PSYCHOSOCIAL WELL-BEING OF ORPHANS IN HIV/AIDS-AFFLICTED EASTERN ZIMBABWE

Constance Nyamukapa

Imperial College London

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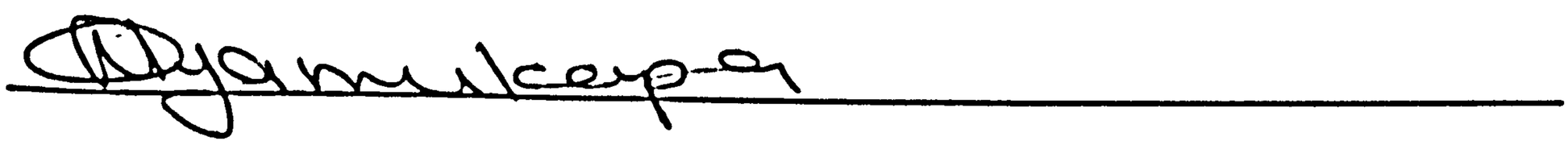
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DECLARATION

I hereby declare that, notwithstanding specific comments on contributions made in each chapter, the work in this thesis submitted for examination for the Doctor of Philosophy degree is my own work.



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ABSTRACT

Background

12 million and 1.1 million children were orphans due to AIDS in sub-Saharan Africa and Zimbabwe, respectively, in 2005. Loss of parents and caregivers robs children of normal development and enjoyment of childhood. They frequently grow up without love, nurturing, care and support and assume care and production roles prematurely. The thesis aims to improve understanding of the extent, causes and consequences of psychosocial distress in orphans in Zimbabwe.

Methods

A theoretical framework describing the relationships between parental illness and death and psychosocial distress and its consequences in AIDS-afflicted populations in sub-Saharan Africa was developed from the literature. Principal components analysis was used to construct composite variables on psychosocial distress from data collected in national and local studies in Zimbabwe. The framework was then tested using Poisson and logistic regression models. Qualitative data were used in interpreting the findings.

Results

Orphanhood was associated with increased psychosocial distress in both data sets. The data provided support for factors hypothesised to lie on the causal pathway between orphanhood and psychosocial distress including being resident in a town or commercial farm; living in a poorer household or one that had experienced a recent death or illness or was receiving external support; being cared for by a less closely-related caregiver; stigma and discrimination, child labour and abuse; inadequate care;

and being out of school. Greater psychosocial distress contributed to early sexual risk behaviour in orphaned children.

Discussion

The thesis provides scientific evidence for increased psychosocial distress amongst orphans in Zimbabwe and suggests that this may contribute to early sexual risk behaviour and exposure to HIV infection. These results highlight the need for psychosocial support for orphans and their caregivers. It is hoped that the improved understanding of causal pathways between parental death and psychosocial distress will assist in the design of effective interventions.

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Chapter 1

Understanding the Psychosocial-Well-Being of Orphans in HIV-Afflicted Eastern Zimbabwe

1.1 Background

The material and socio-economic impact of HIV/AIDS in sub-Saharan Africa has been well documented (Gachuhi 1999; Foster and Williamson 2000; Barnett and Whiteside 2002; Nakiyingi, Bracher et al. 2003; United Nations 2003; UNAIDS., UNICEF. et al. 2004; Richter 2004a; Richter 2006; Alderman, Hoddinott et al. 2002). However, it was only relatively recently that attention began to be focussed on the less visible psychosocial distress experienced by people, and especially children, affected by HIV/AIDS (Foster 2002; Makame, Ani et al. 2002; Green and Smith 2004; Gilborn, Apicella et al. 2006).

Studies indicate that HIV/AIDS sufferers, their carers and dependents are struggling to cope with the illness and are experiencing severe emotional, physical, social, and spiritual turmoil as they try to come to terms with the demands put on them by the disease (Heckman, Somlai et al. 1998; Kaliati, Madzinga et al. 2002; Cadell 2003; Muzuno, Purcell et al. 2003). The impact of AIDS stretches to all aspects of human life including individual, family and social ties and structures, agricultural production, businesses, and services like health and education. Children, because of their dependency on adults for their social and developmental needs, are at particular at risk (Foster, Shakespeare et al. 1995; Walker 2002; Stein 2003; Birdthistle, Floyd et al. 2008).

The lack of attention to the psychosocial effects of HIV/AIDS extends to children (Foster 1998; Armistead, Tannenbaum et al. 2001; Kelly 2002; Ewing 2004). Since the emergence of AIDS, the main focus of child-centred research and programmes has been on the material effects including those on education, health and mortality (Foster, Makufa et al. 1997; Foster and Williamson 2000; Hosegood and Ford 2003; International AIDS Alliance 2003; Gregson, Nyamukapa et al. 2005).

In 2005, 15.2 million children worldwide were alive who had lost one or both parents due to HIV/AIDS-related deaths (UNAIDS 2006). Over 36.3 million adults were living with HIV infection. Given the long incubation period from infection to AIDS, the full impact of the epidemic on orphan figures has yet to be felt as most of those currently living with infection will eventually succumb to the disease and die.

Sub-Saharan Africa is suffering disproportionately from the effects of HIV/AIDS and accounts for 80% of the global burden of infection (UNAIDS 2006). Given such high HIV incidence, prevalence, morbidity and mortality and the concentration of infections within the most economically-productive section of the population, the future of many children in the region is hanging in the balance (Ntozi 1995; Mutangadura 2000; Booysen 2003; Lopman, Barnabas et al. 2005).

With breadwinners and carers being snatched from their midst, children's emotional, physical, spiritual, and psychological health is being put to the test as they helplessly and hopelessly watch their infected parents degenerate and finally succumb to the disease (Levine 1995; Mukiza-Gapere and Ntozi 1995; Dearden and Becker 1997; Levine 2001; Joslin and Harrison 2002). Their misery is compounded by the fact that they have to make a lot of life-changing adjustments that come with the illness or

death of parents such as increased poverty, dietary changes, dropping out of school (Bauman and Germann 2005), having limited access to health services, being parcelled out among relatives to spread the burden of care, and enduring new routines and regimes in destination households (Foster 1998; Gilborn, Nyonyintono et al. 2001; Stein 2003; Ayieko 2004; Matshalaga 2004; Reyes, Perez-Cuevas et al. 2004; Ansell and Young 2004a).

In many cases, children have to deal with their loss with little or no support (London, Leblanc et al. 1998; Veale, Quigley et al. 2001; Walker 2002; Walker 2003; Ansell and Young 2004b; Bauman and Germann 2005, van Oudenhoven and Wazir 2005) Therefore, psychosocial support could help children to cope, accept their loss and move on (Giarrusso, Silvertein et al. 2000; Minkler, Fuller-Thomson et al. 2000; Anderson 2001; Miller, Townsend et al. 2001; Horizons Report 2005; Littrell, Thurman et al. 2007).

The devastation and sheer magnitude of the impact of HIV/AIDS on children's lives and the resultant consequences for their adult lives need to be understood better if their needs are to be addressed (Foster 1998; Foster 2000; Williamson 2000; Anderson 2001; Foster 2002; Schenk and Council 2005). Very little research has been done to examine the changes that occur in children's lives, the psychosocial consequences of these changes and their implications for children's education, attainment of professional skills and behavioural outcomes in the context of increased poverty and sickness and mortality levels due to AIDS and other factors (Foster 2002). Understanding the experiences that children go through (Foster, Shakespeare et al. 1995; Foster, Makufa et al. 1996; Foster 2005; Cree, Kay et al. 2006) and how they affect their future adult outcomes (Abadia-Barrero 2002; Ainsworth and Filmer 2002; Boom, Catalan et al. 2005; Cree, Kay et al. 2006) will facilitate the development of

methods and programmes that will help them to understand their vulnerability, maximise their potential, and access the resources at their disposal to improve their psychosocial well-being and future adult outcomes (Fox 2001; Wight, Aneshensel et al. 2003; UNAIDS., UNICEF. et al. 2004; Gregson, Nyamukapa et al. 2005; Gregson, Garnett et al. 2006).

1.2 Thesis Aim and Objectives of this Chapter

This thesis aims to contribute to improved understanding of the extent, causes and consequences of heightened psychosocial distress in orphans and other children made vulnerable by HIV/AIDS epidemics by developing a theoretical framework describing these relationships and by testing the framework using data from national and local studies in Zimbabwe.

The objectives of this introductory chapter are:

(1) To put the study in context by: (i) briefly reviewing the current status of the HIV/AIDS pandemic with particular reference to sub-Saharan Africa; (ii) describing the study setting in Zimbabwe; and (iii) briefly reviewing the literature on the effects of HIV-associated orphanhood on children's material, physical and socio-economic well-being; and

(2) To review the literature on psychosocial distress resulting from orphanhood and develop a theoretical framework on the causes and consequences - during childhood, adolescence and adulthood – of psychosocial distress associated with being orphaned when a child.

(3) To provide a brief outline of the remainder of the thesis.

1.3 The Current State of the HIV/AIDS Epidemic

Since its discovery over a quarter of a century ago, HIV/AIDS has proved to be far more devastating and complex to address than most people expected. The situation is being made worse by regional differences in epidemic trends and resources, limitations in political will, shortages of human capital, and cultural norms, attitudes and behaviours, which, in some regions, are making the fight against the epidemic such an insurmountable and unattainable task (Basaza and Kaija 2002; Vass 2003; Achebe 2004). Other factors contributing to the rapid spread of the epidemic include the lack of effective and well-resourced policies and programmes that protect and provide care for those infected and affected.

The policies and interests of world financial institutions are also often a hidden fuel to the epidemic (Robalino, Jenkins et al. 2002; Foster 2005). Many of the countries ravaged by AIDS are those whose political and human rights records leave a lot be desired and, because of this, assistance to such countries is either "doctored" to suit funder interests or is not given at all (Umerah-Udezulu and Williams 2005). To the extent that international funding is being made available, delays and wastage are occurring due to other problems within recipient countries such as absence of accountability; poor planning, implementation and coordination; and weak monitoring and evaluation systems. The resulting delays are costing huge numbers of human lives.

In the developed world, anti-retroviral therapy (ART) is giving children more years of life with their parents (Levine 1995; Levine 2001; Matshalaga and Powell 2005; Gilborn, Apicella et al. 2006; Howard, Phillips et al. 2006; UNAIDS 2006; UNAIDS 2007). In many developing countries, especially those in sub-Saharan Africa, ART

remains a pipe dream and a lot of parents will die while still waiting for their turn to have access to the life-enhancing drugs. Until recently, the main reason that people failed to access ART therapies was the exorbitant costs of these treatments. Very few people in the poverty-ridden region have been able to afford the full combination of drugs for the required periods. Even though the prices of these drugs have fallen sharply in recent years, the wider costs of accessing treatment including transport costs and medical charges have continued to place a considerable financial burden on families that many cannot afford. Thus the "bill" left by the HIV/AIDS epidemic for individuals, families, communities and nations is too huge for anybody to pay without feeling the impact. Amongst the worst casualties are children who are being orphaned at a vital stage of their development and are growing up in a disordered poverty-ridden environment (Mahati, Chandiwana et al. 2006; Munyati, Rusakaniko et al. 2006; UNAIDS 2006, Bauman and Germann 2005).

Since the onset of the HIV/AIDS epidemic, the number of orphaned children in the world has risen dramatically (UNAIDS., UNICEF. et al. 2004; Watts, Lopman et al. 2004; Umerah-Udezulu and Williams 2005; UNAIDS 2007). As of the end of 2007, 33.2 million people are estimated to be living with infection in the world while 25 million are thought to have died from AIDS-related illnesses. The number of children under the age of 18 years who have lost one or both of their patents to HIV/AIDS-related deaths was estimated to have shot up to 15 million at the end of 2007, an increase of 30.4% (from 11.5 million) since 2001. Sub-Saharan Africa, dubbed the global epicentre of the epidemic and home to just over 10% of the world population, accounted for 68% of all people living with HIV/AIDS (22.5 million) and 76% of all AIDS deaths in 2007 (UNAIDS 2007). The consequently high adult mortality rate coupled with high fertility means that the region is also home to 76% (11.4 million) of

all children under 18 years who have been orphaned due to AIDS. Of these orphaned children in Africa in 2003, the majority are paternal orphans (20.5 million *versus* 15 million maternal orphans and 7.7 million double orphans). Fathers have higher death rates partly because they are usually older and are infected earlier than mothers and at older ages, where periods of survival post-infection are shorter (Gregson and Garnett 2000). However, international estimates now show more females (61%; 30.8 million globally) infected than males (Gregson and Garnett 2000; Mutangadura 2000; UNAIDS 2007) which means that, in the absence of treatment, there is likely to be an upsurge in female mortality relative to male mortality in periods to come. As a result, absolute increases in the levels of maternal and double orphanhood - and increases relative to levels of male orphanhood – are now occurring (Gregson and Garnett 2000; Gregson, Nyamukapa et al. 2000; Anderson and Doyal 2004; Watts, Lopman et al. 2004).

1.4 Zimbabwe: Background and Current HIV/AIDS Situation

This section of the chapter describes the situation in Zimbabwe in which children orphaned by HIV/AIDS are living. Understanding this context will lead to greater appreciation of what they have to grapple with in their lives as they search for meaning from their loss and forge a new life in totally new and demanding environments.

Zimbabwe is a landlocked country which shares its borders with four other HIV/AIDS-ravaged countries - Botswana, Mozambique, South Africa and Zambia. The southern African state has an estimated population of 13 million people (UNAIDS 2006). Life expectancy has been reduced by AIDS to 34 years and 37 years, for women and men, respectively (UNAIDS 2006; UNAIDS 2007). 83% of the population

is estimated to be living on less than US$2 a day (UNAIDS 2006) and unemployment is estimated at 80% (Bollinger, Stover et al. 1999; UNICEF 2006b; UNAIDS 2007). The economic and political instability in the country, once considered the "bread basket of Africa", has seen inflation soar to a record high of over 8,000% (UNICEF 2006b). The economic meltdown in the country has led to a massive brain drain of young, productive and skilled adults to neighbouring countries and beyond. A further setback for Zimbabwe has been the political turmoil that has, amongst other things, seen several major internationals aid organisations withdraw from the country.

Figure 1.1 Map of Zimbabwe



Source: http:www.asapafrica.org.uploaded images/zimmap

The land redistribution exercise has seen a lot of farm workers being laid off and has led to a shrinking of the country's exports of its agricultural products and in its foreign currency earnings. Gross domestic product has been falling at a record rate of -4.4%

per annum (UNAIDS 2006). With the agricultural sector in dire straits and persistent droughts in Africa, the country's food security has been seriously affected.

The HIV epidemic in Zimbabwe is one of the worst in the world but HIV incidence and prevalence have been coming down since the early 1990s and late 1990s, respectively (UNAIDS 2004). Prior to the recent economic collapse, Zimbabwe was one of the more socio-economically developed countries in sub-Saharan Africa, which may – together with aspects of the colonial legacy (Sanders and Sambo 1991) - perversely, have fuelled the spread of HIV within the country (Gregson, Garnett et al. 1994; Gregson, Waddell et al. 2001). Consequent breakdown of traditional culture, income differentials and wage-labour-associated spousal separation are thought to have increased rates of sexual partner change whilst the country's good transport infrastructure facilitated the spread into the rural areas where the majority of the country's population is based. However, other aspects of development such as the rapid expansion of school education following independence in 1980 which continues to the present day - at the end of 2005, 90% of orphans and 92% of non-orphans (aged 10-14 years), respectively, were estimated to be enrolled in school (UNAIDS 2006) – coupled with widespread recognition of the high mortality associated with HIV/AIDS could now be underpinning the changes in sexual behaviour that have been found to be accompanying the declines in HIV incidence and prevalence (Gregson , Garnett et al. 2006).

Despite the encouraging trends in the epidemic, an estimated 1.3 million people [uncertainty range 1.2-1.4 million] are living with HIV infection in Zimbabwe with 15.6% [14.9-16.3%] of 15-49 year-olds being infected (Zimbabwe Ministry of Health and Child Welfare 2007). More women [60%] than men are currently believed to be

infected. An estimated 115,114 adults are thought to have died from AIDS-related illnesses in 2007. Children have not been spared the suffering. 132,938 [124,235-142,059] children presently live with infection in Zimbabwe and 12,248 [10,728-14,289] are thought to have died of AIDS in 2007. Seventy-seven percent of all orphaned children in the country (975,000 out of 1.265 million) are believed to have lost their parent(s) to AIDS.

Access to ART services is beginning to increase but, in 2007, only 15.7% of men and women requiring to be on antiretroviral treatment (n=479,796) were receiving treatment (Zimbabwe Ministry of Health and Child Welfare 2007). The lack of life-prolonging drugs spells out doom for most children whose parents are living with infection, since they will obviously die in an era where others are being given more years to love and nurture their children.

To make further progress in controlling the epidemic, Zimbabwe still has a lot of hurdles to cross. These include making the political climate favourable such that the brain drain is plugged, talented Zimbabweans currently living in the Diaspora come back home, and major donors, who are currently shunning the country, return. Shortages of health service personnel, good quality health facilities and equipment, and antiretroviral drugs are major problems in the country.

1.5 The Effects of Orphanhood on Children's Education, Health, Poverty, Nutrition, Shelter and Caregiver Arrangements

1.5.1 Overview

The material effects of orphanhood have been relatively well studied. In this section of thesis, we briefly review the main findings from various studies across the globe but with a particular focus on sub-Saharan Africa. The evidence suggests that HIV/AIDS is seriously affecting children's families, breadwinners and caregivers and is thereby leading to unmet needs in the domains of food and nutrition, health and access to healthcare services, education, shelter, and identity, social and legal protection (Abadia-Barrero 2002; Thurman, Snider et al. 2006; Chatterji , Dougherty et al. April 2005).

1.5.2 Poverty

The AIDS pandemic has had devastating effects on all aspects of human life, with children being at greatest risk (Achebe 2004; Abebe and Aase 2007). With the most productive adult populations being affected by HIV/AIDS and dying disproportionately, resources being depleted and services deteriorating, meeting the basic needs of children caught up in the epidemic is proving to be a daunting task for caregivers (Ainsworth, Ghosh et al. 1995; Ainsworth 1996; UNAIDS 2001; International HIV/AIDS Alliance 2003; Anderson and Doyal 2004; Townsend and Dawes 2004; UNAIDS July 2001).

Many individuals, families and communities affected by HIV/AIDS have had to endure a transition from relative wealth to abject poverty (Anderson 2001; UNICEF 2006). In severely affected households, painful and harmful adjustments - often detrimental to children's development - have to be made to their accommodation, education, and consumption patterns (Urassa, Boerma et al. 2001; van Oudenhoven and Wazir 2005). The changes in circumstances are stressing for children too (Joslin and Harrison 2002; Murphy, Marelich et al. 2002; Vass 2003; Horizons Report 2005). They have to adjust to a life of poverty and deprivation as household savings are depleted by health service and funeral costs incurred for family members who could be their sole breadwinners, parents, caregivers or siblings (Abebe and Aase 2007). The hope that the family will ever recover from the resulting poverty is further thrown into doubt as the costs of food and other services force them to sell property such as land or houses thus leaving children with nothing to their name (Mawoneke, Sexton et al. 2001; Matshalaga and Powell 2005). As AIDS continues to plague and wipe out the economically-able members of society, most of children's basic needs are put in jeopardy (McLanahan, Garfinkel et al. November 1999).

AIDS-driven poverty and social crisis forces caregivers to adopt drastic coping measures that are detrimental to children's development. These include cutting down on consumption patterns in terms of food, health services, accommodation, education, clothing and shelter. Even the quality of the care they provide is compromised due to their having to look after too many orphans or fatigue (McLoyd 1990; Kelly 2002; Mturi, Mazibuko et al. 2003; van Wijngaarden, Schene et al. 2004).

Children may be withdrawn from school as financial resources dwindle or due to the loss of the household's productive labour force (Gundersen, Kelly et al. 2004; Zaba,

Whiteside et al. 2004). With their education put on hold and prospects of a better future on the line, children as young as six years old can be drafted in to replace household labour lost due to illness or death (Ainsworth, Beegle et al. 2002; Barnett and Whiteside 2002; Robson 2004) with girls being at greatest risk of taking over daily household chores and providing care for sick household members (Basaza and Kaija 2002; Mahati, Chandiwana et al. 2006). Some children are being forced to sell their labour to supplement household income at very early age (Kaliati, Madzinga et al. 2002; Mturi, Mazibuko et al. 2003). Dire poverty, coupled with shortage of carers, sees some children being parcelled out among relatives as a coping strategy and also to spread the burden of care among relatives (Joslin and Harrison 2002; Madhavan 2004; Matshalaga 2004; Ansell and Young 2004a; Najjumba-Mulindwa 2006). Other children may not be lucky enough to have relatives to take them in. These end up seeking solace on the streets where they are forced to beg to survive or may turn to a life of crime (Mawoneke, Sexton et al. 2001; Kaliati, Madzinga et al. 2002; Rurevo and Bourdillon 2003; Kruger and Richter 2006).

1.5.3 Children's Physical Health

Reduced consumption and dietary changes can result in child morbidity and mortality (Fields and Smith 1998; Schumacher, Smith-Slep et al. 2001). Since the onset of HIV/AIDS, many of the gains in health outcomes that were made in African countries in the 1960s and 1970s have been eroded and child mortality has been on the increase again (Adetunji 2000; Abadia-Barrero 2002; Deininger, Crommelynck et al. 2002; Achebe 2004; Nalugoda, Gray et al. 2004).

Reduced household incomes frequently mean that carers are unable to afford the costs of providing healthcare for their children, leading to high child morbidity and mortality among orphans and vulnerable children (Bird and Shinyekwa 2005; Najjumba-Mulindwa 2006). Being financially strapped, parents and other caregivers may not be have the means to pay for health service charges or to cover the high transport costs involved in accessing these services. In other instances, caregivers may be aware of healthcare services or where to access them (Foster 1998; UNICEF 2005).

Economic studies in HIV/AIDS-affected communities in Uganda noted a shift in households' agricultural patterns (Najjumba-Mulindwa 2006). Households that experienced extensive losses of able-bodied and productive members of the family resorted to growing less labour intensive and less nutritious crops such as cassava (Reyes, Perez-Cuevas et al. 2004; Cohen 2006). Poor diets and lack of proper care can have very detrimental effects on children's development and health (Mukiza-Gapere and Ntozi 1995; Ntozi, Lubaale et al. 1997; Brouwer, Lok et al. 2000).

Some children's health is made worse by the fact that they are themselves infected with HIV (Sewankambo, Gray et al. 2000; Nakiyingi, Bracher et al. 2003). Since the onset of HIV/AIDS, an increasing number of children born to HIV infected mothers are suffering the effects of living with the infection (Basaza and Kaija 2002; Nakiyingi, Bracher et al. 2003; Villamor, Misegades et al. 2005). The plight of most infected children is further compounded by the unavailability and un-affordability of good quality healthcare services that prolong life, ease suffering and allow them to live a normal life (Barnett and Blaikie 1992; Mukiza-Gapere and Ntozi 1995; Ntozi 1995; Barnett and Whiteside 2002; Zaba, Whiteside et al. 2004). With AIDS still being a disease shrouded by mystery and stigma and discrimination, children who are living

with infection are not accorded the care they need to survive (Ainsworth and Filmer 2002; Anderson and Doyal 2004; Boom, Catalan et al. 2005; Hamra, Ross et al. 2005). They endure a life of neglect, being denied food, proper care or being able to mix with other children, being taunted for being infected and having to bear their parents being blamed for infecting them in the first place (Heckman, Somlai et al. 1998; Safman 2004; Dias, Matos et al. 2006; Safman?). A study done in Ethiopia reported people saying they were prepared to look after an uninfected child but not one who was infected (Ainsworth 1996; Abebe and Aase 2007).

Given the deteriorating state of the health system, coupled with poor nutrition and inadequate loving care, most HIV-infected children will not make it past their 18th birthday (Foster 1998; Zaba, Whiteside et al. 2004). Studies of child deaths in relation to maternal mortality found increased morbidity and mortality among the under-fives following maternal deaths. However, Foster et al attributed the causes to ignorance and unhygienic practices rather than to neglect because of their suspected HIV status.

1.5.4 Education

Education holds the key to man's problems in today's world and helps to engender development goals be they social or political or economic (Gregson, Waddell et al. 2001). It gives people hope, light and wisdom and, for the young minds, is the gateway to success (International HIV Alliance. 2003; Gregson, Terceira et al. 2004; Desai and Jukes 2005). Education empowers individuals to make informed decisions in their lives including the ability to understand HIV/AIDS messages and apply them to avoid behaviours that might place them at risk of infection. In most developing countries reeling under the effects of HIV/AIDS, this hope is under threat for most children

since many are left in poverty and have to be withdrawn from school (Carr-Hill, Katabaro et al. 2002; International AIDS Alliance 2003).

With household resources depleted through financing the healthcare needs of ill family members or being swallowed up by high funeral costs, the educational prospects of most orphans are on the line (DFID 2003; Thomas, Beegle et al. 2004). Lack of resources may force caregivers to make painful decisions on whom to send to school from among children in their care (Gachuhi 1999; Gundersen, Kelly et al. 2004; Thomas, Beegle et al. 2004). Most at risk of being hard-hit by such choices and decisions are orphans since caregivers tend to favour their own biological children (Deininger, Crommelynck et al. 2002). Of those orphans who may be lucky enough to stay in school, many have to do without school essentials such as school uniforms, pens, books or other requirements (Mathshalaga 2005, Foster 2000, Kelly 2000).

Some children are forced to miss school to supplement lost incomes in their households while others are forced to drop out of school entirely (Robson, Ansell et al. 2006, Abebe & Aase 2006, Case 2005). Because of the ascribed gender roles, girls are thought most likely to fall victim to having their education disrupted or put on hold while they fulfil care and other domestic roles (Filmer 2000; Richter 2006; Wijngaarden and Shaeffer 2002; Gundersen, Kelly et al. 2004). Failure to juggle being a student by day and a carer by night can prove too demanding for many girls such that they may view dropping out of school as unavoidable (Coombe 2002). With reduced family income, the girl child's education is at stake as families resort to the old system of educating boys on the basis that they continue to contribute to the welfare of the clan whereas girls marry outside the family and thus consider that educating them will only benefit outsiders (Bourdillon 1997; Kileff and Kileff 1997; Gelfand 1999).

Other children are forced to migrate in order to keep attending school (Hosegood and Ford 2003; Nyambedha, Wandibba et al. 2003; Ansell and Young 2004a). Relocation affects children's continued school attendance ,the quality of education children they receive (Kamali, Seeley et al. 1996; Yamano and Jayne 2004). Children who move and do not have the essential birth registration and transfer letters may be barred from attending school until they are in possession of these documents (Kaliati, Madzinga et al. 2002). Their new caregivers may find the task of working through government procedures to obtain school transfer letters, birth certificates or death certificates too daunting (Mahati, Chandiwana et al. 2006)

In addition to poverty and added responsibilities in the household, orphans and children made vulnerable by HIV/AIDS may be infected with the virus themselves which can also affect their school attendance and performance (Makame, Ani et al. 2002). In South Africa, 1.2% of school-age children are infected and it has been estimated that 0.25% of the school-age population will die of AIDS (Garbus and Khumalo-Sakutukwa 2003). The perceived inevitability of their dying may lead some caregivers to regard sending infected children to school as a waste of scarce resources (Richter 2004a). In a study in Thailand, grandparents looking after children of parents who were either living with HIV/AIDS or had died from the disease were found to experience difficulties in finding school places for their grandchildren (Safman 2004). Those children who are lucky enough to be in school have to endure coping with the stressful and debilitating illness plus the stigma and discrimination associated with the disease (Heckman, Somlai et al. 1998; Murphy, Marelich et al. 2002; Lau, Tsui et al. 2003; Richter, Manegold et al. 2004b). At school, they may be taunted and shunned by

both teachers and fellow students which may make them stay away from school altogether.

HIV/AIDS has not spared the educational institutions themselves. The epidemic is undermining the viability of the education institutions by weakening both the supply and the demand (Gachuhi 1999; Kelly 2000; Desai and Jukes 2005). In school, children have to relive traumatic experiences as they watch their teachers' progress from infection to full blown AIDS-related illness and then die or when their lesson times are cut short because teachers fail to turn up because they have to provide care for ailing family members or have to attend funerals. In 1999 the World Bank estimated that 860,000 children had lost teachers to AIDS. Teachers' absenteeism due to ill-health or funeral attendance will continue to affect the quality of education. In Zimbabwe, it has been estimated that, between 2000 and 2010, 2.1% of teachers will be lost annually to AIDS. Of the new teachers that were trained in 2000, 53.3% were said to have replaced those lost to AIDS. This figure is projected to increase further to 82.6% (Allemano 2003; Gundersen, Kelly et al. 2004).

1.5.5 Child-Care Arrangements

Haddad as cited by Mutangadura (2000) states that women exhibit certain nurturing and allocative behaviours that enhance the food and nutrition security of entire households and children in particular. In Zimbabwe and elsewhere in Africa, women play a central role in household economies (Mutangadura 2000). Studies done in Zimbabwe, Uganda, Tanzania have found that orphans live mainly in poorer or elderly female-headed households (Foster, Shakespeare et al. 1995; Foster 1998; Nyambedha, Wandibba et al. 2003; Nyamukapa, Gregson et al. 2003; Nyamukapa and Gregson

2005). With 651,402 adult women infected in Zimbabwe, the future of child care arrangements is under threat. In a study of 215 households, only 30% of orphans were still living in the household they were staying in before their mother died (Foster, Makufa et al. 1997; Kaliati, Madzinga et al. 2002; Kaliati J, Madzing et al. 2002).

Girls are more likely to take up the responsibilities of caring for the sick and replacing labour lost to illness, death or economic migration (Zimbabwe Central Statistics Office and MEASURE 2007). The demands and responsibilities placed on their shoulders will mean that they will have very little time to be children, for developmental play, and to form life-long associations.

Other care arrangements are leaving children in precarious situations (Matshalaga 2004). Cases have been found of children who were supposed to be being cared for by their grandparents actually caring for their own carers (Dearden and Becker 1997; Minkler, Fuller-Thomson et al. 2000). Due to old age frailty and ailments, grandparents are often too old to provide care and are poorly resourced and distressed (Foster, Shakespeare et al. 1995; Nyambedha, Wandibba et al. 2003; Madhavan 2004; Matshalaga 2004). Some grandparents report lacking the energy to keep in touch with school activities and the constant supervision and disciplining of the children required of caregivers (Oburu 2004). Foster et al (1995) and Matshalaga (2004) found 50% of orphans under the care of grandparents who lacked a sound capital base and had limited chances of re-entering the economic sector due to their poor health and old age. Studies done in Malawi by Grangeiro et al (2004) and in Zimbabwe by Gilborn et al (2006), Gomo et al (2006) and Skinner et al (2006) found that most elderly caregivers worry about meeting children's healthcare and education needs and being

able to put food on the table (Giarrusso, Silvertein et al. 2000; van Wijngaarden, Schene et al. 2004).

The fact that most children are being thrust early into adult responsibilities and situations with very little resources places them in danger of being physically and sexually abused (Gregson and Garnett 2000; McCausland and Pakenham 2003). The greatest risk being for the girls who have to take over demanding roles with very little resources which may force them into selling sex to survive or to enter into risky relationships (Gregson, Nyamukapa et al. 2000). Studies of street children indicate that children employ various methods to provide for their families such as vending, doing small favours for food or cash, while others engage in sex just to put food on the table for their siblings (Mawoneke, Sexton et al. 2001; Mturi, Mazibuko et al. 2003).

1.6 Orphanhood and Forms, Causes and Consequences of Psychosocial Distress in Childhood

1.6.1 Forms of Psychosocial Distress in Childhood

The American Association of Psychiatry (1994) and Bowlby (1998) note that children and adolescents are prone to developing psychological distress if life events such as war, violence, natural disasters or personal factors such as deprivation (i.e. poverty), an illness or death, separation or divorce, relocation (familial, school, friends, social networks) and job loss put intense pressure on the individual. Without love, protection and nurturance, living in low-resource settings, and lacking mental, physical and spiritual stimulation, children are at risk of developing childhood disorders such as attention deficit / hyperactivity, anxiety, depression, conduct behaviour, eating

problems, elimination (soiling), learning difficulties and poor mental development, post-traumatic stress, psychosomatic illness (somatoform disorders), bipolar disorders (manic depressive) and schizophrenia. These disorders have severe implications for children's well-being, care and development (Smith, Cowie et al. 2003; Lester, Rotheram-Borus et al. 2006).

The effects of HIV/AIDS epidemics in increasing adult mortality and in decimating and uprooting families and eroding their savings are leaving children to be cared for by less closely-related caregivers in unfamiliar environments with very minimal material and emotional support. The sheer burden that the pandemic places on individuals, families and communities places children, and especially orphans, at greater risk of experiencing some of the disorders listed above. The next few paragraphs provide a general summary of the main childhood psychosocial disorders.

Attention deficit / hyperactivity disorder is said to be most common in children. Those who suffer from the disorder are inattentive, hyperactive and impulsive in their behaviour, and lack the ability to listen and attend to things in detail because they are constantly in motion, fidgeting, squirming, climbing or talking excessively, interrupting conservations and blurting out answers, easily distracted, and forgetful, poorly organised and lacking in study skills. Persistent behaviour impairs children's functioning at home, in school or with friends. Boys are at greater risk of suffering from the condition than girls (American Association of Psychiatry 1994; Bowlby 1998; Murray 2000; Smith, Cowie et al. 2003).

Anxiety and depression are two conditions that are difficult to separate because someone who has severe anxiety may also have symptoms characterising depressive

mood. Anxiety can be mild or severe, with severe being characterised by excessive social phobia - severe fear of being negatively evaluated, rejected, humiliated or embarrassed. Another form of anxiety is panic disorder, with or without agoraphobia, whereby the sufferer experiences shortness of breath, a pounding heart, tingling and numbing sensations, and experiences hot or cold flushes (Dura and Stukenberg 1991; American Association of Psychiatry 1994; Langley, Bergman et al. 2004).

Children suffering from depression typically show symptoms of helplessness, hopelessness, worthlessness, irritability, being impossible to please, and mood swings from great sadness to sudden anger. The condition usually lasts for up to two weeks. However, the chronic form of the disorder (chronic dysthymic) can last for a year or more and additional symptoms may include fatigue, restlessness or slowing down, difficulties in concentrating and sleeping, loss of appetite, social withdrawal, decreased interest or pleasure in previously enjoyed activities and suicidal thoughts. Both boys and girls are at risk of depression but it occurs most often in girls and children aged twelve years and above. In younger children, problems in eliciting the symptoms make it difficult to study. In the era of AIDS, because of the mystery, stigma and discrimination that surround the disease, many children are at risk of suffering from depression-anxiety (Dura and Stukenberg 1991; Muris and Meesters 2002; Lester, Rotheram-Borus et al. 2006).

Children who suffer from *conduct behaviour disorders* have an increased tendency to disregard authority and the rights of others and to break societal rules. Behaviour disorders fall into four main groupings. Aggressive conduct threatens or causes harm to other people or animals. Destructive behaviour involves loss or damage to property through vandalism or setting fire to things. Deceitfulness includes breaking into stores

and homes with the intent to steal. Finally, children may engage in serious violation of rules, for example by playing truant or repeatedly running away from home. Drug and other substance abuse can be the result of a conduct behaviour disorder. For both children and adults, the behaviour may interfere with life functions, social networks and personal well-being (American Association of Psychiatry 1994; Kochanska, Forman et al. 2005; Pakaslahti 2000).

Eating disorders can also take a variety forms including eating very little or too much or eating food and then inducing it (American Association of Psychiatry 1994). *Eliminations disorder* occurs to children who have mastered their toilet training but, because of problems they are facing at home, at school or within themselves, may transgress. This disorder is most likely to occur in under five year-olds but can also occur in children aged between 10 and 12 years (www.healphtyplace.com (American Association of Psychiatry 1994)).

Learning difficulties involve inability to acquire the reading, mathematics, written expression or social skills which are appropriate for one's age. Many children with learning difficulties also suffer from other disorders such as attention deficit/hyperactivity, depression or conduct disorders. Causes of learning difficulties also include an inadequate curriculum or poor teaching, lack of opportunity, and cultural factors. 10-30% of children are estimated to have learning difficulties and the risk is higher for boys than for girls (American Association of Psychiatry 1994).

Post-traumatic stress was considered to be rare in children until recently. Over 3 million children are currently diagnosed with the disorder. Children who suffer from post-traumatic stress experience intense fear, agitated behaviour, emotional numbness,

anxiety or depression. The disorder may manifest itself in refusing to eat, to sleep alone or at all, poor concentration, lack of trust, being irritable, withdrawn or distant from peers, bedwetting, clinging behaviour and sucking of the thumb (American Association of Psychiatry 1994).

Children or adolescents with *psychosomatic illness* complain of aches and pains for which no cause can be found. Symptoms include headache, abdominal pains, hormonal changes from puberty, anxiety and worry, fatigue, loss of appetite, aches and pains, poor balance and coordination, double vision, paralysis, seizures, imagined physical deformities, back pain and sore muscles. Somatic complaints usually occur in 1.3-5% of children and are more common in girls (11%) than in boys (4%). 0.2% of adults are affected with prevalence being 2% in women and 0.2% in men (Ronen, Rosenbaum et al. 2001; Smith, Cowie et al. 2003).

Bipolar disorder is another childhood disorder. The condition is very difficult to diagnose because sufferers may exhibit symptoms similar to those found in people suffering from anxiety disorders and schizophrenia. The lack of unique distinguishable symptoms means a person can live with the condition undetected for ten years or more. Lack of treatment increases the risk of committing suicide, engaging in alcohol and substance abuse, facing problems at school, divorce, not being able to function at work, and self-alienation from family and friends. The condition is thought to be hereditary and can be controlled by therapy (American Association of Psychiatry 1994; Smith, Cowie et al. 2003).

It is believed that there are many forms of *Schizophrenia* and, due to this, the signs and symptoms vary with severity from mild to severe. Some sufferers are able to function

well in life while others are not. Generalised schizophrenia symptoms include delusions, hallucinations, disordered speech, being grossly disorganised, poor personal hygiene, lack of and/or inappropriate emotions, angry outbursts, constant feeling of being watched, trouble with functioning at school, social isolation, clumsy or uncoordinated movements, catatonic behaviour and negative symptoms. The condition can last up to six months with the sufferer exhibiting one or more of the listed symptoms (American Association of Psychiatry 1994; Smith, Cowie et al. 2003).

Psychosocial well-being has been defined as "the positive age-appropriate outcome of children's physical, social and psychological development (Richter, Foster et al. 2006). It is enhanced by children's capabilities and their social and material environment and the lack of these can cause psychosocial distress. The HIV epidemic is affecting children's enjoyment of childhood and their normal development as they become orphaned and are left to survive in situations which place them at the risk of experiencing potential risk factors for psychosocial disorders such as poor social support, stress from adult roles, hopelessness, anger, hostility, depression, anxiety and caregiving related stress. In the context of this thesis, the term psychosocial distress is used to cover the psychological disorders (indicated by the question variables described in Chapter 3 section 3.3.1 and Chapter 4 section 4.3.1) experienced by children as result of a malfunctions in their physical and social environments. The definition fits well with the main aim of the thesis which is to look at whether and how children's physical, social, mental and spiritual well-being is undermined by the HIV/AIDS epidemic.

Different theories attribute different causes and outcomes of psychosocial distress. However, the most commonly cited causes in children and adolescents include loss of

familiarity (i.e. being away from home, school or friends), parental job loss and associated financial problems (Mutangadura 2000; Hoosegood and Ford 2003; Lester, Rotheram-Borus et al. 2006; Carter and Maluccio December 2002), loss of loved ones due to illness or death (Nampanya-Serpell 2000; Joslin and Harrison 2002; Makame, Ani et al. 2002; Cadell 2003; Crampin, Floyd et al. 2003), neglect, abandonment, maltreatment or violence (including sexual and physical abuse), war, natural disasters (hurricanes, earthquakes, floods) and deprivation (in terms of love, material needs, quality of care, communication, food, education, shelter, rights to identity, war, chronic pain or illness and other material needs) (Knoke, Smith et al. 2000; Howarth 2002; Martikainen, Bartley et al. 2002; Betancourt 2004; Matshalaga 2004). Individuals are said to experience certain amounts of stress in everyday life which could be brief or prolonged, mild or severe (SAFAIDS 2000; Billing, Ehrle et al. 2002; Safman 2004; Bhargava 2005).

However, how people experience and react to stressors is believed to vary from individual to individual. The same type of stressor can have different effects for different individuals. Clinical and family studies of people with terminal illnesses such as cancer and HIV/AIDS have found women to be at greater risk of experiencing stress-related problems than men (Minkler, Fuller-Thomson et al. 2000; McCausland and Pakenham 2003; van Wijngaarden, Schene et al. 2004). Other factors are understood to include age, race or ethnicity, social standing, parenting forms, educational standing, and personal characteristics (Wrubel and Folkman 1997; Bowlby 1998; McCausland and Pakenham 2003; Smith, Cowie et al. 2003; Wight, Aneshensel et al. 2003; van Wijngaarden, Schene et al. 2004). The resources available to the individual with which to counteract the stress can also affect psychosocial outcomes (Bowlby 1998; Bolton and Wilk 2004; Birdthistle, Floyd et al. 2008).

Observed disparities in outcomes can be attributed to differences in personal traits, temperament, and social learning between individuals (Brouwer, Lok et al. 2000; Boyden 2003). About 40% of our personality traits are said to be inherited and the remaining 60% are environmentally acquired (Fivush, Bohanek et al. 2003; O'Sullivan 2004). Thus, most of our behaviours are the result of our interaction with environmental factors and these play a greater part in our psychosocial well-being (BerntssonJan-Eric Gustafsson 2000). The stability of the personality is rooted in temperament - an extreme or irregular temperament may result in greater risk of developing disorders (Nichter 1981; Kennedy, Skurnick et al. 1995; Ystgaard, Tambs et al. 1999; Franz, Lensche et al. 2002; Matthews and Power 2002; Sacker and Wiggins 2002).

Some studies (Felitti, Anda et al. 1998; Feinberg 2002) attribute aggressive conduct and sexual and other risk behaviours in adulthood to exposure to emotional, physical or sexual abuse, or household dysfunction in childhood (Shaheen and Gehman 1998; Corak 1999). Studies of community, social and economic factors done in the United States of America found that aspects of social environment or family background such as high levels of poverty and deprivation were associated with high crime rates, drug abuse, and sexual risks among youths (Conger, Conger et al. 1993; Mustard 1998; Jones and Foster 2005)

Thus the stresses we experience in our lives affect our bodies, minds and behaviour and extreme stress can interfere with our daily functions (American Association of Psychiatry 1994; Evans 2004; Case and Ardintion 2005). Studies of children of cancer survivors done in the Netherlands found negative life experiences to be linked to

detrimental behaviour outcomes in terms of emotional and conduct behaviour, schooling and employment outcomes, establishing stable relationships with family and friends, self esteem, fatigue and depression (Camodeca and Goodssen 2005; Kochanska, Forman et al. 2005; Peters, Calam et al. 2005). Once again, the effects were more severe in women than in men with affected females being found to be at higher risk of having long absences from school and reduced educational attainment than their male counterparts (Lengua and Stormshak 2000; Langeveld, Ubbink et al. 2003).

Experiences can become life threatening if, for example, depression or sadness persist for periods of two weeks or more or when it becomes a regular occurrence in a person's life and interrupts daily activities such as eating, mood, speech for younger children, affection and attention, sleeping, working (including school attendance and performance), energy levels, social networking etc. (Cree, Kay et al. 2006).

Children who are constantly exposed to witnessing their parents, guardian or sibling battling with a terminal illness till eventually they deteriorate and die, are left feeling unhappy, helpless and hopeless about the future and may appear listless and passive, show disrupted eating and sleep habits and anger (American Association of Psychiatry 1994; Sarafino 1998; Corak 1999). Stressful life experiences can also affect people's behaviour such that they may become less sociable and insensitive to other people's feelings (Little and Garbet 2000; Richter 2004a; Lieberman, Solomon et al. 2005).

Anger resulting from stressful life experiences can lead to negative social or aggressive behaviour which may be counteracted with physical abuse of the perpetrators who could be children, adolescents or adults (MacLanahan, Garfinkel et

al. 1999; Mahati, Chandiwana et al. 2006; Lyons Undated). Abuse has negative implications for social, spiritual, emotional, mental and physical well-being if it is extreme (Makame, Ani et al. 2002). Stress in parents or guardians has been found to be associated with increased child abuse such as child battering, exploitation and child labour and with being insensitive to children's needs (Conger, Conger et al. 1993; Fields and Smith 1998; MacLanahan, Garfinkel et al. 1999; Brouwer, Lok et al. 2000; Booysen 2003).

Family dysfunction and dissolution can lead to psychosocial distress. This may result from financial problems, divorce, inconsiderate behaviour or opposing goals. For example, over-crowding due to pressure on scarce resources can lead to conflict over privacy and the use of family resources e.g. the bathroom.

1.6.2 Orphanhood as a Cause of Psychosocial Distress in Children

1.6.2.1 Evidence for Increased Psychosocial Distress in Orphans

There have been many studies in which orphaned children have reported feeling lonely, sad and depressed by their experiences (Chinouya, Musoro et al. 2004; Christiansen 2005; UNICEF 2006). In a small study of 41 pairs of orphans and non-orphans, Makame and colleagues (2002) found that orphans had higher scores for internalising problems compared to non-orphans and that nearly three times as many orphans than non-orphans had contemplated suicide. However, very few other empirical studies have been conducted to measure or quantify the relationship between orphanhood and psychosocial distress in children.

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1.6.2.2 Mechanisms for Increased Psychosocial Distress in Orphans

A number of possible mechanisms have been suggested as to how illness and death of parents - particularly from HIV/AIDS - could impact negatively on children's psychosocial well-being. These include the trauma associated with the sickness and death of a loved one, relocation to unfamiliar surroundings, poorer treatment associated with increased poverty, the stigma and discrimination associated with having lost a parent to a feared disease, the effects of possibly being infected with HIV, the stresses of taking on demanding caregiver roles at a premature age, and mental, physical and sexual abuse. Each of these is considered briefly in this section.

<u>Direct effects of parental illness and death</u>

The trauma of watching relatives, caregivers, teachers, friends, neighbours and other community members struggling to cope with the poor health and the stigma and discrimination that typically result from HIV infection and, ultimately, with the deaths that ensue is believed to be a major source of psychosocial distress amongst orphaned children (Mukiza-Gapere and Ntozi 1995; Ntozi , Lubaale et al. 1997; Wijngaarden and Shaeffer 2002; Safman 2004; He and Ji 2007).

Children's suffering often starts long before their parents die. Their parent's incapacitation due to illness can mean that children have to provide care or other help in the home. This, in turn can interfere with their own well-being. For example, their education may be affected because they have to miss or be late for school or because diversion of income to pay for healthcare costs means there are insufficient funds to pay for school uniforms and materials (Ayieko 2004; Atwine, Cantor-Graae et al.

2005). Anticipation of the death of a parent, caregiver or any family member can cause children a lot of anxiety, fear, anger, helpless and hopelessness (Pfeffer 2000; Appleyard, Egeland et al. 2005).

In Ntozi's (1997) study of AIDS mortality in Uganda, 42.2% of children reported being depressed by their parent's being sick. Because children are rarely given information about what is going on around them, they usually end up drawing their own conclusions or have to find their own source of information about the causes of their parent's illness. As parents progress from HIV infection to full blown AIDS, they worry about what the future might hold for them and their parents (Barrera and Garrison-Jones 1992; Barnett and Whiteside 2002; Case and Ardintion 2005). In the Uganda study (Ntozi , Lubaale et al. 1997), 11% of children were sad and scared, while 50% reported feeling helpless and very sad and 11% had cried about their parent's ailment. Children may have unanswered questions about how long their parents will live for, who else knows about their parents' condition, the implications of their parent's illness for their own friendships, what will happen to them when the parent dies, and whether they are also living with infection (Carballo and Solby 2001; Chatterji , Dougherty et al. 2005).

Poor management of change can make the situation worse (Christiansen 2005). Unless the child is helped to understand and manage the subsequent changes to it's their life, the effect on his or her emotional well-being and physical health may be magnified (Pankepp 2001; WHO 2002; Stein 2003; Walker 2003). Much anxiety and distress may stem from uncertainty of the future and the prospective outcomes of the illness (Pesshkin, Streissand et al. 2001; USAID 2004).

Many uncles and aunts are also dying from AIDS leading to reduced contact with the extended family and greater isolation. In this context, caring and other responsibilities become overwhelmingly daunting (UNAIDS., UNICEF. et al. 2004; Umerah-Udezulu and Williams 2005; UNAIDS 2006). The realisation of weaknesses and limitations as to what the can child do without help may cause a great deal of psychosocial distress (Conger, Conger et al. 1993; Cree, Kay et al. 2006).

In many African countries, little attention is paid to grieving children. Children are unable to talk about their parents' death and, when they do express their feelings, nobody is there to listen to them and to help them through the process (Dearden and Becker 1997; Sevellen, Sarna et al. 1998; Billing, Ehrle et al. 2002; Stein 2003; Walker 2003; Vass 2003; Voges and Romney 2003). The reasons are many and almost certainly vary from region to region due to differences in local beliefs and customs. One perverse reason is the desire of relatives to try and protect children from the pains of enduring the loss. Often the cause is mere neglect of children's needs by relatives who become too wrapped up in their own grief to notice and fail to involve children in rites and rituals associated with the death (Corak 1999; Kendler, Sheth et al. 2002; McCausland and Pakenham 2003; Matshalaga 2004). Children in Brazil who were told and participated in burial ceremonies of their parents were found to have shorter grieving periods (Abadia-Barrero 2002; Abebe and Aase 2007).

When children are placed with caregivers who do not understand their need to be loved and protected as their parents would have done, a deep-seated sadness may develop (Chatterji, Dougherty et al. 2005; Horizons Report 2005). Sarafino (1998) describes a young Zimbabwean boy who was deeply distressed by the fact that his father took his mother to their rural home where she died and he never got the chance

to see where she was buried nor to say his goodbye. His desire was to visit her grave and see for himself that she had actually died (Sarafino 1998; Horizons Report 2005; Gilborn, Apicella et al. 2006; Abebe and Aase 2007).

The presence and encouragement of parents gives children a sense of mastery, control, self-esteem, cohesion, validation, affirmation, idealisation and admiration (Fields and Smith 1998; Corak 1999; Fivush, Bohanek et al. 2003). Children are spurred on by the praise they receive from their parents. The loss of parents could stir up anger especially for adolescents if they feel abandoned and left alone by their parents in the hour of their greatest need as they grapple with the problems of progressing from adolescence into adulthood (Shaheen and Gehman 1998; Desmond and Kvalsvig 2005). When parents die, they die with the good things they used to give and provide to their children such as love and nurturing, care, protection, provision of material needs, friendships and role models (Barrera and Garrison-Jones 1992; McBride.M.V., Bynum et al. 2001; Feinberg 2002).

Relocation to unfamiliar surroundings

Relocation to a different area and/or household takes children away from familiar environments and social networks (Cherlin 1999; Nyambedha, Wandibba et al. 2003; Ansell and Young 2004a). Fear of what the new residence may hold can be distressing for children as they anticipate what to make of new relations and have to answer prying questions about their family and personal life. Children are also worried and fearful when they think of the kind of reception they will receive from their new hosts including whether they will be accepted by the new family. A particular concern may

be the competition they will face with the new caregivers' own children for love, attention and material support (Corak 1999; Bolton and Wilk 2004).

A study in Kenya found that children who had migrated to new households from households that had experienced a death or illness were more likely to miss school than those who remained in the same household (UNAIDS., UNICEF. et al. 2004; Yamano and Jayne 2004). This may cause distress to both the children and parents (Barnett and Blaikie 1992).

Childcare arrangements that see children living with carers who neglect them or in institutions where they are starved of information about their family backgrounds can lead to a poor sense of identity (Dearden and Becker 1997; Heckman, Somlai et al. 1998). In Ethiopia, an attempt was made to integrate orphans from institutions into the community by sending them to attend local schools. However, the children were mocked and had to be withdrawn and an NGO was drafted in to provide on-site education (Sarafino 1998)

<u>Increased poverty leading to basic needs not being met</u>

Orphans may be more likely than other children to experience living in extreme poverty for a number of reasons. These include losses of household income when a parent becomes sick and has to give up his or her job, erosion of household income and savings due to high healthcare and funeral costs, and relocation from towns to rural villages as families seek to cut costs (Mukiza-Gapere and Ntozi 1995; Foster 2002; Makame, Ani et al. 2002; Mahati, Chandiwana et al. 2006; Robson, Ansell et al. 2006).

Greater exposure to extreme poverty may, in turn, lead to increased deprivation and psychosocial distress (Richter 2004a; Cohen 2006; Howard, Phillips et al. 2006; Abebe and Aase 2007). HIV/AIDS-related poverty often leaves children with no social, economic or emotional security (Dearden and Becker 1997; Daniel 2005; Dhingra and Arora 2005). For example, a study in Rwanda by Veale et al (2001) found that maternal orphans had more difficulty in accessing food, clothing, shelter, medicines, affection and other needs especially psychological needs.

Not receiving the same treatment as other children may, in itself, result in psychosocial distress. Children may feel that their needs are not being attended to and that they are not being noticed (Hecht and Hansen 2001; Schumacher, Smith-Slep et al. 2001; Stein 2003; Subbarao and Coury 2003). In a REPSSI (2004) study in Zimbabwe, 38% of the children reported being abandoned by family and friends in times of need. Children may be concerned that missing out on education and services that are provided through schools could jeopardise their adult life-chances. The mere thought of not having a means of earning a living and of having to try to eke out a living for themselves under such circumstances is likely to be a very distressing experience (Nampanya-Serpell 2000; Pankepp 2001). Reductions and changes in diet can also cause emotional and physical distress as children have to come cope with the changes.

In addition, not having appropriate clothing or equipment and the shame and stigma attached may prevent children from attending school or social functions and lead to social isolation (Richter, Foster et al. 2006; Robson, Ansell et al. 2006).

Stress associated with being a caregiver when still a child

The roles and responsibilities associated with being a caregiver can endanger children's physical health and mental development (Reyes, Perez-Cuevas et al. 2004; Desmond and Kvalsvig 2005). Not being able to attend school can damage mental development and, together with the ties of needing to be at home, can limit opportunities for socialisation. With most of their time being swallowed up by adult roles, children are left with little time for developmental play with peers or for building relationships (London, Leblanc et al. 1998; Stein 2003). Worries about not being equipped to provide good quality care and about one's own risk of infection can lead to psychosocial distress.

Stigma, discrimination and reduced socialisation

Orphaned children are also at risk of being stigmatised or discriminated against for being associated with parents or relatives who died of AIDS or are living with HIV infection (Kaliati, Madzinga et al. 2002; Walker 2002; Mturi, Mazibuko et al. 2003; Stein 2003; Walker 2003). In a study in Rwanda, some children reported being stigmatised and discriminated against by their extended families, community and formal structures because "their parents were linked to the disease" (Horizons Report 2005).

With AIDS still being a mysterious disease, associated with promiscuous behaviour and shame, children who lose parents experience a lingering sense of guilt, especially if they suspect their parents may have become infected while trying to fend for them (Lau, Tsui et al. 2003; Lindblade, Odhiambo et al. 2003; Safman 2004).

The stigma and discrimination associated with AIDS may lead to children being shunned by other children, relatives and the community. This has serious implications for such children's social networking skills (Sarafino 1998). They may have no self-esteem and confidence when they come into contact with others and may become withdrawn (Pankepp 2001). Studies have highlighted cases in which children take measures to save themselves from being taunted and shunned by teachers and other children at school. These measures include isolating themselves from peers and school environments where stigma and discrimination may be greatest (Foster, Makufa et al. 1997; Stein 2003; Hamra, Ross et al. 2005; Dias, Matos et al. 2006; Ostrom, Serovich et al. 2006)

In a study of children in HIV-affected families in Scotland by Cree et al (2006), few children reported enjoying school and doing well despite their regarding school as their only place of refuge from the disorderly home life and the burden of care. Children in the same study reported distancing themselves from friends because they were worried they would be tempted to reveal family secrets. They had been told to keep their parents' HIV status secret because the parents were worried they would be stigmatised and discriminated against if somebody knew. Class activities such as HIV discussion invoked reluctance to participate for fear that it would be noticed that they knew a lot about HIV; thereby raising questions from teachers and other children (Meads and Nouwen 2005; Ostrom, Serovich et al. 2006). Lessons on prevention were received with ill-feeling because they made children feel their parents were foolish and had indulged in risky behaviour which had led to their becoming infected (Gregson, Nyamukapa et al. 2000; McCausland and Pakenham 2003; Cree, Kay et al. 2006; Gomo, Rusakaniko et al. 2006).

"At times we have no food at home for lunch or supper. At times I avoid playing with those who have food at school fearing they may think I am in need always. I always feel this way."

11 year-old female orphan whose parent died of AIDS

Unite for Children Against AIDS Campaign-Harare

Lack of interaction with others and limited participation in family and community activities robs children of the chance to develop a sense of identity, self-esteem and confidence, and to acquire inter-generational skills such as survival skills, parenting, emotion regulation, problem sharing and solving, social networking and, most important of all, formation of life-long associations (Howe 1996; Fields and Smith 1998; Fivush, Bohanek et al. 2003; Richter 2004a; Abebe and Aase 2007). The reduction in time devoted to them, coupled with feelings of isolation and deprivation of parental attention, may lead to children's developing withdrawal symptoms (Bowlby 1998; Sarafino 1998; Corak 1999; Makame, Ani et al. 2002).

Exploitation and abuse

A life of poverty can make children vulnerable to exploitation and abuse as they take up roles which are inappropriate for their age (Nkomo and Freeman 2006; Robson, Ansell et al. 2006).

Without parental or guardian protection children may be subjected to all forms of exploitation or abuse. Studies in Zimbabwe and South Africa found children working long hours for very low pay and under dehumanising conditions and without proper

protection (Mawoneke, Sexton et al. 2001; Walker 2003; Chinouya, Musoro et al. 2004; Robson 2004). In Sierra Leone and Uganda, orphaned children were abducted and incorporated as fighters while some were forced to work in mines, on farms and as maids for as long 20 hours without rest (MacMullin and Loughry 2004). These inappropriate forms of work are tiring, stressing and interfere with children's development, behaviour and health (Corak 1999; Kendler, Sheth et al. 2002).

Poverty, coupled with little knowledge of how to meet their basic needs and lack of parental or guardian protection, leaves orphans vulnerable to sexual predators who may lure them and promise them help in the form of money or goodies (Birdthistle, Floyd et al. 2008). Parental loss or caregiver neglect can also leave children with nobody to check on whether they are eating well or whether their physical well-being is not endangered by the inappropriate roles they perform.

Sacrifices orphaned children make for others such as staying at home from school to help with the care of a sick parent or in foregoing meals so that siblings could have something to eat may also have grave consequences for their future well-being (Mutangadura 2000; McBride, Bynum et al. 2001; Mturi, Mazibuko et al. 2003).

1.6.2.3 Factors Moderating the Impact of Orphanhood on Children's Psychosocial Well-Being

Caution must be taken in interpreting findings such as those described above on the influence of life events as deterministic factors for psychosocial distress at the population level. This is because clinical samples do not take account of the large

numbers of children who are traumatised by the effects of AIDS mortality but grow up to be well-functioning adults (Bowlby 1998; Boyden 2003).

Whether or not an orphaned child suffers severe psychosocial distress will depend on his or her individual characteristics as identified in section 1.6.1 above and the particular circumstances they encounter. The latter will often differ according to the particular form (and sequence) of orphanhood they experience (Levine 1995; Atwine, Cantor-Graae et al. 2005). No previous studies are known in which levels of psychosocial distress have been compared between children experiencing different forms of orphanhood. However, differences have been found in factors such as relocation (Nyambedha, Wandibba et al. 2003; Ansell and Young 2004a), care arrangements (Hunter 2000; Mawoneke, Sexton et al. 2001; Monasch and Boerma 2004), separation from siblings (Nyambedha, Otieno et al. 2001; Nyambedha, Wandibba et al. 2003), exposure to poverty (Hunter 1990) reduced consumption (Nalugoda, Gray et al. 2004), and educational opportunities (Ainsworth, Beegle et al. 2002; Nyamukapa, Gregson et al. 2003; Case and Ardintion 2005; Nyamukapa and Gregson 2005) that are posited in the theoretical framework (s1.7) to mediate the relationship between orphanhood and psychosocial distress. Thus, psychosocial distress in orphans may also differ according to the form of orphanhood experienced.

1.6.2.4 Consequences of Psychosocial Distress in Childhood

The consequences of psychosocial distress in children differ according to age. As noted already, in young children, psychosocial distress may give rise to constant crying, clinging behaviour, sleeping difficulties and toilet problems. If a child with such symptoms is cared for by a caregiver who lacks knowledge on child development

and behaviour problems, the child may suffer physical abused which will worsen the situation.

In older children, the effects and outcomes of psychosocial distress are thought to differ according to their developmental age and children's agency (McBride-Murray, Bynum et al. 2001; Johnson-Garner and Meyers 2003; Boyden 2003). Depression may affect children's social life, school work and behaviour. Children and adolescents suffering from psychosocial distress have been known to develop negative defensive mechanisms such as becoming withdrawn, showing disregard for social norms and mores, engaging in alcohol and substance abuse (Schumacher, Smith-Slep et al. 2001; Deptula and Cohen 2004) and engaging in aggressive behaviour towards family members or peers and in criminal activity (Dura and Stukenberg 1991; Little and Garbet 2000; Kendler, Sheth et al. 2002; Pakaslathi 2000).

Adults who experience depression have also been found to be aggressive or to lose control of family, work and social responsibilities. Some become abusive, turn to drink, self-harm and even attempt suicide (Corak 1999; Pfeffer 2000; Hussong and Chassin 2004). Severe anxiety and depression can also affect how people communicate with others, with some deciding not trust or seek help from anybody. Lost self-esteem and confidence can make convincing them that they need help very difficult (Dowdney 2000; Pfeffer 2000). Marital instability and loss of employment have been found to be common amongst adults who suffer from depression (McLoyd 1990; O'Sullivan 2004; Shaheen and Gehman 1998).

1.6.2.5 Conclusion

Three decades into the epidemic, huge numbers of children have been orphaned, yet very little is known about the welfare consequences of being an orphan in the countries in Africa hardest hit by HIV/AIDS and where poverty is widespread, health services are deteriorating, and human capital is being eroded (Ainsworth 1996; Ainsworth and Filmer 2002). Orphaned children face relocation, dropping out of school, and taking on adult responsibilities for which they are not prepared (Foster and Williamson 2000; Nyambedha, Wandibba et al. 2003; Ansell and Young 2004a). Because the epidemic has both health and social implications, children are being left to cope with a lot of life-changing experiences (Armistead, Tannenbaum et al. 2001; Andrews, Skinner et al. 2006; Ansell, Huber et al. 2006).

Understanding children's experiences and how these experiences affect their psychosocial well-being is vital if future disasters are to be averted. Today's children are tomorrow's generation and future leaders and failing to act now means we could have failed generations to come (Foster 2002; Gomo, Rusakaniko et al. 2006; Mahati, Chandiwana et al. 2006; Munyati, Rusakaniko et al. 2006; Rusakaniko, Chingono et al. 2006; Skinner, Davids et al. 2006).

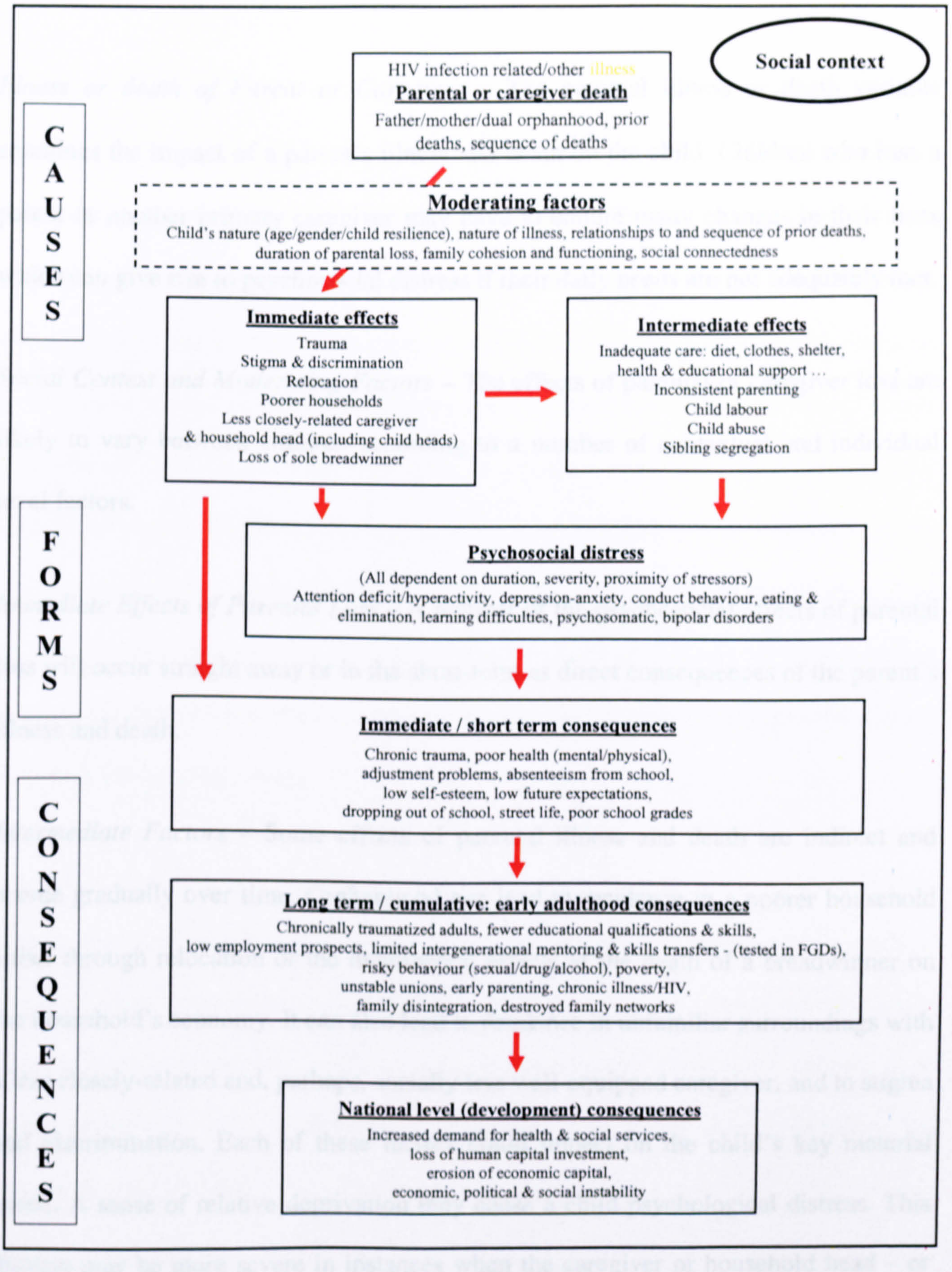
1.7 Theoretical Framework

The focus of this study therefore is on psychosocial distress amongst children experiencing the death of parents due to HIV/AIDS or other causes. The size and strength of statistical associations between orphanhood and psychosocial distress will be measured and possible causal pathways will be evaluated. The consequences of

heightened psychosocial distress during childhood, adolescence and early adulthood will be assessed including factors that might lead to increased exposure to HIV infection.

The assessment will be made using reports given by children and their caregivers in Zimbabwe in surveys on their psychosocial well-being. To guide this assessment, a theoretical framework was developed based on the literature reviewed above (Figure 1.2).

Figure 1.2 Theoretical Frameworks on the Causes and Consequences of Psychosocial Distress amongst Orphans in the Context of a Large-Scale HIV/AIDS Epidemic



The framework was designed to help identify and improve understanding of associations between HIV-associated parental ill-health and death, psychosocial distress that may manifest in children affected by HIV/AIDS, and it's developmental

and adult life-consequences. It can be adapted and applied as seen fit to accommodate research questions and the context of the research environment.

Illness or death of Parent or Caregiver – The parental illness or death variable examines the impact of a parent's illness and death on the child. Children who lose a parent or another primary caregiver may have to endure many changes in their lives which can give rise to psychosocial distress if their daily needs are not adequately met.

Social Context and Moderating Factors – The effects of parental or caregiver loss are likely to vary between children according to a number of contextual and individual level factors.

Immediate Effects of Parental Loss – A number of the psychosocial effects of parental loss will occur straight away or in the short-term as direct consequences of the parent's illness and death.

Internediate Factors – Some effects of parental illness and death are indirect and accrue gradually over time. Orphanhood can lead to residence in a poorer household either through relocation or the incremental effects of the death of a breadwinner on the household's economy. It can also lead to residence in unfamiliar surroundings with a less closely-related and, perhaps, socially less well-equipped caregiver, and to stigma and discrimination. Each of these factors could impact on the child's key material needs. A sense of relative deprivation may cause a child psychological distress. This distress may be more severe in instances when the caregiver or household head – or his wife, in the case of maternal orphans living with their surviving fathers - has children of his or her own who the child perceives to receive preferential treatment. In addition, these changed household circumstances may increase exposure to child

labour and other forms of child abuse which can also result in psychological imbalance.

Psychosocial Distress – Parental illness or loss can result in a number of the forms of psychosocial distress reviewed above such as attention deficit, anxiety and depression, conduct behaviour, eating and elimination, learning difficulties, post traumatic stress, psychosomatic and bipolar disorders. However, data were only available on depression and anxiety in the studies carried out in this thesis. Diagnostics from the literature review and a Mental Health Checklist developed in Zimbabwe, from the World Health Organisation Self Report Questionnaire, to measure depression and anxiety, were adapted to assess the dimensions of psychosocial well-being and imbalance in the children under study. In each case, the degree of imbalance caused by the immediate or intermediate "mediating" effects of illness or death of a parent or caregiver (see above) will depend upon their proximity, severity, and duration and the social context and other moderating factors.

Immediate and Short-Term Consequences of Psychological Distress – Psychological distress resulting from parental and caregiver loss could have a number of immediate and short-term consequences during the course of childhood. These could include chronic trauma, adjustment problems, low self-esteem, low future expectations, poor health (mental/physical), absenteeism from school, poor school grades, dropping out of school, and street-life.

Cumulative and Adult Life-Course Consequences – The effects of psychological and other problems faced due to orphanhood and caregiver loss experienced in early childhood may accumulate as children grow older. Furthermore, these accumulated

emotional and psychological scars may affect the opportunities an individual is able to access during adulthood and his or her abilities to capitalise on these opportunities.

Consequences for National Development – Psychological problems faced by large and growing numbers of children due to HIV/AIDS-associated adult deaths are liable to increase demand for health and social services and cause losses in human capital investment, erosion of economic capital, and economic, political and social instability. Each of these could have important consequences for national development in countries with major HIV epidemics.

1.8 Structure of the Thesis

The remainder of this thesis describes studies undertaken to evaluate the theoretical framework using empirical data from Zimbabwe. Since no single data source had data which could be used to test all the hypothesised relationships implicit in the framework, three different sources were used. These were: (i) the Government of Zimbabwe / UNICEF sponsored Survey on Orphans and Other Vulnerable Children in Rural and Urban High Density Zimbabwe 2004/2005; (ii) the Manicaland Child Cohort Study; and (iii) the population-based open cohort Manicaland HIV/STD Prevention Study. The chapters that follow address different aspects of the data collection and data analysis procedures, the statistical and qualitative results, and the interpretation of these results. The following provides a brief outline of the content of these chapters:

Chapter 2 – this chapter gives a detailed description of the study sites, the study designs, and the data collection methods used in the different data sources. The chapter also provides brief descriptions of the analyses undertaken. More detailed description

of the statistical and other methods used in the data analysis and of the results of these analyses are described separately in Chapters 3-6.

Chapter 3 – this chapter presents the data analysis methods and results on national estimates of psychosocial distress in orphaned and vulnerable children obtained from testing aspects of the new theoretical framework using data from the Government of Zimbabwe / UNICEF sponsored Survey on Orphans and Other Vulnerable Children in Rural and Urban High Density Zimbabwe 2004/2005 (hereinafter referred to as the Zimbabwe OVC Survey 2004/05), a large-scale national cross-sectional survey.

Chapter 4 – this chapter is the central focus of the thesis. The chapter presents the methods and results from analyses done to examine and explore the causes of psychosocial distress in children using detailed data collected in an in-depth study in Manicaland Child Cohort Study in eastern Zimbabwe. The data were used to further evaluate hypotheses derived from the theoretical framework on the determinants and causal pathways of psychosocial distress and to explore the association between orphanhood and psychosocial distress experienced during childhood.

Chapter 5 – this chapter presents analyses and results on the behavioural consequences in adolescence of psychosocial distress experienced in childhood. Cross-sectional and prospective data from the Manicaland Child Cohort Study (MCCS) were used to test the hypothesised links between childhood psychosocial distress and risk behaviour among adolescents aged 12-18 years of age. First, cross-sectional data from the first round of the MCCS were used to test for statistical associations between orphanhood and psychosocial distress and selected risk behaviours amongst

adolescents. Second, prospective data from the first and third and final rounds of the MCCS were used to investigate patterns of causation.

Chapter 6 – this chapter focuses on adult outcomes and the effects of psychosocial distress experienced in childhood on these outcomes. Outcomes examined included educational attainment, employment, sexual debut, substance abuse, marital stability and general health outcomes.

Chapter 7 – in this final chapter, the findings from the analyses of data on the different aspects of the theoretical framework are summarised and, where there are overlaps, are compared for the different data sources. The benefits and limitations of the different data sources and data analyses conducted are discussed. The main results are considered in the light of findings from other studies and policy implications and areas for further research are identified.

1.9 Contribution to Thesis

I conducted the literature review and developed the theoretical framework for the study with guidance from my academic supervisors. I designed the Manicaland Child Cohort Study including the questionnaires and other data collection tools with help from Dr Gregson. I personally oversaw the recruitment and training of the enumerators and the supervision of the data collection and processing activities including the data quality checks and other field logistics. The Survey on Orphans and Other Vulnerable Children in Rural and Urban High Density Zimbabwe 2004/2005 was designed and conducted by others with the cleaned data set being made available to me for analysis. I designed and conducted the qualitative studies included in the thesis.

All the data analyses and the write-up and compilation of the thesis were done by the student under the guidance and supervision of Dr S. Gregson, Dr M. Jukes and Dr B. Lopman. Assistance was also sought from other work and departmental colleagues during the course of the PhD training.

Chapter 2

Data: Survey Design and Methods

2.1 Introduction

In this chapter, we describe the data used to test the theoretical framework on orphanhood and psychosocial distress developed in Chapter 1. The different data sources and methods of data collection are described. The statistical and other methods used in the data analysis and the results of these analyses are described separately in Chapters 3-6.

2.2 Data Sources

Three quantitative data sets were used. The first data set is the Government of Zimbabwe / UNICEF sponsored Survey on Orphans and Other Vulnerable Children in Rural and Urban High Density Zimbabwe 2004/2005 (hereinafter referred to as the Zimbabwe OVC Survey 2004/05) which was used for the national level analyses of orphanhood and psychosocial distress presented in Chapter 3. The second data set was that collected in the Manicaland Child Cohort Study (MCCS). These data were used for the more in-depth analysis of the causes and consequences of psychosocial distress during childhood and adolescence presented in Chapters 4 and 5. The final data set was taken from the third round of the Manicaland HIV/STD Prevention Study and was used to investigate adult outcomes resulting from orphanhood in childhood in Chapter 6. Data from the household census and verbal autopsy interviews conducted in the second round of this study were also used as the sampling frame for the MCCS.

The study designs and data collection procedures used in these surveys are described in the following sections. In addition, new qualitative data were collected for the specific purposes of the student's PhD project. The methods used to collect these data are described at the end of this chapter.

2.3 The Zimbabwe OVC Survey 2004/05

The aims of this survey were to improve understanding of the circumstances of orphans and vulnerable children and to collect baseline values for outcome indicators of the Government of Zimbabwe / UNICEF OVC Country Programme 2005-2006. The scope of the survey was broad - covering most aspects of children's well-being - and a report reviewing the descriptive findings was produced and distributed by UNICEF (UNICEF 2005). However, the student was requested to carry out more in-depth analyses of the data on orphanhood and psychosocial distress by UNICEF-Zimbabwe and its local partners. This work was done between August and September 2005.

2.3.1 Survey Design and Organisation

The design of the Zimbabwe OVC Survey 2004/05 was based on international guidelines for OVC research and is detailed in the final report (UNICEF 2005). Data collection was carried out between November and December 2004 by UNICEF-Zimbabwe in collaboration with the Zimbabwean Ministry of Public Service Labour and Social Welfare.

The survey was done in 21 purposively-selected districts. 17 were chosen because they were to be covered by UNICEF-Zimbabwe and the Government of Zimbabwe Country Programmes. These were Binga, Buhera, Bulawayo, Bulilima, Chegutu, Chipinge, Gokwe North, Harare, Hurungwe, Hwange, Mangwe, Mt. Darwin, Mudzi, Rushinga, Tsholotsho, Zaka, and Zvishavane. The remaining 4 districts were selected to provide information for the European Union funded Educational Transition and Recovery Project (ETRP) which was being implemented in these areas – these districts were Beitbridge, Bindura, Chirumaanzi, and Mwenezi. The districts chosen for both the UNICEF-Zimbabwe / Government of Zimbabwe Country Programme and the European Union ETRP programme were selected based on poverty and education levels.

Figure 2.1 OVC Baseline Survey Districts



Of the 21 sampled districts, 19 were rural and two were urban high-density districts in the two major cities of the country - Harare and Bulawayo. The enumeration areas

covered included communal and newly resettled subsistence farming areas, large commercial estates, small farms and small holdings. In three of the districts (Bindura, Zaka and Binga), a town, a growth point or a mining centre were included in the sample.

In each district, 8 census enumeration areas were selected according to probability proportional to size from which 5 were purposively selected to ensure representative geographical coverage. In Zimbabwe, census enumeration areas are delineated to contain around 100 households. Thus, approximately 500 eligible households were expected to be found in each district. Assuming an average of 0.7 orphans per household, it was expected that approximately 350 orphans would be enumerated in each district.

The survey was done in two parts. In an initial household survey, data were collected on the general demographic, socio-economic and health status of all household members. Two children (one male and one female) aged 12-17 years were selected at random from each household and asked questions relating to psychosocial distress and sexual behaviour. Up to three visits were made for each of the two interviews (household and individual) so as to maximise participation. Questionnaires were translated into the two major local languages (Shona and Ndebele) and back-translated into English and checked to ensure the accuracy of the original translation. Given the sensitive nature of some of the questions, children were interviewed on their own by same-sex enumerators.

Orphans status was categorized based on the survival status of the father and mother of the child with those who were aged 12-17 classified as children and are the central focus of analysis of the Zimbabwe OVC Survey 2004/05. The term "paternal orphans"

was used to refer to those who had lost their fathers only, while the term "maternal orphans" was used to describe those who had lost their mothers only and "double orphans" for those who had lost both parents. Vulnerable children were defined as non-orphaned children living in a household with a death in the last 12 months or one with a chronically ill adult(s). In a recent study in eastern Zimbabwe, 82% of orphaned children had had a parent with HIV infection (Watts, Lopman et al. 2004).

2.3.2 Data Collection Instruments

A set of two questionnaires was used to collect the data from the study participants. The first was the household based questionnaire (HHQ) which was used to gather general household information pertaining to the demographic, socio-economic and health status of household members and included details of household location, information on household members inter-relationships, gender, age, general health in last 12 months, marital status, educational attainment, literacy and language used. For those aged 0-17 years, data on parental survival status and (where appropriate) the year of death was recorded. For those whose parents were still alive, data on their parents general health in the last 3 months, their residence and, for those not resident, reason for not being in the household and one of the options given was whether they were ill. The household questionnaire was also used to gather information on whether the births of children aged 0-17 years had been registered and on material possessions such as blankets, shoes, clothing, education level. For those currently out of school, the reason for their dropping out was collected. The household questionnaire schedule also included questions on the source of drinking water and possession of immovable and movable property such as toilet facilities, electricity, wheelbarrows, scotch carts etc. Information on support availed to the household in the last 12 months by type (including educational assistance) and who the recipients and providers were was also

gathered. General health information for those aged 0 -17 years and health records including vaccination records for 0-4 year-olds were also collected from the study population.

The Female and Male Questionnaire Modules for those aged 12-17 years and for 18-24 year-olds selected for the survey gathered information on HIV/AIDS awareness, age at sexual debut, partner information and sexual activities including methods of protection, psychological health issues based on questions on anxiety and depression, social connectedness and support from the closest adult.

Enumerators were recruited from local people in the districts covered by the survey and provided with training on data collection procedures and rapport building.

2.3.3 Ethical Review

The Zimbabwe OVC Survey 2004/05 was sanctioned by participating Ministries – namely, the Ministry of Public Service Labour and Social Welfare, Central Statistics Office of Zimbabwe, Ministry of Local Government, National AIDS Action Committee, National AIDS Council, Ministry of Educations and Culture, Sports and Culture and Ministry of Higher and Tertiary Education - and by the local UNAIDS and UNICEF offices. Also local government and community committees gave their blessings for the survey to be carried out in their areas.

2.4 Manicaland Child Cohort Study

2.4.1 Background

In previous studies in Manicaland, evidence had been found for increases in adult mortality and consequent rises in the prevalence of orphanhood due to the HIV/AIDS epidemic (Gregson, Garnett et al. 1994; Gregson, Anderson et al 1997). These findings led the student to conduct analyses of quantitative data from the Manicaland HIV/STD Prevention Study on childcare arrangements for orphans and on the effects of parental loss on primary school completion. The results showed that children whose mothers had died – but not paternal orphans - were at increased risk of failing to complete primary school education. In a Wellcome Trust Masters Research Training Fellowship research project, the student carried out qualitative investigations in Manicaland to identify the likely underlying causes of the observed patterns (Nyamukapa and Gregson 2005).

This work, in turn, led to the establishment of the Manicaland Child Cohort Survey (MCCS). The aims of the MCCS were to assess the socio-demographic and family background and household circumstances of orphaned children, to describe the changes taking place in extended family and community childcare arrangements in the face of the ongoing HIV/AIDS epidemic, and to assess the effects and cumulative impact of orphan experiences in relation to children's well-being and prospective adult life chances.

2.4.2 Survey Sites

The Manicaland HIV/STD Prevention Study is being conducted in 12 locations in Zimbabwe's eastern province of Manicaland close to the border with Mozambique (Figure 2.1a). Further details of the design of this study are given in section 2.5 below. The MCCS was carried out in the 8 sites that are visited last in each round of the main Manicaland Study (Figure 2.1b). These were small towns (2), estates (2), roadside trading settlements (2) and subsistence farming areas (2). The stratification of sites meant that it was possible to assess whether child and orphan experiences, community childcare arrangements, cumulative effects of orphan experience etc. differed by geographical location.

Figure 2.1a Manicaland HIV/STD Prevention Project Study Location

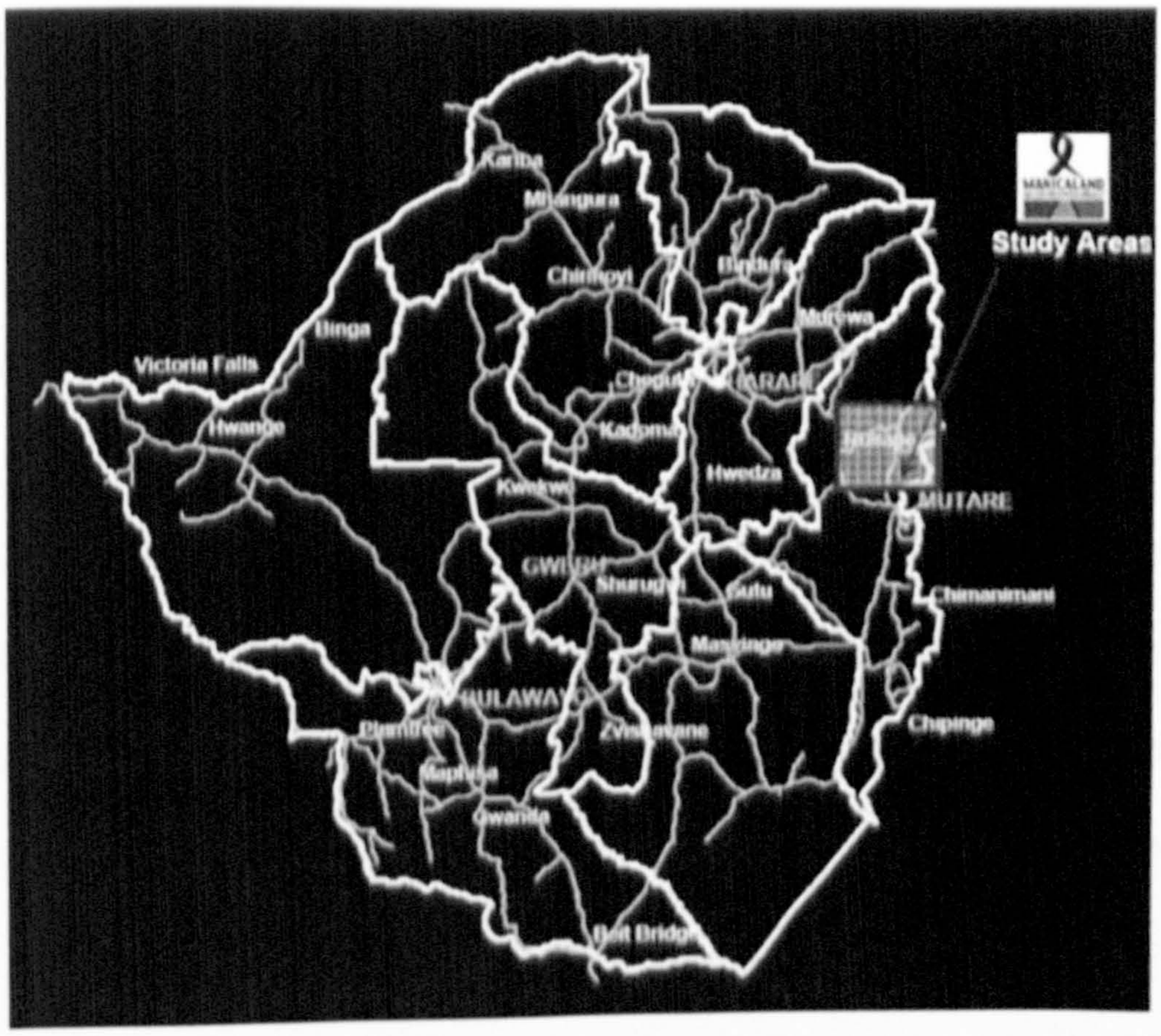
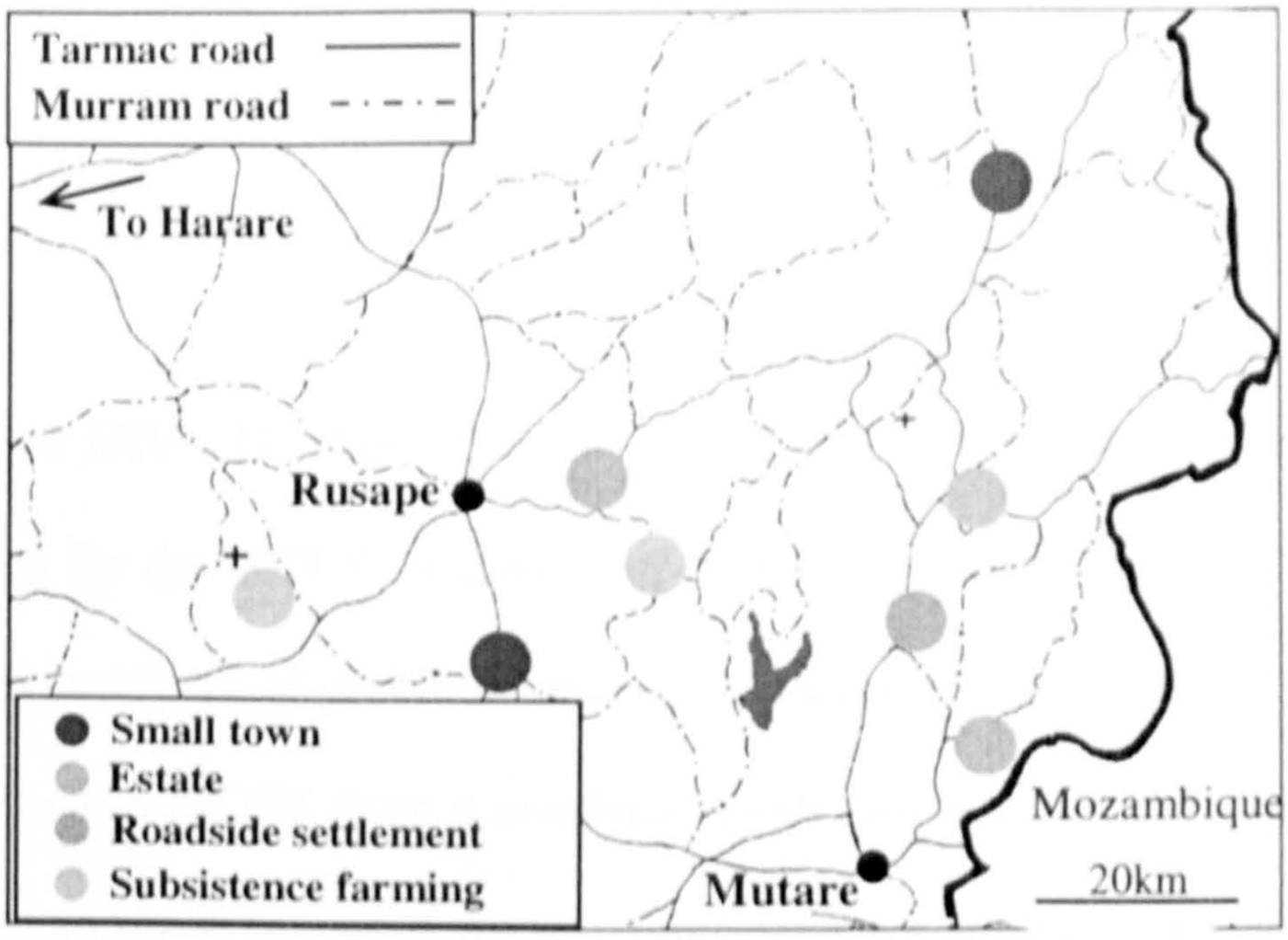


Figure 2.1b Manicaland Child Cohort Study Sites



The principal means of survival differ by location. In the small towns, some caregivers are employed in the small industrial areas or in the service sectors while others sell agricultural produce. Those who own accommodation sometimes rent out rooms to earn money.

In the estates, the primary means of survival is wage income. In addition, some people carry out small informal trading activities such as vegetable vending, running small tuck shops and selling illegal beer. A few families in the roadside trading settlements also run small businesses such as grocery shops, grinding mills, hair salons, eating houses etc. Others own small-scale farms or plots on which they grow agricultural produce for sale at the trading centres or by the roadside to passing motorists or government depots in the area. Those who live in the subsistence farming areas survive on their varied agricultural products or small piece or service jobs that are available locally and, for some, remittances from husbands or wives or relatives working in towns and estates.

A small number of women in all sites are engaged in disguised commercial sex work with this being more common in the small towns, estates and roadside settlements (Lewis, Garnett et al. 2005).

2.4.3 Survey Design

The Manicaland HIV/STD Prevention Study (the Manicaland Study) was used as the sampling frame for the MCCS. A sample of children stratified by initial orphan status (roughly equal numbers of paternal, maternal and double orphans and non-orphans) was selected for the MCCS from a combination of two sources: (1) listings of newly orphaned children made in verbal autopsy interviews for adults interviewed in the first round of the Manicaland Study (1998-2000) but reported as being deceased at the time of the second round (2001-2003); and (2) listings of children by parental survival status made in the household census conducted for the second round of the Manicaland Study.

First, all surviving newly orphaned children identified in the verbal autopsy interviews were selected. Then sampling fractions of children by orphan status enumerated in the household census (see sections 2.5.4 and 2.5.5 below) were calculated to provide roughly equal numbers of paternal, maternal and double orphans and non-orphans. In total, 10,308 children were enumerated in this census (Watts, Lopman et al. 2004). Based on the numbers of children in each orphan category identified in the verbal autopsy interviews and in the household census listings, it was estimated that 1/50 non-orphans, 1/5 paternal orphans and all maternal and double orphans would need to be selected for the survey in addition to those identified in the verbal autopsy interviews. The smaller numbers of maternal and double orphans identified in the verbal autopsy interviews were probably due to lower mortality and younger ages of

death amongst women (Watts, Lopman et al. 2004). Using these sampling fractions, children in each orphan category were selected at random for the survey (i.e. for non-orphans and paternal orphans) from the household census listings.

Initially, 1,430 children aged 0-18 years at last birthday (278 non-orphans, 348 paternal orphans, 370 maternal orphans and 434 double orphans) and their caregivers were identified and selected from the household listings and verbal autopsy questionnaires completed during the second round of the Manicaland Study. One year later in each site (December 2002 to March 2004), a first follow-up survey (round one of the MCCS) of these children and their caregivers was conducted. In total, 1,003 children (70% of the original sample of 1,430 children) were interviewed (248 maternal, 279 double, 222 non-orphans and 254 paternal orphans). These children formed the sample for the closed cohort study and the original intention was that they be followed up on two further occasions at six monthly intervals.

In practice, because of project-related logistical problems and difficulties associated with the political atmosphere prevailing in Zimbabwe at time of the project, the inter-survey intervals varied with some children being followed up at exactly six months while others were interviewed two or three months later. In order to reduce the length of time between the inter-survey dates, the team was divided into two, with one group of interviewers finishing the one survey round, while the second group went back to start the next survey. Thus, round two was done between June 2003 and October 2004 and round three was done from January 2004 to March 2005. In each survey round, where children had migrated to another household, attempts were made to trace them to these new households.

The numbers of children re-interviewed in the second and third rounds of the MCCS were 866 (86% of those seen in round one; 199 non-orphans, 215 paternal orphans, 226 maternal orphans and 226 double orphans) and 779 (90% of those seen in round two), respectively.

2.4.4 Data Collection Instruments

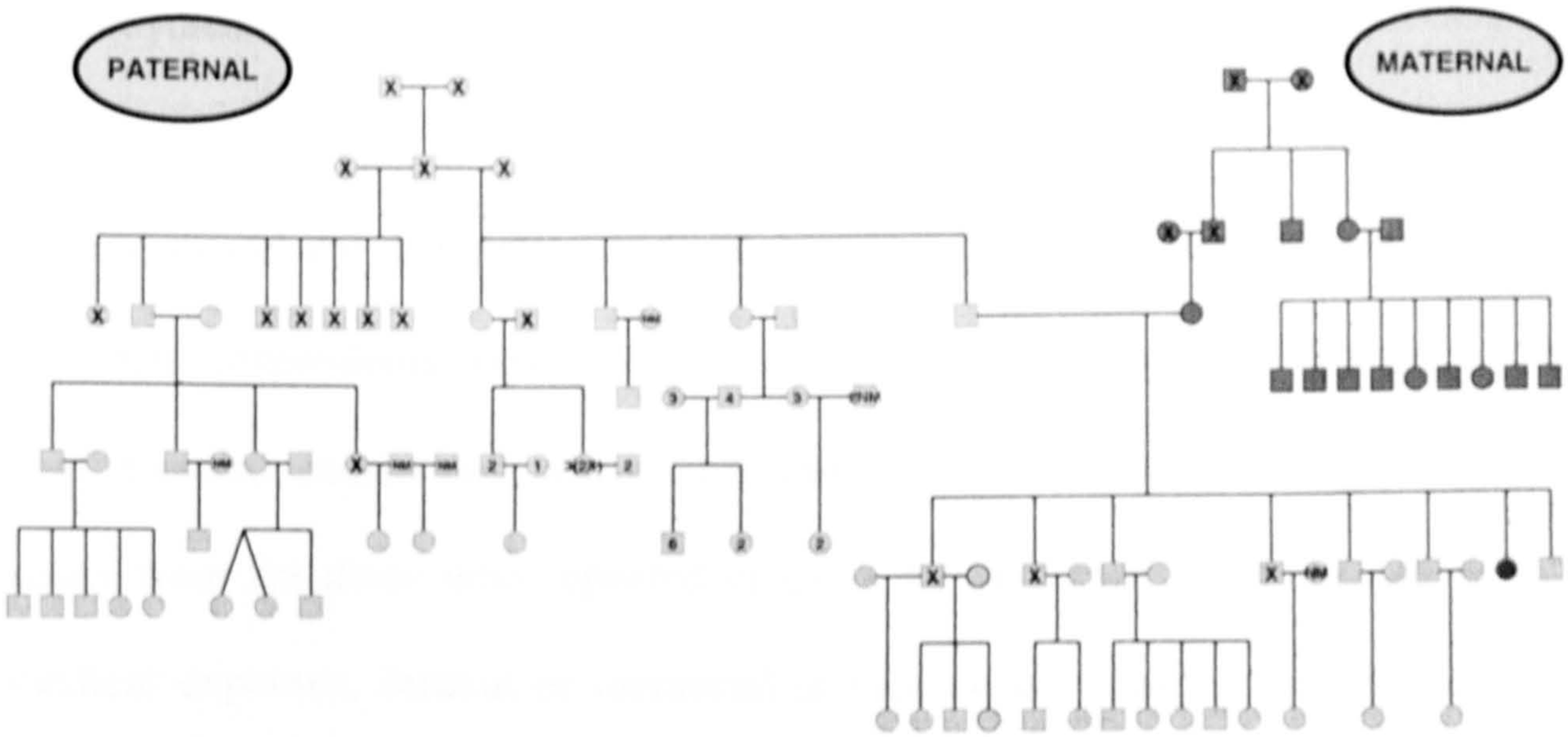
Household questionnaire

Information obtained in an earlier Wellcome Trust Masters Research Training Fellowship project done between November and June 2003 provided the basis for the design of the questionnaires.

To maximise participation, up to three attempts were made to visit each household. In total 953 households were included in the study of which 429 (45%) contained more than one participating child.

Initially, for each household, the household representatives were asked to help prepare a genogram (Figure 2.2) showing the family background of the index child. These genograms were used to identify all surviving members of the child's extended family who might either be potential caregivers or sources of material or social support for the child or (in the case of other children and elderly persons) might also be in need of similar support. The members of the extended family identified in this way were then listed on an "Extended Household Questionnaire" (Appendix 1).

Figure 2.2 Example of a Genogram used to Identify Potential Caregivers and Sources of Support for OVC in Manicaland, Zimbabwe



Key-genogram representing two sides of a index child's family

X	**deceased household member**	**o——□**	**marital union**
o	**female**		
□	**male**	**| children from the union**	

Red dot indicates the index child (child under investigation)

Children and their caregivers answered a series of questions pertaining to people who reside in their current households and the other members of their extended families. These questions covered their residence and survival status, age, gender, health, marital status and fertility history (for adults), the relationship of each member to the index child, financial support (how much) provided to the child, parental survival status for all children aged <19 years, education, and employment.

The Extended Household Questionnaire also gathered information on ownership of moveable and immovable property, toilet facilities and the source of drinking water of the households under study. Respondents were asked to state whether resources were shared with neighbours or the community or were exclusively for the use of the immediate family. Details of immovable property collected included house, toilet and floor type, presence of electricity, and information on improvements made to the home

since the last interview visit and on who contributed towards any such renovations. Details of durable and moveable property included ownership of bicycles, motorcycles, cars, tractors and cattle.

To understand the difficulties and property loss that come with illness of household members, respondents were asked if any immovable or movable property had been sold in recent months and, where applicable, the reason for the sale. Options given to select from for those who reported property being moved or sold were as follows: medical expenses, funeral or memorial service costs, taken by relatives after death, used to pay school fees, or for other unspecified reasons.

Individual questionnaire

To gather information on the index child, a second structured questionnaire, the "Child and Caregiver Questionnaire" was used (Appendix 2). This second questionnaire covered the socio-demographic characteristics of the child's parents and current and past caregivers, the current caregiver's social capital, current child-care arrangements, the child's life experiences, the child's physical and psychological health, work and health related life-style (smoking, STI infections, sexual debut). For children under the age of 7 years, anthropometric measurements (weight in kilograms, height in centimetres and skin fold thickness in centimetres) were taken.

Due to the sensitivity of some of the questions, separate interviews were held with the child and the caregiver wherever it was required. Separating the caregiver and child during the interview was done to encourage truthful responses from each party, especially on sensitive child life-experiences, psychological health, behaviour and the life-style of the child. Interviewed together, the child and caregiver provided

information on the child's care history. The questions on socio-economic background, social capital, current child-care arrangements and the child's psychological health were addressed to the caregiver in the absence of the child. Children aged 7 years and above were then interviewed separately on issues pertaining to their life experiences, work and lifestyle, their psychological health (children aged 12 years and above only), and sexual behaviour (children aged 15 and above). For children who were below 7 years of age, a more limited range of questions was asked to the child (i.e. excluding the questions on psychosocial health) and caregivers were asked to assist the child in answering the questions.

The original questionnaire templates were in English and were translated into the local language Shona by a local university (University of Zimbabwe) graduate. The Shona version was given to a different person who translated the Shona version back to English and these were compared to the original template to see if the Shona version contents and meaning were compatible. Final corrections were made and this version was adopted for use with the sampled children.

Details on the recruitment and training of field staff were similar to those employed in the Manicaland Study and are given below in section 2.7.

2.4.5 Data Entry and Verification

Each interviewer was issued with a unique identifier number which they wrote down in the interviewer box on the questionnaires as well as their initials and signature. The information helped the quality supervisor to link questionnaires to the interviewers

especially in cases when they wanted things explained or if they felt the interviewer needed to make a second visit to the household.

Data straight from the field were handed in to a data quality supervisor who went through them checking for inconsistencies or missing information. In the event of a questionnaire being incorrectly filled in or having too many inconsistencies, the data quality supervisor would request the interviewer responsible to schedule another interview just for the sections that needed correcting or more information. Once corrected, the questionnaires were passed on to the data entry team and were entered into computers using SPSS. Double entry was used to further check and control for data entry errors.

2.5 The Manicaland HIV/STD Prevention Study

2.5.1 Background

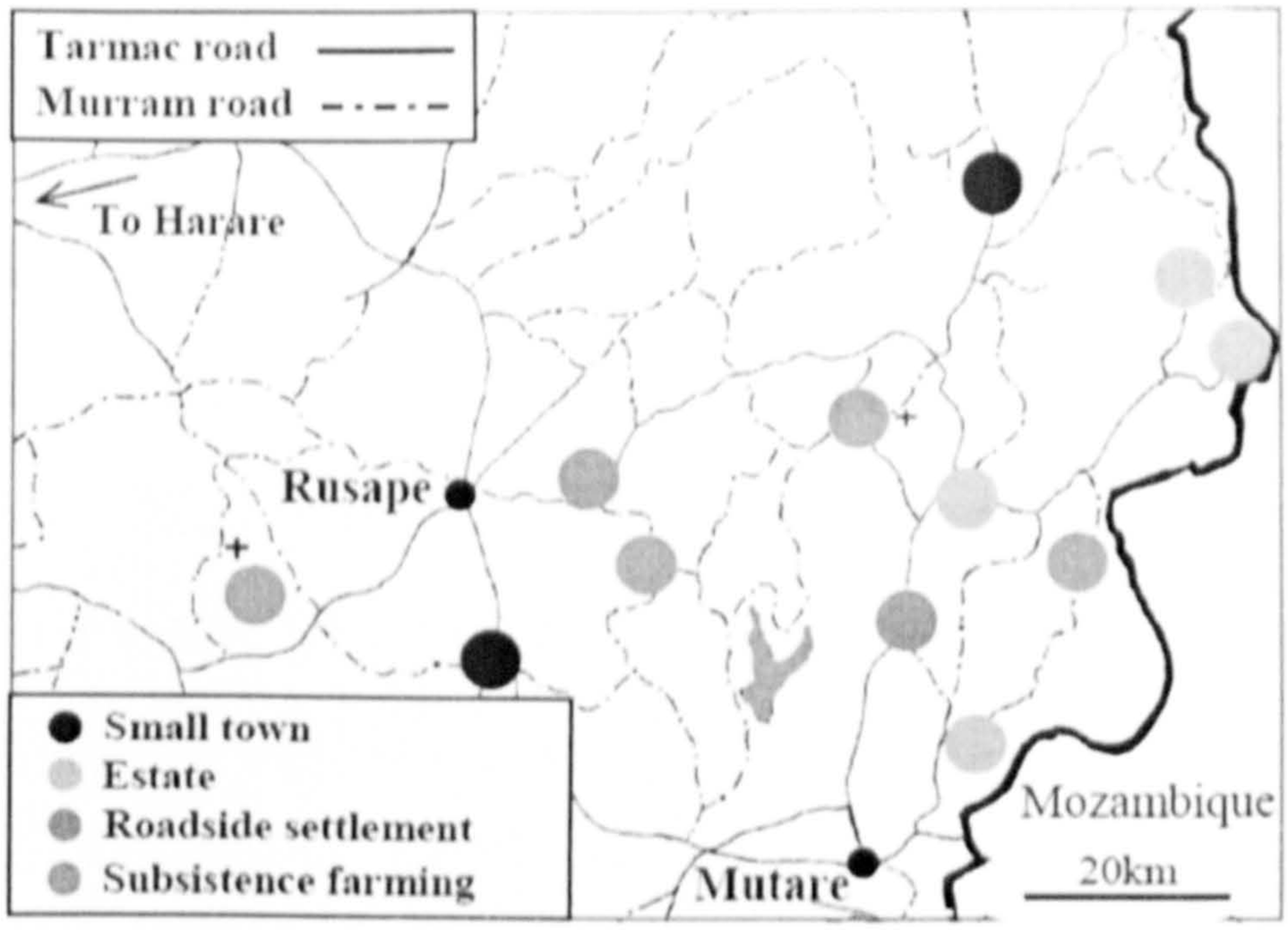
The Manicaland HIV/STD Prevention Study (Manicaland Study) is a population-based open cohort study which has been ongoing in the eastern part of Zimbabwe for more than ten years now. The aim of the project is HIV/AIDS surveillance (Gregson, Terceira et al. 2004) and evaluation of HIV prevention programmes including peer education, condom distribution, syndromic management of sexually transmitted infections (Gregson and Chandiwana 2006), prevention of mother to child transmission, voluntary counselling and testing, and other programmes being implemented either by government or other stakeholders in the field. Since its inception in mid-1998, the study has conducted longitudinal surveys and parallel HIV surveys at local antenatal clinics at 2-3 yearly intervals and qualitative investigations.

2.5.2 Study Sites

The study sites for the Manicaland Study are made up of 12 communities in the Mutasa, Makoni and Nyanga districts of Manicaland, Zimbabwe's eastern province (Figures 2.1a & 2.3). These comprise 6 pairs of sites matched on socio-economic criteria originally for the purpose of a community randomised controlled trial of an HIV prevention intervention. Thus, the sites include two pairs of subsistence farming areas, one pair of roadside trading settlements, one pair of forestry estates, one pair of large-scale commercial tea and coffee plantations and one pair of small towns.

Since the inception of the Manicaland Study, three rounds of surveys have been successfully completed with the 12 sites being covered in succession in each round. The first survey was carried out from July 1998 to February 2000; round 2 was done from July 2001 to February 2003; and round three was done from July 2003 to August 2005. The fourth round was started in July 2006 and is still on going and is expected to finish in June 2008.

Figure 2.3 Manicaland HIV/STD Prevention Study Sites



2.5.3 Survey Design, Eligibility Criteria and Participation Rates

Full details of the design of the Manicaland Study have been published previously (Gregson, Nyamukapa et al. 2000; Gregson, Terceira et al. 2004; Gregson, Nyamukapa et al. 2005) so just a summary is given here. In each round of the survey in each site, a listing of all households resident within the site is prepared (or updated from the previous survey) with the help of guides (usually village community health workers) from the local community. A complete household census is then conducted using a pre-designed household questionnaire form. Individuals listed in these household forms who meet the selection criteria for the round are invited to complete an interview and to provide a small dried blood spot sample for HIV and STD testing.

The selection criteria have been varied between survey rounds primarily for funding reasons but have consistently been designed to provide a random sample of adults within the general population. In the first two rounds, individuals were eligible if they

met the age criteria (males: 17-54 years; females: 15-54 years), had stayed in the household for 4 or more nights in the last month, and had been staying in the household at the same time one year previously. A maximum of one member of each marital grouping (i.e. a husband and his wives) was selected at random for participation in the study in order to increase the statistical power of the community randomised controlled trial of HIV prevention). In the third round, the eligibility criteria were relaxed to include 15-54 year-olds for both sexes (and older individuals who had participated in earlier survey rounds), recent in-migrants, all members of marital groupings, and visitors to the households.

All identified eligible participants received a briefing on the aims of the project and were given a project information sheet which explained the individual and community-level benefits of participating in the study, the risks involved, and their rights regarding joining the study and terminating their participation. Individuals who indicated that they wanted to participate in the study were required to sign a consent form to show that they did this out of their own free will. For all those who were below 16 years of age, consent had to be sought first from a parent or guardian before the child could be invited to join the study. Individuals who wanted to know their own HIV status were encouraged to take up the free testing services offered by the project at designated local health centres within the study areas. Free treatment of sexually transmitted diseases was also made available.

The participation rates for the household surveys have been 98%, 94% and 96% in rounds one, two and three, respectively. The participation rates amongst individuals selected for interview in the three rounds have been 79% (9,454/11,980), 79% (7,019/8,894) and 83% (16,517/19,868), respectively.

2.5.4 Data Collection Instruments

The tools used to collect data in the Manicaland Study were structured household and individual questionnaires (Appendix 3), and verbal autopsy questionnaires.

The household membership questionnaire was used to generate listings of household members by age, sex, survival status, general health, relationship to household head, parental survival status for those aged <18 years, education level, employment status and residence. Basic information on the socio-economic status of the household (i.e. ownership of moveable and immoveable assets) was also collected.

The individual questionnaire (addressed to consenting eligible male and female adults) included sections on background socio-demographic characteristics (including parental survival status for all those aged <30 years), sexual behaviour, knowledge, attitudes and experience in relation to HIV/AIDS, and fertility history.

The verbal autopsy questionnaire was used to collect information from primary caregivers (or the nearest equivalent) for adult survey participants who had died since the previous round of the survey. This information included an updated listing of all children of the deceased together with data on the current survival status of these children.

Details on the recruitment and training of field staff were similar to those employed in the MCCS and so are given together in section 2.7.

2.5.5 Data on Orphan Experience during Childhood and the Effects of Psychosocial Distress in Adulthood

In this thesis, data from the third round of the Manicaland Study were used to investigate the effects of orphanhood when a child on experiences during early adulthood and possible associations between psychosocial distress and other key outcomes during adulthood (Chapter 6).

The relevant data collected in the individual interviews in round three included information on parental survival during childhood (for adults now aged 15-29 years in sites 5-12), information on current psychosocial well-being (depression-anxiety), and information on educational attainment, employment status (type and level of employment), sexual risk behaviour for HIV and STD acquisition (including age at first sex, rates of partner change and consistent condom use with regular and non-regular partners) and marital stability. The data on current HIV status were also examined to assess whether negative childhood experiences were correlated with increased risk of subsequent HIV infection.

2.5.6 Incentives

Individuals who participated in the project and study area communities benefited in one way or another from incentives offered by the project. Individuals found to be eligible for individual interviews and interviewed were given a T-Shirt each as a token of appreciation for their time and for agreeing to participate in the study. Those who reported, during interview, having any form of sexually transmitted infections were offered treatment at the project's expense. As a way of ensuring quality surveillance of sexually transmitted infection including HIV/AIDS and that health centres offered

quality care and treatment to patients, the project through funding provided by Plan International, coordinated training of nurses and general health assistants on Syndromic Management of Sexually Transmitted Infections. The Plan funding was also used to procure drugs that were distributed to almost all local health centres for use by the local populations. Voluntary testing and counselling services for local people who were eager to know their HIV status but had difficulties accessing testing facilities was offered by the project.

2.6 Focus Group Discussions

2.6.1 Purpose

A fully-fledged qualitative study was not undertaken for the thesis. However, some focus group discussions were conducted to provide information which could help to explain some of the findings from the quantitative study.

The focus group discussions had several aims.

1. The first aim was to explore the applicability and appropriateness of the theoretical framework on orphanhood and psychosocial distress as a tool for highlighting and analysing orphaned and vulnerable children's experiences in the Zimbabwean and other African contexts.

2. The second aim was to evaluate the appropriateness of the methods (questionnaires and interviewing techniques) used to collect sensitive data from children and to seek ways of refining these methods if they were found to be insensitive and inappropriate tools for assessing vulnerable and orphaned children's needs.

3. The third aim was to examine the evolution of the extended family and the implications of these unforeseen changes for childhood outcomes such as educational qualifications, employment, skills and risky sexual relations.

4. The fourth aim was to aid interpretation of the results from analyses of quantitative data on orphanhood and psychosocial distress collected in the Zimbabwe OVC Survey 2004/05 and the MCCS.

The focus group discussions also explored childcare issues such as the question of whether children should be accorded the chance to decide or participate in decisions on their care arrangements and the extent of child abuse and how the community dealt with such issues. Study interviewers were also asked to shed light on how they dealt with any forms of abuse they encountered during the survey and the role that research-based agencies can play in helping to stamp out abuse without upsetting the functionality of community structures.

2.6.2 Study Design

In total, 12 focus group discussions were conducted each with groups of 8-12 participants. These comprised the following:

1. One focus group discussion in each of four different study sites - one from each of the different socio-demographic strata covered by the Manicaland Study and the MCCS - with children (aged 12-18 years) and with caregivers (8-12 per group who had participated in the final round of the MCCS (n=8)

2. One focus group discussion each in a roadside trading settlement and a small town with local people recruited from the same villages in which children and their caregivers had been interviewed (n=2)

3. One focus group discussion each in the same roadside trading settlement and small town with local adults who had been orphaned before they had attained their 18th birthday – "adult former orphans" (n=2)

To get an overview of the children's reactions to the questions during the interviews and of how the interviewers dealt with situations of distress, separate in-depth interviews were held with two of the enumerators involved in the MCCS (one male and one female).

All groups and respondents (children, caregivers, adult former orphans, local people and interviewers) contributed information on child-care arrangements, evolution of the extended family, children's adult life-chances, child abuse in the study communities and measures taken by the community and the role of researchers regarding issues of identified abuse cases. Discussions on the evolution of the extended family focused on the issues of who was providing the care and why and the implications of these forms of care for children caught up in such arrangements.

In addition, the focus groups with children and their caregivers provided feedback on the questionnaires and the applicability of the theoretical framework to the Zimbabwean context and provided inputs into the interpretation of findings from the study. Group participants were taken through the questionnaires and asked to identify any questions they thought were not appropriate or were insensitive to the children's

plight and what it was they found difficult about these questions. This was done by going through the appropriate sections of the questionnaire. The student explained the theoretical framework and participants were asked to comment on whether the course of events followed the depicted flow. The student made a short presentation on the results of the data analyses from the Zimbabwe OVC Survey 2004/05 and the MCCS and participants were asked to comment on what might be the explanations for the findings. The results presented were those on higher psychosocial distress levels in girls than in boys, in orphans than in non-orphans, and in children in towns and estates compared to other locations, and on maternal orphans being more likely to engage in early and risky sexual relations. Participants were invited to comment on why more children were being found in the care of maternal relatives than paternal relatives in patrilineal societies and what could be bringing about these changes.

The focus group discussions with adult former orphans covered the implications of childhood experiences for educational completion and attainment, professional qualifications and adult life-chances. They also shed light on interventions that would have made their situation better and what might be the most appropriate actions to take to assist children currently orphaned by HIV/AIDS. The reports given by the former orphans on their experiences as children were compared in the analyses with those reported as being faced by today's orphans.

2.6.3 Data Collection Procedures

Village health workers assisted with identifying and recruiting the children, caregivers, local adults and adult orphans to participate in the study. Village health workers were requested to identify 48 children and their caregivers (using a list of individuals

selected at random from those who participated in the last round of the MCCS) and the local adults (n=24) and former orphans (n=24).

The focus group discussions were held at central places in the community - usually a community hall or a local health centre. Two activities were planned per day, one in the morning and another in the afternoon. Caregivers were more readily available and easier to secure than children, so, in most of cases, morning sessions were held with caregivers or the other adult groups. When children could not attend due to school activities such as sports or exams, the activities had to be done at the weekend. Each session took between two and three hours with breaks in between during which people were served drinks and snacks or had lunch. The medium for communication during the focus group discussions was the local language, Shona.

The proceedings from the focus group discussions were captured on a Sony tape recorder. Brief notes were also taken on flip charts as a back-up in case the tape stopped in the middle of the discussions. Schedules outlining the structure of the focus group discussions were drafted in advance and used to guide the discussions (Appendix 4). The student acted as the facilitator of the focus groups and was assisted by two work colleagues - a nurse and a social worker.

2.7 Field Staff

The field staff for the different studies done in Manicaland had similar duty performance requirements and training so the details of these will be described together in this section. Given the sensitive nature of the data collected in the three studies, enumerators had to be chosen carefully and needed to have appropriate training in human behaviour, to be respectable in the eyes of the community, to have

the ability to build rapport, and to have knowledge of community politics and relevant structures.

University of Zimbabwe graduate social workers and nurses were recruited as enumerators on the basis of qualifications, experience and general self-presentation from list of applicants after the posts had been advertised in the Zimbabwean local papers - the Herald, the Sunday Mail and the Manica Post. Those selected underwent two to three weeks of intensive training on the aims and objectives of the study, research ethics, rapport building, community entry issues and the general politics of the areas under study. They also, with the help of the Principal Investigator, had a detailed review of the questionnaire items and were taught how to administer the questionnaires and how to take blood samples and anthropometric measurements. Role-playing was used to help build confidence in the enumerators and also to help identify areas where they needed further help. Interviewers also role-played how to deal with the various types of distress they could face in the field. They were also taught the importance of self-presentation in terms of dress code, conduct whilst in the communities, appropriate use of language, and how these would affect their work. A laboratory manager from the Biomedical Research and Training Institute was enlisted to train enumerators on how to collect biomedical samples and safety measures to adopt during specimen collection.

Heading the two studies was the Principal Investigator who was assisted by two managers [Fieldwork (1) and Database (1)]. Also appointed to assist the managers was a deputy manager, four supervisors and two assistant fieldwork supervisors. These all helped with the day-to-day running of the field activities and data quality issues. Below the supervisors on the organisational chart were enumerators (8-10), data

capture clerks (3-4), drivers (2) and, below these, were the support staff who worked in the project houses. To reduce travel costs and the fatigue of travelling back and forth, the field team was housed in rented accommodation in the study sites. They worked six days a week and, for every Saturday they worked, they received an extra day at the end of the month to travel back to their homes to visit their families and sort out their accommodation and pay bills.

In all the surveys, due to the sensitivity of the issues being dealt with and to observe the cultural communication lines on such issues as sex, fertility and sexual health, female enumerators interviewed females while males interviewed males. Interviews had to be done away from other household members to allow for confidentiality and privacy and thereby secure the flow of truthful information. In the Zimbabwean community, despite the high level of education among the population, such issues are still treated on gender lines and it is regarded a taboo for men to converse freely on such issues with someone's daughter or wife. Failure to observe these societal norms would have lead to serious misreporting and been met with disapproval or have caused tension between couples in the households visited. Despite high female and male literacy rates, male dominion over females still exists and male household heads still regard themselves as the "custodians of women rights" for their spouses, daughters and other females living in their households regardless of age or seniority. They also control the decision-making process, even in matters relating to female health (Bourdillon 1997). Male dominion was shown by some females who, when they were visited during the course of the survey and invited to take part in the study, requested enumerators to give them more time to consult or seek permission to participate in the study from their husbands or their husband's brothers who were out at the time of the visit.

2.8 Ethical Approvals and Procedures (Manicaland Studies)

Since the Manicaland Study and The Manicaland Child Cohort Study were operating under the same implementing institution (the Biomedical Research Training Institute) and fell under the same ethical review body, the process taken to obtain ethical approval was similar and will be reported on here once to avoid repetition.

Permission to undertake the studies had to be sought at various levels. Initial approval was obtained for the Manicaland Study and the MCCS from the Medical Research Council of Zimbabwe's Research Ethics Committee which falls under the Ministry of Health and Child Welfare (02,187 and A/990). In the United Kingdom approval for the Manicaland Study and the MCCS was obtained from the Nursing and Allied Professions Research Ethics Committee (NAPREC. 97.039) and the St Mary's Research Ethics Committee (04Q0403/130), respectively. For the MCCS, further permission had to be sought from the Child Agency in the Department of Social Welfare.

Prior to the start of recruitment, a series of community meetings was held with local government officials and local residents to explain the study aims and procedures and to seek their permission to work in their communities. Due to differences in levels of understanding within different sectors of the population, meetings had to be held at various levels. The same meetings were used to identify and assess the community concerns and problems that the project might encounter and to plan for responses to the problems anticipated.

At individual household level, the interviewers explained what was involved in participating in the study and that participants were free to leave the study at any time without giving their reasons for doing so. Following this, the same process was followed with the individuals selected for the one-to-one interviews (both in the main study and the child cohort study). After having sought verbal consent from parents or guardians, interviewers asked them to endorse their consent by signing a consent form to this effect. Parental or guardian consent both verbal and written was sought for children who were 16 years of age and below and after parental or guardian permission was granted children themselves had to also provide written consent.

Chapter 3

National Estimates of Psychosocial Distress in OVC:

Analysis of Data from the Zimbabwe OVC Baseline Survey 2004/05

3.1 Introduction

The literature review in Chapter 1 found there have been very few previous attempts to develop and test theoretical frameworks that focus on the psychosocial effects of orphanhood and their consequences for child well-being and development in populations subject to major HIV/AIDS epidemics. To the extent that studies on the psychosocial effects of orphanhood have been conducted in these populations (Brouwer, Lok et al. 2000; Makame, Ani et al. 2002; Itemba 2003; Atwine, Cantor-Graae et al. 2005; UNAIDS July 2001), they have typically been small-scale and have rarely attempted to develop or test theory on this subject.

In Chapter 1, a new theoretical framework was developed based on the current literature on possible causes and effects of heightened psychosocial distress in children orphaned or made vulnerable by HIV/AIDS.

3.2 Objective of Chapter

In this chapter, we test aspects of the new theoretical framework using data from the Government of Zimbabwe / UNICEF sponsored Survey on Orphans and Other Vulnerable Children in Rural and Urban High Density Zimbabwe 2004/2005

(hereinafter referred to as the Zimbabwe OVC Survey 2004/05), a large-scale national cross-sectional survey. Details of the design and data collection methods used in this survey were given in Chapter 2.

The student was not involved in the survey design and the data collected covered only a sub-set of the factors hypothesised to contribute to increased psychosocial distress and its sequelae in OVC. Nonetheless, it was felt worthwhile to analyse the data that were collected since these could still provide useful insights into some of the most important relationships given the national scope of the survey and its' large sample size.

The following specific hypotheses, based on the theoretical framework developed in Chapter 1 were tested.

1. *Effects of illness and death:*

1.1 Children who are orphaned tend to suffer greater psychosocial distress than other children

1.2 Non-orphaned children who are made vulnerable in other ways by HIV/AIDS (VC) tend to suffer greater psychosocial distress than non-OVC

1.3 The effects of maternal loss are more profound than those of paternal loss; thus, among orphans, maternal and double orphans typically suffer greater psychosocial distress than paternal orphans

2. *Factors moderating the effects of parental illness and death on psychosocial distress include:*

2.1 Psychosocial distress is greater among girls than boys

2.2 Psychosocial distress is greater among younger children

2.3 Psychosocial distress is greatest among children whose parent(s) have died recently

2.4 Psychosocial distress is reduced when the child receives close support from a caregiver, relative or friend (social connectedness)

2.5 Psychosocial distress is reduced when external support is provided to the child's household

3. *Immediate effects of parental illness and death that can lead to psychosocial distress include:*

3.1 Loss of a breadwinner, closely-related caregiver or household head

3.2 Residence in a poorer household (through loss of income or relocation)

3.3 Residence in an urban area

3.4 Residence with a young household head

3.5 Residence with a male household head

4. *Intermediate (i.e. more gradual) effects of parental illness and death that can lead to psychosocial distress include greater exposure to:*

4.1 Being out of school

5. *Effects of psychosocial distress on early sexual behaviour*

5.1 Boys and girls who experience greater psychosocial distress at young ages are more likely to commence sexual activity early

5.2 Boys and girls who experience greater psychosocial distress at young ages are more likely to engage in high risk sexual activity

3.3 Data and Methods of Data Analysis

3.3.1 Construction of Variables Used in the Analyses

The Zimbabwe OVC Survey 2004/05 collected data on psychosocial distress from persons aged 12-24 years. However, since the focus of the current study was on children, and to facilitate comparisons with findings from the Manicaland surveys (Chapters 4-6), only data for those aged 12-17 years were included in these analyses.

Orphans were sub-divided into those who had lost both of their parents (double orphans), their mother only (maternal orphans) and their father only (paternal orphans). Vulnerable children (VC) were defined as those who were either living in a household that experienced the death of an adult other than a parent in the last year, who lived in a household with a chronically-ill person, or who lived in a household with a household head who was also under the age of 18 years.

Psychosocial distress variable

The psychosocial distress variable was formulated using responses from 16 question items (Table 3.1a) on depression, anxiety, physical health (headaches, stomach-aches, general good health, general body malaise [tiredness]), emotional problems (crying,

suicidal thoughts, loss of interest in daily activities), and self alienation (loneliness and feeling people not friendly to them). There were 4 possible responses for each question (1 - never, 2 - sometimes, 3 - often, 4 - always) and the interviewer had to tick one. For data analysis purposes, options 3 and 4 were combined and coded (1) - i.e. the "expected" outcome. Options 1 and 2 were both coded (0), the unexpected outcome. For Q108, Q111 and Q119, where the wording was such that "often" and "always" referred to positive outcomes, the coding was done in reverse - [Zimbabwe OVC Survey 2004/05 Females and Males Module: Q107-Q122] (Wise, Gallagher et al. 1999; UNICEF 2005).

Principal component factor analysis was used to formulate the psychosocial distress variable based on one factor. All the 16 questions had variable loadings greater than 0.3 (see Table 3.1) so were adopted for the psychosocial distress variable formulation. The one factor solution had an Eigenvalue of 3.63 and explained 23% of the data variation. The Cronbach Alpha reliability inter-item correlation test coefficient score was 0.76 (Wise, Gallagher et al. 1999).

Table 3.1a The psychosocial distress variable items factor loading results (in descending order): responses from children aged 12-17 years

Question: I am curious to know how often you have not felt a certain way during the past week. Please tell me whether.....		
Q112	You were feeling tense, nervous or worried?	0.59
Q118	You were finding it difficult to concentrate on things?	0.55
Q117	You were feeling lonely?	0.53
Q120	You were feeling that people were not being friendly to you?	0.52
Q116	You were losing you interest in things?	0.51
Q114	You were crying without being provoked?	0.50
Q119	Your health was good?	0.49
Q121	You were feeling tired?	0.49
Q115	You were finding it difficult to enjoy your daily activities?	0.48
Q110	You were having problems sleeping?	0.48
Q111	You felt good about yourself?	0.46
Q107	Were having headaches?	0.45
Q108	You were happy?	0.42
Q109	Your appetite was poor?	0.40
Q113	You were having digestion (tummy) problems?	0.38
Q122	You were thinking of killing yourself?	0.31

Power calculations indicated that the sample size obtained in the Zimbabwe survey was sufficient to detect an effect of orphanhood on the psychosocial distress outcome variable with an estimated effect size of 0.17 with 90% power at a significance level of 95% assuming an equal standard deviation for the outcome in both groups.

In testing the hypotheses derived from the theoretical framework, the following variables were used to represent the moderating factors and immediate and intermediate effects of orphanhood that could lead to psychosocial distress.

Moderating factors

(1) Gender of child – [HHQ-Q3]

(2) Younger children were taken to be those aged 12-14 years; older children were taken to be those aged 15-17 years - [HHQ-Q4]

(3) Duration of parental loss - an ordered categorical variable was formulated as follows: 1 – parent died <1 year ago; 2 – parent died 1-4 years ago; 3 – parent died 5 or more years ago – [HHQ-Q12 & Q16]

(4) Social connectedness – this variable was based on 9 questions asked to children about their relationship to a person they felt close to and with whom they spent most of their time (Table 3.1b). The person could be either a member of their current household or somebody from outside. The pre-coded relationships of this person comprised the following: 1 - mother, 2 - father, 3 - grandparent, 4 - uncle/aunt, 5 - older sibling, 6 - guardian, 7 - social worker, 8

- adult friend, 9 - other specify. Questions on issues such as support and encouragement, attention and effective/affective listening, affection, praise, comfort, trust, buying and provision of necessities, and quality time spent with person were addressed to the children. The response to each question was ranked on a 4 point scale (1 - never, 2 - sometimes, 3 - often, 4 - always). Coding of responses was done in the same way as for the psychosocial distress variable. Principal component factor analysis was used to formulate the social connectedness variable based on a single factor. The first factor had an Eigenvalue of 8.84 and explained 98% of the data variation in the data. Inter-item power correlations were almost 1.00 for all 9 items. The Cronbach Alpha reliability test for the social connectedness score was very high (0.997) - [Female & Male Modules Q125-Q133]

Table 3.1b The social connectedness variable items factor loading results (In descending order): responses from children aged 12-17 years

Question: What one adult do you spend the most time with?		
Q131	Does (name) provide for your necessities?	1.00
Q125	Does (name) support or encourage you?	1.00
Q126	Does (name) give you attention and listen to you?	0.99
Q130	Does (name) trust you?	0.99
Q128	Does (name) praise you?	0.99
Q129	Does (name) comfort you?	0.99
Q127	Does (name) show you affection?	0.99
Q132	Does (name) buy you things?	0.99
Q133	Does (name) spend time with you?	0.97

(5) External support - free emotional or psychological support for the child such as companionship, counselling and spiritual support - [HHQ -Q54b]

Immediate effects

(1) Loss of breadwinner, closely-related caregiver or household head – being in the care of a less closely-related household head: non-parent coded (0); parent coded (1) - [HHQ-Q2]

(2) Residence in poorer household – a Wealth Index was constructed using answers to questions on access to safe water and sanitation services (safe water, perennial water supply, and safe sanitation, perennial water and long distance to water – [QHH - Q30, Q31, Q33, Q34], ownership of physical assets (electricity, solar electricity, television, watch or clock – [QHH - Q40a, Q40b, Q40d, Q41a]) and transport ownership (bicycle, animal cart, pushcart cart, wheel barrow – [Q41b, Q41d, Q41f, Q41g]. Principal component analysis was applied to the 3 different types of assets (immovable assets, movable assets, and water and sanitation services). For each type of asset, the 1st principal component (PC) was selected. The proportions of the variation explained by the 1st principal component for the 3 types of asset were 44% for immovable assets, 39% for movable assets, and 35% for water and sanitation services. Scores based on the PC were extracted for each household and used to create scales (quintiles) ranging from 1 (least advantaged) to 5 (most advantaged). The scores for the 3 asset types were added up to give a total score for each household. Households were then split again into 5 groups (quintiles) from the least to the most advantaged based on these total scores. For the analyses presented in this thesis, a binary variable was constructed. Children living in households in the first (lowest) quintile were considered to be living in extreme poverty (the expected outcome) and were coded (1). The remainder were coded (0)

(3) Location of residence – urban and commercial farms were coded (1); other rural areas were coded (0) - [HHQ-page 1A of HHQ]

(4) Age of household head – children living with heads of households aged under 20 years were coded (1); children with older household heads were coded (0) - [HHQ-Q4]

(5) Gender of household head – children living with female heads of households were coded (1); children with male household heads were coded (0) - [HHQ-Q3]

Intermediate Factors

(1) Being out of school - [GHHQ-Q28].

Determinants of risky sexual behaviour among the study population

In testing the hypothesis that psychosocial distress could lead to early sexual risk behaviour for acquisition of HIV infection, the following variables were used to represent early sexual risk behaviour:

(1) Commencement of sexual activity - [Females and Males Modules -QF/M94]

(2) Engagement in a high-risk sexual partnership – defined as sex with a partner who was not a spouse, fiancé or regular partner – [Females and Males Modules - QF/M92/102]

3.3.2 Statistical Methods

Ordinary least squares regression was used to calculate standardised coefficients and to test for associations between orphanhood and other forms of OVC experience and psychosocial distress and to assess the effects of the hypothesised immediate and intermediate determinants. These effects were tested initially in age-adjusted models and then in multivariate models. Logistic regression was used to test the hypothesised associations between psychosocial distress and onset of sexual relations after controlling for possible confounding variables. To limit confounding with OVC status, the hypothesized determinants of psychosocial distress and early sexual behaviour were evaluated initially in non-OVC.

3.4 Results

3.4.1 Numbers of Participants and Participation Rates

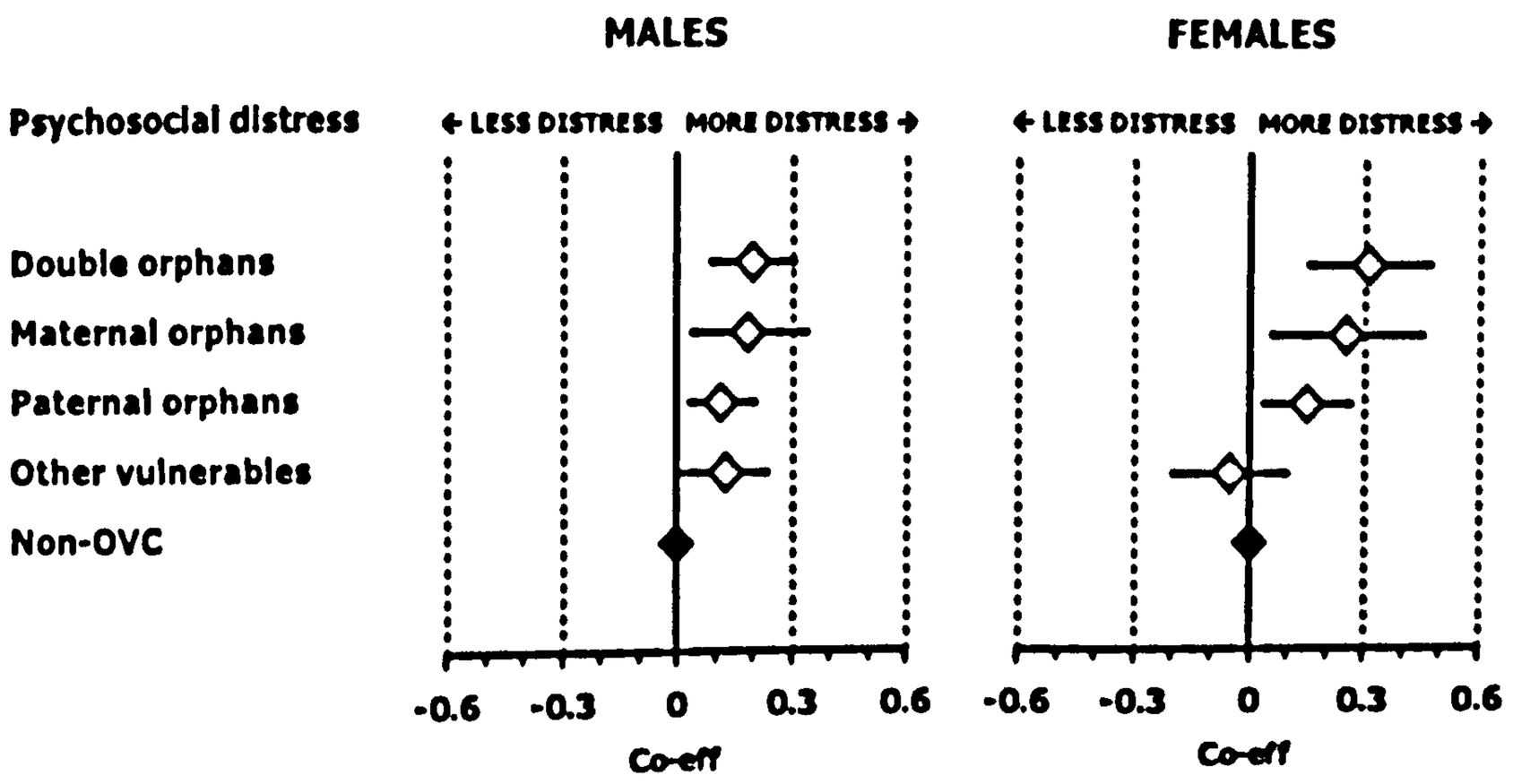
12,356 households were enumerated in the Zimbabwe OVC Survey 2004/05. These households contained 31,415 children aged 0-17 years, of whom, 13,688 (44%) were OVC and 451 (1.5%) had missing information on OVC status. Of the 5,328 individuals aged 12-17 years selected to take part in the study, 5,295 (99%) were interviewed on their psychosocial well-being and sexual behaviour. Of these, 87% (4,660 - 548 double orphans, 281 maternal orphans, 1,123 paternal orphans, 543 non-orphans vulnerable children and 2,165 non-vulnerable non-orphans) had complete information on the psychosocial distress and social connectedness variables.

3.4.2 Patterns of Association between OVC Experience and Psychosocial Distress

Overall, girls were found to have more psychosocial distress than boys (Coeff, 0.30; 95% CI, 0.21-0.40). No difference was found between younger (12-14 year-olds) and older (15-17 year-olds) children (P=0.6). Compared to non-orphans, orphans had more psychosocial distress for both males (Coeff, 0.13; 95% CI, 0.06-0.20) and females (Coeff, 0.20; 95% CI, 0.11-0.29) and at younger (Coeff, 0.14; 95% CI, 0.07-0.22) and older (Coeff, 0.18; 95% CI, 0.10-0.27) ages.

Orphans whose fathers or mothers had died in the last year showed signs of more severe psychosocial distress than those whose parents had died further into the past (data not shown) but these differences were not significant (P>0.05). For both sexes, each type of orphan exhibited more severe distress than non-OVC (Figure 3.1).

Figure 3.1 Effects of OVC Status on Psychosocial Distress by Gender



Diamonds represent ordinary least squares regression coefficients. Horizontal lines represent the 95% confidence intervals.

For boys, but not for girls, non-orphaned vulnerable children also showed evidence of more psychosocial distress (Coeff, 0.13; 95% CI, 0.01-0.24).

3.4.3 Causal Pathways between OVC Experience and Psychosocial Distress

As explained in the methods (s3.2.2), the intermediate or more proximate determinants of psychosocial distress in children were initially identified in non-OVC. The results of the bivariate and multivariate analyses were very similar, so only the results from the multivariate analysis are reported here. Being resident in an urban area (Coeff, 0.16; 95% CI, 0.04-0.28), on a commercial farm (Coeff, 0.46; 95% CI, 0.08-0.84), in a poor household (Coeff, 0.14; 95% CI, 0.04-0.24) or in a household that had received external support (Coeff, 0.21; 95% CI, -0.01-0.44), and not being related to the closest caregiver (Coeff, 0.14; 95% CI, 0.03-0.24) were positively associated with psychosocial distress. Being in a female-headed household (Coeff, -0.11; 95% CI, -0.19- -0.02) and receiving psychosocial support from the closest caregiver (Coeff, -0.05; 95% CI, -0.09- -0.01) had protective effects against psychosocial distress. No significant effects were observed for relationship to household head or age of household head. It should be noted however that, in some cases, lack of significant results in the above determinants could be due to the small numbers of non-OVC who had experienced these circumstances.

Table 3.2 compares the frequencies of the hypothesised socio-demographic determinants of psychosocial distress by form of OVC experience. Non-orphaned vulnerable children and maternal orphans were the most likely to be found in towns and commercial farms. Double and paternal orphans were found disproportionately in poorer and female-headed households and more often reported having received external support and being out of school. All types of OVC were more likely than non-OVC to be living in a household headed by a person under 20 years of age and, with

the exception of non-orphaned vulnerable children, were more likely to be found in households headed by a non-relative and to be unrelated to their closest adult. Overall – i.e. including respondents of both genders irrespective of whether they had had sex at all – reports of forced sex were relatively rare but were more common in paternal orphans.

Table 3.2 Age and sex-standardised odds ratios for selected socio-demographic determinants of psychosocial distress by type of OVC experience in children in Zimbabwe aged 12-17 years

Determinant	Double orphans				Maternal orphans				Paternal orphans				Other vulnerable children				Non-OVC
	AOR	(95% CI)	P-value	n (%)	AOR	(95% CI)	P-value	n (%)	AOR	(95% CI)	P-value	n (%)	AOR	(95% CI)	P-value	n (%)	n (%)
Location																	
Urban & commercial farms *vs.* subsistence	1.0	(0.8-1.3)	0.969	70 (13)	1.3	(0.9-1.9)	0.098	46 (17)	0.9	(0.7-1.1)	0.298	128 (12)	1.4	(1.1-1.8)	0.011	85 (18)	273 (13)
Poverty																	
Poorest quintile (wealth index) *vs.* higher	1.6	(1.2-2.0)	<0.001	128 (23)	0.9	(0.6-1.3)	0.577	43 (15)	1.3	(1.1-1.6)	0.003	232 (21)	1.0	(0.7-1.2)	0.758	87 (16)	359 (17)
Sex of household head																	
Female *vs.* male	2.8	(2.3-3.3)	<0.001	266 (49)	1.3	(1.0-1.7)	0.055	87 (31)	9.3	(7.8-11.0)	<0.001	854 (76)	1.2	(1.0-1.5)	0.061	160 (30)	552 (26)
Relationship to household head																	
Not related *vs.* related or self	2.3	(1.4-3.9)	0.001	24 (4)	3.4	(1.9-6.1)	<0.001	17 (6)	2.0	(1.3-3.2)	0.002	41 (4)	1.0	(0.5-2.1)	0.915	10 (2)	39 (2)
Self	-			10 (2)	-			5 (2)	-			8 (1)	-			10 (2)	0 (0)
Age of household head																	
< 20 years *vs.* ≥20 years	11.5	(5.4-24.8)	<0.001	26 (5)	5.0	(1.7-14.1)	0.003	6 (2)	4.1	(1.8-9.0)	0.001	19 (2)	7.0	(3.0-16.1)	<0.001	15 (3)	9 (0)
Relationship to closest adult																	
Not related *vs.* related	1.5	(1.2-1.9)	0.001	125 (23)	1.4	(1.0-1.9)	0.042	59 (21)	1.3	(1.0-1.5)	0.020	217 (19)	0.9	(0.7-1.2)	0.618	80 (15)	341 (16)
Support from closest adult																	
Index	-0.03	(-0.1-0.1)	0.499	548 (100)	0.00	(-0.1-0.1)	0.966	281 (100)	-0.04	(-0.1-0.0)	0.281	1,123 (100)	0.02	(-0.1-0.1)	0.661	543 (100)	2,165 (100)
External psychosocial support																	
Some support *vs.* no support	2.2	(1.5-3.4)	<0.001	34 (6)	1.4	(0.7-2.6)	0.361	11 (4)	1.6	(1.1-2.3)	0.017	51 (5)	1.2	(0.7-2.0)	0.511	19 (4)	64 (3)
School enrolment																	
Not enrolled *vs.* enrolled	1.5	(1.2-1.9)	<0.001	174 (33)	1.2	(0.9-1.6)	0.300	79 (30)	1.3	(1.1-1.6)	0.002	320 (30)	1.0	(0.8-1.3)	0.702	127 (24)	502 (24)
Sexual abuse																	
Forced sex *vs.* none	2.1	(0.4-11.7)	0.387	2 (0)	-			0 (0)	5.0	(1.6-16.0)	0.007	10 (1)	-			0 (0)	4 (2)
Chronically ill adult in household																	
Yes	-			43 (8)	-			46 (16)	-			139 (12)	-			214 (39)	0 (0)
N	548				281				1,123				543				2,165

AOR, Odds ratio for occurrence in OVC versus non-OVC adjusted for sex and age
CI, Confidence interval

After controlling for differences in exposure to socio-demographic determinants of psychosocial distress hypothesised to lie on the causal pathway between orphanhood and psychosocial distress, the strength of the observed associations was reduced (Table 3.3). However, these associations remained statistically significant.

Table 3.3 Effect of OVC status on psychosocial distress in children aged 12-17 years after accounting for the effects of observed intermediate determinants

Determinant	Double orphans			Maternal orphans			Paternal orphans			Non-OVC
	Co-eff† (95% CI)	P-value	n	Co-eff† (95% CI)	P-value	n	Co-eff† (95% CI)	P-value	n	n
Age and sex-adjusted models										
Orphan status	0.25 (0.16-0.34)	<0.001	548	0.22 (0.10-0.34)	<0.001	281	0.13 (0.06-0.20)	<0.001	1,123	2,165
Multivariate models										
Orphan	0.21 (0.11-0.30)	<0.001	548	0.19 (0.07-0.30)	0.002	281	0.12 (0.04-0.20)	0.003	1,123	2,165
Location (compared to subsistence)										
Urban & commercial farms	0.21 (0.10-0.31)	<0.001	70	0.19 (0.07-0.30)	0.001	46	0.17 (0.07-0.27)	0.001	128	273
Poverty										
Poorest quintile (wealth index)	0.14 (0.04-0.23)	0.004	128	0.10 (0.00-0.20)	0.056	43	0.10 (0.02-0.19)	0.018	232	359
Sex of household head										
Female	-0.08 (-0.16- -0.00)	0.047	266	-0.11 (-0.19- -0.02)	0.012	87	-0.048 (-0.12-0.03)	0.211	854	552
Age of household head										
<20 years	0.61 (0.27-0.95)	<0.001	26	0.75 (0.26-1.24)	0.003	6	0.01 (-0.35-0.37)	0.954	19	9
Relationship of closest adult										
Not related	0.14 (0.04-0.23)	0.004	125	0.14 (0.04-0.25)	0.006	59	0.17 (0.08-0.25)	<0.001	217	341
Support from closest adult										
Index	-0.03 (-0.07-0.01)	0.100	548	-0.05 (-0.09- -0.01)	0.010	281	-0.04 (-0.07- -0.01)	0.014	1,123	2,165
External psychosocial support										
Some support (compared to none)	0.31 (0.12-0.50)	0.002	34	0.22 (0.00-0.44)	0.049	11	0.14 (-0.04-0.32)	0.117	51	64
School enrolment status										
Out of school	0.15 (0.06-0.24)	0.001	174	0.20 (0.11-0.29)	<0.001	79	0.22 (0.14-0.30)	<0.001	320	502
R-squared		0.054			0.049			0.044		

CI, Confidence interval

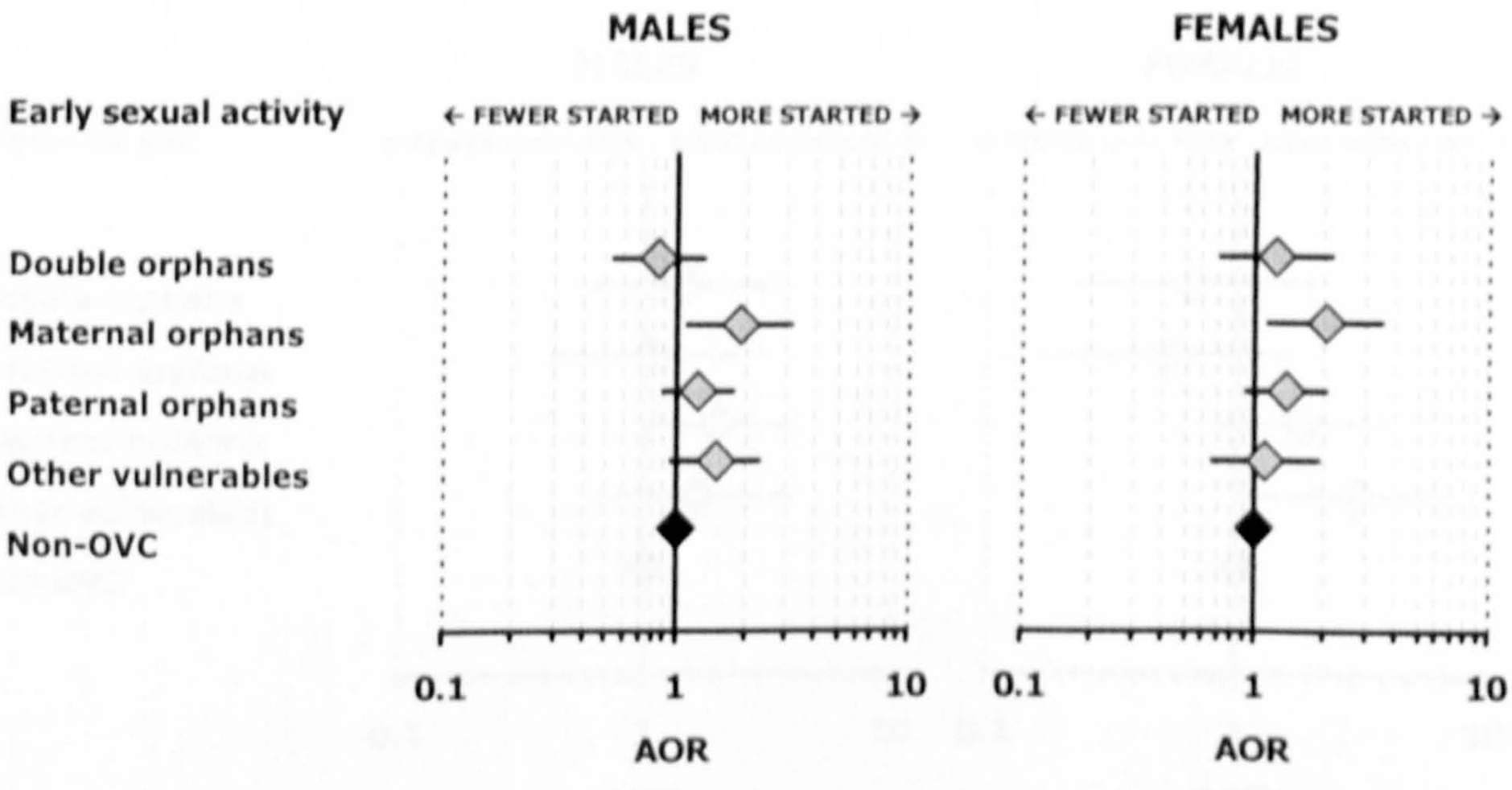
† Adjusted co-efficient from ordinary least squares regression comparing OVC to non-OVC

No difference was observed in non-orphaned vulnerable children compared to non-OVC in the age- and sex-adjusted model (p=0.316)

3.4.4 Psychosocial Distress as a Determinant of Sexual Risk Behaviour in OVC

10.5% (251/2,398) of males and 8% (181/2,262) of females aged 12-17 years reported having experienced sexual relations. Overall, OVC were more likely to have started sex than non-OVC (age-adjusted odds ratio, AOR, 1.30; 95% CI, 1.05-1.60) but the difference was not statistically significant for either gender (males: 11.4% versus 9.3%; AOR, 1.25; 95% CI, 0.95-1.64; females: 9.2% versus 6.7%; AOR, 1.35, 95% CI, 0.98-1.86). Maternal orphans (males: AOR, 1.88; 95% CI, 1.13-3.15; females: AOR, 2.01; 95% CI, 1.15-3.49) and paternal orphans (both genders combined: gender and age-adjusted OR, 1.29; 95% CI, 1.00-1.67) but not double orphans (both genders combined, P=1.0) were more likely than non-OVC to have started sex (Figure 3.2). Other vulnerable children were also more likely to have started sex but the difference was not statistically significant (both genders combined, P=0.087).

Figure 3.2 Effects of OVC Status on Early Sexual Activity by Gender

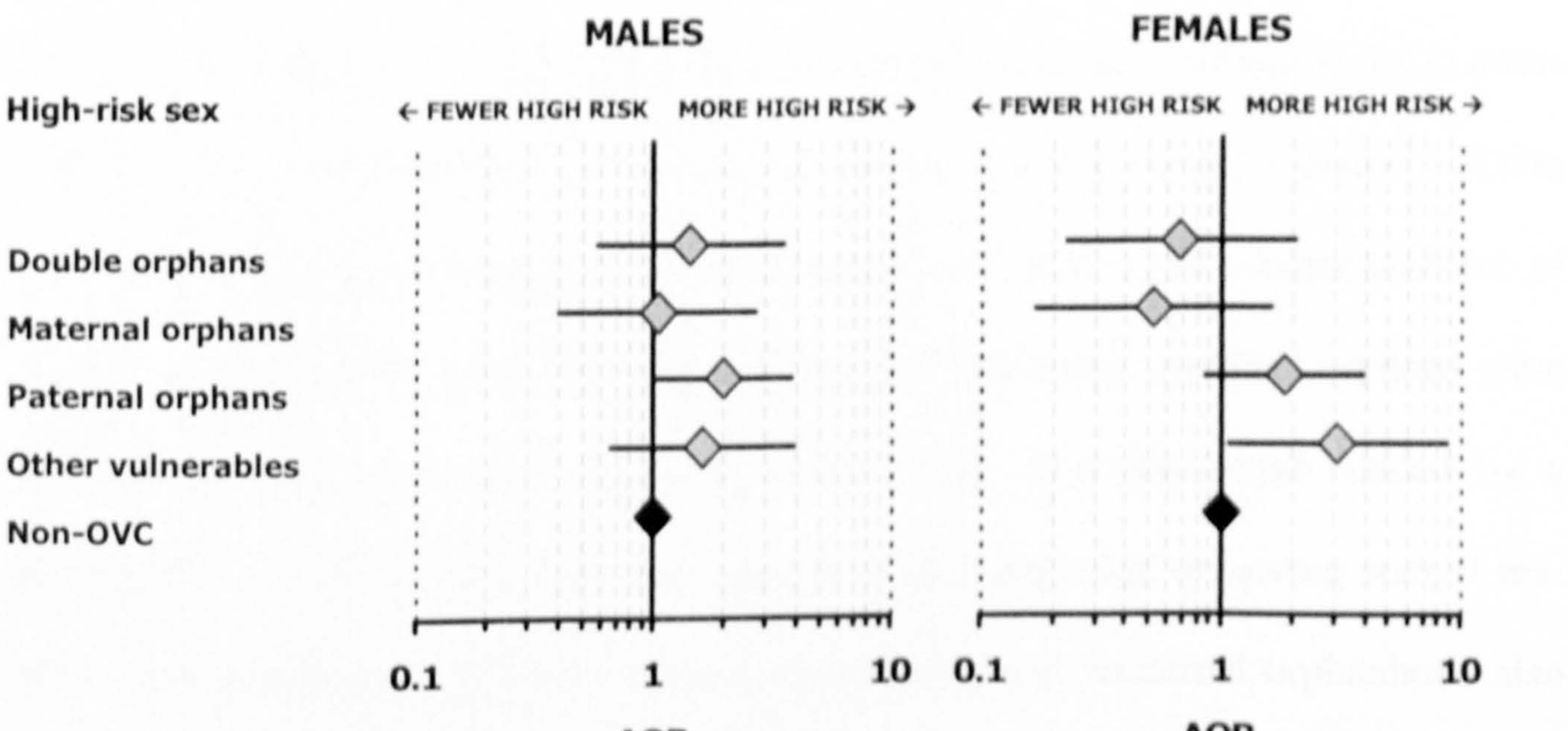


Diamonds represent age-adjusted odds ratios from logistic regression. Horizontal lines represent the 95% confidence intervals.

When the analysis was restricted to unmarried individuals, maternal orphans (AOR, 1.70; 95% CI, 1.11-2.63), paternal orphans (AOR, 1,41, 95% CI, 1.07-1.86) and other vulnerable children (AOR, 1.58; 1.11-2.24) were all more likely than non-OVC to report commencement of sexual activity but there was still no difference for double orphans (P=1.0).

Of those who had started sex, 56% (141/251) of males and 44% (79/181) of females reported having had high-risk sex. Overall, OVC who had started sex were non-significantly more likely to have had high-risk sex than their non-OVC counterparts (males: 59.3% versus 52.0%; AOR, 1.60, 95% CI, 0.93-2.75; females: 48.1% versus 40.6%; AOR, 1.38; 95% CI, 0.75-2.56). Male paternal orphans (AOR, 1.96; 95% CI, 1.00-3.82) and female non-orphaned vulnerable children (AOR, 3.09; 95% CI, 1.09-8.76) were more likely than non-OVC to have experienced high-risk sex (Figure 3.3).

Figure 3.3 Effects of OVC Status on High Risk Sex (Unprotected Casual Sex) For Those who have Commenced Aexual Activity



Diamonds represent age-adjusted odds ratios from logistic regression. Horizontal lines represent the 95% confidence intervals.

Once again, the results of the univariate and multivariate analyses of intermediate determinants of onset of sexual relations in non-OVC were similar for both sexes. Therefore, only the results of the multivariate analysis are reported. No longer being enrolled in school was associated with early onset of sexual relations (males: AOR, 2.52; 95% CI, 1.61-3.94; females: AOR, 7.10; 95% CI, 3.90-12.92). A higher score on the psychosocial distress scale was also positively associated with having started sexual relations (males: AOR, 1.36; 95% CI, 1.06-1.75; females: AOR, 1.23; 95% CI, 1.01-1.50). For females, living in a female-headed household was associated with early sexual activity (AOR, 1.81; 95% CI, 1.02-3.19). For both genders, greater poverty showed a non-significant reduction in the likelihood of having started sex but the numbers of cases were small. Care must be taken in interpreting these results since the associations identified could be due to reverse causality – for example, early sexual relations could lead to earlier school leaving or psychosocial distress rather than *vice versa*.

After also adjusting for differences in location of residence, exposure to extreme poverty, sex of household head, school enrolment and psychosocial distress (Table 3.4), only maternal orphanhood remained associated with early commencement of sexual activity (AOR, 1.71; 95% CI, 1.14-2.55). Unmarried maternal orphans were more likely than unmarried non-OVC to be living in a household headed by a grandparent which, in turn, was associated with increased risk of having started sex. After further adjusting for relationship to household head, maternal orphanhood also ceased to show a significant association with early onset of sexual relations amongst unmarried individuals (P=0.2).

Table 3.4 Effect of OVC status on onset of sexual relations in children aged 12-17 years after accounting for effects of psychosocial distress and other observed intermediate determinants

Determinant	Double orphans			Maternal orphans			Paternal orphans			Other vulnerable children			Non-OVC
	AOR† (95% CI)	P-value	n	AOR† (95% CI)	P-value	n	AOR† (95% CI)	P-value	n	AOR† (95% CI)	P-value	n	
Age and sex-adjusted models													
OVC	0.97 (0.69-1.38)	0.875	548	1.95 (1.34-2.84)	0.001	281	1.29 (1.00-1.67)	0.049	1,123	1.34 (0.96-1.87)	0.087	543	2,165
Multivariate models													
OVC	0.78 (0.54-1.13)	0.196	548	1.71 (1.14-2.55)	0.009	281	1.07 (0.80-1.47)	0.667	1,123	1.29 (0.91-1.83)	0.149	543	2,165
Location (compared to subsistence)													
Urban & commercial farms	0.79 (0.50-1.25)	0.313	70	0.74 (0.46-1.19)	0.211	46	0.80 (0.53-1.20)	0.278	128	0.74 (0.47-1.19)	0.222	94	273
Poverty													
Poorest quintile (wealth index)	0.56 (0.36-0.86)	0.008	128	0.61 (0.39-0.95)	0.029	43	0.70 (0.49-1.00)	0.049	232	0.69 (0.45-1.05)	0.086	87	359
Sex of household head													
Female	1.29 (0.94-1.78)	0.117	266	1.42 (1.02-1.97)	0.036	87	1.18 (0.88-1.59)	0.273	854	1.53 (1.12-2.10)	0.008	160	552
School enrolment status													
Out of school	3.76 (2.77-5.11)	<0.001	174	3.39 (2.48-4.64)	<0.001	79	3.55 (2.72-4.65)	<0.001	320	3.76 (2.78-5.09)	<0.001	127	502
Psychosocial distress													
Greater score on index	1.34 (1.18-1.53)	<0.001	548	1.31 (1.15-1.49)	<0.001	281	1.24 (1.10-1.39)	<0.001	1,123	1.35 (1.18-1.54)	<0 001	543	2,165
Pseudo-R2		0.1656			0.1758			0.1592			0.1721		

AOR, Odds ratio adjusted for age and sex and, for multivariate models, observed determinants of commencement of sexual activity.
CI, Confidence interval

Being out of school and increased psychosocial distress were independently positively associated with early onset of sexual relations for each form of OVC irrespective of whether those who were already married were included ($P<0.005$, in all cases). Residence in the poorest quintile of households was associated with reduced likelihood of having started sex in each OVC status sub-group.

3.5 Discussion

Against the backdrop of a large-scale maturing epidemic (Chapter 1), we found evidence that orphaned teenagers had elevated psychosocial distress and were more likely than non-OVC to have started sexual activity. Differences in age, gender, place of residence, exposure to severe poverty, relationship to household head, school enrolment, and support from closest adult and from external sources explained only a small part of the increased psychosocial distress seen in orphaned children. The causal trends were supported by the results from focus group discussions with children and their caregivers, locals and adult former orphans. However, more pronounced psychosocial distress showed an independent association with early onset of sexual activity.

Our findings are consistent with those from other studies that have also found increased psychosocial distress amongst girls, orphans and children living in poverty or not enrolled in school (Foster 2002; Makame, Ani et al. 2002; Atwine, Cantor-Graae et al. 2005; Cluver and Gardner 2006; Thurman, Snider et al. 2006; He and Ji 2007; Chatterji, Dougherty et al. April 2005). However, the study reported in this chapter (and also now published in a paper in the *American Journal of Public Health* (Nyamukapa, Gregson et al. 2008) – Appendix 6) is the first to obtain statistically robust measurements from a large national sample, to distinguish the effects by type of

orphan experience, and to apply data to a theoretical framework for understanding how psychosocial distress can arise in OVC and the consequences during and after childhood.

The cross-sectional nature of the Zimbabwe OVC Survey 2004/05 made it difficult to draw firm inferences on directions of causality – for example, between psychosocial distress and early sexual experiences. Nonetheless, our results were consistent with the causal pathway hypothesised in the conceptual framework wherein parental death causes psychosocial distress which, in turn, leads to more risky sexual behaviour. The data suggest that poverty and not being in school can mediate the relationship between form of orphanhood and psychosocial distress. However, since the determinants tested here explained only a small part of the increase in psychosocial distress, factors such as trauma, stigma and discrimination, that could not be measured using the national survey data, might also be important (see also Chapter 4). In a study in eastern Zimbabwe (Nyamukapa, Gregson et al. 2003; Nyamukapa and Gregson 2005), children reported that being in poorer households and being out of school were sources of distress. For example, poverty could result in lack of presentable clothing which could lead to their not being taken for social gatherings or visits to relatives and created difficulties in their finding friends. Children who were out of school lacked information and felt excluded from the social circle. However, within households, it was said that orphans could receive less preferential treatment in the allocation of resources including clothing than the families' own biological children. Amongst children in school, orphans had less time for and less help with homework.

Poorer districts were purposefully selected in the Zimbabwe OVC Baseline Survey, so the data probably over-represent poorer households and we cannot be certain that the

relationships found between orphanhood, psychosocial distress and early sexual activity hold at national level. Although our summary indicator of psychological distress showed good internal reliability, as with all such questionnaire-based assessments applied to new populations, we cannot be sure that the measure captured all culturally important aspects of psychosocial distress. Nor can we be certain that the weightings assigned to variables (through principal components analysis) reflect their intrinsic seriousness ("thinking of killing yourself" *versus* "being happy").

The substantive findings of the study provide important new information to guide policy on forms of psychosocial support and optimal targeting strategies. The results suggest that all forms of orphans are at increased vulnerability to psychosocial distress and may be in need of support. Whilst the statistical models explained only a part of this increased vulnerability, the results did confirm - for 12-17 year-olds - earlier suggestions that school enrolment can help to mitigate the psychosocial distress associated with orphanhood (Gregson, Waddell et al. 2001; Kelly 2002; Gregson, Nyamukapa et al. 2005). Similarly, extreme poverty - indicated by being in a household in the poorest quintile - was also found to be associated with psychosocial distress for all forms of orphans, so targeted poverty alleviation could also have a part to play. Social connectedness - indicated by being related to the closest adult and receiving meaningful support from this adult - was associated with reduced psychosocial distress (Abadia-Barrero 2002; King, De Silva et al. 2007). Thus, support that enables OVC to remain in households with close relatives could also reduce psychosocial distress. The negative association found between receipt of external psychosocial support and greater psychosocial distress is troubling but could reflect successful targeting out-weighing the initial effectiveness of these programmes.

In Zimbabwe, median age at first sex is later than in many other African countries (18 years for females and 19 years for males (Ferguson and Horwood 1998; UNAIDS 2006). Nevertheless, our finding that maternal orphans, in particular, are at risk of early onset of sexual relations is consistent with those from other studies in urban and rural areas, which have shown a consequent increase in HIV infection in teenage girls (Birdthistle, Floyd et al. 2008; Gregson, Nyamukapa et al. 2005; Cluver and Gardner 2007). Thus, programmes to reduce psychosocial distress in OVC could contribute to reducing the spread of HIV infection.

Chapter 4

Causes of Psychosocial Distress in Children in Manicaland, Eastern Zimbabwe

4.1 Introduction

The literature on the effects of orphanhood in populations subject to major HIV epidemics was reviewed in Chapter 1 and a theoretical framework was developed on causal pathways through which HIV-associated orphanhood could result in psychosocial distress during childhood.

In Chapter 3, data from a large-scale national cross-sectional survey conducted in 2004/05 were analysed and provided evidence that orphaned children do indeed suffer greater psychosocial distress than other children in Zimbabwe. However, given the fairly limited data on possible intermediate determinants of psychosocial distress collected in the national survey, it was only possible to partially investigate the causal pathways through which orphanhood can lead to heightened levels of psychosocial distress.

4.2 Objective of Chapter

In this chapter, more detailed data collected in an in-depth study in Manicaland, eastern Zimbabwe, are used to further evaluate hypotheses on the causal pathways between orphanhood and psychosocial distress experienced during childhood derived from the theoretical framework.

The following specific hypotheses, based on the theoretical framework developed in Chapter 1, are tested:

1. *Effects of parental illness and death include:*

1.1 Children who are orphaned tend to suffer greater psychosocial distress than those who are not orphans

1.2 The effects of maternal loss are more profound than those of paternal loss; thus, among orphans, maternal and double orphans typically suffer greater psychosocial distress than paternal orphans

2. *Factors moderating the effects of parental illness and death on psychosocial distress include:*

2.6 Psychosocial distress is greater among girls than boys

2.7 Psychosocial distress is greater among younger children

2.8 Psychosocial distress is greatest among children whose parent(s) have died recently

2.9 Psychosocial distress is reduced when external support is provided to the child's household

3. *Immediate effects of parental illness and death that can lead to psychosocial distress include:*

3.6 Trauma experienced as a result of a death

3.7 Trauma experienced as a result of the illness of a household member

3.8 Stigma or discrimination

3.9 Loss of a breadwinner, closely-related caregiver or household head

3.10 Frequent relocation between households

3.11 Residence in a poorer household (through loss of income or relocation)

4. *Intermediate (i.e. more gradual) effects of parental illness and death that can lead to psychosocial distress include greater exposure to:*

4.1 Inadequate care - poorer diet, clothing, shelter, health-care, educational support and other basic needs than are received by other children (i.e. either due to more extreme poverty or direct stigma or discrimination)

4.2 Being out of school

4.3 Inconsistent parenting (resulting from multiple changes of caregivers)

4.4 Living apart from siblings

4.5 Physical and psychological abuse (including child labour)

4.3 Data and Methods of Data Analysis

4.3.1 Quantitative Data

4.3.1.1 Construction of variables used in the analyses

Cross-sectional and prospective data from the first round of the Manicaland Child Cohort Study (MCCS) were used to test the hypotheses listed above (please refer to Chapter 2 for a description of the data collection methods used). In these analyses, respondents aged 0-18 years at last birthday were taken to be children.

For the purposes of the current analyses, data were used on variables related to psychosocial distress collected in the separate interviews done with caregivers (for children aged 7-18 years) and children (12-18 years). These variables were based on those used in the World Health Organisation Self-Report Questionnaire on depression and anxiety (Beusenberg and Orley 1994) - see pages 21-23 in the Child and Caregiver Questionnaire (Appendix 2). Factor analysis was used to unpack the themes from a selection of questions asked to children (20 items) and caregivers (41 items) (see page

21 Child and Caregiver Questionnaire) and only variables with a factor loading ≥ 0.3 were adopted for use in the analysis.

From the caregivers' responses, one depression-anxiety variable for psychosocial distress was derived (17 items of which 15 had factor loadings ≥ 0.3; Table 4.1). From the children's responses, the psychosocial distress variable was derived using the same questions plus three others which were not asked to the caregivers (a total of 20 items of which 17 had factor loadings ≥ 0.3 in single factor solution; Table 4.3). Because factor analysis suggested single factor solutions for both scales without great variability in factor loadings an outcome score was created by summing all variables with factor loadings ≥ 0.3 and maximum total score of 17 was possible. This simple summing, as opposed to a weighted summing, allows for ease of interpretation.

The questions used to construct the psychosocial distress variables and those used for the moderating factors and immediate and intermediate effects were each distilled into dichotomous variables for the purposes of the analysis – Yes (coded 1) – the expected outcome - indicating increased levels of psychosocial distress while No (coded 0) - the unexpected outcome - indicated less or absence of psychosocial distress. The hypothesis being that increased psychosocial distress levels would be more prevalent in orphans.

In testing the hypotheses derived from the theoretical framework, the following variables were used to represent the different moderating factors and immediate and intermediate effects of orphanhood that could translate into psychosocial distress. The moderating, immediate and intermediate factor variables were all derived from

questions asked in the Extended Family and Household Members Questionnaire (EXFAM) or the Child and Caregiver Questionnaire (CCQ).

Moderating factors

(1) Younger children were taken to be children aged 12-15 years; older children to be those aged 16-18 years - [CCQ- Q503]

(2) Duration of parental loss:

i) For round 1 data: an ordered categorical variable was constructed coded as follows: 0 - parent still alive; 1 - parent died 0-4 years ago; 2 - parent died 5-9 years ago; and 3 - parent died 10-18 years ago - [CCQ- Q502, Q507, Q511]

ii) For round 3 data (to maximise periods of parental loss for children already orphaned at round one): an ordered categorical variable was constructed: 0 - parent died within 0-1 year; 1 - parent died within 2-4 years, and 3-parent died within 5-17 years and 4-parent died within 18 or more years - [CCQ- Q502, Q507, Q511]

(3) External support - caregiver reports of assistance received by the household based on the presence of an orphan in the household or of assistance being given direct to the child - [CCQ- Q453, Q455].

Immediate effects

(1) Death-related trauma – adult (18 years or over; excluding a parent), sibling (aged under 18 years) or caregiver who died in the last 3 years - [EXFAM Q029, QCC-Q430, Q434]

(2) Sickness-related trauma – currently living in a household with a seriously-ill member (child or adult including a parent) - [EXFAM Q030, CCQ- Q434]

(3) Stigma and discrimination – child reported being treated worse (coded 1) rather than the same or better (coded 0) than other children in the household - [CCQ- Q613]

(4) Loss of breadwinner, closely-related caregiver or household head– being in the care of a less closely-related caregiver: non-parent coded 0, parent coded 1 - [CCQ- Q426, Q434, Q506, Q510]

(5) Frequent relocation – based on changes in residence by single year of age. Numbers of relocations calculated by adding up the numbers of moves made by the child at each single year of age. Multiple moves between households were coded 1; single or no moves coded as 0 - [CCQ- Q513a]

(6) Residence in a poorer household – formulated from 10 questions in the EXFAM questionnaire on ownership of moveable (i.e. radio, television, bicycle and cattle) and immovable (i.e. housing – house type and floor type) assets and access to facilities by type and whether they were shared (i.e. toilet and water source). For each asset or facility, those who owned or had access to the item were scored 0; those who did not were scored 1. Total scores out of

10 were calculated for each individual. These were then grouped into quintiles. Those in the highest quintile were taken to be the poorest households and were coded 1; the remainder were coded 0 - [EXFAM - Q055, Q056, Q057, Q058, Q059, Q060, Q064, Q065].

Intermediate effects

(1) Inadequate care - from responses to questions on whether selected basic needs (i.e. food provision, health care, school fees and clothing) were met by either the caregiver or the caregiver's spouse in the last year and questions asked to the child on whether they owned a pair of shoes. If none of the basic needs were met by the caregiver or his/her spouse and the child did not own a pair of shoes, the child was coded 1; otherwise, the child was coded 0 - [CCQ - Q442, Q444, Q447, Q450, Q451]

(2) Being out of school - based on children's reports on their current enrolment in (coded 0) or out of school (coded 1) - [CCQ-Q519]

(3) Inconsistent parenting – based on caregiver's report of child's caregiver history from birth to age at interview date. Numbers of changes in caregiver at each single age were added to give a total number of moves since birth. Children who had experienced more than one change in caregiver in their lifetime were coded 1; the remainder were coded 0 - [CCQ-Q514]

(4) Living apart from siblings – caregivers were asked whether the child had any surviving siblings. For those who had surviving siblings, a follow-up question was asked on whether the child resided with any of his/her siblings in their

current household. For children with surviving siblings, those not living with any siblings were coded 1; those living with one or more siblings were coded 0. Children with no surviving siblings were coded 0 - [CCQ-Q429]

(5) Physical abuse – based on children's reports of whether they had been beaten by an adult in the month prior to interview – [CCQ-Q601]

(6) Child labour – based on reports of having worked for more than 20 hours per week in the family fields or having, at one point in their life, undertaken paid work – [CCQ-Q611]

4.3.1.2 Cross-sectional analyses

First, psychosocial distress was compared for orphans *versus* non-orphans after adjusting for differences in age and sex. This was done using caregiver and child responses separately and the results were compared. Because the effect of orphanhood was found to differ between the analyses done using the caregiver and child responses, further investigations were conducted to establish the validity of and reasons for this finding. The results obtained using the child responses (showing positive associations between orphanhood and psychosocial distress) [see section 4.4.1.2] were consistent with those seen in the national data that were also based on children's own responses (Chapter 3). It was hypothesised that the results obtained using the caregivers' responses failed to reveal the same pattern because: (i) orphans' caregivers were less closely related; and (ii) less-closely related caregivers were not so sensitive to children's psychosocial status. This hypothesis was tested in three stages:

(1) Re-running the analyses for both caregivers and children's responses for children aged 12-18 years, for whom complete data were available on the questions that yielded scores ≥ 0.3 in the principal components factor analysis based on the caregivers' responses. This was done to control for other factors that might have invalidated the comparison (i.e. differences between the questions asked to caregivers and children; differences in the age-ranges of children covered; and differences in the numbers of children in the sample)

(2) Tabulating the distributions of caregiver's relationships to children by children's orphan status to see whether orphans (and particular forms of orphans) were more likely to be cared for by more distantly-related caregivers; and

(3) Using the data obtained from the caregiver responses and multivariate Poisson regression to test for associations between caregiver's relationship to child and reported psychosocial distress

The results obtained from the children's own responses were more plausible and externally consistent than those based on the caregivers' responses (see results given below). Furthermore, the findings from the additional investigations described above suggested that the results obtained using the caregiver responses were severely confounded by relationship to caregiver. Initially, it had been planned to focus the analysis on the caregiver data due to the larger sample size and wider range of children's ages covered by these data. However, due to the indications of greater reporting bias in these data, subsequent analyses were restricted to the data obtained directly from the children and consequently were limited to the age-range 12-18 years.

Second, stratified Poisson regression was used to test whether age and/or sex moderate the relationship between orphanhood and psychosocial distress. This was done for paternal and maternal loss separately.

Third, frequency tabulations for the various hypothesised immediate and intermediate determinants of psychosocial distress were conducted. Age- and sex-adjusted odds ratios were computed using logistic regression to compare exposure to these different determinants amongst orphan groups and non-orphans.

Fourth, multivariate Poisson regression models were developed for each orphan group and for all orphans combined: (i) to test whether the hypothesised determinants were associated with greater psychosocial distress in children; and (ii) to establish whether increased exposure to these determinants accounted for the greater psychosocial distress seen amongst orphaned children.

1,003 children aged 0-18 years - 257 paternal orphans, 245 maternal orphans, 279 double orphans and 222 non-orphans – were enumerated in the first round of the MCCS. Of these children, 871 were aged 7 years and above; 824 (95%) of these had complete caregiver responses for all the variables required for the analyses described above. 551 were aged 12-18 years; of whom 527 (96%) had complete child responses for all the variables used in the analyses.

4.3.1.3 Prospective longitudinal analyses

Poisson regression models adjusted for age and sex were used to assess whether orphan and other experiences reported at round one of the MCCS and found to be associated with psychosocial distress at round one continued to show similar effects in rounds two and three. Further assessment was done to establish whether consistent supply of external support reduced psychosocial distress among children in the study population. This was done by dividing the children into three groups: (1) those who reported receiving no support at all; (2) those who received intermittent support over the three year survey period; and (3) those who received external support consistently over the three years. Poisson regression tests were used to test for differences in psychosocial distress controlling for age, sex and orphan status.

The longitudinal data were also used to investigate whether psychosocial distress increased or reduced relative to that in non-orphans with increasing durations of orphanhood. Mean differences in scores for psychosocial distress between rounds one and three were calculated for each orphan and non-orphan group. Poisson regression was used to test whether the mean change in psychosocial distress seen amongst orphans (and orphan sub-groups) differed from that in non-orphans.

4.3.2 Qualitative Data

Anecdotal material from qualitative interviews and focus group discussions were used to aid interpretation of the quantitative results. These were taken from the 13 focus group discussions (FGD) held with children (n=4) and their caregivers (4), who participated in rounds 1-3 of the MCCS (i.e. in both cases, one FGD was conducted in

each of the 4 different types of study area); adults who had been orphans when children [adult orphans] (2); local community members (2); and interviewers (1). Each group had between 12 and 14 participants. To evaluate the appropriateness of the questionnaire and the sensitivity of tools in data collection a third of children and their caregivers (85 paternal, 70 maternal, 81 double and 68 non-orphans and same number of their caregivers) were selected at round one and the comments they made about the projects, questionnaire and interviewers or interviewers in the open ended section of the Child and Caregiver Questionnaire (CCQ-last page) during the three survey rounds were recorded and analysed. Further details of the data collection methods are given in Chapter 2.

The data were transcribed straight from Shona, the local language, into English. The transcribed data was analysed manually using content theme analysis. This involved coding recurring themes and then interpreting the coded data. The thematically coded data were explored further to identify differences between groups (Miles and Huberman 1994; Wolcott 1994; Heaton 2004; Silverman 2006).

4.4 Results

4.4.1 Quantitative Data – Cross-Sectional Analysis

4.4.1.1 Psychosocial distress based on caregiver responses

Table 4.1 shows the questions that were included in the caregiver psychosocial distress variable – i.e. those that had factor loadings ≥ 0.3. The Cronbach alpha reliability test Coefficient score for the 15 selected variables was 0.71.

Table 4.1 Psychosocial distress variable items factor loading results: caregivers' responses (7-18 years olds)

	Question items	Factor loadings
1	Is (name)'s digestion poor?	0.53
2	Does (name) have uncomfortable feelings in the stomach?	0.53
3	Does (name) feel nervous, tense or worried?	0.52
4	Does (name) feel more unhappy than usual?	0.51
5	Does (name) feel tired all the time?	0.48
6	Is (name) easily frightened?	0.47
7	Is (name)'s appetite poor?	0.46
8	Does (name) cry more than usual?	0.45
9	Does (name) sleep badly?	0.45
10	Does (name) have trouble thinking clearly?	0.43
11	Does (name) find it difficult to make decisions?	0.43
12	Is (name)'s daily work suffering?	0.43
13	Does name find it difficult to enjoy daily activities?	0.41
14	Do (name)'s hands shake?	0.39
15	Does (name) often have headaches?	0.36
	Question items with <0.3 factor loadings: not used	
16	Has (name) lost interest in things?	
17	Is (name) able to play a useful part in life?	

The caregiver responses indicated less psychosocial distress amongst orphans than in non-orphans with double and maternal orphans suffering the lowest levels of distress (Table 4.2).

Table 4.2 Psychosocial distress reports by orphan status: based on caregivers' responses: for children aged 7-18 years old

Sociodemographic status	Caregivers' responses (n=824)					
				Testing for difference		
	Number	Mean	S.D.	Coeff*	95 % CI	P-value
Non-orphans	142	3.69	2.96			
Orphans	682	3.21	2.59	-0.14	-0.24, -0.05	0.003
Paternal	234	3.68	2.86	-0.01	-0.12, 0.10	0.795
Maternal	164	2.64	2.29	-0.32	-0.45, 0.20	<0.001
Double	284	3.14	2.45	-0.17	-0.28, -0.06	0.002

*Poisson regression models adjusted for age and sex

4.4.1.2 Psychosocial distress based on children's responses

Given the unexpected findings from the caregiver data, it was decided to also examine the relationship between orphanhood and psychosocial distress using the data collected from the children themselves.

Table 4.3 shows the questions that were included in the psychosocial distress variable derived from the children's own reports. In addition to the questions asked to the caregivers, three extra questions were asked to the children. These were: (1) Do you think you are a worthless person? (2) Have you ever thought of ending your life? and (3) Do you feel tired all the time? The Cronbach alpha reliability test Coefficient score based on the 17 items that had factor loadings ≥ 0.3 was 0.73.

Table 4.3 Psychosocial distress variable items factor loading results: children's responses (12-18 years olds)

	Question items	Factor loadings
1	Do you cry more than usual?	0.55
2	Do you feel tense, nervous or worried?	0.54
3	Do you feel tired all the time?	0.54
4	Do you have uncomfortable feelings in your stomach?	0.48
5	Do you find it difficult to make decisions?	0.47
6	Is your appetite poor?	0.46
7	Do you feel more unhappy than usual?	0.45
8	Do you feel a worthless person?	0.44
9	Do your hands shake?	0.43
10	Do you sleep badly?	0.43
11	Is your digestion poor?	0.40
12	Are you easily frightened?	0.40
13	Do you get tired easily?	0.39
14	Do you have trouble thinking clearly?	0.38
15	Do find it difficult to enjoy your daily activities?	0.37
16	Has the thought of ending your life been in your mind?	0.31
17	Do you often have headaches?	0.31
	Question items with <0.03 factor loadings: not used	
18	Is your daily work suffering?	
19	Are you able to play a useful part in life?	
20	Have you lost interest in things?	

In contrast to the results obtained from the caregivers' responses, the results based on the children's own responses indicated that orphans suffered greater psychosocial distress than non-orphans (Table 4.4). Paternal orphans were the worst affected whilst the difference was not statistically significant for maternal orphans (P-value=0.2).

Table 4.4 Psychosocial distress reports by orphan status: children's responses (12-18 year olds)

Socio-demographic status	Children's responses (n=527)					
	Testing for difference					
	Number	Mean	S.D.	Coeff*	95 % CI	P-value
Non-orphans	83	4.13	2.88			
Orphans	444	4.83	3.12	0.15	0.03, 0.26	**0.013**
Paternal	150	5.19	3.25	0.21	0.08, 0.34	**0.001**
Maternal	109	4.51	3.19	0.08	-0.06, 0.22	0.245
Double	185	4.74	2.92	0.13	0.01, 0.26	**0.040**

*Poisson regression models adjusted for age and sex

4.4.1.3 Explanation of difference in effect of orphanhood on psychosocial distress as measured using caregiver and child data

The differences between the results obtained from the caregiver's and children's responses could be due to a number of reasons.

First, the ages of the children differed. The caregiver data included children who were 7-18 years old whilst the child data were obtained from children aged 12-18 years. The symptoms of psychosocial distress in 7-11 year-olds may differ from those in older children. Elsewhere, it has been found that, in contrast to older children, younger children are more likely to express their psychosocial distress through temper tantrums and clinging (American Association of Psychiatry 1994). In addition, the tool used to measure psychosocial distress in the study may be more effective at measuring

psychosocial distress in adolescence than at young ages (Bowlby 1998). Second, the extra questions that were asked to children but not to their caregivers resulted in differences in the composition of the psychosocial distress variables obtained.

To investigate these possibilities, the analyses were re-run using the age-range of children for whom responses were also obtained from the children themselves (i.e. 12-18 years) and omitting the questions that had not been asked to the caregivers.

Similar results were obtained (Table 4.5) to those found for the full age-range (Table 4.2). However, the caregiver results now only showed significantly lower levels of psychosocial distress for maternal orphans. The results based on the children's self-reports still indicated that orphans suffered greater psychosocial distress than non-orphans. Paternal and double orphans remained at greatest risk.

Table 4.5 Psychosocial distress reports by orphan status: caregivers reports vs children's reports: children aged 12-18 yrs (R1)

Socio-demographic status	Caregiver responses (n=527)						Children's responses (n=527)					
	Test for difference						Test for difference					
	Number	Mean	S.D	Coeff	95% CI	P-value	Number	Mean	S.D	Coeff	95% CI	P-value
Non-orphans	83	3.47	2.61				83	4.13	2.88			
Orphans	444	3.23	2.58	-0.08	-0.21, 0.05	0.223	444	4.83	3.12	0.15	0.03, 0.26	0.013
Paternal	150	3.69	2.87	0.07	-0.11, 0.18	0.600	150	5.19	3.25	0.21	0.08, 0.34	0.001
Maternal	109	2.40	2.22	-0.37	-0.54, -0.20	<0.001	109	4.51	3.19	0.08	-0.06.0.22	0.245
Double	185	3.35	2.43	-0.03	-0.17, 0.11	0.696	185	4.74	2.92	0.13	0.01, 0.26	0.040

*Poisson regression tests adjusted for age and sex

4.4.1.4 Are less closely-related caregivers less likely to report psychosocial distress in children in their care?

Inclusion of younger children in the caregiver variable and differences in the questions asked therefore account for some of the discrepancy with the results obtained from the children's own reports. Nevertheless, in contrast to the children's self-reports, the caregiver data still showed no disadvantages associated with orphanhood. Therefore, it

seems possible that the caregivers of orphans are under-reporting psychosocial distress. This could be because they are less closely-related to the children in their care and therefore less well-attuned to their problems than caregivers of non-orphans.

To investigate this, Table 4.6 compares the distributions of children by orphan status according to their caregiver's relationship. Orphans and, in particular, maternal and double orphans, were much less likely to be being cared for by a parent than non-orphans.

Table 4.6: Are orphans more likely to be cared for by less closely related caregivers?

Relationship to caregiver	Orphans	Paternal orphans	Maternal orphans	Double orphans	Non-orphans
	(n=682) %	(n=236) %	(n=164) %	(n=284) %	(n=142) %
Parent	37.7	62.3	29.9	21.5	71.0
Grandparents	31.0	25.0	30.5	37.0	15.8
Other relatives	19.8	8.5	29.3	23.6	5.6
Brother or sister	7.8	3.3	5.5	12.0	2.1
Not related	0.4	0	0.6	0.7	0.7
Missing caregiver information	3.5	0.9	4.3	5.3	5.6

* Children aged 7-18 years at R1

More than one-fifth of double orphans were reported as being cared for by a parent. Participants in the qualitative investigations suggested that this could occur when double orphans were in the care of an uncle, aunt or step-parent. This could be explained by what Bourdillon (1997) observed as being common among the Shona people whereby children call their father's brothers "father" and their mother's sisters "mother". A similar observation was made by Mhondoro (Mhondoro 1997) (p80) in the book by Clive and Peggy Kilef (1997) who states that "A Shona man's sense of duty towards his brother's family is so strongly stressed that, when the brother dies, he customarily honours his obligation to take over the wife and children".

In addition, it was said that a caregiver's relationship to a child could be misreported if the interviewer failed to emphasise the need to differentiate children born to the carer or household head from those being cared for and residing in the same household. Respondents who did not trust their interviewers to keep information confidential (e.g. if this related to family or marital secrets or feuds) or who failed to understand why information was being collected may not have supplied truthful information for fear of exposing children to harm. This was said to occur when caregivers or households heads were so close to the children in their care that they would report them as their own or not orphans at all. In other instances, children from single parents or broken down unions may have been mistakenly reported as double orphans because caregivers hoped to receive benefits from the project.

Due to the different possible forms of mis-reporting, double orphans who were reported as being cared for by a parent were excluded from the subsequent analysis.

Poisson regression was used to test for associations between being cared for by a closely-related caregiver and psychosocial distress controlling for age, sex and orphan status, using the caregiver responses. The results for all children combined indicated that parents were more likely to report psychosocial distress in children in their care than non-parents [Coeff: 0.11; 95% CI 0.03-0.19]. In non-orphans [Coeff: 0.14; 95% CI -0.08-0.35] and in paternal orphans [Coeff: 0.19; 95% CI 0.05, 0.34], parents (i.e. in most cases mothers) were more likely than non-parents to report their children as suffering from psychosocial distress. In maternal orphans [Coeff: -0.02; 95% CI -0.22-0.19], parents (i.e. fathers) were no more likely to report their children as suffering from psychosocial distress than other caregivers (P-value=0.9).

Most maternal and double orphans were in the care of less closely-related caregivers. The test for association between caregiver's relationship to the child and their reports on the child's psychosocial distress reports did indicate that parent caregivers (and particularly mothers) were more likely than non-parent caregivers to report children in their care as suffering from psychosocial distress. Thus, it seems likely that orphans' psychosocial distress was under-reported by their non-parent carers. The discrepancies between the caregiver and children responses and the finding that these were most probably due to under-reporting by less closely-related caregivers led to the decision to use the children's responses in all subsequent analyses.

4.4.1.5 Factors moderating experience of psychosocial distress: the effects of age and sex

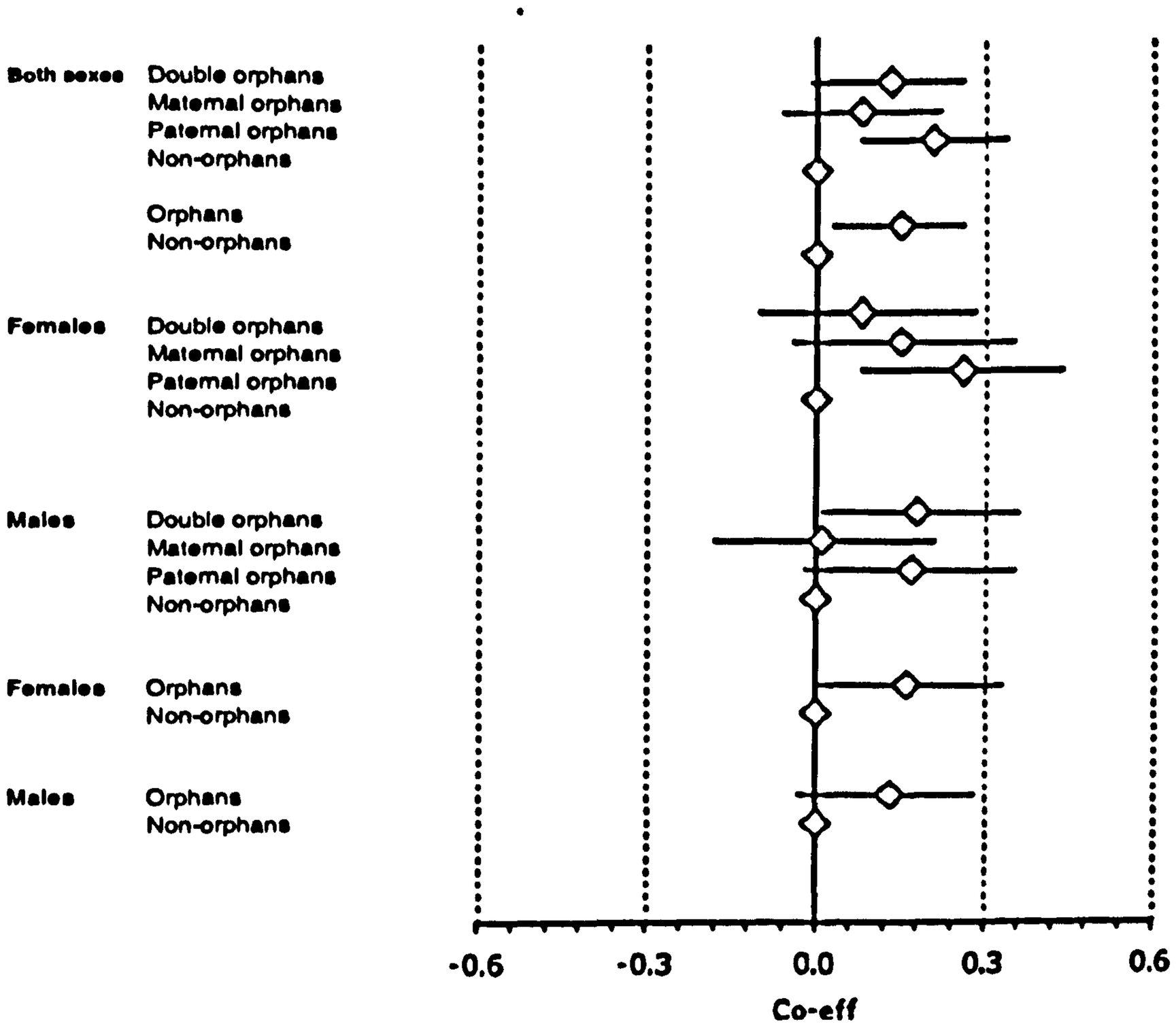
Figure 4.1 shows the patterns of psychosocial distress by sex and age. Girls were observed to exhibit greater psychosocial distress than boys [Coeff: 0.22; 95% CI 0.15-0.31]. Older boys (aged 16-18 years) reported less psychosocial distress than younger boys (aged 12-15 years) [Coeff: -0.27; 95% CI -0.50- -0.05].

Figure 4.1 Psychosocial Distress by Sex and Age-Group



Further tests were conducted to explore whether the effects of orphanhood were seen in both sexes. Orphaned children showed significantly greater levels of psychosocial distress than their non-orphaned peers in both boys and girls (Figure 4.2). In girls, paternal orphans appear to suffer the most distress and there was some suggestion that maternal orphans were also affected. In boys, paternal and double orphans were the worst affected.

Figure 4.2 Psychosocial Distress by Sex and Orphan Status in Children aged 12-18 years (MCCS R1)



Diamonds represent Coefficients from Poisson regression tests.
Horizontal lines represent 95% Confidence Interval (CI).

4.4.1.6 Association between duration of parental loss and psychosocial distress

Table 4.7 shows the results for the association between orphanhood and psychosocial distress by time since parent died with double orphans being included in both the paternal and maternal orphan categories. Amongst paternal orphans, elevated psychosocial distress was seen for all durations of parental loss with the results being significant for both recent and long-term orphanhood. Maternal orphans who lost their mother more than 4 years ago reported significantly less psychosocial distress than those whose mothers were still alive.

Table 4.7 Test for association between parental loss duration and psychosocial distress: by type of parental loss.

Duration and type of loss	Number	Mean	S.D	Test for difference* Coeff	95% CI	Pvalue
Paternal loss duration						
Father alive	164	4.31	3.10			
0-4 yrs ago	84	5.26	3.20	0.18	0.06, 0.30	0.003
5-9 yrs	96	4.68	3.00	0.06	-0.06, 0.18	0.347
10-18 yrs	85	4.98	3.08	0.16	0.04, 0.28	0.009
Missing information	22	4.61	3.15	0.07	-0.14, 0.28	0.495
Maternal loss duration						
Mother alive	240	4.80	3.17			
0-4 yrs ago	87	5.10	3.09	0.07	-0.04, 0.18	0.198
5-9 yrs	86	4.34	2.96	-0.11	-0.23, 0.01	0.061
10-18 yrs	64	3.93	2.79	-0.18	-0.31, -0.04	0.013
Missing information	13	5.00	3.96	0.03	-0.22, 0.28	0.796

*Poisson regression tests controlled for age and gender

4.4.1.7 Hypothesised causal pathways between orphanhood and psychosocial distress

The frequencies of immediate and intermediate effects of orphanhood hypothesised to lie on the causal pathway between orphanhood and increased psychosocial distress in the theoretical framework seen in the children in the stratified study sample are given in Table 4.8.

Close to two-thirds of the children (59%) in the study reported having experienced the death of an adult or child household member (other than a parent), a sibling or caregiver in the 3 years prior to interview in the first round of the survey. Half were living with a seriously-ill caregiver or household member at the time of interview.

Table 4.8 Determinants of psychosocial distress: based on caregiver and children's responses

Life experience	Source of information	All children (n=527) Number	%
Immediate effects			
Trauma - death in household	Caregiver	312	59
Trauma - illness in household	Caregiver	266	50
Stigma and discrimination	Child	29	6
Residence change >1 moves	Child/caregiver	56	11
Residence in poorer household	Caregiver	178	34
Intermediate effects			
Cared for by less closely related caregiver (non-parent)	Child/caregiver	360	68
Received inadequate care	Child/caregiver	417	79
Experienced inconsistent parenting (>1 carer changes)	Child/caregiver	86	16
Child labour	Child	172	33
Child abuse	Child	75	14
Separated from siblings	Caregiver	102	19
Not enrolled in school	Child	76	14
Received some external support	Caregiver	196	37

Relatively few children reported being treated differently to other children (6%) or having changed residence more than once since birth (11%). One third (34%) of the children lived in the poorest quintile of households suggesting that the older children from whom self-reported data were collected lived in poorer households than the younger children included in the initial sample. Two-thirds (68%) were in the care of someone other than a parent and one-in-six (16%) had had multiple caregivers since birth. One-third (33%) of children reported either having worked to earn money or having worked for more than 20 hours per week in the household plot in the last month. One-in-seven (14%) said they had been beaten by an adult member of the household in the last month. One-in-five (19%) were not living together with any of

their surviving siblings. One-in-seven (14%) of the children were not enrolled in school at the time of the interview. Slight over a third (37%) of children reported having received some form of material support either directed to the household because of the presence of an orphan or provided directly to the index child.

4.4.1.8 Associations between hypothesized determinants and psychosocial distress

Tests for association between immediate and intermediate effects [determinants] and the psychosocial distress outcome variable indicated strong positive associations for: (i) residing in a household that experienced the death of household member in the last 3 years; (ii) living in a household with a member who was seriously ill; (iii) suffering stigma or discrimination; (iv) receiving inadequate care from caregiver and/or spouse; (v) child labour; (vi) physical abuse by an adult household member in the last month; and (vii) not being in enrolled in school (Table 4.9).

No difference in psychosocial distress was found between children being cared for by a parent and those cared for by a less closely-related relative. Further tests were conducted to establish, separately, whether this was the case for children being cared for by mothers and by fathers. However, no difference was found for children being cared for by either parent.

Table 4.9 Test for association between determinants and psychosocial distress outcome variable.

Determinants	Test for difference		
	Coeff	95 % CI	P-value
Immediate effects			
Trauma - death in household	0.10	0.02, 0.18	0.014
Trauma - illness in household	0.10	0.03, 0.18	0.010
Stigma and discrimination	0.41	0.27, 0.56	<0.001
Residence change >1 moves	0.10	-0.03, 0.22	0.121
Residence in poorer household	-0.00	-0.08, 0.08	0.988
Intermediate effects			
Cared for by parent vs non-parent	0.04	-0.04, 0.12	0.327
Received inadequate care	0.24	0.14, 0.35	<0.001
Experienced inconsistent parenting (>1 carer changes)	-0.02	-0.12, 0.09	0.774
Child labour	0.19	0.10, 0.27	<0.001
Child abuse	0.27	0.17, 0.38	<0.001
Separated from siblings	-0.08	-0.19, 0.02	0.114
Not enrolled in school	0.26	0.14, 0.38	<0.001
Received some external support	0.03	-0.05, 0.11	0.498

*Poisson regression tests controlled for age and gender

No associations were found between multiple changes of residence or caregiver, sibling separation, or residence in a poorer household and levels of psychosocial distress. External support for the household was not associated with reduced psychosocial distress.

4.4.1.9 Relative frequencies of hypothesized determinants of psychosocial distress by orphan status

Tests were conducted to find out whether orphans were more likely than non-orphans to experience circumstances hypothesized to increase psychosocial distress (Table 4.10). More orphans than non-orphans had experienced a household death (other than to a parent); being in a household with a member who was seriously ill; multiple changes of residence and caregiver; being cared for by a less closely-related caregiver; having worked for wages or for more than 20 hours per week; being separated from their siblings; and living in a household that had received external support.

Table 4.10 Odds ratios of orphans experiencing immediate and intermediate determinants compared to non-orphans

Determinants	Orphans (444)				Double orphans (185)				Maternal orphans (109)				Paternal orphans (150)				Non-orphans (83)
	Test for difference				Test for difference				Test for difference				Test for difference				
	%	AORs	95 % CI	Pvalue	%	AORs	95 % CI	Pvalue	%	AORs	95 % CI	Pvalue	%	AORs	95 % CI	Pvalue	
Immediate effects																	
Trauma - death in household	69	44.37	15.91, 123.70	<0.001	82	87.92	29.92, 258.28	<0.001	56	26.99	9.11, 79.95	<0.001	64	34.75	12.01, 100.56	<0.001	5
Trauma - illness in household	52	1.50	0.93, 2.42	0.096	49	1.35	0.80, 2.29	0.263	50	1.38	0.77, 2.48	0.285	57	1.71	0 98, 2.98	0.058	42
Stigma and discrimination	6	2.59	0.60, 11.15	0.202	5	2.28	0.49, 10.71	0.296	10	4.53	0.97, 21.15	0.054	4	1.87	0.35, 9.78	0.458	2
Residence change >1 moves	12	3.51	1.06, 1.56	0.039	14	4.30	1.25, 14.81	0.021	14	4.09	1.14, 14.70	0.031	8	2.23	0.61, 8.21	0.227	4
Residence in poorer household	34	1.21	0.72, 2.01	0.469	30	1.02	0.58, 1.81	0.944	34	1.21	0.65, 2.23	0.554	40	1.48	0 83, 2.64	0.182	30
Intermediate effects																	
Cared for by parent vs non-parent	77	0.15	0.08, 0.28	<0.001	22	0.07	0.03, 0.13	<0.001	34	0.12	0.06, 0.24	<0.001	62	0.41	0.21, 0.79	0.008	81
Received inadequate care	80	1.50	0.88, 2.58	0.138	83	1.79	0.97, 3.33	0.064	75	1.11	0.57, 2.15	0.762	81	1.49	0.77, 2.89	0.236	72
Experienced inconsistent parenting (>1 carer changes)	19	5.91	1.81, 19.20	0.003	23	7.69	2.30, 25.69	0.001	28	9.91	2.90, 33.87	<0.001	7	1.75	0.46, 6.60	0.410	4
Child labour	34	1.64	0.93, 2.89	0.088	34	1.53	0 83, 2.83	0.177	33	1.65	0.82, 3.33	0.158	36	1.89	0.99, 3.59	0.054	24
Child abuse	13	0.67	0.35, 1.27	0.222	14	0.78	0.38, 1.59	0.492	12	0.58	0.25, 1.33	0.198	13	0.62	0.29, 1.33	0.222	19
Separated from siblings	21	1.86	0.92, 3.75	0.084	25	2.40	1.14, 5.04	0.021	24	2.31	1.04, 5.13	0.040	13	1.03	0.45, 2.36	0 943	12
Not enrolled in school	15	1.02	0.45, 2.29	0.969	16	1.09	0.45, 2.63	0.843	10	0.56	0.20, 1.61	0.282	17	1.30	0.53, 3.22	0.564	13
Received some external support	42	4.58	2.36, 8 88	<0.001	45	5.26	2.61, 10.59	<0.001	40	4.64	2.19, 9.81	<0.001	38	3.76	1.82, 7.79	<0.001	13

*Logistic regression tests adjusted for age and sex

All orphan groups were more likely than non-orphans to reside in households that had experienced deaths; to be cared for by less closely-related caregivers; and to live in households that had received external support. Among the different orphan groups, paternal orphans were at greater risk of living in a household with a seriously-ill household member and to have experienced child labour. Maternal orphans were almost five times (10% *versus* 2%) as likely to have experienced stigma and discrimination in their households as non-orphans. Relocation, changes in caregiver, and being separated from siblings were most common in maternal and double orphans. The risk of receiving inadequate care was greatest among double orphans.

4.4.1.10 Multivariate test for association between determinants and psychosocial distress by different orphan status

Table 4.11 shows the results from multivariate Poisson regression models developed to assess whether the circumstances hypothesized as being immediate or intermediate factors on the causal pathway between orphanhood and increased psychosocial distress accounted for the excess psychosocial distress observed amongst orphans in the study (Table 4.5 and Figure 4.2).

Table 4.11 Multivariate Poisson regression test for causal pathways of psychosocial distress by orphan type and experience: children age 12-18 years (R1)

Determinants	Orphans (444)		Double orphans(185)		Maternal orphans(109)		Paternal orphans (150)	
	Test for difference		Test for difference		Test for difference		Test for difference	
	Coeff	P-value	Coeff	P-value	Coeff	P-value	Coeff	P-value
Age and sex adjusted model	0.15	0.013	0.13	0.040	0.08	0.245	0.21	0.001
Full model	0.07	0.339	-0.04	0.712	-0.02	0.873	0.17	0.044
Immediate effects								
Trauma - death in household	0.10	0.040	0.11	0.214	0.17	0.063	0.02	0.767
Trauma - illness in household	0.09	0.028	0.08	0.157	-0.02	0.837	0.22	0.001
Stigma & discrimination	0.26	<0.001	0.23	0.066	0.42	0.001	0.31	0.027
Residence in poorest household	-0.08	0.090	-0.01	0.928	-0.20	0.011	-0.05	0.432
Intermediate effects								
Cared for by parent vs non-parent	0.09	0.046	-	-	0.02	0.842	0.11	0.137
Inadequate care (lack basic needs)	0.19	0.001	0.23	0.007	0.30	0.001	0.14	0.110
Residence change >1 moves	0.10	0.151	0.14	0.167	0.17	0.192	-0.07	0.636
Caregiver changes >1 changes	-0.03	0.611	-0.08	0.249	0.11	0.345	0.19	0.207
Child labour	0.13	0.006	0.16	0.015	0.14	0.122	0.13	0.061
Child abuse (physically abused in last month)	0.21	<0.001	0.20	0.010	0.22	0.026	0.34	<0.001
Sibling separation	-0.11	0.044	0.00	0.963	-0.24	0.018	-0.04	0.711
Not enrolled in school	0.17	0.009	0.24	0.009	-0.03	0.808	0.16	0.089
Received some external support	-0.00	0.994	0.16	0.017	-0.13	0.140	0.17	0.044

* Poisson regression test controlled for age and gender

For orphans as a whole, half the excess psychosocial distress was explained by the various determinants and the excess was no longer statistically significant after controlling for these determinants. Trauma, stigma and discrimination, inadequate care, child labour, child abuse, and not being enrolled in school all appeared to contribute to the greater psychosocial distress seen in orphans.

In the regression models, the hypothesized determinants accounted for the greater psychosocial distress seen in double orphans compared to non-orphans but only partially accounted for the excess found in paternal orphans. Stigma and discrimination showed statistically significant positive associations with psychosocial distress in all orphan groups, but this association was particularly pronounced in maternal orphans.

4.4.2 Prospective Data

4.4.2.1 Psychosocial distress levels over the three surveys rounds

The mean psychosocial distress scores reduced over the three rounds from 4.76 in round one to 3.84 in round two and 2.79 in round three. In part, this may have been because the average age of the children in the study increased between rounds - from 14.5 years in round one to 14.6 years in round two and 15.6 years in round three – and older children tend to report less psychosocial distress (Figure 4.1).

Psychosocial distress in orphans relative to non-orphans appears to have increased over time (Table 4.12). This trend was also seen in paternal orphans. Maternal orphans who did not report more psychosocial distress than non-orphans in the first two rounds

of the survey did report greater distress in round three. In contrast, double orphans who had higher psychosocial distress than non-orphans in the first two rounds no longer showed a statistically significant difference in round three, although this may have been due to a reduction in the size of the sample.

Table 4.12 Psychosocial distress reports by orphan status over the three survey rounds: children aged 12 and above

Status	Round One (527)			Round Two (444)			Round Three (432)		
	*Test for difference			Test for difference			Test for difference		
	Coeff	95 % CI	P-value	Coeff	95 % CI	P-value	Coeff	95 % CI	P-value
Non-orphans									
Orphans	0.15	0.03, 0.26	0.013	0.18	0.04, 0.32	0.011	0.26	0.10, 0.43	0.002
Paternal orphans	0.21	0.08, 0.34	0.001	0.26	0.11, 0.42	0.001	0.39	0.21, 0.57	<0.001
Maternal orphans	0.08	-0.06, 0.22	0.245	0.06	-0.12, 0.23	0.540	0.24	0.03, 0.45	0.028
Double orphans	0.13	0.01, 0.26	0.040	0.18	0.03, 0.33	0.022	0.15	-0.04, 0.33	0.114

*Poisson independent regression tests controlled for age and gender

Table 4.13 shows the associations between the hypothesized determinants and psychosocial distress at each of the three survey rounds. Suffering stigma and discrimination, receiving inadequate care, child labour, physical abuse, and not being in school all showed consistent associations with psychosocial distress.

Table 4.13 Tests for association between childhood experiences (determinants) and psychosocial distress over the three survey rounds: children aged 12 and above

Determinants	Round One (527)			Round Two (444)			Round Three (432)		
	*Test for difference			Test for difference			Test for difference		
	Coeff	95 % CI	P-value	Coeff	95 % CI	P-value	Coeff	95 % CI	P-value
Trauma - death in household	0.10	0.02, 0.18	0.014	0.09	-0.06, 0.24	0.230	-0.01	-0.19, 0.17	0.911
Trauma - illness in household	0.10	0.03, 0.18	0.010	0.13	0.03, 0.22	0.009	-0.12	-0.24, -0.01	0.036
Residence in poorer household	0.00	-0.08, 0.08	0.988	0.02	-0.10, 0.15	0.724	0.12	0.01, 0.23	0.037
Stigma and discrimination	0.41	0.27, 0.56	<0.001	0.23	0.02, 0.44	0.028	0.70	0.50, 0.91	<0.001
Cared for by closely-related caregiver	0.04	-0.04, 0.12	0.327	-0.10	-0.20, -0.00	0.042	0.01	-0.10, 0.13	0.836
Inadequate care	0.24	0.14, 0.35	<0.001	0.25	0.09, 0.40	0.002	0.43	0.20, 0.66	<0.001
Residence changes >1	0.10	-0.3, 0.22	0.121	0.39	0.19, 0.59	<0.001	0.07	-0.20, 0.35	0.599
Caregiver changes >1	-0.02	-0.12, 0.09	0.774	0.17	-0.00, 0.34	0.053	-0.01	-0.17, 0.16	0.950
Child labour	0.19	0.10, 0.27	<0.001	0.20	0.09, 0.31	0.001	0.37	0.25, 0.48	<0.001
Child abuse (physical)	0.27	0.17, 0.38	<0.001	0.41	0.27, 0.56	<0.001	0.35	0.16, 0.55	0.001
Sibling separation	0.08	-0.03, 0.18	0.155	0.07	-0.05, 0.19	0.240	-0.09	-0.23, 0.05	0.208
Not enrolled in school	0.26	0.14, 0.38	<0.001	0.19	0.05, 0.34	0.009	0.21	0.06, 0.36	0.007
Received some external support	0.03	-0.05, 0.11	0.498	-0.09	-0.19, 0.01	0.063	-0.16	-0.29, -0.03	0.013

*Posson independent regression tests ontrolled for age and gender

Interestingly, whilst living in a household that was receiving external support was not associated with reduced psychosocial distress at round one, this effect became increasingly apparent in rounds two and three. However, amongst the children whose orphan status remained unchanged and who were seen in the same locations at all three rounds, those whose households consistently received external support did not suffer less psychosocial distress than their peers. This may have been because only a small number of children (27/292) lived in households that received consistent support. Therefore, the greater impact of external support seen in the round three data may have been due to improvements in the nature of external support received occurring over time. However, it could also have reflected changes in the composition of the sample of children (e.g. longer average durations of orphanhood or different places of residence).

No evidence was found in the prospective data for increases or reductions in psychosocial distress with increasing duration of orphanhood (Table 4.14).

Table 4.14 Tests for change in psychosocial distress with increasing duration of orphanhood: comparison of changes in psychosocial distress (R1-R3) in children orphaned at R1 vs children not orphaned through out the survey period

Orphans status		Test for difference		
	Number	Coeff	95% CI	Pvalue
Non-orphans	48			
Orphans	255	0.03	-0.03, 0.09	0.354
Paternal orphans	76	0.01	-0.06, 0.08	0.752
Maternal orphans	38	0.04	-0.05, 0.13	0.400
Double orphans	111	0.04	-0.03, 0.11	0.242

4.4.3 Qualitative Results

4.4.3.1 Introduction

Anecdotal information from the focus group discussions were used to assess the appropriateness of the methods and tools used to collect the quantitative data and their sensitivity to children's plight. These included the theoretical framework, the questionnaires, the interviewing techniques, and the conduct of the enumerators.

4.4.3.2 The Acceptability of the Questionnaires and Terminology used

Most of the children and their caregivers who took part in the focus group discussions had no major objections to the questions asked throughout the three rounds of survey. They saw the survey questions as offering knowledge about child care and also raising awareness on children's needs in general, especially orphans who were thought to have special needs.

"The questions you ask are good. Thank you very much for your concern"

Female paternal orphan, aged 16 years

(Comment from open-ended section of

the Child and Caregiver Questionnaire (CCQ))

"I was not worried about what they asked me."

Male maternal orphan, aged 18 years (Comment-CCQ)

"I am happy to be associated with BRTI. Your questions are good and helpful."

Caregiver of a 13 year old male paternal orphan

(Comment-CCQ)

Children and caregivers thought the questions on psychological well-being, child-care arrangements and work experiences helped them to understand central issues regarding provision of care for orphaned children.

"The questions were okay and they helped to show that those who asked us have interest in us. They made us rethink our lives for the better."

Female double orphan, aged 18 years

(Children's focus group discussion, Site 5)

"Programme is good because it educates us about problems that affect or may affect children in our care"

Caregiver of a 10 year-old female non-orphan

(Comment-CCQ)

They reported gaining social skills through talking to enumerators and some even reported discussing their problems with the enumerators because they found them to be good listeners and counsellors.

"I learnt that as OVC we need to take care of ourselves and be sensitive to the needs of those caring for us. We need to be upright rather than waiting to follow behind in order to have good behaviour or work hard at school."

Male paternal orphan, aged 17 years

(Comment-CCQ)

"You are like aunts to us for you are asking us and we are opening our hearts to something we have not done to anyone before. It (the study) has helped me to see how I should treat orphans ."

Female former orphan and also caregiver

(Comment-CCQ)

"(We were) asked about real events in our lives and we are able to answer the questions that were put to us "

Male double orphan, 12 year of age

(Comment-CCQ)

"I found it helped a lot to have someone talk to the children. Since the interviews, my children have been open about what they need and feel and this has helped to improve the way we communicate in the family and how we function as a family".

Female caregiver

(Caregiver focus group discussion, Site 12)

They took their being selected to participate in the project as a great honour to represent other people and were also grateful for the project implementers for taking interest in their plight. They regarded the information gathering as a step towards getting help for their problems.

"The programme is good. It helps us a lot and helps lessen our stress through talking to our sisters (female interviewers)"

Female double orphan household head, aged 17 years

(Comment-CCQ)

Despite viewing the project in a positive light, some orphaned children pointed out that they were not happy being asked repeatedly about their parents' survival status over the survey period. They also said they felt stigmatised when the term orphan was used to refer to them.

"I did not like talking about my parents over and over again"

Male double orphan, aged 15 years

(Children's focus group discussion, Site 5)

"We don't want to be called orphans. People should use our names. We don't mind it (the term orphans) being used once but not everyday. Due to our participation in this study (the Child Cohort Study) people now refer to us as AIDS orphans. We don't like it"

Male paternal orphan, aged 17 years

(Children focus group discussion, Site 9)

The situation was made worse by local people who called them "AIDS orphans." The project in which these children participated was named "The Manicaland Child Cohort Study". However, the term "AIDS orphans" could possibly have arisen because people linked the study with the main Manicaland HIV/AIDS Prevention Project from which the Manicaland Child Cohort Study emanated. They said they would be happy to assist with finding names for future projects.

4.4.3.3 Interviewing Techniques

Both the children and the caregivers found being interviewed separately allowed them to give truthful answers on issues they discussed with interviewers. However, there were counter accusations that some of the information given might not have been true. Children thought their caregivers may have under-stated some of their experiences while caregivers thought some children may have exaggerated their experiences to get sympathy from the interviewers.

"I had no problem with having separate interviews but feel that the children could have lied to get sympathy from you. But if you were happy with what you got we are also happy."

Male caregiver

(Caregiver focus group discussion, Site 12)

"Separate interviews made us feel free to talk about our life experiences without being afraid of what the caregiver would say or what could happen to you afterwards."

Male paternal orphan, 17 years old

(Comment-CCQ)

"Separate interview meant I was be able to feel at ease and able to tell interviewer my experiences. It helped to curb further abuse."

Female double orphan, 18 years old

(Children focus group discussion, Site 12)

In response to the question of "to what extent they thought misreporting and exaggeration could have happened", both sides said they thought it was limited. However, two maternal orphans, one 12 year-old male and one 16 year-old female openly admitted not reporting the abuse they experienced at the hands of their carers during the first round of the survey, saying they had feared their caregivers would be told what they had said. But when nothing happened after the first interview, they realised they could trust the interviewers; so they gave truthful information in the second and third rounds.

"I cried each time I was asked about abuse. My cousin beats up me for no apparent reason. But this should not stop you from asking the question. It is important that you find out what is happening to children under care or who have lost their parents. Fearing the interviewer would tell my aunt what I had said, I lied about it the first time around. But when nothing happened after the first interview I gave truthful answers thereafter"

Female maternal orphan, aged 16 years, being cared for by a paternal aunt

(Children's focus group discussion in roadside trading settlement, Site 9)

"I am very certain that we all told the truth including the children. If untruths were told it could have been at the initial stages of the survey where a lot of us and the children needed to gain your trust first. So if you are worried about this to be honest there could be very minimal harm to your work because it was to a very small extent. It could only be those who had something to hide"

Female caregiver and also village health worker

(Caregiver focus group discussion, subsistence farming area, Site 12)

On the question of the professional conduct of interviewers, children and their caregivers reported that they found enumerators trustworthy and they kept in confidence the information given to them and this helped to build trust over the survey period. They were also said to have been good listeners, respectful, empathetic, understanding and sociable people who kept their professional distance which was said to be hard to do given the circumstances in the environment in which they were working which included poverty, illness, deaths, child abuse and neglect, political instability and uncooperative local leadership.

"The programme brought us friends who are interested in our lives - I feel happy to discuss issues with BRTI friends (interviewers). I always look forward to their visits because they are a source of comfort. I now have someone to confide in and a source of advice on life related issues"

Paternal orphan, aged 13 years

(Comment-CCQ)

Interviewers were not over dressed and despite their being university graduates never looked down upon the participants. Participants said over-dressing would have made them authoritative and domineering which would have led to difficulties in rapport building and trust. Children and caregivers found their repeating of questions during interviews helpful for it helped them to think things through. Some enumerators were said to have remained friends at heart to some of the caregivers and children.

4.4.3.4 Assessment of the Applicability of the Psychosocial Distress Measure to the Zimbabwe Context

A brief run down of the symptoms local people used to describe psychosocial distress was carried out with all participants. Participants from all four groups *[children, caregivers, local community members and adult former orphans]* were asked to come up with terms they used to describe psychosocial distress in everyday life. The aim of the activity was to assess whether the measure which was adopted from the World Health Organisation Self Report Questionnaire (SRQ) and used in the study analyses would be applicable in the Zimbabwean context. The results obtained are presented below.

Table 4.15 Questionnaire psychosocial distress based variable items vs symptoms mentioned during group discussions.

Psychosocial distress variable items (questionnaire)	*Focus group participants suggested psychossocial distress symptoms*
Do you feel tired all the time?	Feel tired all the time/looks tired
Do you cry more than usual?	Crying a lot (at slightest provocation)
Do you feel tense,nervous or worried?	Worried all the time (does not sit still, appear agitated)
Do you have uncomfortable feelings in your stomach?	Stomach-ache
Do you find it difficult to make decisions?	Cannot initiate anything
Is your appettie poor?	Does not eat well
Do your hands shake?	Stammering/body shaking
Do you sleep badly?	Fail to sleep because would be thinking of parents/treament
Are you more unhappy than usual?	Sad all the time ot not free even among peers/too quiet
Do think you are a worthless person?	Feels worthless
Do get easily tired?	Sleeping all the time or tired look all the time.
Are you easily frightened?	Being easily frightened
Is you digestion poor?	Suffer from indigestion
Do you find it difficult to enjoy your daily activities?	Loss of enjoyment of daily activities
Do you have trouble thinking clearly?	Disrespectful or Aggressive
Has the thought of ending your life been in your mind?	Suicidal
Do you often have headaches?	Physical complaints/ mostly headaches/stomach-ache
	Attention seeker

The symptoms mentioned by participants were no different from those used in the study as adapted from the World Health Organisation Self Report Questionnaire. This exercise helped to show that the measure used was applicable in the study context and to the study population.

4.4.3.5 Exploration of Quantitative Results: Why Girls Report More Distress than Boys

One aim of the focus group discussions was to find out what the local people thought caused psychosocial distress in orphaned children and a summary of the findings is presented below.

Participants saw African gender-determined roles that confined girls within the home, while boys were allowed to roam about freely, as detrimental to the girl children's psychosocial health. Work around the home environment exposed girls to witnessing the suffering and deterioration of HIV-infected family members and thrust them into care roles such as bathing, feeding and other adult roles at tender ages. Performing these care roles with very little know-how and protection exposed them to the risk of HIV and other infections. Associated with the roles of caring for sick family members was the worry about the parent or caregiver's deteriorating health and possible imminent death and also their own future prospects in the face of so much suffering.

"*Us girls, we tend to hold grudges and internalise issues a lot. Most of the time, we are not able to discuss issues affecting us while boys can vent their anger through play or can walk away from the scene of the incident. Also girls are most of the time confined to the home and are more protected by the adults in the home. Most of the chores they do are within the home unlike boys who are allowed to roam freely and play with other boys.*"

Female double orphan

(Children focus group discussion, subsistence farming area, Site 12)

"Girls stay at home most of the time helping out. If money for fees is not enough, they may be sacrificed for boys. Or they may be persuaded to drop out of school in their teens so that they could find work or marry".

Male caregiver

(Caregiver focus group discussion, commercial estate, Site 5)

"The chores are contributing to greater distress witnessed in girls. They just have too much going on in their small children's heads (parental loss) to deal with and adult chores are contributing to their distress. Parental loss and then chores? That is just too much for them."

Male caregiver

(Caregiver focus group discussion, roadside trading centre, Site 9)

Girls were said to be very conscious of their appearance and to be easily affected if they felt they looked different in terms of their clothing or general body appearance. The chance to compare themselves to others is provided by their being constantly in the limelight as they went about their roles within the home and the community. Lack of material things including beauty products were cited as the reason for girls' involvement with sugar daddies or engaging in risky early sex. Unmet material needs and unhealthy or malfunctioning relationships were said to contribute to heightened psychosocial distress levels among girls.

"Most of us cannot provide for all the things that their parents used to give them, for example, tea and bread, school fees. And due to this, they get distressed when we fail or they may be tempted to find someone outside the family to provide these things for them. This is why they engage in sex - just to get these."

Male caregiver

(Caregiver focus group discussion, subsistence farming area, Site 12)

"Parental loss means lack of moral guidance. Some would be trying to satisfy basic needs and some trying to chase fashion."

Male caregiver

(Caregiver focus group discussion, roadside trading centre, Site 9)

Also within the home, girls were prone to both physical and sexual abuse. A 17 year-old paternal orphan said their situation was made worse by the fact that girls seldom expressed freely their feelings or experiences to others (Foster 2002; Makame, Ani et al. 2002). Over-protection of girls by parents and guardians was cited, by boys, as reason for some of the psychosocial distress experienced by girls. Girls were said to require parental or guardian permission, even for minor visits. Thus, they were robbed of chances to share their hurt and feeling with peers, to form supportive social networks, and to have child play which would help rid them of any distress they felt.

4.4.3.6 Focus Group Discussion Results on the Causes of Psychosocial Distresses in Childhood: Why Orphans were More Likely to be Distressed than Non-orphans

<u>What parents mean to children: the deep void created by parental loss</u>

Parental loss resulting from incapacitating illness or death is a devastating and life-changing experience. All participants felt that some of the changes were so demanding that children caught up in these situations, who did not have support or resources to counteract their impact, were made to feel helpless and hopeless. Unmet emotional, physical, mental, social and spiritual needs were blamed for increased levels of psychosocial distress in orphans. The parental role was viewed by children as extending beyond meeting basic needs. Children described their parents as role

models, friends, advisors, counsellors, good listeners and comforters when one was feeling low, mediators and protectors in times of arguments or fights with siblings, other family members and neighbours. Parents, and especially mothers, were said to be very appreciative of children's accomplishments no matter how small and were very generous with praise. Children found praise from mothers increased their self-esteem and desire to excel in the future. A 17 year-old paternal orphan said the void left by parents was very difficult for anybody to fill. Children and caregivers agreed, with caregivers admitting to finding it hard to fulfil the role and to motivate their children. Some said it was due to lack of resources, others cited family feuds they had with the deceased, others complained of unappreciative children thrust into their care who were insensitive to their caregivers' needs. All these were cited as contributing to psychosocial distress in orphaned children.

"Most of these children are being left in the care of fathers who have no time for them. They will be spending most of their time alone leaving them to their own devices or open to abuse."

Female paternal orphan, 16 years old

(Children focus group discussion, forestry estate, Site 5)

<u>Unmet emotional needs</u>

All groups mentioned that lack of love, care, encouragement, self-esteem, self-confidence, trust, security, sense of belonging and guidance were causative factors for increased psychosocial distress in orphans (Mutangadura 2000; Billing, Ehrle et al. 2002; Nyamukapa and Gregson 2005; Richey 2005). Also, the failure of relatives to prepare children for the loss of their parent(s) and to involve them in the rituals that

can help with mourning and lead to closure (Bowlby 1998; Corak 1999; Kendler, Sheth et al. 2002). Children and former orphans wanted people to understand that mourning is not a one-off process and that children needed continuous support (Robson, Ansell et al. 2006; Richter, Foster et al. 2006b). Some caregivers were said to be unaware of this and unsympathetic to orphans' plight, scolding the children for being broody or quiet. Orphaned children said they were distressed by relatives' discussing their parents' illness in very hurtful ways in their presence or when they witnessed a sibling suspected to have AIDS being mistreated (Thurman, Snider et al. 2006).

"*Lack of love and sympathy from caregivers stops us from telling our careivers how we feel or what we need to feel better. We do not feel free at all. Most of them don't understand how we feel inside when we are silent. They think we just want attention. We get scolded for doing this. Yet I will be thinking about my father sometimes - saying that, if he was here, I would be able to do this and that with him or have that.*"

Male paternal orphan, 17 years old

(Children focus group discussion, roadside trading centre, Site 9)

"*We should also refrain from tormenting the children by telling them that "We did not kill your parents and using words like ..."you need to be grateful that I took you in when nobody else indicated they would" when children refuse to do chores or his or her grades drop. This all shows that we don't understand their needs - they would be still mourning so we need to be very careful with them.*"

Female caregiver

(Caregiver focus group discussion, subsistence farming area, Site 12)

Orphans reported being told to "shut up" or had comments like "lier" or "why don't you be like 'so and so'" thrown at them by their caregivers. This occurred in situations where there was mistrust between children and caregivers. Such comments made orphans feel inadequate, refrain from taking part in family conversations, and lose face, confidence and self-esteem. Some children said they were not able to defend themselves when they made genuine mistakes or had mistakes heaped onto them by other children living in the home because carers had already formed negative attitudes towards them.

"*The other problems faced by orphans are being verbally abused or not having anybody to listen to them or being treated differently in the households they stay in. During the home visits that I make in this town (Nyazura), I have witnessed orphans trying to join in family conversations, trying to defend themselves when being heaped with blame for a mishap in the house, and being told to shut up by their caregivers or by other children in the home.*"

Female Caregiver / Health Worker

(Key Informant Interview, small town, Site 7)

Some caregivers felt the emphasis placed on children's rights by researchers, Government bodies, community watchdogs and other child protection agencies neglected their own rights and vulnerabilities. While they appreciated the children's problems, they found some children were unappreciative of the sacrifices they made which caused their own lives to be miserable. They cited examples of children causing problems and refusing to respect rules. Carers were distressed by the roles they had to perform with meagre resources and support.

"I have a book at home which talks about children's rights - what is it that they are teaching our children? To rebel against us? I feel we should have a say in what is taught to our children. We are never consulted on what is given to our children and why. They seem to emphasise children's right over those of parents and caregivers. I don't agree with the idea of leaving education to the schools. They are damaging our children especially by teaching them about sex and the use of condoms and pills."

Local village head

(Focus group discussion, Site 12)

"We now have community-based intervention programmes but sometime their hands are tied because the same government that comes up with these structures has put in place laws that bar the same structures from acting on behalf of the children. The people chosen are afraid of being caught up in family wrangles which may make them end up looking after the child themselves or being charged by government. The worry is who is going to protect them?"

Female caregiver

(Caregiver focus group discussion on role community towards orphans)

"My child is mentally challenged. I am failing to get a school that will accept her. Please can you help? I hope the child will find a school that will accept him because I have no idea how I can help him and cannot sleep because of it"

Caregiver to a 17 year-old male double orphan

(Comment - CCQ)

"Please help us. I cannot carry on. I am tired"

Caregiver (grandmother) to a 6 year-old double orphan

Female participants in focus group discussions said lack of consultation and dumping of children with poverty-ridden caregivers in remote areas led to less love and attention. Adult participants considered the practice whereby patrilineal societies allocate children to family members without consulting the wife or household head (husband) to be flawed and in need of change. They wanted all parties to take part and to reach a decision knowing what they were all agreeing to. Though the problem was most common among paternal uncles and aunts, increased morbidity and mortality due to HIV/AIDS was creating greater demand for carers and the practice was increasing among maternal relatives.

"Husbands bring in children without consultating with the child or their wives. Most of the time, discussions are made by males and rarely are females involved. This is why most end up with their uncles. The wife may not treat the child well. You can afford to care for one or two children but more that this calls for reducing or adjusting meals to like no breakfast or lunch or supper only with no breakfast. If income is not enough to meet all children's needs, the wife gets distressed and can take it out on the child."

Female caregiver

(Caregiver focus group discussion, small town, Site 7)

"There is another problem we face when we take in children. Lets say I am given my sister's child. My wife may decide to discriminate againts the children in terms of work or, food. She may share food unequally or ill-treat him/her when I am not around. ... Most children run away because they are being ill-treated by the wives or husbands of their carers in the home."

Male caregiver

(Caregiver focus group discussion, Site 7)

Disputes over caregiver arrangements could lead to neglect of children's basic needs such as school enrolment, clothes, food and health care. One female carer, who was one of two siblings, was forced to take in her brother's child. When she took the child with her to the marital home, the husband agreed to let her stay with them but never made any commitment to meet material requirements as part of the deal. Each time he came home from work, he brought clothes, school materials and other goodies for their own three children but nothing for the orphaned child. The woman said the husband's actions made her realise that she had to find means to provide for her niece, which she had done with great passion so that the niece was now attending a local university. Disappointingly, none of their own children had managed to go beyond ordinary level. She called for all caregivers not to sit back and mourn about their situation but to use all the resources at their command to better the lives of the children in their care and also to teach the same children to work for their keep so as to prepare for an enjoyable future.

Thus, the extra psychosocial distress that orphaned children experience could arise from unmet emotional needs due to tension between spouses or families, lack of consultation on care-giving arrangements and support for caregivers, poor

understanding of children's needs, discrimination in access to basic needs, and mistreatment.

Unmet physical needs: living in poverty

The transition from living in better-off households to living in abject poverty and in un-familiar environments can be distressing. Some of the adults who had been orphans in childhood [*former orphans*] and younger children cited lack of food, clothes, fees, and other materials that help them to cope as a reason for increased psychosocial distress in orphaned children. Some of the older orphans told of their childhood ordeals. These included being sent on errands while caregivers and their own children would have food and coming back to scraps or having to go to bed hungry.

Another cause of distress for orphans was being left out of family or community functions because they did not have decent clothes to wear and their carers were ashamed of being seen with them in public. Lack of decent clothes was said to be prevalent among orphans and to be more distressing for girls than boys because girls tend to be more conscious about their appearance and to compare their situations with those of other children (Foster, Makufa et al. 1996; Kelly 2000).

Orphans cited lack of access to health services as being distressing to them. Most of the children who participated in the focus group discussions said they were not able to utilise health centres when they were ill because their caregivers could not afford the charges. Those who had been ill said they recovered from the illness naturally - i.e. without seeking treatment – or had sought traditional methods of treatment. Orphans also said they had been sent home due to non-payment of fees or because they lacked

part of their school uniform or other school materials. They found this distressing because, in most cases, they were sent to homes where they knew there was nobody to pay for them. A 16 year-old double orphan reported making friends only with children in "her material class" who were other orphans. Such groupings make orphans stand out from the crowd thus highlighting differences that may exist between them and non-orphans which result in their being stigmatised and discriminated against by other groups.

"I don't go just because I am ill. I will have to judge how serious I am or the ailment is like when I have malaria or very painful stomach or headache ... in most the cases, if I cannot go to school or do other jobs around the home, then I will go. This is because we cannot afford to buy the prescribed drugs and there are no medicines in most clinics so people are now required to buy their own medicine. I have to play the wait and see game - everybody does these days or they buy painkillers from the local shops."

Female double orphan, aged 16 years

(Children focus group discussion, Site 12)

Thus, living in poorer households – due to the death of the household's breadwinner or being relocated to a poorer household – and having less access to basic requirements and services than other children were thought to be sources of psychosocial distress in orphaned children.

Unmet mental needs

Unmet mental needs included lack of formal and informal education. HIV/AIDS-induced poverty led to orphans being pulled out of school so as to cut costs. Both former orphans and children said they would have preferred being in school on an empty stomach to having no education but enough to eat. Education was viewed by all groups as a gateway to success in life and, without it, life would be a struggle. To elaborate on the importance of education, a 65 year-old female former orphan reiterated that the struggle for survival of an educated person was not as bad as that of one without education. An educated person uses the skills and knowledge he or she gained at school to access services and has greater confidence to approach others for assistance than those without education. Most former orphans blamed their failure to get better jobs and to lead better and normal lives on their lack of education. Some former orphans reported surviving by doing piece jobs for others and being exploited in the process.

For children, education meant more than jobs. Education, according to a 17 year-old male paternal orphan, was not just about literacy and numeracy. The school environment was said to help children forget about the problems at home, by focussing on school activities and having time to be children, and to provide role models in the form of teachers. The school environment was also said to offer positive reinforcement from teachers and those around them. Within the school environment, children were accorded the chance to share ideas with friends or other children in the same predicament, to learn to regulate emotions, to develop problem-solving skills, to realise their potential and utilise it to the maximum, and, most important of all, to

acquire the skills needed to capitalise on and mobilise resources in their environment that could help them to cope in life.

Most psychosocial support activities were said to be channelled through places where children were mostly likely to be such as schools. Orphans in school did better than those who were out of school. School dropouts were looked down upon by those in school because they were regarded as not having anything intelligible to contribute to discussions and therefore nobody befriended them. This was particularly disheartening for orphans, especially if they had nobody to play with. Parents were reported to ban their children from playing with those who were out of school, citing mischief as the only thing anybody could learn from these children.

"*I may not be able to find friends for it is at school where associations are made. Most children don't like to befriend someone who is not in school and even parents say: "what can you learn from a child who is not in school, apart from mischief?*""

Female paternal orphan, aged 17 years

(Children focus group discussion, forestry estate, Site 5)

Thus, missing opportunities to get an education for life; to mix with other children without feeling different; to receive the help that is channelled through schools, such as counselling and other school materials; and to have time to be kids among other kids; and having low future prospects were cited as some of the causes of distress in orphaned children.

"We go to school to learn, so if not enrolled, we may miss a lot of knowledge about life and life skills. You may not be good in school but just being in school opens your mind to a lot of things like behaviour, how to make use of available resources to see one through e.g. through agriculture. Bible teaching or even teacher instructions help mould behaviour and can give direction and being given actitivities that make you able to solve problems."

Male paternal orphan, aged 17 years

(Child focus group discussion, subsistence farming area, Site 12)

<u>Unmet social needs</u>

Standing alone makes anybody more visible, creates a sense of feeling different, vulnerable and, therefore, at risk of being judged. Participants in all focus group discussions agreed that individuals have the right to integrate into society without feeling stigmatised or different and to forge a sense of belonging, form friendships and community ties, feel accepted, have identify, acknowledgement from peers, and opportunities for social interaction. Parents were said to help with the creation and acquisition of links and skills and the information that made integration possible and smooth. Losing parents made some children reluctant to venture into community functions or relationships for fear of having to answer prying questions on family issues or due to lack of confidence, self-esteem or know-how. Young orphans who participated in the focus group discussions noted that they sometimes found it difficult to integrate into the community because they felt different either in terms of clothing or schooling, or because they had very little knowledge on their family history or

because they were not acknowledged by their peers or the wider community or not accorded the opportunities that enabled them to forge social interaction.

Family feuds were another source of psychosocial distress for children. Sources of conflicts included witchcraft accusations, sibling rivalries which had gone out of hand, neglect, unpaid bride price, and conflicts over wills, life savings and property between the deceased's children or spouse and other family members. Though people generally abided by the terms of the deceased's will, the family will was often considered contrary to custom and to interfere with family functionality. Local watchdogs needed greater powers to monitor the situation between orphans and their caregivers and to intervene to solve problems that arose. From the children's perspective, these feuds denied them the chance to get to know some of their family members. They were upset at being used as pawns in family conflicts and, given the choice, would want to have access to all relatives regardless of their differences. Limited access to the other half of the family robbed them of opportunities to get to know their relatives, to increase their social support networks, and to learn socially-acceptable behaviour through feedback.

Children found most of the conflicts to be between mothers-in-laws (their grandparents, especially paternal grandmothers) and daughters-in-laws (their mothers), sibling rivalry (their father *versus* his siblings), maternal and paternal relatives (caused by unpaid bride price in most cases). A 16 year-old double orphan reported how their paternal grandmother repeatedly told them that she hated caring for them and also their "mother for turning her son's head" *[the deceased was thought to have influenced her husband to neglect his family*].

Children caught up in family feuds found themselves forced to take sides, and, in most cases, they had to side with the family looking after them, although, given the chance, they said they would never have wanted to be part of it. Children reported feeling helpless, hopeless and fearful of the future. If they took sides with the wrong family, the feud would spill over to them too and could result in their being thrown out or life-long consequences for their general welfare and social support networks. A 36 year-old former maternal orphan reported a similar instance in which her paternal relatives were not in good books with her maternal relatives. The paternal relatives would allow her to visit but only in the clothes she was wearing. She said that taking away her clothes was meant to stop her from going or enticing her to come back because her maternal relatives were too poor to afford new clothes for her. However, she said she did not mind having no clothes but preferred the love and welcome which she got.

"When my father died, my mother was chased away from the family home by my half brother (my father's son). He also took us from our mother to his own house. He got married and his wife would not give us food. Staying with him and his wife was hell. They both ill-treated us. We grew up facing a lot of problems. Sometimes we had to eat at neighbours. I did try and talk to my half brother but his reply was "You are troubling my wife.""

Female former maternal orphan

(Former orphan focus group discussion, Site 7)

Lack of knowledge of family history was cited as another cause of distress by former orphans. Orphans who lost parents at young ages reported having no knowledge of what their parents looked like because most families were not able to afford to have pictures taken. A 65 year-old male former paternal orphan who was looked after by his

maternal relatives when his father died, reported being distressed by the fact that he never got to know his paternal relatives. His maternal relatives never wanted to discuss the issue with him. A 16 year-old maternal orphan was in a similar predicament. She had lost her mother when she was only 6 months old and was taken in by her paternal aunt. She had no idea who her mother or maternal relatives were. Her paternal aunt's name was on her birth certificate as the "biological mother". Finding out that "her current mother" was her father's sister was painful but not knowing who her mother was was devastating for her to bear everyday and she vowed to launch a search for the other half of her family when she finished school. Limited access or lack of knowledge of the other half of the family was said to rob children of chances of receiving better care or of assessing for themselves who would act in their best interests.

Existing in such environments, children and even former orphans reported being subjected to listening to family members ranting about how bad their parents or the other family members were. Former and current orphans participating in the focus group discussions said they were distressed that they never got to hear the good side of their parents or other hated family members. They would have wanted to hear even the small good deeds that these relatives had done. This would have made a difference to their lives and helped them to build their own picture rather than accepting the one created for them by their feuding family members.

<u>Spiritual needs</u>

Ill-treatment of children by their caregivers or *vice versa* was attributed to a lack of guidance, fear and belief in a higher being (God). The fear and love enshrined in the belief in God was needed to understand and give children the quality of care they

needed. Friction and stress between caregivers and children, lack of respect and gratitude, and bewitching by relatives were all said to be possible if there was no protection from a God. A 34 year-old female former orphan believed her paternal aunt had used black magic to wreck her marriage, make her ill and kill her husband. Her situation only started to improve when she joined an independent apostolic church which helped her to fend off the evil spirits. The caregiver of a 12 year-old double orphan found praying everyday made her care role easy.

Some participants believed that having faith-regulated behaviour helped both the child and the caregiver. Children found believing in a God as something that would help rid them of suicidal thoughts that stemmed from ill-treatment. Those who believed in God called on non-believer caregivers to embrace a faith that would give them spiritual hearts, understanding, eyes and ears to see and hear the needs of children in their care and also to regulate their own behaviour towards the children. However, males in the local community members' focus group discussions felt that child abuse had nothing to do with belief but more of individual make-up and background. They cited a few local examples of churchgoers whom they said were more sin-ridden than the man who has never been through a church door.

"These children should be encouraged to go to church where they will be taught about good behaviour thereby receive moral guidance. Caregivers who go to church are helped by their belief and Christian practices to love and care for children in a nice way."

Female local participant

(Local community members focus group discussion, Site12)

4.4.3.7 Measures to Reduce Children's Psychosocial Distress

Selection of caregivers: Taking action in the best interests of the child has been at the centre of all children's policies, rights and service provision. However, focus group discussions highlighted that children's rights, and especially rights to choices, remain largely on paper, despite Zimbabwe's being a signatory to the United Nations Convention of Children's Rights. It was observed that there was conflict between modern ways of dealing with children's issues and the old traditional definition of what constitutes a child and societal responsibilities towards that child. In most African societies, there are "few individuals who can go their own way because hardly any person is free from the control of and dependence on relatives" (Mhondoro 1997). A man in his mid-seventies said he takes the child's seat in his father's house and his father can decide the next course of action. These culturally-defined positions, ties, interdependence and roles made the idea of a child's choosing his or her own caregiver riddled with difficulties and dilemmas.

Participants agreed that orphaned children should be involved in choosing their caregivers. However, it was noted that, in the era of HIV/AIDS, the person the child chose to be his or her caregiver might also die. Therefore, it was important that relatives not chosen initially were not offended and continued to be willing to take on this responsibility. Children and former orphans also thought that seeking volunteer caregivers would help to protect children from being mistreated. However, they were aware that problems could arise from this including poverty, caregivers volunteering for the wrong reasons (i.e. to exploit or abuse), and a shortage of volunteers due to the surge in the number of children needing care.

"What should be considered are these: are they able to provide for the child materially, guide him/her morally and/or reduce delinquency and help the child cope. Above all, they should show love and care for the children. They need to be an understanding, patient and forgiving person - to look after someone's child requires patience and understanding."

Female caregiver / local health worker

(Caregiver focus group discussion, Site 12)

Children thought that, in some circumstances, childcare provision should be extended to non-relatives who were willing and had the resources to do so. Former orphans agreed saying that their experiences had shown that close family relations did not always guarantee quality care. Younger children in the focus group discussions said they wanted childcare arrangements to be based on love above all else. They wanted to be cared for by someone who understood what they were going through, who was empathetic and loved them for who they were (Ewing 2004). However, most children thought the people best placed for this role were grandparents, especially maternal grandparents, because of their greater experience in dealing with children's emotional needs, their understanding nature, and because they had fewer responsibilities since their own children had grown up and left home (Giarrusso, Silverstein et al. 2000; Minkler, Fuller-Thomson et al. 2000; Matshalaga 2004; Oburu 2004; Ansell and Young 2004b). In some ways, younger carers were preferred but they had their own children to think about. They were also at higher risk of dying from HIV/AIDS. After considering the pros and cons of the different possibilities, all participants agreed that, while it might be a good idea to consult the child in many circumstances, final decisions on childcare arrangements should be left to the family decision-makers

"A carer should be someone who volunteers for the position. They should be sociable, not mean, able to guide the child morally, and able to provide food and clothes. If possible, they should be a relative but, if there is no option, they should be anybody with the listed qualities who is willing and able to take care of children. Even among relatives, some are able and some are not. Those not able - they ill-treat orphans by giving them hard chores or chores that are inappropriate for their ages or they may refuse children food, fail to send them to school or even not buy them good clothes (tatters) This why we are saying only those who can treat orphans well, enrol them in school, and do things that help the child forget the pain of the loss should take in children."

A group of children

(Children focus group discussion, Site 12)

Support for school attendance: Enrolling children in school was seen as another way of preventing children from getting distressed. Of the 26 former orphans who participated in focus group discussions, only five had attained secondary school education and only two of these had a professional qualification – one was a male teacher, the other a female nurse. Those with no skills said they found life a struggle and thought that, if they had had a better education, they would have achieved better things in life compared to what they had achieved.

Psychosocial support for caregivers: However, participants were also quick to acknowledge that children had their own part to play if they were not to be ill-treated by their caregivers. One 18 year-old maternal orphan attributed some of the abuse that children received to their failure to appreciate the demands placed on caregivers and the sacrifices they make. Caregivers said they also needed support to cope with the

demands placed on them due to the loss of family members and the need to provide childcare. This way they would be able to provide quality care to orphans. They also said they found the environment in which they were required perform childcare roles too stressing to do the job well. This included continued loss of extended family members, increased numbers of children orphaned and needing care, the failing economy, the unstable political climate and natural disasters such as droughts that made providing for children a nightmare. Therefore, providing for the psychosocial needs of caregivers could help to reduce psychosocial distress in children.

"*I think we also need to realise that caring for orphans (us) is a demanding job; therefore, we should help by being understanding of our caregivers' needs. Oprhans need to be respectful and cut down on laziness and on misbehaviour such as being involved in theft or drug abuse, which places the blame on the caregiver. These caregivers, most of them are doing their level best. It is only the economic hardships that are failing them. We have to realise that we also have to work. Even our parents would require us to help around and we should do the same with caregivers. We learn through doing things. This will lead us to be trusted and also loved.*"

Female double orphan, aged 18 years

(Children focus group discussion, Subsistence farming area, Site 12)

4.5 Discussion

The aim of this chapter was to understand differences in levels of psychosocial distress by gender and orphan status and to explore determinants of psychosocial distress in children made vulnerable by HIV/AIDS. Initially, the intention was to base the

analysis on the caregivers' reports so as to cover the widest possible age-range of children and to maximize statistical power. However, the comparison of psychosocial distress in orphans *versus* non-orphans based on the caregivers' responses was found to be invalid because orphans generally had less closely-related caregivers than non-orphans and less closely-related caregivers tend to under-report children's psychosocial distress. The qualitative findings suggest that misreporting by caregivers could have been caused by a genuine lack of knowledge about how children felt, perhaps due to poor communication, interest or concern about the child's psychosocial health or because they were too burdened by their other duties and responsibilities and their own distress to notice children's suffering (Wrubel and Folkman 1997; Sevellen, Sarna et al. 1998; Minkler, Fuller-Thomson et al. 2000; Franz, Lensche et al. 2002; Matthews and Power 2002; McCausland and Pakenham 2003; Oburu 2004; van Wijngaarden, Schene et al. 2004). Given these concerns about the caregiver data, the information collected directly from children aged 12-18 years were used in the main analyses.

4.5.1 Effects of Parental Illness and Death

It was hypothesised that children who have lost parents to illness or death tend to suffer greater psychosocial distress than those who are not orphans and that the effects of parental loss are more profound for maternal and double orphans than for paternal orphans. The quantitative data provided evidence to support the first part of this hypothesis for both boys and girls. However, whilst paternal and double orphans were found consistently to suffer greater psychosocial distress than non-orphans, there was less evidence that this was the case for maternal orphans. Paternal and double orphanhood was associated with greater distress in all three rounds and in both males

and females, although the difference was not statistically significant for female double orphans or double orphans as a whole in round three. In contrast, evidence for greater psychosocial distress in maternal orphans was only found in the third round of the survey and in females in round one (non-significant).

It is possible that the inconsistent evidence for increased psychosocial distress in children whose mothers have died reflects greater under-reporting of psychosocial problems even by the children themselves. Especially in the earlier rounds of the survey (i.e. before trust had been established with the research team), maternal orphans may have feared that information they provided would be shared with their fathers, step-mothers and other carers resulting in their receiving punishments. During the focus group discussions only two children indicated that in their first interview they had misreported on how they were treated because they did not trust interviewers and feared that their carers would get know about it and reprimand them if they told the truth. However, the apparent under-reporting of children's psychosocial distress seen in the caregiver data point to weaker relationships between maternal orphans and their caregivers and there were also indications of this in the qualitative data. Opportunities for fathers to develop trusting and healthy relationships with their children and to get attuned to their children's emotional, spiritual, social and psychosocial needs are limited by the amount of time they spend working away from home. Similarly, societal codes of communication between parents and children leave fathers with few options for developing strong bonds with their children because everything is done through the mother. Children accused fathers of being less patient and a bit harsh when approached for help. During the focus group discussions, fathers were accused by children, especially orphans, of abandoning them after their mothers had died. Their

attention was said to be focussed on looking for new wives and attending to their new children's needs.

The greater psychosocial distress found amongst orphans and paternal and double orphans, in particular, could be ascribed to life-changing events associated with parental loss. The quantitative mediation analyses and focus group participants indicated that issues such as poverty, re-location, being taken of school, sibling separation, and lack of quality care, love, nurturing, and basic needs as the causes of psychosocial distress in orphans.

4.5.2 Factors Mediating the Effects of Parental Illness and Death on Psychosocial Distress

Hypotheses were tested for girls and young children. Girls, children orphaned at young ages, and children who had lost a parent recently were hypothesised to be at greatest risk of suffering psychosocial distress. It was also hypothesised that children who lived in households that received external support would suffer less distress.

Girls, overall, were found be at greater risk of experiencing psychosocial distress than boys and older children (both males and females) were found to report less psychosocial distress than younger children. The focus group discussions with children, local community members, caregivers and former orphans offered possible explanations for girls' increased psychosocial distress. These included being taken out of school to help care for the sick and dying, which not only meant they lost the benefits of being in school, but exposed them to a lot of suffering and possible abuse and required them to take on duties at home for which often they were too young. At the same time, over-protection in the home could hinder girls from developing social

networks and obtaining wider support. Girls were also said to be very particular about their appearances and material needs such that any differences they noticed heightened their distress.

Orphans whose parent(s) had died within the last five years exhibited the greatest psychosocial distress (Table 4.7), confirming hypotheses. However, for children whose fathers had died (i.e. including double orphans), increased psychosocial distress compared to children whose fathers were still alive appeared to persist and was seen at all durations of orphanhood even after controlling for age. In contrast, children whose mothers had died a longer time ago tended to report less psychosocial distress. The latter may have been due to maternal orphans misreporting or not being open about their psychosocial problems as discussed above.

The quantitative results supported the hypothesis that older children suffer less psychosocial distress than younger children. This could be because older children's appraisal of events around them is much more advanced and they are better able to command resources that can help them to deal with their situation. Also, older children are better at dealing with their emotions than younger children. Younger children are being orphaned at stages when their need for parental guidance and support is greatest and the sudden turn of events can leave them with no lifeline.

Contrary to hypotheses, the cross-sectional data from the first round of the survey provided no evidence that external support reduced children's psychosocial distress either in all children as a whole or in all orphans. In fact, paternal and double orphans living in households that were receiving support tended to suffer higher levels of distress (Table 4.11). This may be because the effects of good targeting of households

in need are out-weighing the positive effects of the support provided. Encouragingly, the longitudinal data suggest that this relationship may have been changing over time. By round three, children living in households that were receiving external support tended to suffer less psychosocial distress. However, there was no evidence in the data that this was due to the effects of support being sustained over a period of time. Unfortunately, no data were collected on the form of support provided but it is possible that, over time, material assistance was increasingly augmented by psychosocial support and that it is this combination that is required to address the greater psychosocial distress seen amongst orphans.

Support availed to children over the three survey periods decreased in the third round (Table 4.16). The decline in support might explain lack of decrease in orphans' psychosocial distress over time. The other reason could be that the type and quality of support was also deteriorating overtime given the socioeconomic and political turmoil Zimbabwe is/was going through or could be the troubles facing the southern African country is creating new needs which are distressing the children further.

During focus group discussions, children reiterated that since some of the systems put in place to help children cope were also reeling under the effects of HIV/AIDS and political and socio-economic strain, these services were limited due to lack of resources and human capital and were therefore failing to make the desired effect. Children, former orphans, and caregivers thought that the only way that meaningful benefits could be realised from intervention programmes would be if support was organised for both children and their carers.[1]

[1] Further discussion on how the findings compare with those from the national survey (described in Chapter 3) and from other studies is given in the concluding chapter of the thesis.

Table 4.16 Frequencies of external support received overall and by orphan status overtime: MCCS R1- R3: children aged 12 and above

Status	Round 1		Round 2		Round 3	
	n	%	n	%	n*	%
All children	527	37	444	37	431	27
Non-orphans	83	13	70	23	63	14
Orphans	444	42	374	40	368	30
Paternal orphans	150	38	123	43	135	30
Maternal orphans	109	40	86	40	64	23
Double orphans	185	45	165	37	162	33

R3 n* one child lost dropped due to lack of information on both support and orphan status.

4.5.3 Immediate and Intermediate Effects of Parental Illness and Death that can Lead to Psychosocial Distress

The most common of the hypothesised determinants were found to be trauma, inadequate care, and being cared for by a non-parent which were all reported for more than half of the purposive sample of children aged 12-18 years. Roughly one third of the children lived in the poorest quintile of households and a third reported experience of child labour. Substantial minorities had dropped out of school or had experienced sibling separation, inconsistent parenting, child abuse and multiple changes of residence. Surprisingly few children (6%) reported stigma or discrimination.

Orphans were more likely than other children to reside in a household that had experienced a death or illness, to have changed residence, to be in the care of a less closely-related caregiver, to have experienced multiple caregiver changes, child labour, and sibling separation, and to live in a household that was receiving external support (42% *vs.* 13%) (Table 4.10). All forms of orphans were more likely to reside in households that experienced deaths, to be cared for by less closely-related caregivers, and to have received external support. Paternal orphans were at greater risk

of living in a household with an ailing household member (57% *vs.* 42% in non-orphans), while stigma and discrimination was most common among maternal orphans (10% *vs.* 2%). Residence and caregiver changes and sibling separation were more likely among maternal and double orphans. Inadequate care was found to be more common among double orphans (83% *vs.* 72%). Compared to other orphan groups, paternal orphans had a higher chance of experiencing child labour (36% *vs.* 24%). Reports of child abuse were no more common in any of the orphan groups than in non-orphans.

Tests for association between the hypothesised determinants and psychosocial distress in the complete sample of children indicated that experiencing household death and illness, being stigmatised and discriminated against, receiving inadequate care, child labour, child abuse and not being enrolled in school were all strongly associated with increased levels of psychosocial distress (Table 4.9).

The hypothesised determinants accounted for the greater psychosocial distress observed in orphans overall and in double orphans and partially explained the excess found in paternal orphans. For orphans as a whole, trauma, stigma, inadequate care, child labour, child abuse, and being out of school all helped to explain the greater psychosocial distress. Inadequate care, stigma and child abuse were important for each of the orphan groups. However, other factors varied in importance according to the form of orphanhood experienced. For double orphans, child labour and being out of school were important. For maternal orphans, stigma had a particularly strong effect. For paternal orphans, trauma (illness in household), and, to a less extent, child labour and being out of school contributed to increased psychosocial distress.

Taking together the results on the relative frequencies of determinants in orphans and non-orphans and their associations with psychosocial distress, trauma, inadequate care, and child labour appear to be the most important sources of heightened psychosocial distress in orphans in the study population with stigma and discrimination (less common but showing a strong independent effect) and increased likelihood of being out of school also being important.

These results highlight the psychosocial distress that children suffer directly when their parents become ill and die. However, other factors (determinants) are also at play. More extreme poverty *per se* was not found to be associated with psychosocial distress. However, unmet basic needs and greater involvement in child labour (presumably related to poverty avoidance) were important. In the focus group discussions, lack of parental love and nurturing by caregivers (and particularly by mothers) were emphasised. No independent association was found in the quantitative data between being cared for by a non-parent and psychosocial distress. However, this may have been due to under-reporting as discussed earlier. Furthermore, to some extent, this lack of love and nurturing may have been reflected in the greater stigma and discrimination experienced by some orphans.

Chapter 5

Consequences in Adolescence of Psychosocial Distress Experienced During Childhood

5.1 Introduction

Gaps still exist in understanding how psychosocial distress resulting from being orphaned in childhood contributes to detrimental behaviour outcomes in adolescence. Most data on behaviour outcomes in adolescents are either from inner city minority populations in Western countries, poverty-related studies, clinical studies done with patients suffering debilitating illness (such as cancer) and their families, or studies of divorcees and single parents (Levine 1995; Manning and Lamb 2001; Langeveld, Ubbink et al. 2003; Lieberman, Solomon et al. 2005). In these studies, links have been found between poverty, parental loss due to illness or death, separation-related depression and adolescents' risky behaviour. Those studies that have examined the impact of AIDS and the effects on children have focused mainly on the causes of psychosocial distress (Foster 2002; Makame, Ani et al. 2002; Murphy , Marelich W.D. et al. 2002; Atwine, Cantor-Graae et al. 2005). Little attempt has been made to explore possible associations between distress and behaviour outcomes in adolescence.

Recent studies in Manicaland, Zimbabwe (Gregson, Terceira et al. 2004; Gregson, Nyamukapa et al. 2005), indicated that orphans are more susceptible to being out of school, to early sexual activity and marriage, to experiencing sexually transmitted infections and teenage pregnancy, and to being HIV positive. Among orphans, those found to be at greater risk were female maternal orphans and orphans with low

educational attainment. Psychosocial distress may be one of the factors that causes orphans to have more risky behaviours. Today's youth are being counted upon as tomorrow's future generation and leaders and they have a lot to contribute in terms of national security and development. If their future is marred by detrimental behaviour outcomes, it means the future of any nation will be at stake.

5.2 Objective of Chapter

This chapter uses data from the Manicaland Child Cohort Study to assess whether greater psychosocial distress experienced during childhood leads orphaned and other children to adopt more risky behaviours for HIV infection and ill-health in adolescence.

The following specific hypotheses, based on the theoretical framework developed in Chapter 2, are tested:

1. Children orphaned during childhood tend to adopt more risky behaviours during adolescence than other children
2. Psychosocial distress during childhood is associated with greater adoption of risky behaviours during adolescence
3. Greater psychosocial distress in childhood contributes to orphans' tending to adopt more risky behaviours during adolescence

5.3 Data and Methods of Data Analysis

5.3.1 Quantitative Data

Cross-sectional and prospective data from the Manicaland Child Cohort Study (MCCS) were used to test the hypotheses listed above (see Chapter 2 for a description of the data collection methods used). In these and the subsequent analyses, respondents aged 0-18 years at last birthday were taken to be children and those aged 15-18 years at last birthday were considered to be adolescents.

First, cross-sectional data from round one of the MCCS were used to test for statistical associations between orphanhood and psychosocial distress and selected risk behaviours amongst adolescents. Second, prospective data from the first and third and final rounds of the MCCS were used to investigate patterns of causation.

Four variables describing risk behaviours in adolescence were formulated using data from questions asked in rounds one and three of the MCCS and were used in the analyses outlined above:

(1) Commencement of sexual activity

(2) Engagement in a high-risk sexual partnership – defined as one or more of the following: (i) partner more than 5 years older; (ii) payment for sex; (iii) first sex was forced sex; or (iv) multiple current sexual partners

(3) Substance abuse – defined as having drunk alcohol or smoked cigarettes

(4) Marriage – i.e. ever married including long-term cohabiting unions (>1 year).

NB None of the children who reported having been married had been widowed, separated or divorced.

Teenage pregnancy was also considered as an outcome that could jeopardise opportunities in adulthood. However, only 2 out of the 19 (10.5%) children who had ever had sex reported having experienced pregnancy and both of these were male.

299 children aged 15-18 years were enumerated in the first round of the MCCS, for whom, complete information was available on orphanhood status for 93.6% (280). For these children, frequency tabulations were done for each of the four behavioural outcomes comparing the percentages exhibiting these behaviours amongst all orphans and each type of orphan separately with those for non-orphans. All children with data on a particular outcome were included in the analysis for that outcome irrespective of whether data were missing for the remaining outcomes. This was done to maximize statistical power in a situation where the overall sample size was small. Details of the numbers of children included in each analysis are given in the Results.

Logistic regression models adjusted for age and sex were developed to estimate odds ratios (and 95% confidence intervals) for each form of behaviour amongst orphans compared to non-orphans. Logistic regression was used to assess whether psychosocial distress was associated with the four forms of risky behaviour after adjusting for the effects of age and sex. In this analysis, the psychosocial distress variable based on children's own responses derived in Chapter 4 was used.

For the prospective analysis of each behavioural outcome, the children selected were those who were aged 17-20 years at last birthday in round three of the survey who, in round one, had reported not having engaged in that particular behaviour. The number of these children for each behavioural outcome is reported in the Results section. For each behaviour, logistic regression was used to test for a causal association between psychosocial distress measured at round one and the behavioural outcome measured at round three. Because no statistically significant differences were found between orphanhood and the risky behaviours in the MCCS data (see Results below), no attempt was made to assess the contribution of psychosocial distress to adoption of risky behaviours amongst orphans using these longitudinal data.

5.3.2 Qualitative Data

The data used were taken from the 13 focus group discussions held with children (4 groups) and their caregivers (4), who participated in the MCCS to round three (i.e. in both cases, one in each of the 4 different types of study area), adults who had been orphans when children [adult orphans] (2), local community members (2) and interviewers (2). Each group had between 12 and 14 participants. In addition, data were used from the 5 key informant interviews carried out with service providers (Department of Social Welfare, a church organisation, and an international NGO), a local chief and a community worker. Further details of the data collection methods are given in Chapter 2.

The data were transcribed straight from the local language into English. The transcribed data was analysed manually using content theme analysis. This involved coding recurring themes and then interpreting the coded data. The thematically coded

data were explored further to identify differences between groups (Strauss 1987; Wolcott 1994; Heaton 2004; Silverman 2006).

5.4 Results

5.4.1 Quantitative Data – Cross-Sectional Analysis

5.4.1.1 Associations between Orphanhood and Risk Behaviours in Adolescents

Overall, the prevalence of the various behaviour outcomes examined was low and few statistically significant results were found; probably due to the small number of 15-18 year-old children in the study. More orphans compared to non-orphans, had started sex prior to the survey date 8% *vs.* 5% and had engaged in substance abuse 8% *vs.* 3% (Table 5.1). However, neither of these differences was statistically significant. All orphans (n=17) and non-orphans (n=2) who reported having started sex were found to have engaged in paid sex or to have experienced forced first sex or multiple sex partnerships. Only one orphan and no non-orphans reported having been in a marital or long-term union.

Similar tests were run comparing each different orphan status groupings with non-orphans. All orphan groups were more likely to have started sex - double 6%, maternal 9% and paternal orphans 10% *vs.* non-orphans 5% - and to have engaged in substance abuse. However, when tests for differences between the different orphan types and non-orphans were performed, the only (borderline) significant result was the increased likelihood of paternal orphans having engaged in substance abuse [P=0.056].

Table 5.1 : Percentages and odds ratios of behaviour outcomes by orphan type (R1): 15 -19 year olds

	Orphans combined (n=238)					Double orphans (n=102)					Maternal orphans (n=61)					Paternal orphans (n=75)					Non-orphans (n=42)	
	Test for difference					Test for difference					Test for difference					Test for difference						
Risk behaviours	n	%	†OR	95 % CI	Pvalue	n	%	OR	95 % CI	Pvalue	n	%	OR	95 % CI	Pvalue	n	%	OR	95 % CI	Pvalue	n	%
Ever had sex	210	8	1.89	0.40, 8.94	0.420	85	6	1.27	0.23, 7.03	0.786	53	9	2.54	0.43, 15.09	0.306	72	10	2.28	0.41, 12.59	0.343	39	5
*Risky behaviour (paid sex, forced sex, partners >1	17	100	-	-	-	5	100	-	-	-	5	100	-	-	-	7	100	-	-	-	2	100
*Married or in long term relationship	17	6	-	-	-	5	0	-	-	-	5	0	-	-	-	7	14	-	-	-	2	0
Substance abuse (alcohol & drugs)	219	8	4.23	0.53, 33.99	0.174	90	6	2.74	0.29, 25.38	0.376	56	4	2.19	0.14, 21.21	0.680	73	15	7.82	0.95, 64.38	0.056	40	3

† ORs age and sex adjusted

n represents number with complete informations for the particular variable.

NB Test done for males and females combined due to small numbers involved

* Only those who reported being sexually active

5.4.1.2 Associations between Psychosocial Distress and Risk Behaviours in Adolescents

Psychosocial distress is a standardized variable (Mean (M) = 0, Standard deviation (SD) = 1). Thus the odds ratios in Table 5.2 can be interpreted as increased odds of engaging in risk behaviour associated with a 1 SD increase in psychosocial distress. Children who reported greater psychosocial distress were more likely to report having engaged in sex and having drunk alcohol or smoked cigarettes. However, only the difference for substance abuse was close to being statistically significant [P=0.099].

Table 5.2 :Percentage and odds ratios indicating association between psychosocial distress and risk behaviour in 15-19yrs olds *

	All children (n=280)				
			Test for difference		
Risk behaviours	**n**	**%**	**†OR**	**95 % CI**	**Pvalue**
Ever had sex	249	8	1.05	0.88, 1.26	0.554
*Risky behaviour (paid sex, forced sex, partners >1)	19	100	-	-	-
*Married or in long term relationship	19	5	-	-	-
Substance abuse (alcohol & drugs)	259	7	1.16	0.97, 1.39	0.099

† ORs age and sex adjusted

n =number with complete data for this particular variable.

*Only those who reported being sexually active: males and females combined

5.4.2 Quantitative Data – Prospective Analysis

4% of the children who reported not having engaged in sex at round one had done so by round three. A third [33%] of those who reported having engaged in sex for the first time in the inter-survey period had had risky sex or partnerships. Only 17% of those who had not reported marital or long-term unions at round one were now married or in long-term relationships and 3% of those who reported having not drunk alcohol or smoked a cigarette were found to have done so by round three. Logistic regression

analyses indicated that greater psychosocial distress was associated with reduced likelihood of starting sex and of engaging in substance abuse. However, these differences were not statistically significant.

Table 5.3 : Associations between psychosocial distress experienced at round 1 & risky behaviour outcomes between Round 1 and Round 3 (MCCS: among 17-20 year olds at Round 3)

Behaviour Outcome		Test for difference		
	%	N	**ORs	95 % CI	P-value
Ever had sex	4	163	0.64	0.38, 1.07	0.086
*Risky behaviour (paid sex, forced sex or multiple partners)	33	6	-	-	-
*Married or in long-term relationship	17	6	-	-	-
Substance abuse (alcohol & drugs)	3	163	0.68	0.43, 1.10	0.114

*Only those who reported having started sex

**Age and gender adjusted ORs

5.4.3 Qualitative Findings

Anecdotal information collected in the focus group discussions with children, caregivers, adult orphans and local community members did not indicate any major differences in opinion amongst them with regards to the causes of risky behaviour. They all indicated that risky behaviour was common among orphans and non-orphans alike, especially girls. They assigned girls' increased risk to their always being in the limelight through the chores they did in and around the home which widened their exposure to tempting situations and envious prospective abusers.

"Risky behaviour is now common even among non-orphans, especially those children left in the care of fathers who have no time for them. These children would be spending most of their time alone leaving them to their own devices or abuse."

Female paternal orphan, aged 12 years

(Children focus group discussion-Site 5)

I have known of non-orphans who have run away from home. Some children get all they need but they don't like going to school or even listening to those who care for them. They play truant, misbehave. Some have their family spirits haunting them for life. Nothing good will come out of them no matter how well you treat them."

Male caregiver

(Caregiver focus group discussion, roadside trading centre, Site 9)

However, participants were quick to point out that risk behaviour was more likely among orphans due to loss of parental guidance and protection (Zimbabwe Central Statistics Office 2007). Participants did regard parental loss-related psychosocial distress as a causative factor in risky behaviour but in an indirect way. They blamed circumstances that came with being orphaned such as inadequate child care arrangements and consequent lack of emotional and material support for children's resorting to risky behaviour as a way of dealing with their stress. Specific triggers of risky behaviour outcomes resulting from parental loss included ill-treatment from caregivers, peer influence, poverty that hampers caregivers from making adequate provision for children's emotional and material needs (Kendler, Sheth et al. 2002; van Wijngaarden, Schene et al. 2004), coupled with children's, especially girls', desire for fashionable clothes (Conger, Conger et al. 1993; Birdthistle, Floyd et al. 2008). Lastly, caregivers and local community participants claimed that some children had hormonal imbalance which destined them to engage in risky behaviour and this had nothing to do with parental loss or the kind of care these children received.

"Engaging in risky behaviour - it may be that those who do it, do it as way of escape from all the stress that comes from caring for others in the household. Or they want to help themselves by get a husband whom they think will give them that missing parent or love that they miss so much."

Female double orphans, aged 18 years
(Children focus group discussion, small town, Site 7)

"But orphans are at risk. Next door neighbours influence them not listen to their caregivers, lead them astray and lure them to run away from home with the promise of freedom and jobs in towns. There, they are abused sexually and then come back to us with their kids. I have to take care of the two orphans."

Female caregiver
(Caregiver focus group discussion, subsistence farming area, Site 12)

5.4.3.1 Poverty

All participants felt that poverty-related demands which saw caregivers pull children out of school to help out at home and inadequate provision for material needs rendered these children's future bleak. Being out of school, lacking in material needs, being left to their own devices with very little to occupy them, and being left at the mercy of uncaring adults increased these children's chances of engaging in risky sex and substance abuse or being abused sexually. Participants stated that girls were more likely to engage is risk sex because, by nature, they cared and worried much about their looks and appearance and tended to crave for fashionable things. Even the

children's groups pointed out that vulnerability was common among girl children and was worse still if they were orphaned. Ill-treatment was thought to lead to:

"Some children marrying early.....and if the relationship is not built on love, it may not last. When they do break up they are propelled into finding another partner fast, especially if they also have no home."

Male – Adult former orphans focus group discussion

(Site 9 – roadside trading settlement)

5.4.3.2 Moral Guidance

Moral guidance was said to help young children understand what constitutes correct behaviour in their society and its importance (Bourdillon 1997; Kileff and Kileff 1997; Gelfand 1999). However, parental or caregiver loss left orphaned children with no one to guide them on the straights and narrows of life, thereby rendering them unable to distinguish harmful from non-harmful behaviour. Some of the behaviours cited were engaging in early sexual debut to get money for goodies and fashionable clothes.

"*These children who are taken into care* [by relatives or non-relatives] *are not guided morally. Once they are able to do house chores they think they are able to run their own lives and they elope. ... Some fashion chasers* [both orphaned and non-orphaned children] *may be forced by their desire to have the latest fashion and/or to meet other material needs to go out with sugar daddies or resorting to selling their bodies*"

Male - Caregivers focus group discussion

(Site 12 – subsistence farming community)

Caregivers who did not show any interest in children' physical, emotional and material needs were said by the participants to force children to turn to neighbours or peers for advice and support. The advice the children got from their neighbours or peers sometimes was in conflict with the rules set by their caregivers thus bringing in tension or friction between the child and the caregiver. The tension caused by lack of understanding or communication, coupled with the lack of care and interest in the child shown by caregivers, was said to drive children to revolt. Children were said to end up being reckless with their lives by engaging in early sex, eloping with the intention of getting married, running away from home to escape from abusive caregivers or seeking comfort from the alcohol or drugs. Some were said to run away to seek employment as maids or herd boys or to stay on the streets or with non-relatives (Hosegood and Ford 2003; Mturi, Mazibuko et al. 2003). Because of their vulnerability and their thinking being clouded by stress, orphaned children were said to follow any given advice without thinking about the implications of their actions for their lives and the lives of those around them (Mawoneke, Sexton et al. 2001; Kaliati, Madzinga et al. 2002).

"*Neighbours are influencing children....These children are easily led astray. They are lured into running away from home to hunt for jobs in the urban areas where they will be sexually abused. The most painful part is that they will come back to us with their kid. Another mouth for me to feed! I am forced to look after two children.*"

Angry adult female

Caregiver focus group discussion

(Site 12 – subsistence farming community)

5.4.3.3 Child Abuse

Focus group participants also indicated that the social networks of trust and support which may appear genuine and readily available with open doors for vulnerable and orphaned children did not always remain trustworthy. Participants reported that children were being abused by those purporting to help them by offering a shoulder to cry on:

"A child may choose to confide in a neighbour or peer about their problems and is promised help or any kind ..... End result will be abuse either sexually or physically [hard chores for small things like a bar of soap or a bowl of mealie meal] *just because he is providing her with materials that she needs."*

Male - caregiver focus group discussion

(Site 5 – forestry estate)

5.4.3.4 Special Significance of Losing a Mother

Fathers' - and mothers' to a lesser extent – failing to spend quality time and give children in their care support and protection was cited as a reason for children engaging in risky sexual behaviour or substance abuse. Most mothers were said to spend some quality time with their children and showed interest in whatever activities their children took part in. In the event of the father dying, mothers were said to sacrifice all for the sake of their children (Mutangadura 2000; Franz, Lensche et al. 2002; Nyamukapa and Gregson 2005). One double orphan painted the picture of an effective mother by saying:

"...mothers know when you are ill or not happy. They are easy to talk to and have time for you. They listen to whatever a child may have for them and don't make false promises but tell you what they can or cannot do for you and they keep their promises." [Cries]

Double orphan – orphaned children's focus group discussion
(Site 5 – forestry estate)

Fathers were seen by children and female participants mostly as being authoritarian, unapproachable or difficult to communicate with and lacked interest in children's activities and school work. The children pointed out that a father's lack of interest was shown by his forgetting to attend the school consultation day, to buy the pen requested for, or to ask how the child had done at the end of term.

A young adult former maternal orphan was looking after her sibling after they revolted against their father's bringing a new wife into the family home before the rituals for their deceased mother had been performed. She stated angrily that their fathers' lack of emotional care for his surviving children was portrayed by the hurry with which he had re-married:

"I bet some fathers at the funeral [of their wives] *will be busy throwing their eyes around in search of a prospective wife and, even before tears would have dried on the mourning children's cheeks, will bring a new mother! I think you* [research team] *should hold workshops with widows and widowers and help them understand that the words mother and father do not mean the same when applied to step-parents!"*

22 year-old whose mother had died when she was 16 years old
(Children being cared for by social services and a church organisation)

Because of the lack of communication and emotional distance between fathers and children, participants attributed children's risky behaviour to lack of emotional and material support from fathers especially in the case of maternal orphans. Most fathers were said to spend less time in the home than mothers so that maternal orphans were left to their own devices.

"Most of these children are being left in the care of fathers who have no time for them. Children spend most of their time alone and they can do what they want like engaging in sex or falling victim to sexual abuse."

Female - caregiver focus group discussion

(Site 9 – roadside trading settlement)

Though most participants did not directly link psychosocial distress to risky behaviours, there was some acknowledgement that it could lead to sexual risks and substance abuse when children adopted behaviours to vent their feelings or get back at their caregivers for the abuse they had suffered.

"They see marriage as a solution to their suffering or a way of finding solace".

Female – children's focus group discussion

(Site 5 – forestry estate)

However, even the orphaned children agreed with some of the adult participants that there were some children whom may be genetically destined to engage in risky

behaviour be it sexual or substance abuse. A local substantive chief angrily narrated how he tried his level best to provide for his grand-daughter [his daughter's daughter] but was very disappointed by the fact that she chose to leave school and elope with the family's herd boy. The local chief went on to elaborate that some children were haunted by the spirits of their families and that these spirits made them engage in risky behaviour. He believed, in this case, that a child's behaviour had nothing to do with her being psychosocially distressed or losing her mother (Gelfand 1999).

"I did all I could to make my granddaughter happy including helping her prepare for her future by sending her to school (daughter's child). She had everything any child would wish for. How does she reward me! She eloped with our herdboy. When she realised she lived better with us she came back but she was pregnant. She still wanted me to pick up her pieces. Some children are just plain not appreciative! If I begin to think of it, I think some are haunted by bad spirits. The spirits make them misbehave and as a result nothing good you do for them will make them appreciate or change no matter how well you treat them."

Male – caregiver focus group discussion

(Site 12 – subsistence farming community)

5.4.3.5 Adolescent Experiences of Adults Orphaned in Childhood - The Influence of Changing Times

Trying to get evidence-based information from adult former orphan participants highlighted the effect of changing times and the diffusion of culture on risky behaviour in today's generations. Older former orphans [age-range was from 22-87 years-old] pointed out that, 40 or 50 years ago, risky behaviour was met with stiff penalties from

family sources of authority and society in general. Because of the harsh treatment that perpetrators received it was not rampant in their days compared to nowadays. Breakdown of family ties and disappearance of shared responsibilities due to labour migration, growing nuclearisation of families (Bourdillon 1997), new government laws such as the Widow and Inheritances Acts and the Age of Majority Act, which gave widows and girls' more powers, were cited as helping to diffuse the cultural mores that regulated behaviour.

None of the former orphans admitted to having had sex outside marriage. Only two females, who had been maternal orphans, reported having married around the ages of 18; the rest of the women said they had married at around 24 years of age. Only one, a twenty year-old, was unmarried at the time of the focus group discussions. This female former orphan indicated that she had thought of getting married but could not trust her paternal relatives to care for her siblings and this had made her shelve the idea for the moment.

We grew up in Chivhu where our parents had a house. When our father died, we continued staying with our mother's mother and we had a better life. She sent us to school and would teach us things. When she died, our paternal relatives decided that it was not good for us to be staying with our maternal relatives and brought us here [Watsomba – roadside trading settlement]. *When we came here is when we experienced a lot of problems. We were given a rundown shack of a house and we stay alone in that house. ... I had to drop out of school. We asked them if they could follow up on our father's pension but, since they would have had to pay for this, they refused. ... My other siblings had to drop out of school due financial constraints; they never had the chance I had, even though I dropped at Form 3. ... This is why I am saying losing parents causes problems. I am now 24 and I could have got married but I*

cannot imagine my relatives looking after my siblings, so I decided against it for their sake. We are soldiering on together. Anyway, if you work hard, without thinking of finding a boyfriend, one will be able to manage. Today, I have managed to raise my siblings. You just need to work hard for yourself.

Female former double orphan

(Former orphans focus group discussion, Site 9)

Most male adult former orphans reported marrying when they were in their 30s or 40s. The delay, they said, was due to their having needed to accumulate the bride wealth first from scratch and to establish a home. The need to reclaim or repair the parental homestead had also contributed to the delay. None of the adults who had lost a parent during childhood reported having divorced or separated from a partner in their life time. There were two widows and one widower. It was recognised that some marriages were not rosy and participants reported that, in last-minute counselling before departing for the matrimonial home, women especially were told that they needed to persevere and endure all the trials and tribulations that came with being in a marital union. Deserting a marriage was frowned upon in those days and they said they had to make it work or endure whatever the problem was. The most vital reason for this was the lack of a home to go back to, especially if one was a maternal orphan. Relationships between step-mothers and step-children have always been strained. This was despite all the cultural mores and the checks and balances put in place by families and society at large to deal with ill-treatment of orphaned children. Some former orphans cited problems that came with moving in to stay with a step-mother as the reason they decided to put their energies in making their marriages work. Thus, the thought of not having a proper and welcoming home to return to made them work harder at improving their relationships rather than walking out.

"In our days getting married meant one would have to have acccumulated enough money to pay lobola with and for general wife upkeep. In my case I had to build a home first because I had nowhere to take my wife to. I had lost all when I was taken in by my maternal relatives thus it meant reclaiming my right to be among my father's people. This delayed things for a long time. I just did not want to go through what I went through growing up by taking my wife in with relatives. I only married at thirty when I had all Ithought would make us comfortable and happy and we sure were-it was worthy the wait."

Male former orphan

(Former orphan focus group discussion, Site 9)

On the issue of risky behaviour, an 85 year-old woman, who was orphaned when she was barely ten, summed it all up by narrating the horrors experienced by young women who dared to engage in sex outside marriage. The elderly woman, supported by other people in the group who were fifty and above, stated that adolescent girls were subjected to routine virginity testing to prevent their bringing dishonour to the family. Aunts guarded their nieces jealously for this reason because they themselves would not be spared the humiliation. The woman went on to state that the family would forgo the cow that was normally slaughtered or given to them as a way of thanking them for providing them with a "full wife". Other humiliating deterrents that were mentioned included the presentation of the pair of sheets used by the couple on their first night with a hole burnt through them to the aunt of the bride indicating that bride was not a virgin at marriage, having hot roasted round nuts poured down the girls' dress, and her being made to sit on a vicious ants' nest to make the girl or young woman reveal who had taken her virginity. In some cases, girls were married-off to

somebody who would be happy to have them to save the family face in the village. The list was endless and very chilling to listen to. Because of all the reasons cited, the adult former childhood orphans agreed that engaging in risky behaviour in their day was equated with dicing with death. Substance abuse was unheard of in the adult orphans' days because they had to be of a certain age to drink or sit with drinkers. They thought, in their situation, they had been protected by the repressive cultural norms and values which they said had been washed clean out of today's society

"My child, things were a bit tough in our days. Today's children seem to have all things easy for them. In our days, we had virginity testing. ... There was no way anybody would want to humiliate their families in any way. At marriage, they also checked to see if you were still a virgin. Not being one meant the pair of the sheets you used with your husband on the first night was given with a hole burnt through them to your family through your paternal aunt. This was not only humiliating to yourself but also to your aunt. Due to this, our aunts guarded us jealously. ... If a boy was interested in me, he would propose and, if I was happy with him, I would go to my aunt and consult. If he was from a good family, she would approve and, if not, would withhold her approval. ... Things were tough then, my daughter, compared to today, where even nine and twelve year-olds already know a man [slept with a man or have had sexual intercourse] *already!"*

Female former maternal orphan

(Former orphans focus group discussion, Site 9)

5.5 Discussion

The quantitative analysis of orphans' involvement in risky behaviour indicated that orphans may be more likely than non-orphans to engage in early sex and substance abuse. The differences seen were not statistically significant, possibly due to the small numbers of adolescents in the study. This seems likely since significant results were found for earlier sexual activity in larger similar studies done in Manicaland (Gregson, Nyamukapa et al. 2000; Gregson, Terceira et al. 2004; Gregson, Nyamukapa et al. 2005) and Zimbabwe as a whole (Zimbabwe Central Statistics Office 2007). These studies, however, did not collect data on substance abuse in adolescents. There was no suggestion in the data from the current study for orphaned adolescents being more likely to engage in high risk sex - indicated by having sex for money, forced sex, more than one sexual partners or a partner whose age was five years or more; again, possibly due to small numbers.

Studies in Pennsylvania in the USA found a similar link between divorce-related parental loss and risky behaviour among adolescents, especially the link with substance abuse among adolescent males (Shaheen and Gehman 1998; Corak 1999).

The risky behaviour found among orphans and the differences by orphan type are also important for policy makers and programme planners and implementers. All orphans types (double, maternal and paternal orphans) were found to be at increased risk of starting sex early and of engaging in substance abuse, with paternal orphans being more likely to drink, use drugs or smoke a cigarettes compared to non-orphans. Since risky behaviour does not cause one to become orphaned, it can safely be said that

orphanhood was or can be a driver of risky behaviours among orphaned and vulnerable children.

Focus group participants suggested that the greater risk behaviour among orphans could be attributed to the fact that their caregivers do not spend quality time with them. This, in turn, could be attributed to pressures put on these caregivers as they see to it that there is food on the table or tend to bedridden household members (Foster, Shakespeare et al. 1995; Wrubel and Folkman 1997; Minkler, Fuller-Thomson et al. 2000; Billing, Ehrle et al. 2002; McCausland and Pakenham 2003; Oburu 2004; van Wijngaarden, Schene et al. 2004). Paternal orphans' increased risk of substance abuse could be attributed to the lack of a father figure to morally guide them and, in some studies, risky behaviour has been found to be a way of coping with loss or of disguising stress related to the loss (Corak 1999; Kendler, Sheth et al. 2002).

The results on the association between psychosocial distress and risky behaviours, based on cross-sectional data, are consistent with the findings from the national survey reported in Chapter 4 which suggest that children who experience increased psychosocial distress are more likely to engage in early sex, be married or engage substance abuse.

The test to determine whether being psychosocially distressed at round one determined risky behaviour in round three, 2 years later, in children aged 17-20 years old, indicated non-significant negative associations between being psychosocial distressed and having recently started sex, early marriage and substance abuse.

One explanation for the negative association could be that risk takers were disproportionately lost to follow-up. Studies done in Kenya, Lesotho, South Africa and Malawi (Hosegood and Ford 2003; Nyambedha, Wandibba et al. 2003; Ansell and Young 2004; Ansell and Young 2004a) and in Zimbabwe (Matshalaga 2004; Mutero-Munyati 2004; Robson 2004; Zimbabwe Central Statistics Office 2007; Zimbabwe Ministry of Health and Child Welfare 2007) have shown that families use migration as a way of coping with the impact and effects of AIDS. Among all children, younger and, in some cases, older children [in search of employment] and orphaned and vulnerable children have been found to be more likely to change household than non-orphaned and non-vulnerable children (Zimbabwe Central Statistics Office 2007). Among orphans, those who change residence most often are maternal orphans and double orphans (Matshalaga 2004; Ansell and Young 2004a).

A second possible explanation could result from the inability of cross-sectional data to distinguish the direction of causality. Thus, associations seen in cross-sectional surveys could be because early sex and/or substance abuse lead to greater psychosocial distress. Once this was controlled for in the longitudinal analysis, it emerged that psychosocial distress actually tended to *reduce* the likelihood of early sex and substance abuse. These results were not statistically significant but, nonetheless, tend to suggest that psychosocial distress may limit rather than increase risky behaviour. This could be because those experiencing psychosocial distress are inhibited by their condition [distress] from engaging in risky behaviour or from venturing out to meet new friends.

An important limitation in the analyses of both the cross-sectional and longitudinal analyses was the inability to test for gender differences. This was due to the sample

being too small to carry out disaggregated analysis but may have obscured important gender differences in the relationships between orphanhood, psychosocial distress and adoption of risky behaviours.

The focus group discussions also helped to highlight vulnerability of children in the homes they are cared for, in the community, and even among those who may be trusted family members, friends or accomplices. By seeking outside help, children could inadvertently be endangering their lives. Thus, although the study results are not statistically significant, they do offer an insight to the problems and some possible causal pathways for risky behaviour in orphaned adolescents.

Finally, the focus group discussions with former orphans highlighted the limbo that exists among the people with regards to traditional and modern ways of doing things. When planning for programmes, there is need to take cognisance of old traditions which people may revert to, when it suits them, which may conflict with new policies and programmes and stagnate or stabilise the enjoyment of the benefits or full utilisation of these new programmes. The study communities are patrilineal societies where males are revered as heads of households and control all resources and decision-making powers. In this context, women caregivers said they felt trapped by their lack of power and voice and thus were forced into taking up child care roles and responsibilities which they felt they would avoid if given the choice. They attributed the ill-treatment of children and the lack of interest shown by some female caregivers to the lack of consultation and decision-making powers. Old traditional authoritarian customs, plus the checks and balances cited above, need exploring further so as to understand their implications for the psychosocial well-being of children in care and their caregivers.

Chapter 6

Consequences in Adulthood of Psychosocial Distress Experienced During Childhood

6.1 Introduction

Experiences during childhood may have long-lasting consequences that carry over into adulthood. For example, orphanhood may lead to psychosocial distress during childhood and early school drop-out which, in turn, lead to low school qualifications and limit employment and other opportunities later in life.

Extensive studies of the long-term consequences of childhood deprivation due to parental loss (through death, illness and divorce or separation) and poverty have been conducted in more developed countries (Barrera and Garrison-Jones 1992; Badla, Gutlerrez et al. 1996; Dearden and Becker 1997; Bowlby 1998; Corak 1999; BerntssonJan-Eric Gustafsson 2000; Dowdney 2000; Cree, Kay et al. 2006). However, only a small number of such studies have been carried out in developing countries (Bowlby 1998; Gregson, Nyamukapa et al. 2000; Kelly 2000; Deininger, Crommelynck et al. 2002; Foster 2002; Kendler, Sheth et al. 2002; Makame, Ani et al. 2002; Allemano 2003; Beadnell, Baker et al. 2003; Nyamukapa, Gregson et al. 2003; Richter 2004a; Atwine, Cantor-Graae et al. 2005; Birdthistle, Floyd et al. 2008; Nyamukapa and Gregson 2005). Furthermore, few if any have looked at the implications of orphanhood beyond adolescence.

In earlier research in Manicaland (Gregson, Nyamukapa et al. 2005) and a high-density suburb of Harare (Birdthistle, Floyd et al. 2008), orphanhood (and maternal

loss, in particular) has been found to be a risk factor for early engagement in sexual activity leading to teenage pregnancy and increased risk of sexually transmitted diseases including HIV infection. In part, this was explained by earlier school drop-out (Nyamukapa and Gregson 2005). In Chapters 3 and 5, we found evidence that heightened psychosocial distress may also contribute to orphans' greater likelihood of adopting high risk behaviours for HIV acquisition during adolescence.

In this chapter, we use retrospective data from a large-scale cohort of adults followed up every 2-3 years in the Manicaland HIV/STD Prevention Study to investigate the section of the theoretical framework (Chapter 2) which proposes that losing parents when a child can lead to adverse outcomes during adulthood, in part, due to increased psychosocial distress. In particular, we investigate whether having lost a parent or parents during childhood or adolescence is associated with adverse outcomes during early adulthood (ages 18-29 years). The adult outcomes examined include depression and we also investigate whether depression experienced in adulthood is associated with other negative outcomes.

6.2 Objective of Chapter

The objective of this chapter is to explore and understand the effects of parental loss during childhood and adolescence on educational completion and attainment, sexual behaviour, and employment and health outcomes in adulthood using data from the third round of the Manicaland HIV/AIDS/STD Prevention Study.

The following specific hypotheses, based on the theoretical framework (detailed explanation in Chapters 1 and 2), are tested:

1. Adults who lost one or both parents before the age of 12 years (but not those who lost a parent between the ages of 12-17 years) are more likely to suffer from depression than adults whose parents are still alive

2. Adults who lost one or both parents before the age of 12 years are: (i) more likely to have dropped out of school before reaching secondary level due to lack of fees; and (ii) less likely to have obtained 5 "O" level passes; than adults whose parents are still alive

3. Partly as a consequence of (2), adults who lost one or both parents before the age of 12 years are less likely to be in professional or skilled employment than adults whose parents are still alive

4. Adults who lost one or both parents before the age of 12 years are more likely: (i) to have engaged in substance abuse; and (ii) to have engaged in high risk behaviour for HIV acquisition (including unstable marriages); than adults whose parents are still alive

5. Adults who lost one or both parents before the age of 12 years are more likely to suffer poor health (including being HIV positive) than adults whose parents are still alive

6. Adults who suffer depression are: (i) less likely to be in professional or skilled employment; (ii) more likely to be engaging in risky behaviours (including sexual behaviours and substance abuse); and (iii) more likely to be in poor health (including being HIV positive); than other adults of the same age and gender

6.3 Data and Methods of Data Analysis

6.3.1 Quantitative Data

6.3.1.1 Construction of Variables Used in the Analysis

Data from the third round of the ongoing population-based Manicaland HIV/STD Prevention Study in the eastern part of Zimbabwe were used in this analysis. Data from sites 5-12 of this survey were used because these were the only sites in which retrospective data on orphan status during childhood were collected for 18-29 year-olds. By coincidence, these sites were the same as those covered by the Manicaland Child Cohort Study (Chapters 4 and 5) and included small towns (2), forestry plantations (2), roadside trading centres (2) and subsistence farming areas (2).

Data on gender of respondent, parental survival status, reported depression in the last 3 months, educational attainment (level reached and passes obtained), employment status, age at first sex and marriage (<18 years), marital instability (divorce/separated), number of sexual partners (>1 new sexual partner in the last year) and substance abuse (alcohol, drugs and cigarettes) obtained from adults aged 18-29 years were tested for associations with orphanhood during childhood (<12 years) and adolescence (12-17 years at last birthday).

With the exception of orphan status, binary variables for use in the analyses with expected outcome coded (1) and unexpected outcome coded (1) were created as follows:

Orphan status variables

(1) Orphan status – current orphan status was determined using reports of current parental survival status given by adults aged 18-29 years interviewed in the individual interviews. For those with a deceased parent, age at orphanhood was calculated using data on current age and year of death of parent. Two groups of orphan experience were identified: (i) orphan experience before age 12 year; and (ii) orphan experience between ages 12-17 years; and compared with no orphan experience up to the interview date (i.e. both parents still being alive at current age – 18-29 years). For the variable covering experience in the age range 0-11 years, children were coded (0) if both parents were still alive at the interview date (and had therefore been alive at their 12th birthday); (1) if their father only had died before their 12th birthday; (2) if their mother only had died before their 12th birthday; and (3) if both parents had died before their 12th birthday. An equivalent variable was constructed for the age range 12-17 years. In addition, summary variables were constructed for orphan experience of any description during these two age ranges. For example, for the 0-11 year age range, the variable was coded (0) if both parents were still alive at the interview date (and therefore must have been alive at the 12th birthday) and (1) if one or both parents had died before the child turned 12 - [ID Q202 gender of respondent, Q203 year of birth, Q204 age at last birthday, Q205, Q209 parental survival status, Q206, Q210 year of death for parents who died]

Psychosocial distress variable

(2) Depression - respondents were asked whether they had felt depressed in the 3 months prior to the interview date. The questionnaire response categories

comprised a 3 point scale [very much (1), a little (2), and not really (3)]. The "very much" category was adopted as the expected outcome (coded 1) and the other two options (2 & 3) were combined and coded as the unexpected outcome (0) - [ID Q508]

Childhood outcomes

(3) Educational attainment – two variables were constructed: (i) reason for dropping out of school; and (ii) whether or not achieved 5 "O" level passes.

The first variable was based on responses to a question on reasons for dropping out of school asked to those who never completed their education (i.e. both primary and secondary school levels). The following 11 possible options were given:

(a) Insufficient funds
(b) Found job
(c) To go to college or university
(d) Inadequate exam passes
(e) Needed to help at home
(f) Marriage
(g) Pregnancy/childbirth (voluntarily)
(h) Pregnancy (expelled)
(i) Caught having sex
(j) Expelled (not pregnancy or sex related)
(k) Other (specify)

For the purpose of exploring the effects of childhood orphaning on adults' educational attainment, lack of funds (a) was adopted as the expected outcome

and was coded (1) and the remaining responses were all treated as unexpected outcomes and were coded (0) - [ID Q217]

The second educational attainment variable was derived from reports on passes at ordinary level. Having less than 5 subjects passed at ordinary level (either due to failure to reach Form 4 or taking "O" levels but having fewer than 5 passes) was treated as the expected outcome (1) and having 5 or more passes was treated as the unexpected outcome and coded (0). In Zimbabwe, passes in at least 5 subjects including Mathematics and English are required for an overall pass at "O" level. However, for the purpose of this thesis, passes in any 5 subjects were regarded as being sufficient - [ID Q218]

Early adult outcomes

(4) Risk behaviours – the following five variables were constructed and used in the analysis:

(a) *Substance abuse* - respondents were asked if they had, at some point in their lives, used alcohol, drug or cigarettes for pleasure. Those who had used one or more of these substances were coded (expected 1); non-users (unexpected 0) - [ID Q241, Q245, Q246]

(b) *Early age at first sex* – if sexual debut was before the age of 18 years (the age of majority for consent in Zimbabwe), the act was considered to be risky (expected 1); if after the age of 18 years it was considered less risky and coded (0) - [ID Q401]

(c) *Early marriage* – age at first marriage less than 18 years was adopted as the expected outcome and coded (1) whilst older ages of marriage were treated as unexpected (0); for this variable, those who reported having started sex were taken as the base population – [ID Q247, Q249]

(d) *Marital instability* - divorced or separated. This variable was created for respondents who reported having been married at least once in their lifetime. Having ever experienced divorce or separation was adopted as the expected outcome (1); never having experienced a divorce or separation was taken to be the unexpected outcome and was coded (0) – [ID Q272]

(e) *Multiple sexual partners* – defined as >1 new sexual partner in the last 12 months in respondents who reported having had at least one sexual partner in their lifetime. Formulated from respondents' reports on their number of new sexual partners in the last 12 months. Reporting more than one partner was the expected outcome (1) and one or less was taken to be the unexpected outcome and coded (0) - [ID Q273]

(5) Health status – three variables were constructed. For the first variable on recent general health, responses indicating serious or recurring illness were coded (1) and reports of being in good health were coded (0) - [ID-Q501]. For the second on sexually transmitted disease (STD) symptoms, reports of genital ulcers or genital discharge and pain in the last year were coded (1) and absence of such symptoms was coded (0) - [ID-Q509 & Q511]. For the third variable on HIV infection status, individuals whose test results in the survey were

positive were coded (1) and those whose results were negative were coded (0) - [Laboratory results form]

(6) Employment status – two variables were constructed. In the first variable, current unemployment was taken to be the expected outcome and coded (1) and being in employment of any kind was taken as the unexpected outcome and coded (0). In the second variable, being unemployed or in manual or unskilled employment was taken as the expected variable and coded (1) and being in skilled or professional employment was coded (0) - [ID Q238]

6.3.1.2 Data Analysis

Frequencies of reported depression were tabulated using the orphan status categories defined above. To test whether orphanhood in childhood (<12 years) or adolescence (12-17 years) was associated with increased risk of depression in adulthood, logistic regression models were constructed controlling for age and gender.

Logistic regression was also used to test for associations between being orphaned in childhood and educational attainment, risky behaviour, poor physical health outcomes and poor employment opportunities after controlling for age and gender.

Finally, logistic regression was used to test whether depression (in adulthood) contributed to (any) observed associations between early orphanhood, risky behaviour (substance abuse, marital instability and multiple sexual partners), poor physical health, and employment status.

6.3.2 Qualitative Data

Since the main focus of this Chapter was adult outcomes in relation to childhood orphaning, qualitative data from just the two focus group discussions carried out with former orphans (adult orphans) in two of the four sites (roadside trading centre [site 12] and small town [site 7]) were used. The focus group discussions were held at local community halls in the study areas. The former orphan participants were purposively recruited by four local village health workers. A total of 26 adults participated in focus group discussions (12 in site 7 and 14 in site 9). 11 were male and 15 female. Their ages ranged from 22 to 81 years and their mean age was 43.7 years; 43.9 years [range 22-75 years] for males; 43.4 years for females [22-81 years].

A discussion schedule was used to guide the discussions and to follow points of interest on adult educational and employment outcomes amongst the former orphans. Discussions were conducted in the local Shona language and recorded on a Sony tape recorder. Key points were also recorded manually on flip charts as a back-up and participants also took notes guided by the researcher as a way of increasing their involvement.

The data were transcribed straight from Shona into English. The transcribed data were analysed manually using content theme analysis. This involved coding recurring themes and then interpreting the coded data. The thematically coded data were explored further to identify differences between groups (Miles and Huberman 1994; Wolcott 1994; Heaton 2004; Silverman 2006).

6.4 Results

6.4.1 Quantitative Data: Cross-Sectional and Retrospective Analyses of Data from Round 3 of the Manicaland HIV/STD Prevention Study

6.4.1.1 Orphanhood Experience amongst Young Adults aged 18-29 years

6,860 adults aged 18-29 years were identified from all the 12 sites in the third round of the Manicaland HIV/STD Prevention Study, of whom, 5,694 were in sites 5-12 where data on orphanhood during childhood were collected. Of these, 4,736 had complete information on parental survival and the other variables used in the analysis. 2,331 (49.2%) had lost at least one parent prior to the interview and 2,405 (50.8%) still had both parents alive. 403 (17.3%) and 621 (25.6%) of those who had lost at least one parent had done so before the age of 12 years and between the ages of 12 and 17 years, respectively. The remainder 1,307 (56%) had first become an orphan after their 18th birthday.

6.4.1.2 Associations between Orphanhood when a Child and Depression in Early Adulthood

Logistic regression was used to test for association between orphanhood in childhood and adolescence and depression as an adult (Table 6.1). Overall, those who had become orphaned either in childhood or adolescence were not found to be more likely than other young adults to report depression. Only respondents who had become double orphans (18% *vs.* 14%) and, to a lesser extent, maternal orphans (16% *vs.* 14%) in their teens showed signs of increased depression and these differences were not statistically significant. Overall, females were more likely than males to report

depression (e.g. 19% *vs.* 8% in non-orphans) but there was no evidence for differences in the effect of early orphanhood between males and females. Adults whose fathers died when they were aged between 12 and 17 years were significantly *less* likely to report depression (9% *vs.* 14%).

Table 6.1 Tests for association between orphan experience in childhood and depression in adulthood, Manicaland HIV/STD Prevention Study (Survey round 3)

Form of orphanhood	Orphaned when aged <12 yrs					Orphaned when aged 12-17 yrs					Non-orphaned*	
	AOR	95 % CI	P-value	%	n	AOR	95 % CI	P-value	%	n	%	n
Males												
Orphan	0.60	0.29, 1.28	0.186	4	183	0.72	0.40, 1.31	0.283	5	276	8	1,036
Paternal orphans	0.49	0.20, 1.25	0.135	4	136	0.55	0.25, 1.22	0.141	4	181	8	1,036
Maternal orphans	0.43	0.06, 3.20	0.409	3	31	0.60	0.14, 2.53	0.487	4	47	8	1,036
Double orphans	2.34	0.51, 10.77	0.276	13	16	1.61	0.61, 4.22	0.333	10	49	8	1,036
Females												
Orphan	0.97	0.66, 1.41	0.857	18	220	0.97	0.71, 1.33	0.867	17	345	19	1,369
Paternal orphans	0.93	0.61, 1.43	0.744	18	164	0.74	0.49, 1.10	0.132	14	232	19	1,369
Maternal orphans	1.26	0.54, 2.94	0.595	20	35	1.49	0.83, 2.67	0.182	24	66	19	1,369
Double orphans	0.78	0.23, 2.67	0.688	14	21	1.65	0.84, 3.25	0.144	26	47	19	1,369
All Combined												
Orphans	0.87	0.63, 1.21	0.415	14	403	0.91	0.69, 1.20	0.507	11	621	14	2,405
Paternal orphans	0.82	0.56, 1.20	0.310	11	300	0.69	0.49, 0.99	0.044	9	413	14	2,405
Maternal orphans	0.98	0.46, 2.10	0.954	12	66	1.25	0.74, 2.13	0.405	16	113	14	2,405
Double orphans	1.10	0.42, 2.90	0.849	14	37	1.64	0.94, 2.85	0.080	18	96	14	2,405

Logistic regression tests controlled for age and gender
* Non-orphaned at date of interview (i.e. when aged 18-29 years)

6.4.1.3 Associations between Orphanhood when a Child and other Outcomes in Early Adulthood

Table 6.2 shows the results for associations between orphanhood when a child and outcomes as a young adult. The research hypothesis was that adults who had lost one or both parents before their 12th birthday would be more likely to still be suffering adverse consequences. However, since the only possible association observed between orphanhood and depression was seen in those who had become double orphans between the ages of 12 and 17 years, outcomes in adults who had been orphaned at these slightly older ages were also examined. The results are shown separately for females and males.

Women

Women orphaned at both younger and older childhood ages were more likely to have dropped out of school due to lack of fees than those who had not been orphans during childhood (Tables 6.2a and 6.2b). In each case this was most common for those who had been double or maternal orphans. However, similar proportions (14-15%) of women who had and had not been orphans had attained at least 5 'O' level passes.

Overall levels of substance abuse were low (≤6%) and no significant differences were found with early parental loss. Women who had been orphans were somewhat more likely to report starting sex and/or marriage before their 18th birthday. However, the differences were only statistically significant for women who had been double orphans before age 12 and those whose mothers had died when they were 12-17 years old. No evidence was found for differences in experience of divorce or separation but women orphaned before their 12th birthday were more likely than those not yet orphaned to report multiple sexual partners in the past year.

Overall, women who had been orphaned reported similar patterns of current health and HIV prevalence to those whose parents were still alive. Those who had been maternal or double orphans (particularly those whose parent(s) had died before their 12th birthdays) were more likely to report STD symptoms and had elevated levels of illness and HIV infection. However, sample sizes were small and none of the differences were statistically significant.

Table 6.2a Comparison of outcomes in early adulthood (18-29 years) by orphan experience before the age of 12 years (females)

Adult outcomes	All orphans					Paternal orphans					Maternal orphans					Double orphans					Non-orphans*	
	Test for differences					Test for differences					Test for differences					Test for differences						
	AOR	95 % CI	P-value	%	n	AOR	95 % CI	P-value	%	n	AOR	95 % CI	P-value	%	n	AOR	95 % CI	P-value	%	n	%	n
Education																						
Left school due to lack of fees**	1.39	1.04, 1.85	0.027	51	220	1.11	0.80, 1.55	0.523	46	164	2.36	1.17, 4.73	0.016	60	35	3.67	1.40, 9.65	0.008	71	21	44	1,369
"O" level passes <5	1.02	0.65, 1.60	0.931	86	218	0.98	0.59, 1.63	0.940	88	162	2.80	0.54, 9.62	0.262	71	7	0.57	0.19, 1.73	0.325	81	21	86	1,362
Risky behaviours																						
Substance abuse - alcohol, drugs or cigarettes	1.20	0.49, 2.90	0.691	3	220	0.76	0.23, 2.52	0.657	2	164	3.15	0.71, 13.97	0.132	6	35	2.27	0.29, 17.60	0.432	5	21	2	1,369
Age first sex <18 years	1.29	0.95, 1.75	0.103	33	220	1.16	0.82, 1.65	0.403	30	164	1.38	0.68, 2.81	0.369	34	35	2.41	1.02, 5.72	0.046	47	21	27	1,369
Married aged <18 years	1.23	0.86, 1.76	0.268	33	157	1.07	0.71, 1.63	0.737	30	119	0.93	0.36, 2.40	0.878	27	22	4.13	1.49, 11.46	0.007	63	16	29	980
Ever divorced/separated	1.24	0.85, 1.81	0.274	44	157	1.45	0.96, 2.19	0.079	32	119	0.54	0.16, 1.86	0.329	14	22	0.77	0.22, 2.75	0.692	19	16	25	980
Multiple new sex partners in last 12 months (>1)	1.54	1.04, 2.27	0.029	18	220	1.46	0.93, 2.29	0.096	16	164	1.84	0.81, 4.15	0.144	23	35	1.56	0.51, 4.75	0.433	19	21	12	1,369
Health status																						
Recurring or serious illness in last few months	1.06	0.73, 1.53	0.773	18	220	0.88	0.57, 1.37	0.569	16	164	1.79	0.82, 3.89	0.142	26	35	1.54	0.56, 4.27	0.403	24	21	18	1,369
STI symptoms - discharge and/or ulcers in last 12 months	0.92	0.47, 1.84	0.834	5	220	0.70	0.30, 1.64	0.407	4	164	2.55	0.74, 8.84	0.140	9	35	1.07	0.14, 8.53	0.922	5	21	5	1,369
HIV positive	0.92	0.61, 1.39	0.709	15	220	0.74	0.46, 1.20	0.228	13	164	1.93	0.79, 4.69	0.147	20	35	1.49	0.47, 4.71	0.500	19	21	17	1,359
Employments status																						
Unemployed vs. employed	1.06	0.66, 1.68	0.821	90	220	0.97	0.58, 1.61	0.905	88	164	1.85	0.44, 7.82	0.404	94	35	1.12	0.26, 4.88	0.880	90	21	87	1,369
Unemployed / manually vs. skilled or professional	1.66	0.59, 4.67	0.340	98	220	1.28	0.45, 3.62	0.642	98	164	-	-	-	100	35	-	-	-	100	21	97	1,366

Logistic regression tests adjusted for age

* Non-orphans at interview date (i.e. when aged 18-29 years)

** Primary or secondary level

Table 6.2b Comparison of outcomes in early adulthood (18-29 years) by orphan experience when aged of 12-17 years (females)

Adult outcomes	All orphans					Paternal orphans					Maternal orphans					Double orphans					Non-orphans*	
	Test for differences					Test for differences					Test for differences					Test for differences						
	AOR	95 % CI	P-value	%	n	AOR	95 % CI	P-value	%	n	AOR	95 % CI	P-value	%	n	AOR	95 % CI	P-value	%	n	%	n
Education																						
Left school due to lack of fees**	1.40	1.10, 1.79	0.006	50	345	1.29	0.97, 1.71	0.078	48	232	1.43	0.86, 2.36	0.164	50	66	2.04	1.12, 3.72	0.019	57	47	44	1,369
"O" level passes <5	0.86	0.61, 1.23	0.417	85	341	0.86	0.56, 1.30	0.461	87	230	0.85	0.41, 1.76	0.660	86	65	0.91	0.38, 2.20	0.842	87	47	86	1,369
Risky behaviours																						
Substance abuse - alcohol, drugs or cigarettes	1.58	0.80, 3.11	0.186	3	345	1.96	0.95, 4.04	0.070	4	232	0.67	0.09, 5.07	0.706	2	66	1.04	0.14, 7.83	0.971	2	47	2	1,369
Age first sex <18 years	1.21	0.93, 1.56	0.149	31	345	1.05	0.77, 1.44	0.739	28	232	2.21	1.34, 3.64	0.002	45	66	0.91	0.47, 1.77	0.778	26	47	27	1,369
Married aged <18 years	1.31	0.98, 1.77	0.070	35	330	1.10	0.77, 1.57	0.609	31	166	2.21	1.27, 3.86	0.005	47	53	1.30	0.60, 2.84	0.505	34	29	29	960
Ever divorced/separated	0.86	0.61, 1.21	0.382	21	248	0.74	0.49, 1.13	0.167	19	166	1.22	0.65, 2.31	0.532	26	53	0.89	0.36, 2.23	0.806	21	29	25	960
Multiple new sex partners in last 12 months (>1)	0.82	0.56, 1.20	0.302	11	345	0.83	0.53, 1.30	0.421	11	232	1.19	0.59, 2.39	0.626	15	66	0.28	0.07, 1.16	0.080	4	47	12	1,369
Health status																						
Recurring or serious illness in last few months	0.96	0.70, 1.32	0.808	17	345	0.89	0.60, 1.30	0.538	16	232	1.21	0.65, 2.26	0.555	20	66	1.04	0.48, 2.27	0.915	17	47	18	1,369
STI symptoms - discharge and/or ulcers in last 12 months	1.19	0.69, 2.03	0.534	5	345	0.85	0.42, 1.74	0.654	4	232	2.20	0.90, 5.35	0.082	9	66	1.70	0.50, 5.75	0.392	6	47	5	1,369
HIV positive	1.07	0.76, 1.50	0.714	15	343	1.07	0.72, 1.60	0.731	16	232	1.08	0.53, 2.22	0.823	15	66	0.99	0.40, 2.44	0.983	13	47	17	1,359
Employment status																						
Unemployed vs. employed	1.16	0.78, 1.74	0.463	91	345	0.95	0.61, 1.47	0.816	89	232	2.50	0.77, 8.09	0.125	95	66	1.69	0.52, 5.53	0.387	94	47	89	1,369
Unemployed / manually vs. skilled or professional	0.96	0.47, 1.94	0.908	97	344	0.65	0.32, 1.31	0.227	96	232	-	-	-	100	66	-	-	-	100	47	97	1369

Logistic regression tests adjusted for age

* Non-orphans at interview date (i.e. when aged 18-29 years)

** Primary or secondary level

Few women reported formal sector employment and no statistically significant differences were found by orphan status during childhood.

Men

Similar comparisons were made for men (Tables 6.2c and 6.2d). Again, those who had been orphaned in childhood were more likely to report having left school due to lack of fees although the difference was only statistically significant for those whose parent(s) (and particularly fathers) had died when they were 12-17 years old. As was the case with women, no differences were seen in educational achievement as represented by having the minimum requirement of 5 'O' levels.

Table 6.2c Comparison of outcomes in early adulthood (18-29 years) by orphan experience before the age of 12 years (males)

Adult outcomes	All orphans					Paternal orphans					Maternal orphans					Double orphans					Non-orphans*	
	Test for differences					Test for differences					Test for differences					Test for differences						
	AOR	95 % CI	P-value	%	n	AOR	95 % CI	P-value	%	n	AOR	95 % CI	P-value	%	n	AOR	95 % CI	P-value	%	n	%	n
Education																						
Left school due to lack of fees**	1.23	0.89, 1.70	0.211	50	183	1.27	0.88, 1.84	0.199	51	136	0.84	0.40, 1.78	0.657	42	31	2.01	0.72, 5.61	0.182	56	16	48	1,036
"O" level passes <5	0.88	0.61, 1.26	0.488	74	183	0.75	0.51, 1.12	0.164	71	136	1.08	0.46, 2.54	0.859	77	31	4.42	0.58, 33.78	0.152	94	16	76	1,033
Risky behaviours																						
Substance abuse - alcohol, drugs or cigarettes	1.09	0.75, 1.58	0.662	29	183	1.03	0.67, 1.57	0.904	28	135	1.07	0.46, 2.50	0.871	29	31	1.99	0.62, 6.34	0.246	31	16	30	1,036
Age first sex <18 years	1.16	0.82, 1.64	0.398	30	183	1.13	0.76, 1.67	0.557	29	136	1.29	0.60, 2.76	0.520	32	31	1.23	0.42-3.56	0.707	31	16	27	1,036
Married aged <18 years	2.08	0.73, 5.94	0.169	12	43	2.73	0.94, 7.89	0.064	15	34	-	-	-	0	7	*	*	*	0	2	6	303
Ever divorced/separated	1.13	0.51, 2.50	0.766	21	43	1.54	0.68, 3.48	0.306	26	34	-	-	-	0	7	*	*	*	0	2	18	303
Multiple new sex partners in last 12 months (>1)	1.09	0.78, 1.52	0.611	35	183	1.00	0.68, 1.47	0.989	34	136	1.23	0.59, 2.58	0.582	39	31	1.81	0.66, 5.02	0.251	44	16	35	1,036
Health status																						
Recurring or serious illness in last few months	1.27	0.86, 1.87	0.234	22	183	1.35	0.87, 2.08	0.178	23	136	1.10	0.44, 2.72	0.839	19	31	0.98	0.27, 3.48	0.970	19	16	17	1,036
STI symptoms - discharge and/or ulcers in last 12 months	0.25	0.03,1.83	0.171	1	183	0.32	0.04, 2.42	0.784	1	136	-	-	-	0	31	*	*	*	0	16	3	1,036
HIV positive	2.16	1.20, 3.90	0.010	9	183	2.37	1.25, 4.49	0.008	10	135	1.31	0.30, 5.80	0.719	6	31	2.21	0.27, 18.01	0.457	7	15	6	1,031
Employments status																						
Unemployed vs. employed	1.19	0.81, 1.73	0.378	75	183	1.34	0.87, 2.08	0.187	76	136	0.84	0.37, 1.88	0.665	68	31	0.81	0.24, 2.74	0.745	75	16	69	1,036
Unemployed / manually vs. skilled or professional	1.19	0.68, 2.09	0.537	91	183	1.22	0.64, 2.30	0.546	91	136	1.74	0.40, 7.58	0.459	94	31	0.53	0.11, 2.51	0.420	86	16	88	1,034

Logistic regression tests adjusted for age

* Non-orphan at interview date (i.e. when aged 18-29 years)

** Primary or secondary level

Table 6.2d Comparison of outcomes in early adulthood (18-29 years) by orphan experience when aged of 12-17 years (males)

Adult outcomes	All orphans					Paternal orphans					Maternal orphans					Double orphans					Non-orphans*	
	Test for differences					Test for differences					Test for differences					Test for differences						
	AOR	95 % CI	P-value	%	n	AOR	95 % CI	P-value	%	n	AOR	95 % CI	P-value	%	n	AOR	95 % CI	P-value	%	n	%	n
Education																						
Left school due to lack of fees**	1.79	1.35, 2.38	<0.001	57	276	1.89	1.35, 2.64	<0.001	58	181	1.75	0.95, 3.22	0.073	57	47	1.45	0.80, 2.62	0.219	51	49	48	1,036
"O" level passes <5	1.20	0.86, 1.67	0.275	79	273	1.09	0.74, 1.60	0.654	78	181	0.51	0.70, 3.28	0.296	83	47	1.46	0.67, 3.18	0.340	83	46	76	1,033
Risky behaviours																						
Substance abuse - alcohol, drugs or cigarettes	1.23	0.89, 1.69	0.206	28	276	1.21	0.83, 1.77	0.318	28	181	2.21	1.14, 4.27	0.018	40	47	0.62	0.27, 1.39	0.247	16	49	30	1,036
Age first sex <18 years	0.85	0.62, 1.16	0.297	24	276	0.77	0.53, 1.12	0.166	22	181	1.40	0.75, 2.59	0.293	34	47	0.69	0.34, 1.41	0.309	20	49	27	1,036
Married aged <18 years	1.13	0.37, 3.47	0.830	7	60	1.28	0.36, 4.57	0.700	8	40	1.98	0.23, 16.70	0.530	11	9	-	-	-	0	11	6	303
Ever divorced/separated	1.03	0.50, 2.13	0.939	18	60	1.15	0.49, 2.67	0.747	20	40	1.28	0.26, 6.36	0.761	22	9	0.45	0.06, 3.56	0.445	9	11	18	303
Multiple new sex partners in last 12 months (>1)	1.01	0.76, 1.34	0.957	33	276	0.99	0.70, 1.39	0.939	33	181	1.26	0.68, 2.31	0.463	18	47	0.85	0.45, 1.62	0.628	29	49	35	1,036
Health status																						
Recurring or serious illness in last few months	0.27	0.65, 1.32	0.673	18	276	0.76	0.49, 1.18	0.224	15	181	1.21	0.59, 2.48	0.605	21	47	1.55	0.80, 2.99	0.194	27	49	17	1,036
STI symptoms - discharge and/or ulcers in last 12 months	0.37	0.09, 1.57	0.175	1	276	-	-	-	0	181	-	-	-	0	47	2.40	0.53, 10.74	0.253	4	49	3	1,036
HIV postive	1.38	0.77, 2.49	0.278	6	274	1.03	0.48, 2.24	0.937	4	181	3.33	1.30, 8.51	0.012	13	46	1.03	0.24, 4.46	0.968	4	49	6	1,031
Employments status																						
Unemployed vs. employed	0.98	0.71, 1.35	0.897	74	276	0.85	0.58, 1.23	0.389	71	181	0.86	0.43, 1.69	0.653	70	47	2.50	1.02, 6.11	0.045	88	49	69	1,036
Unemployed / manually vs. skilled or professional	1.94	1.08, 3.47	0.026	95	276	1.45	0.77, 2.73	0.245	93	181	2.49	0.59, 10.57	0.217	96	47	-	-	-	100	47	88	1,034

Logistic regression tests adjusted for age

* Non-orphan at interview date (i.e. when aged 18-29 years)

** Primary or secondary level

Men who had been orphaned before their 12th birthday were more likely to be HIV positive than those who had not been orphaned [AOR 2.16; 95% CI 1.20-3.90]. A similar excess risk of HIV infection was seen in men whose fathers had died before they were 12 [AOR 2.37; 95% CI 1.25-4.49] and those whose mothers had died when they were aged 12-17 years [AOR 3.33; 95% CI 1.30-8.51]. The former were more likely to have married before age 18 and to have divorced or separated although neither difference was statistically significant. The latter were more likely to report substance abuse and had consistently elevated (non-significant) levels of sexual risk behaviour.

As with the women, men who had been orphaned in childhood had similar levels of formal sector employment to those whose parents were still alive. However, those whose parent(s) had died when they were aged 12-17 years were less likely to be in skilled or professional employment (5% *vs.* 12%). None of those who had been double orphans was in skilled or professional employment (n=47).

6.4.1.4 Associations between Educational Attainment, Risk Behaviours and Adult Health and Employment Outcomes

In the theoretical framework it is posited that short-term consequences of orphanhood such as reductions in educational attainment and increased risk behaviours during adolescence and early adulthood translate into long-term adverse outcomes in relation to health and employment opportunities. Table 6.3 shows the patterns of association between these short-term and longer-term outcomes observed in the Manicaland data. A number of inter-relationships between risky behaviours and adverse health outcomes were observed in the data. In particular, substance abuse was found to be

associated with increased risk of STD symptoms in females. Early age at first sex was associated with HIV infection for both sexes and poorer overall health for females. Early experience of divorce or separation was associated with poor health, increased risk of STDs and HIV infection for both sexes. Reports of multiple recent sexual partners were associated with increased risk of HIV for females and STDs for males.

As expected, having fewer than 5 'O' level passes increased the chances of being unemployed for both males and females. Recent general health was not related to employment status. However, in females, those with a recent history of STD symptoms were more likely to be unemployed whilst those with HIV infection were less likely to be out of work.

Table 6.3 Multiple logistic regression tests for associations between risk behaviour and health and employment outcomes for all adults and by gender: 18-29 year-olds

Adult outcomes	All adults			Females			Males		
	Test for differences			Test for differences			Test for differences		
	AOR	95 % CI	P-value	AOR	95 % CI	P-value	AOR	95 % CI	P-value
a) *Recurring/serious illness model*									
Risky behaviours									
Substance abuse - alcohol, drugs or cigarettes	0.90	0.61 - 1.32	0.591	1.02	0.54 - 1.93	0.948	0.87	0.54 - 1.41	0.585
Age first sex <18 years	1.32	0.95 - 1.83	0.098	1.52	0.99 - 2.33	0.055	1.00	0.60 - 1.68	0.989
Married aged <18 years	0.84	0.57 - 1.22	0.359	0.77	0.49 - 1.21	0.260	0.37	0.08 - 1.69	0.200
Ever divorced/separated	1.43	1.12 - 1.82	0.004	1.40	1.07 - 1.84	0.014	1.69	0.98 - 2.92	0.060
Multiple new sex partners in last 12 months (>1)	1.16	0.87 - 1.54	0.326	1.03	0.71 - 1.48	0.883	1.43	0.88 - 2.33	0.150
Total number of observations	(n=2,564)			(n=1,944)			(n=620)		
b) *Sexually transmitted diseases model*									
Risky behaviours									
Substance abuse - alcohol, drugs or cigarettes	1.78	1.00 - 3.18	0.051	2.75	1.42 - 5.33	0.003	0.78	0.30 - 2.03	0.616
Age first sex <18 years	1.31	0.78 - 2.19	0.307	1.43	0.78 - 2.63	0.250	0.89	0.33 - 2.37	0.811
Married aged <18 years	0.93	0.52 - 1.64	0.791	0.89	0.47 - 1.69	0.729	-	-	-
Ever divorced/separated	1.96	1.38 - 2.80	<0.001	1.67	1.13 - 2.46	0.010	5.85	2.23 - 15.36	<0.001
Multiple new sex partners in last 12 months (>1)	1.74	1.15 - 2.64	0.008	1.43	0.88 - 2.33	0.146	4.04	1.47 - 11.08	0.007
Total number of observations	(n=2,564)			(n=1,944)			(n=590)		
c) *HIV model*									
Risky behaviours									
Substance abuse - alcohol, drugs or cigarettes	1.06	0.74 - 1.52	0.766	1.41	0.81 - 2.46	0.227	0.88	0.57 - 1.41	0.604
Age first sex <18 years	2.03	1.50 - 2.74	<0.001	2.32	1.57 - 3.42	<0.001	1.62	1.00 - 2.62	0.052
Married aged <18 years	0.79	0.56 - 1.11	0.169	0.71	0.48 - 1.07	0.105	0.55	0.15 - 1.99	0.366
Ever divorced/separated	2.02	1.63 - 2.52	<0.001	2.12	1.67 - 2.71	<0.001	1.56	0.92 - 2.63	0.099
Multiple new sex partners in last 12 months (>1)	1.38	1.05 - 1.83	0.020	1.43	1.02 - 1.99	0.035	1.28	0.79 - 2.07	0.312
Total number of observations	(n=2,553)			(n=1,936)			(n=617)		
d) *Unemployed model*									
<5 'O' level passes	1.58	1.28 - 1.94	<0.001	1.98	1.38 - 2.84	<0.001	1.40	1.09 - 1.80	0.009
Recurring/serious illness	1.00	0.81 - 1.25	0.973	0.85	0.61 - 1.18	0.336	1.08	0.80 - 1.45	0.612
Discharge and pain/genital ulcers	1.69	1.04 - 2.75	0.034	2.19	1.10 - 4.36	0.025	1.34	0.65 - 2.78	0.424
HIV infection	0.78	0.61 - 1.00	0.053	0.61	0.44 - 0.83	0.002	1.09	0.73 - 1.63	0.683
Total number of observations	(n=4,509)			(n=2,557)			(n=1,952)		

Logistic regression tests adjusted for age and sex and in the unemployment for location.

6.4.1.5 Test for Association between Depression and Observed Adult Outcomes in Adults Aged 18-29 years

The other objective of this section of the chapter was to test the hypothesis that psychosocial distress may inhibit achievement of maximum potential in terms of educational attainment and performance, may facilitate the development of behaviours that endanger health, and may, through a combination of these effects, limit employment prospects (adult outcomes).

The finding of a lack of statistical associations between orphanhood when a child and depression in adulthood suggests that the increased psychosocial distress seen in orphans does not carry over into adulthood. Therefore, enduring psychosocial distress does not appear to contribute to the increased susceptibility to sexual risk behaviour, poor health and low employment levels seen amongst adults who were orphans when they were children. Nevertheless, it is still useful to assess whether depression in adulthood is associated with other negative outcomes (Table 6.4).

Table 6.4 Test for association between depression and selected outcomes in young adults, Manicaland HIV/STD Prevention Study (Survey round 3)

Adult outcomes	All adults*					Females					Males				
	Test for difference					Test for difference					Test for difference				
	AOR*	95 % CI	P-value	%	n	AOR	95 % CI	P-value	%	n	AOR	95 % CI	P-value	%	n
Education															
Left school due to lack of fees**	1.19	1.00, 1.41	0.044	51	4,559	1.31	1.07, 1.59	0.007	49	2,589	0.90	0.64, 1.26	0.553	53	1,970
"O" level passes <5	1.21	0.94, 1.57	0.134	83	4,533	1.19	0.86, 1.66	0.291	89	2,570	1.25	0.83, 1.90	0.286	77	1,963
Risky behaviours															
Substance abuse - alcohol, drugs or cigarettes	1.26	0.94, 1.67	0.122	16	4,557	1.57	0.94, 2.62	0.082	3	2,589	1.17	0.81, 1.67	0.401	33	1,968
Age first sex <18 years	1.38	1.15, 1.65	<0.001	29	4,690	1.45	1.18, 1.78	<0.001	30	2,666	1.19	0.83, 1.70	0.338	27	2,024
Married aged <18 years	1.11	0.89, 1.40	0.346	24	2,556	1.15	0.91, 1.45	0.229	30	1,945	0.29	0.04, 2.20	0.233	5	621
Ever divorced/separated	2.00	1.61, 2.49	<0.001	24	2,640	1.96	1.55, 2.47	<0.001	25	2,003	2.33	1.31, 4.13	0.004	20	637
Multiple new sex partners in last 12 months (>1)	1.53	1.24, 1.89	<0.001	22	4,689	1.63	1.24, 2.15	<0.001	13	2,665	1.40	1.00, 1.95	0.047	36	2,024
Physical health															
Recurring/serious illness in last few months	1.48	1.20, 1.81	<0.001	18	4,690	1.04	0.48, 2.27	0.915	17	2,666	1.55	0.80, 2.99	0.194	18	2,024
STI symptoms - discharge and/or ulcers in last 12 months	2.70	1.95, 3.72	<0.001	4	4,690	2.5	1.75, 3.58	<0.001	6	2,666	3.71	1.82, 7.57	<0.001	2	2,024
HIV positive	1.52	1.23, 1.90	<0.001	14	4,665	1.65	1.31, 2.09	<0.001	19	2,652	0.96	0.52, 1.76	0.883	7	2,013
Employment status															
Unemployed vs employed	0.91	0.72, 1.14	0.392	81	6,690	0.71	0.54, 0.94	0.017	89	2,666	1.33	0.91, 1.94	0.136	70	2,024
Uemployed/manually skilled vs skilled or professional	0.96	0.66, 1.41	0.848	94	4,408	0.82	0.48, 1.42	0.482	97	2,662	1.10	0.64, 1.88	0.727	90	2,022

* Aged 18-29 years at interview date

** Primary or secondary level

In females, depression was associated with having dropped out of school due to lack of fees [AOR 1.31; 95% CI 1.07-1.59]. Depression was also associated with a number of risky behaviours - substance abuse (borderline significant), early age at first sex, divorce/separation, and multiple sexual partners – and with increased risk of STDs including HIV infection [AOR 1.65; 95% CI 1.31-2.09]. However, there was no association with serious or recurring recent illness.

In males, depression was not associated with having left school due to lack of fees (P = 0.6) and associations with risk behaviours were weak. However, depression was associated with having been divorced or separated, with multiple recent sexual partners, and with recent STD symptoms [AOR 3.71; 95% 1.82-7.57]. There were no associations between depression and either HIV infection or recent illness.

Depression was less common in women who were unemployed but there was no difference by employment status in men.

6.4.2 Qualitative Findings

6.4.2.1 Introduction

The anecdotal qualitative data from adult former orphans were collected and analysed: (1) to provide information on how contemporary childhood experiences compare with those encountered by children in the past; (2) to provide insights into how orphan experiences during childhood affect subsequent experiences during adulthood; and (thereby) (3) to inform assessments of what can be done to help today's orphans avoid some of the long-term problems faced by their predecessors.

6.4.2.2 *Orphan Experiences Today Versus in the Past*

The adult former-orphans related similar experiences to those identified by today's orphans (see also Chapter 4). These included lack of support with bereavement, lack of follow-up by relatives to see how they were coping in their new environments, and the sense of loss they experienced when they were relocated to a different household. Orphans typically were treated more strictly and punished more severely when they made mistakes and were more likely to be given dangerous jobs (e.g. yoking dangerous and difficult oxen). A female former maternal orphan told how her brother was sent down the precarious family well to retrieve objects that had fallen in whilst water was being drawn. The same brother was sent to look for a lost animal and was told he was not allowed to come home until he had found it. She said she would accompany him on these errands to give him moral support and also to make sure he was safe for she feared he might be on the menu of hyenas and other animals that hunted at night. Failure to find the animals meant they had to spend the night up a tree. Such comradeship did not go unpunished since she would also get punished for not being at home. Being the elder of the two, she said she never minded being punished as long as she was sure her brother was safe.

"*The problems I have are lack of clothes* [Cries]. *I would like the people who look after me to treat me well and also to treat me in the same way as they do their own children.*"

Male double orphans 16 years old

(Children focus group discussion, Site 5)

"I was left in the care of my mother's sister who had her own children. My aunt cared for me well but whenever her children, who normally stayed in Harare, came home, I would know that my days of happiness would have to be put on hold until they went back. They would ill treat me - they would give me less food and remind me that their mother was not my own mother. My prayer everyday was "May God help me so that I have my own home". ...."

Female former orphan, aged 46 years

(Former orphan focus group discussion, site 9)

Being overworked was also common. Females, especially, found it hard to balance their school work and the demands at home. At school, they were beaten for missing school or not doing home work. At home, they would also be beaten for coming home late from school. They said they had felt trapped in and unprotected by systems that never acknowledged their circumstances.

"I was being beaten every day up to the day I got enrolled in the study. At home, for staying at school to do sports; and, at school, for failing to do my home work because of chores my cousins lined up for me. This was taking place in the last 2 years until I got enrolled in your project and sissy [the female interviewer] *went with me to see my teacher. The abuse has now stopped. If it had not been for her, I would have run away from home long ago."* [Cries, crawls under the desk and sobs hysterically - she had to be escorted out of the room].

Female maternal orphan aged 16 years old,

In the care of a paternal aunt

who had claimed to be her biological mother on the birth cerficate

(Children focus group discussion, roadside trading settlement, Site 9)

"In our times, we were given less food and, at the same time, were overworked. All the food we had grown was fed to others. If they had given us an education we would be living better lives. ... It was not that they did not have the money. No. They had it but they did not think of the future, apart from that of their own children. We were sent to herd their cattle and work in their fields instead [bitterly]. *This is why we are suffering today."*

Female former orphan

(Former orphan focus group discussion, roadside trading centre, site 9)

6.4.2.3 Long-Term Consequences of Orphanhood

Long-term consequences of being orphaned when a child included enduring psychosocial distress, inability to acquire jobs and social standing, entrenched poverty due to longstanding debts, premature marriage, and, for some, inability to escape from unsatisfactory marriages.

<u>Psychosocial distress</u>

Many former orphans said they sometimes still got upset at the thought of the severe punishments they had received from their caregivers when they were young. Small everyday things and people asking why they had died triggered the yearning for their parents. Some went on to say that they re-live their experiences each time they try and give a bit of their history to their own children. They said they re-tell some of their experiences to their children and still find them distressing.

"The problem that I have and still think about a lot is why my father did not survive like other fathers. If he had, I wouldn't have been abused like I was by being given too many chores, being sent to herd cattle in the rain, and not being enrolled in school. Had he been here [alive], *I am sure I would not be working on a farm for peanuts like I do today. I could have achieved a lot in my education and would be talking of a very nice job or life because I would have gone further with my eudcation. So, if you are not educated, you have no training that you can use. It pains me everyday to think of this. The pain is greater when I am with my children."*

Female former double orphan

(Former orphans focus group discussion, small town, Site 7)

"I used to get home from school and find that those who are caring for me have not left any food for me. I would steal things like groundnuts and water melons from other people's fields. ... I would get severely beaten for it. ... I still have not forgiven my uncle and aunt for doing this to me. It distresses me to think they put me through this. To think that even today they claim to have taken care of me - I pretend to be grateful and like them but there is nothing I should be thankful for. What? For the pain and hunger? Inside [rubs her chest area with right hand. i.e. "in my heart"] *I am still the child they did not look after properly - I am all pain. Nothing will erase that from me - they took my life....."*

Female former orphans cared for by paternal uncle and wife

(Former orphan focus group discussion, small town, site 7)

Education and employment opportunities

Those that hadn't had the opportunity to go to school reported this as still being a source of depression. One participant said the struggle of educated orphans was less strenuous than that for those with no education. Participants said education equipped people with skills to deal with or cope with problems better. Amongst the 26 focus group discussion participants, 16 (62%) had only been to primary school. However, 10 (38%) had received at least some secondary school education and 7 had completed Form 4 ('O' levels). Thus, in some cases, families had stuck together and made sure that the orphans in their care had received the best education they could afford. This was illustrated by the two former orphans who had managed to get professional training despite being orphaned in childhood - one male was now a teacher and one female was a qualified nurse. The nurse said her father was the only male in his family but had three sisters. When he died, she was taken in by her aunts, who with the help and blessing of their husbands, pooled their resources together and made sure she had the best education they could afford in those days. The male teacher was also seen through by his father's relatives. A counter example was provided by a 65 year-old former paternal orphan who was convinced that both his paternal and maternal relatives could have afforded to send him to school but they chose not to for reasons best known to them. Former orphans ruled out lack of commitment and intelligence on their part because they were pretty sure that they were "*bright enough.*"

"Our lives are not what we could have achieved if we had gone to school. I was very bright. Due to this, I have failed to help my children attain the levels education they wanted .... I did build a decent home for them but the standard is not what I would have wanted for them. I wanted to give them a much much better life than what they

have at the moment. What I am paid today is not enough. When I look at the lives of my peers, I feel I am very behind regarding personal and family development. This affects what my children have manged to achieve for themselves and the life I lead in terms of what I eat or have compared to others."

Male former paternal orphan, now a trained teacher

(Former orphan focus group discussion, roadside trading centre, Site 9)

The only skills most of the former orphans gained were in agriculture, household chores such as cooking, cleaning, caring for family members, tending farm animals and other domestic piece jobs which they said were not good enough to survive on in the present day world where money is the centre of life. Employment opportunities were limited by this lack of formal education and skills. One male participant who just had some primary education said he was an experienced builder but, because he had no professional training, had very limited possibilities for getting bigger and better contracts. Most of the former orphans in the group survived on subsistence agriculture or support from working sons or grandchildren. They were finding a life a struggle given the economic troubles facing Zimbabwe. Most reiterated that, given the chance to go to school, they would have worked hard at it and would have done better.

"Because of lack of proper education, I am not able to provide for my children as much as I would want to. This distresses me. I don't want to leave them a legacy of debts like my own father left me. I helped my two sons pay all their bride price before I die because I know none of my relatives will give them a hand. What I know is that they [relatives] *will be happy to help them spend all that I have toiled for when I die."*

Male 64 year-old

(Former-orphans focus group discussion, small town, Site 7)

The problems posed by the lack of a good education and limited job opportunities were particularly great for women whose situations were made worse because they owned little movable property. Female participants said they feared that they would bequeath to their children a legacy of poverty - destining them to a further cycle of poverty and struggle in life.

Low social standing

Orphanhood also brought with it the "sins of fathers being visited on children". Some adult former orphans reported being left to cater for themselves because of long-standing family feuds in which their deceased parents were perpetrators or implicated. Parental loss had robbed many former orphans of dedicated social skills trainers. They were often left out of family and communal activities from which they could learn social and intergenerational skills either deliberately or because they were tied up with duties in the home. Some male former orphans complained of not being able to take leading roles in settling communal disputes or burial and other ritual ceremonies because they were never afforded the chance to learn the procedures. When they had undertaken these roles, men said they had found them difficult given the expectations of those watching them and the ridicule they faced for failing to do them well – often from the very people who had not taught them how to conduct these roles in the first place. They felt orphan-related stigma and discrimination would haunt them for the rest of their lives.

"It is depressing for a man of my age to still be pushed around. I am now 55 years old, yet during a family gathering, I still get "picked on and pushed" for failing to perform roles they never bothered to teach me when I was growing up. I am treated like a

child. For orphans like us, the pain has been with us for too long and will remain with us forever. It is painful, my sister, to be an orphan. It is not something that you grow out of like clothes... the yearning for them [parents] and thinking '... if only my parents had not died things would be different' all comes streaming back and it is very painful"

Male 65 year-old

(Former orphans focus group discussion, roadside trading centre, Site 9)

<u>Debts and entrenched poverty</u>

During adolescence, orphans were more likely than other children to be asked to take care of their own siblings, which further limited their opportunities for gaining qualifications and employment. Even when they got older, family indebtedness and obligations stifled their ability to look after their own children and save for their old age. Adult orphans who had been taken in by relatives complained of indebtedness that stretched even to their own children. The practice of demanding compensation for taking in daughters' children was said to be rife among maternal relatives. One such example was given by a 75 year-old man who had been a double orphan by the age of seven and was taken in by his maternal relatives:

"My sister [the student], being an orphan means all sorts happen to you. My mother died after giving birth to me. My father died when I was seven. I moved from relative to relative until I ended up with my maternal relatives with whom I stayed till I was of age. At the age of 39, I approached my maternal uncles and told them I had acquired enough money to pay for my bridal wealth. I was shocked to be told that my dead father had not paid a penny for my mother and, as of custom, that debt had to be settled first and by me even though I have no idea who my paternal relatives were

then. I also had to pay my maternal relatives for my upkeep since my paternal relatives never contributed towards my upbringing. Sister, I married twice, my mother and my wife! To think of it I get mad at both my paternal relatives for not helping out and at my maternal relatives for being so greedy. They knew I had nothing to do with it yet they still wanted me to pay and were not ashamed to get the little I had gathered for myself."

Male 75 year-old former double orphan
(Former orphans focus group discussion, roadside trading centre, Site 9)

Marriage and sexual risk behaviour

Most of the adult former orphans concurred that, in their day, there was a strong commitment to marriage unlike today, when they said people could marry one day and divorce two hours later. Lack of resources or a home to take the wife to were cited as the main reasons that men married later in life. Most men in the groups had married at around thirty years or above whilst the women had done so in their late teens or early twenties. For females, divorce was said to be difficult, especially if there was no home to go back to or if relations with relatives were sour. The early marriage seen in the quantitative data for female orphans was said to be prompted by desire to escape the abuse and household chores they were assigned by their caregivers.

"After all the chores we did in the home, we thought it was not difficult to run a home so we got married to escape from the abuse. We had acquired all the skills needed in the running of a home."

Female 64 year-old who reported marrying at 18 years of age (Site 7 - small town)

None of the focus group participants had been divorced or separated. An 81 year-old woman in the group said that maternal orphans especially found it difficult to leave their marriage because they thought non-parent relatives would be less welcoming than their own parents might have been. Some women admitted that their marriages were not working well but said they thought it in their best interests to hang-in there and try to make their marriages work rather than to go back and suffer at the hands of their relatives. Aunts were said to advise most young women who got married to put up with all marital problems, stating that it was what all women went through so who were they to chicken out when others were putting up with it.

6.5 Discussion

The results of the quantitative analysis indicate that being orphaned as a child (≤ 12 years) is associated with a number of adverse behavioural and health (but not employment) outcomes in early adulthood. These included increased risk behaviours and, for males and those females who had lost their mothers or both parents, suggestions of poorer health outcomes including increased risk of HIV infection. Depression in adulthood was found to be associated with increased risk behaviour and adverse physical health outcomes including, for females, HIV infection. However,

there was little evidence in the current data to support the hypothesis that psychosocial distress following parental loss in early childhood carries over into young adulthood and thereby contributes to the associations observed between early orphanhood and adverse physical health outcomes in young adults. Adult former orphans in the focus group discussions did report continuing distress but no associations were found in the quantitative data between early orphanhood and depression in early adulthood.

For adults whose parent(s) had died when they were in their teens, there was less evidence for adverse behavioural and health outcomes. The small number of men (n=46) who had become maternal orphans were at increased risk of HIV infection (13% *vs.* 6% in non-orphans). Similarly, women who had been maternal orphans were more likely to have started sex and married at young ages and had higher levels of reported STD symptoms. Otherwise, no statistically significant differences were found. Men who had been orphaned in their teens were found to be less likely to be in skilled or professional occupations. However, as with adults orphaned at younger childhood ages, those orphaned when in their teens were no more likely to report themselves as currently being depressed than those with both parents still alive. The one (borderline) statistically significant finding was that losing both parents whilst a teenager may be associated with depression in early adulthood. This could be because the experience is still relatively recent. Thus, again, there is only weak evidence that psychosocial distress resulting from orphanhood in adolescence translates into adverse outcomes in adulthood.

An important limitation in the data used in this analysis is that no information was available on depression or on other aspects of psychosocial distress experienced in childhood. Therefore, it is still possible that psychosocial distress experienced around

the time of losing parent(s) - which faded subsequently - contributed to early risk behaviours (e.g. early adoption of substance abuse or early onset of sexual activity (see Chapters 3 and 5)) which, in turn, contributed to the poorer health outcomes seen in the adults who had lost their parent(s) when they were young. Similarly, psychosocial distress experienced around the time of losing parent(s) might have affected educational attainment and thereby have contributed to the poorer employment outcomes observed in the data. Contributions of orphanhood-associated psychosocial distress to adverse outcomes could also have been obscured in the retrospective data used in this analysis if individuals who suffer psychosocial distress in childhood are more likely to die or migrate to urban areas before reaching adulthood.

The data used for the analysis of associations between depression and other negative outcomes in adulthood were cross-sectional in nature. This was because data on orphanhood experience in childhood for adults aged 18-29 years only began to be collected in the third round of the Manicaland HIV/STD Prevention Study and no longitudinal data were available. Furthermore, the question on depression only covered the three months prior to the interview date. So, for example, there is no way of knowing whether those who reported recent depression had also been depressed earlier in life and whether this could have contributed to early initiation of sexual activity or marriage. More generally, with the current data, even when strong statistical associations are present, it is difficult to establish directions of causality. For those who were depressed and had been divorced, depression may have prompted them to divorce or the divorce could have been a cause of their depression. Therefore, these results must be interpreted with caution.

Because their parents are generally younger and have had shorter periods since they were born in which to die, fewer young children than older children are orphans. Thus, the numbers of adults aged 18-29 years in the Manicaland survey who had lost parents before their 12th birthdays were small. Therefore, it is possible that some important effects of early orphanhood were not observed in the results due to limited statistical power. This is particularly so for maternal and double orphans because children lose their mothers at older ages on average than they do their fathers – because fathers tend to be older and also to acquire HIV infection sooner and therefore to die earlier than mothers.

The anecdotal qualitative data sheds some light on likely causal pathways between early orphanhood and negative outcomes in adulthood. In particular, adult former orphan focus group participants emphasised how having dropped out of school early had affected their subsequent employment opportunities. Being orphaned was also often associated with acquiring long-term financial and social debts. These problems, in turn, were constraining their ability to provide for their own children. The stigma and discrimination associated with orphanhood endured for many years and had limited their opportunities to acquire social standing within their communities.

Early marriage amongst girls whose mothers had died was said to be prompted by the abuse they received from their caregivers. Teenage girls whose mothers have died have been found to start sex at younger ages and to be at increased risk of HIV infection in earlier studies in Manicaland (Gregson, Nyamukapa et al. 2005) and in high density suburbs in Harare (Birdthistle, Floyd et al. 2008). Women aged 18-29 years who had been maternal orphans were more likely than their peers to report a history of STD symptoms and those whose mothers had died before their 12th

birthdays were more likely to be HIV positive. However, these differences were not statistically significant. This may be because of the small numbers of female respondents in the study sample who had experienced maternal orphanhood and/or because women who were not orphaned were subject to high risks of infection during their 20s (e.g. because they married and became subject to their husband's risk behaviour (Spark-du Preez, Zaba et al. 2004).

In conclusion, the results of this chapter indicate that early orphanhood can give rise to long-term adverse consequences for both health and employment during adulthood. Whilst there was no quantitative evidence that the psychosocial distress in childhood caused by the early loss of a parent carries over into adulthood, it remains a possibility that the increased sexual risk behaviour in adolescence to which this contributes underpins some of the subsequent poorer health and employment outcomes. Long-term longitudinal studies, in which individuals are followed from early childhood through to adulthood, are needed to investigate this possibility.

Chapter 7

Discussion

7.1 Introduction

7.1.1 Study Context

Sub-Saharan Africa has been described as the epicentre of the HIV/AIDS epidemic - with only 10% of the world population, it accounts for 68% of the burden of infections. The epidemic has left 11.4 million children without parents and, for some, parental or caregiver death means the loss of a source of livelihood, shelter, familial environment, access to health care services, and educational prospects, and loss of enjoyment of childhood as they prematurely take-up adult roles.

Zimbabwe - the main focus of this thesis - is one of the countries in southern Africa that is reeling under the burden of the HIV epidemic. The studies described in the thesis were done against a background in which the HIV prevalence in adults (aged 15-49 years) and the number of children aged 0-14 years orphaned by HIV/AIDS in Zimbabwe in 2007 were estimated at 15.6% (range 14.9-16.3%) and 975,956 (904,307-1,047,462), respectively. 127,562 people are estimated to have died from AIDS-related causes in 2007. AIDS and economic decline are making the extended family's ability to care for orphans a daunting task. Lack of stable care puts many children at greater risk of malnourishment, emotional under-development, illiteracy, poverty, sexual exploitation, and HIV infection, thus endangering the health and future of the society they are expected to sustain (Zimbabwe National AIDS Council and

USAID 2004; Boom, Catalan et al. 2005; Howard, Phillips et al. 2006; Richter, Foster et al. 2006b).

Many more single orphans stand to become double orphans as surviving parents living with infection succumb to the disease and die. Having one parent die from HIV/AIDS increases the chances that the remaining parent will also die from the same causes. It has to be understood that, apart from the AIDS epidemic, a myriad of economic, political, social and other problems facing the country could be contributing to the development of psychosocial distress in the populations under study (Bollinger, Stover et al. 1999; Kaliati, Madzinga et al. 2002).

7.1.2 Summary of Thesis Objectives

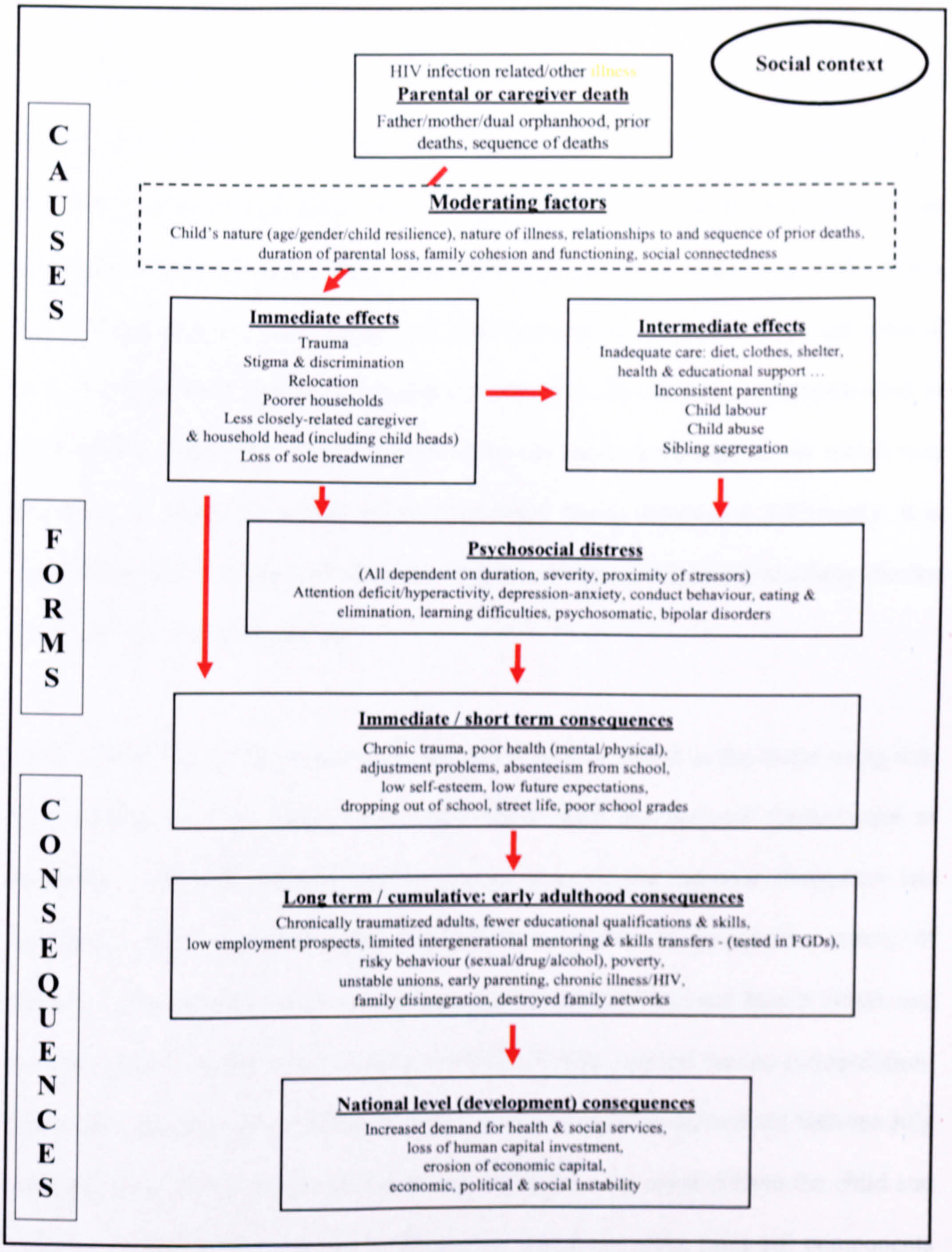
The objectives of the thesis were to develop a theoretical framework for understanding the relationship between orphan experience, psychosocial distress, child well-being and adult life-chances and to test the validity of this framework in the Zimbabwe context using empirical data from national and local data sources.

A secondary objective of the thesis was to develop and evaluate methods for collecting and analysing data on psychosocial distress and, in particular, to assess the validity and reliability of these methods and their sensitivity to children's experiences and feelings.

7.1.3 Theoretical Framework and Summary of Hypotheses Tested in the Thesis

An initial theoretical framework was developed based on the pre-existing literature and is reproduced here in Figure 7.1.

Figure 7.1 Theoretical Framework developed *a priori* from the literature



The theoretical framework can be thought of as comprising a number of different but complementary hypotheses. In summary, parental illness and loss during childhood is hypothesised to cause increased psychosocial distress. The extent to which this occurs

is hypothesised to depend upon (be "moderated" by) the social context, the nature and duration of parental loss and the gender, age and other personal characteristics of the child. In the framework, it is also hypothesised that the greater psychosocial distress resulting from parental illness and death is "mediated" by a number of changes in the children's personal experiences and circumstances. Some of these (e.g. trauma) can have a direct and immediate effect on children's psychosocial well-being whilst others (e.g. inadequate care over a period of time) may act in a more indirect and gradual way. Children who experience heightened psychosocial distress are hypothesised to experience a number of adverse outcomes in the short and longer-terms which may culminate in poorer opportunities and outcomes during adulthood. Ultimately, it is hypothesised that national development might be affected due to the resulting erosion of human and economic capital.

Each of these hypotheses (apart from the last one) was tested in the thesis using data from Zimbabwe. The main data sources used were the national Government of Zimbabwe / UNICEF OVC Baseline Survey (carried out between November and December 2004), the Manicaland Child Cohort Survey (a prospective survey of children carried out over three rounds between December 2002 and March 2006), and data from the 3rd round of the Manicaland HIV/STD Prevention Survey (a population-based open cohort study of adults for which the 3rd round was carried out between July 2003 and June 2005). Psychosocial distress variables were created from the child and caregiver responses (separately) to the survey questions using principal components analysis. Then, levels of psychosocial distress were compared and contrasted by orphan status and the modifying effects of factors such as age, sex, and form and duration of orphanhood and the hypothesised mediating factors or determinants and consequences were investigated.

The main findings from the tests of these various hypotheses are summarised in the next section.

7.2 Summary of Main Findings in Relation to the Theoretical Framework

7.2.1 Associations between Orphanhood and Psychosocial Distress

Comparison of findings from analyses of national and local data

Univariate and multivariate tests using the national and local data were conducted in order to test the hypotheses drawn from the theoretical framework on associations between orphanhood and psychosocial distress.

Both the national data and the local data confirmed the hypothesis that orphanhood is a causative factor in psychosocial distress. The results of the analysis of the national data, based on a larger more robust sample, provided statistically significant evidence that all forms of orphans (double, paternal and maternal) are at risk of suffering greater psychosocial distress compared to non-OVC. The local data from Manicaland province, in eastern Zimbabwe, provided further evidence that double and paternal orphans suffer greater psychosocial distress than non-orphans.

In the national survey, non-orphaned children could be sub-divided into vulnerable and non-vulnerable children based on a standard UNICEF definition (UNICEF 2005). Under this definition, non-orphaned children are considered to be vulnerable if they live in a household that experienced the death of an adult other than a parent in the last

year, they live in a household with a chronically-ill person, or live in a household in which the head of household is under 18 years of age. Male non-orphaned vulnerable children were found to experience greater psychosocial distress on average than male non-vulnerable children but no difference was found for females (Gilborn, Apicella et al. 2006).

Some of the differences in reported levels of psychosocial distress observed between the different OVC groups could be due to varying patterns of misreporting. Maternal and double orphans in the care of less closely-related caregivers may have feared that their caregivers would get to know what they had said. Paternal orphans are more likely to be in trusting relationships (i.e. with their mothers) and elevated self-confidence and self-esteem could have led to their reporting more truthfully about their situation. However, greater confidence could also have made them over-report their psychosocial distress levels in the hope of getting some form of material help. A similar trend was observed when the WHO Self Report Questionnaire (WHO-SRQ-20) was tested in Ethiopia (Beusenberg and Orley 1994).

Moderating factors

It was hypothesised that girls, younger children and orphans who had experienced the loss of their parent more recently would tend to suffer greater psychosocial distress compared to other children.

There was evidence in both data sets that girls report greater psychosocial distress than boys.

In the Manicaland data, more psychosocial distress was recorded in younger children (aged 12-15 years) than in older children (16-18 years). The difference was statistically significant in males but not in females. Younger children (aged 12-14 years) also reported more psychosocial distress than older children (15-17 years) in the national survey but the difference was not statistically significant.

Slightly different analyses were carried out on the two data sets to test whether levels of psychosocial distress varied with time since parental loss due to the differences in sample size and statistical power available. In the analysis of the Manicaland data, children whose fathers had died recently (<5 years) and those whose fathers had died further into the past (10-18 years) - but not those whose fathers died 5-9 years ago - reported more psychosocial distress than children whose fathers were still alive. Children whose mothers had died further into the past reported *less* psychosocial distress than those whose mothers were still alive. In the national survey, orphans whose fathers or mothers had died in the recent past (in the last year) reported more severe psychosocial distress than those whose parent(s) had died further into the past but neither difference was statistically significant.

Participants in the focus group discussions gave plausible explanations for the preliminary quantitative findings. They attributed girls' and orphans' elevated psychosocial distress to the prevailing gender roles, their position in family and society, to parental or guardian over-protection that stopped them from mixing and sharing ideas with friends, their inability to express their feelings, their being in the care of unsympathetic caregivers, and to greater exposure to suffering family members (Conger, Conger et al. 1993; Kennedy, Skurnick et al. 1995; Foster and Williamson 2000; Kelly 2002; Matthews and Power 2002).

It was suggested that the increased psychosocial distress suffered by younger children could be due to their being orphaned at very critical stages in their lives when they are still very dependent on parents for everything from love and nurturing, a stable environment, moral guidance and protection from harm, provision of all their material and emotional and other needs (Bowlby 1998; Smith, Cowie et al. 2003).

The finding of increased psychosocial distress in children who experienced recent paternal loss could be attributed to their being cared for by grief-stricken parents or guardians, who may be unwell themselves, in environments that lack adequate social, emotional and material support (BerntssonJan-Eric Gustafsson 2000; McBride-Murry, Bynum et al. 2001). Family function, social cohesion and support to individuals in time of stress are vital to enhance coping and the lack of any of these could be detrimental to children's psychological health (Shaheen and Gehman 1998; Dowdney 2000; Redinbaugh, Schuerger et al. 2001; Smith, Cowie et al. 2003; Howard, Matinhure et al. 2006).

7.2.2 Causal Pathways between Orphanhood and Psychosocial Distress - Comparison of Findings from Analyses of National and Local Data

We hypothesised that immediate and intermediate effects such as death or illness-related trauma, stigma and discrimination, relocation, residence in town or on commercial estates, residence in poorer households, being cared for by a less closely-related caregiver and household head, inconsistent parenting, loss of breadwinner, being in a female- or child-headed household, sibling separation, being out of school, receiving inadequate care, experiencing child labour and child abuse (physical) can lead to the development of psychosocial distress in children.

Using multivariate regression and controlling for age and sex, tests were conducted for associations between these hypothesised determinants and psychosocial distress in the national and Manicaland data. Due to differences in the original aims and design of the two surveys, some of the determinants could be tested with the local data but not with the national data and *vice versa*. The results of the tests provided evidence for most of the determinants as having mediating effects on the development of psychosocial distress in the study populations while, for some hypothesised determinants, no significant associations were found (Table 7.1).

Table 7.1 Comparison of results of tests for hypothesised immediate and intermediate determinants of psychosocial distress based on data from the National and Manicaland surveys

Hypothesised determinant**	National survey		Manicaland CCS	
Social context				
Residence in an urban area (vs. subsistence farming)	√√		-	
Residence on a commercial farm (vs. subsistence farming)	√√√	‡	-	
Immediate effects				
Trauma - death in household	-		√√	
Trauma - illness in household	-		√√	
Stigma and discrimination	-		√√√	‡
Residence change (>1 move)	-		NS	
Residence in poorer household	√√√		NS	
Residence in male-headed household	√√		-	
Residence in child-headed household	NS	‡	-	
Intermediate effects				
Cared for by non-parent vs. parent*	√√		NS	
Received inadequate care	-		√√√	
Experienced inconsistent parenting (>1 caregiver change)	-		NS	
Child labour	-		√√√	
Child abuse	-		√√√	
Separated from siblings	-		NS	
Not enrolled in school	√√√		√√√	
Received some external support	√		NS	

NS, p>0.1; √, p<0.1; √√, p<0.05; √√√, p<0.01

-, no data

* In the National data, this was tested using a variable on relationship to the closest adult

** Tested in non-OVC (National data) and non-orphans (Manicaland data), numbers of children in these categories experiencing some of the determinants were small

‡ N<50

In the national survey, children living in cities and towns and on large-scale commercial farms reported more severe psychosocial distress providing evidence for the importance of social context. Maternal orphans were found to be more likely than non-OVCs to live in these types of areas (Table 7.2); thus, a greater propensity to live in urban areas may contribute to the heightened psychosocial distress found in maternal orphans.

Participants in the focus group discussions in Manicaland said the higher psychosocial distress levels observed in town and farm residents could be due to work and financial problems, overcrowding, and lack of support with childcare from the extended family. Focus group participants said that the absence of a sense of community in urban areas left most families unsupported and struggling to survive on their own. Similar findings have been observed in orphan studies done in rural and urban Zimbabwe (Giarrusso, Silvertein et al. 2000; Mutangadura 2000; Matshalaga 2004; Gilborn, Apicella et al. 2006; Munyati, Rusakaniko et al. 2006).

Trauma in the form of having experienced a recent death or illness of a household member was associated with greater psychosocial distress in the Manicaland data. All forms of orphans were more likely to report a recent death (*excluding parental death*) or illness of a household member than non-orphans so greater exposure to trauma probably contributes to their higher levels of psychosocial distress. No data on trauma were collected in the national survey.

Children who reported stigma and discrimination in the Manicaland survey had substantially higher levels of psychosocial distress. However, only maternal orphans were more likely to report stigma and discrimination in the survey and the difference was only borderline significant. Overall, only a few children reported having

experienced stigma and discrimination and it is possible that this could have been under-reported due to shortcomings in the design of the questions or out of fear of possible disclosure and recriminations. Again, no data on children's experiences of stigma and discrimination were collected in the national survey.

Double and maternal orphans were more likely to report multiple changes of residence than non-orphans in the Manicaland survey but no statistical evidence was found for an association between multiple moves and heightened psychosocial distress.

In the national survey, children living in the poorest quintile of households reported significantly higher levels of psychosocial distress and double and paternal orphans - but not maternal orphans or other vulnerable children – were found disproportionately in the poorest households. However, these findings were not replicated in the Manicaland analysis. This may have been because the wealth indices used to identify children living in the poorest quintile of households had to be constructed using different variables in the two surveys since different questions were asked in the respective questionnaires. The focus group participants thought children living in poorer households experienced greater psychosocial distress because of the pressures and strife that come with poverty and poor communication.

Table 7.2 Comparison of frequencies of determinants of psychosocial distress in OVC vs. non-OVC (or non-orphans) in the National and Manicaland survey data

Hypothesised determinant	Category of OVC						
	Double orphan		Maternal orphan		Paternal orphan		OVC
	Nat'l	Manic'd	Nat'l	Manic'd	Nat'l	Manic'd	Nat'l
Social context							
Residence in urban area or commercial farm (vs. subsistence farming)	NS	-	√	-	NS	-	√√
Immediate effects							
Trauma - death in household	-	√√√	-	√√√	-	√√√	-
Trauma - illness in household	-	NS	-	NS	-	√	-
Stigma and discrimination	-	NS	-	√	-	NS	-
Residence change (>1 move)	-	√√	-	√√	-	NS	-
Residence in poorer household	√√√	NS	NS	NS	√√√	NS	NS
Residence in male-headed household	(√√√)	-	(√)	-	(√√√)	-	NS
Residence in child-headed household	√√√ ‡	-	√√√ ‡	-	√√√ ‡	-	√√√ ‡
Intermediate effects							
Cared for by non-parent vs. parent*	√√√	√√√	√√	√√√	√√	√√√	NS
Received inadequate care	-	√	-	NS	-	NS	-
Experienced inconsistent parenting (>1 caregiver change)	-	√√√	-	√√√	-	NS	-
Child labour	-	NS	-	NS	-	√	-
Child abuse	-	NS	-	NS	-	NS	-
Separated from siblings	-	√√	-	√√	-	NS	-
Not enrolled in school	√√√	NS	NS	NS	√√√	NS	NS
Received some external support	√√√	√√√	NS	√√√	√√	√√√	NS

NS, p>0.1; √, p<0.1; √√, p<0.05; √√√, p<0.01

-, no data

(), reverse association - e.g. orphans are generally *less* likely than other children to live in male-headed households

* In the National data, this was ascertained using a variable on relationship to the closest adult

‡ N<50

Demographic characteristics of household head were not considered as possible sources of increased psychosocial distress in the original theoretical framework but were investigated in the analysis of the national survey data because of the robustness of the sample. Amongst non-orphans, living in a male-headed household was found to be associated with greater psychosocial distress. Orphans were found to live disproportionately in female-headed households which therefore may tend to *reduce* their levels of psychosocial distress compared to other children. However, children's relationships to female heads of households typically differ according to their form of orphanhood (e.g. in the case of maternal and double orphans, female household heads will tend to be grandmothers and more distant relative whereas for paternal orphans and non-orphans, the female household head will usually be the child's mother) so the

effect of living in a female-headed household could differ by form of orphan experience.

No association was found between residence in a child-headed household and psychosocial distress amongst non-OVCs in the national survey probably because very few non-OVC live in such households. In the final multivariate models, double orphans and maternal orphans who lived in child-headed households did have higher levels of psychosocial distress than double and maternal orphans who lived with older household heads. No similar analysis was undertaken with the Manicaland data due to the smaller overall sample size and the consequently small number of child-headed households in the study.

Not being related to the closest adult was associated with greater psychosocial distress in children in the national survey. No similar association was found in the Manicaland data in which the closest equivalent indicator compared children who were cared for by non-parents versus parent(s). However, both analyses found evidence for all categories of orphans being more likely to have a less closely-related caregiver than non-orphans. Focus group participants suggested that the situation of children in the care of less closely-related caregivers' could be worsened by mistrust, poor communication, lack of sympathy, and unmet emotional and material needs.

In the Manicaland data, inconsistent parenting and being separated from siblings were more common in double and maternal orphans but neither of these experiences was found to be associated with greater psychosocial distress. In contrast, child labour and child abuse were strongly associated with heightened psychosocial distress but neither experience was significantly more common in orphans.

In both surveys, being out of school was strongly associated with more severe psychosocial distress. In the national survey, not being enrolled in school was more common in double and paternal orphans but not in maternal orphans or other vulnerable children. No significant differences in school enrolment were found in the Manicaland data. Focus group participants thought that not being enrolled in school could mean children miss out on social networks, emotion regulation and other social skills. Children who are out of school are shunned by those in school leaving them with no social networks and limited support from peers.

Finally, a borderline significant association was found between residence in a household receiving external support from a Government or NGO programme and *increased* psychosocial distress. This may be because the effect of successful targeting of vulnerable children is stronger than the initial effect of these interventions. No association was found in the Manicaland data. In both surveys, more double and paternal orphans than other children lived in households receiving external support. In Manicaland, the same was also true for maternal orphans.

In each survey, the determinants that were found to have strong associations with psychosocial distress explained some but not all of the heightened distress experienced by orphans and vulnerable children.

In the national survey, the differences in psychosocial distress observed between orphans and non-OVC remained statistically significant even after controlling for the determinants identified in the analysis. This left room for speculation that factors that were not measured in the survey, such as trauma, child labour, child abuse, stigma and discrimination, might also be important.

In the Manicaland survey, these factors were measured and were indeed found to contribute to the greater levels of psychosocial distress found in orphans. For double orphans, orphanhood was no longer associated with heightened psychosocial distress after the greater likelihood of trauma, stigma, inadequate care, child labour, child abuse, and being out-of-school were taken into account. For paternal orphans, the effect of orphanhood was weakened after accounting for differences in exposure to trauma, stigma, child labour, child abuse, and being out-of-school.

7.2.3 Consequences of Psychosocial Distress

Sexual risk behaviour – comparison of national and local survey results

In the national survey, orphaned and other vulnerable children were more likely to have started sex than non-OVCs. The same trend was seen in both boys and girls but the difference was not statistically significant for either sex. Maternal and paternal orphans – but not double orphans or non-orphaned vulnerable children - were more likely to have started sex than non-OVCs. The same pattern of risk by form of orphanhood was seen in the Manicaland Child Cohort Study data but none of the differences were statistically significant, perhaps due to the small sample size. However, in the Manicaland HIV/STD Prevention Study cohort, 15-17 year-old female maternal orphans were significantly more likely than other children of the same age to have started sex (Gregson, Nyamukapa et al. 2005). The same was found for adult former maternal orphans whose mothers died when they were 12-17 years old (Table 6.2b).

In the national survey, level of psychosocial distress was positively associated with increased risk of having started sex. A non-significant positive association was seen in the Manicaland data.

In the national data, in addition to heightened psychosocial distress levels, living with a female household head and being out of school were found to be independent risk factors for early sexual commencement while residence in a poorer household had a protective effect. Only maternal orphans continued to have a higher risk of early commencement of sex after adjusting for location of residence, exposure to extreme poverty, sex of household head, school enrolment and psychosocial distress. Further examination of the circumstances of maternal orphans revealed that they were mainly in the care of grandparents and the observed association ceased to exist when relationship to household head and relationship to caregiver were also controlled for.

Other adverse outcomes of orphanhood and psychosocial distress in adolescence and adulthood

In Manicaland, borderline statistically significant associations were found in adolescents between paternal orphanhood and substance abuse and psychosocial distress and substance abuse.

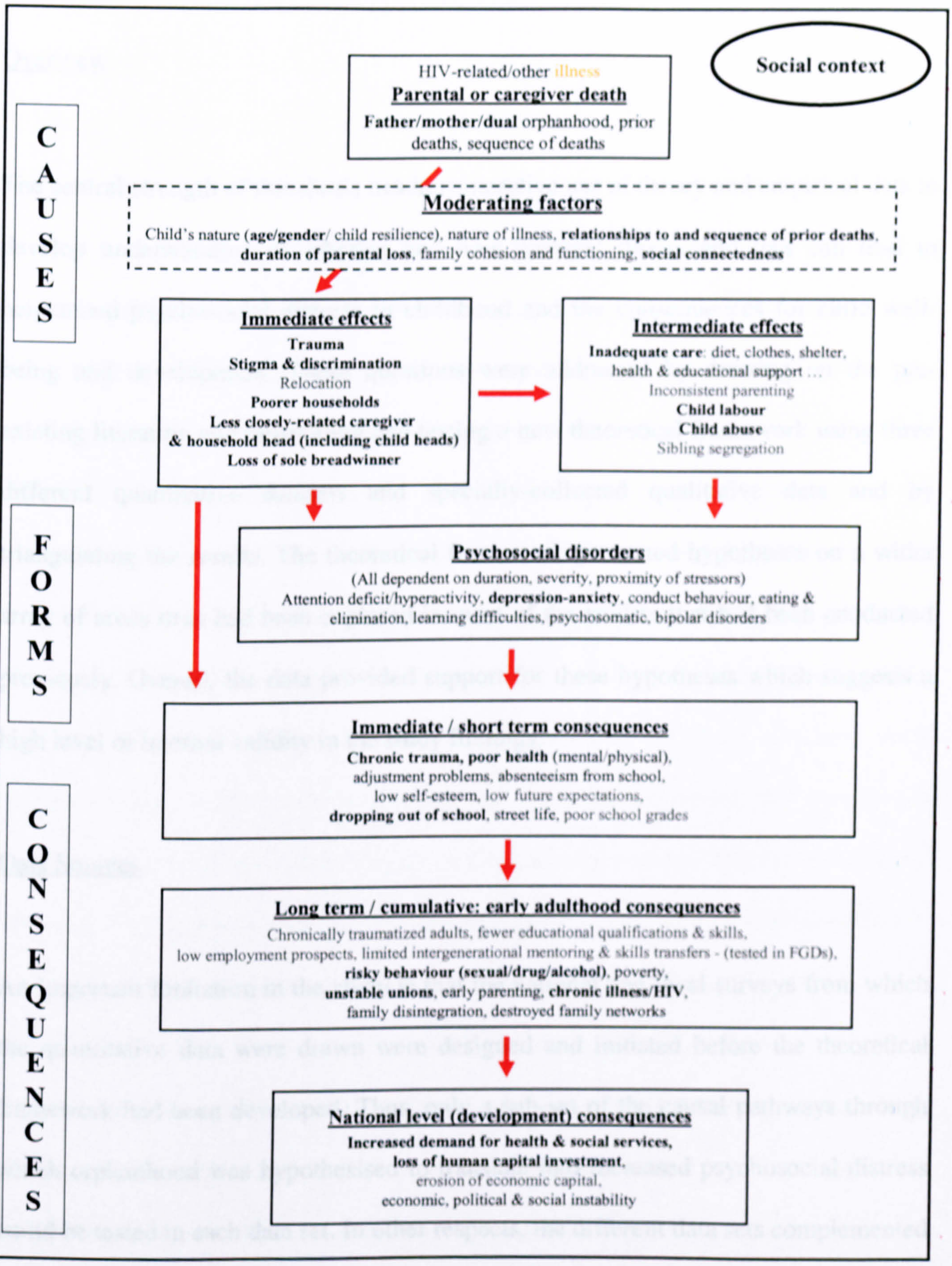
In the Manicaland HIV/STD Prevention Study, reports of orphanhood during childhood were found not to be associated with current depression but were associated with some adverse behavioural and health outcomes in early adulthood. Depression in young adults was also associated with adverse behavioural and health outcomes including (for women) HIV infection. However, there was little evidence to support the hypothesis that psychosocial distress following early parental loss carries over into

adulthood and thereby contributes to the associations observed between early orphanhood and adverse physical health outcomes in young adults.

7.2.4 Review of Theoretical Framework

The theoretical framework was reviewed in the light of the empirical findings summarised above (Figure 7.2). Where support was found for a particular causal pathway between orphanhood and heightened psychosocial distress, this pathway was highlighted in bold. This was done when there was evidence in one or both of the surveys for any form of orphanhood so as not to rule out potential pathways too hastily. Pathways from orphanhood to psychosocial distress and effects of psychosocial distress that were not tested in the thesis are left in plain text. Those for which there were data to suggest they do not play a part in explaining the causes and effects of psychosocial distress in orphans are shown in grey in the figure. However, where this was based purely on findings from the Manicaland study, caution should be taken before these are dismissed entirely since the sample size was small and statistical power to detect differences was low. Therefore some genuine effects could have been missed. Furthermore, factors that are not important in Zimbabwe could have greater relevance elsewhere.

Figure 7.2 Theoretical framework reflecting findings from the current study



7.3 Strengths and Limitations of the Thesis

7.3.1 Overview

The central strength of this thesis lies in its iterative use of theory and empirical data to develop understanding of whether and how parental illness and loss can lead to heightened psychosocial distress in childhood and the consequences for child well-being and development. These questions were addressed by drawing on the pre-existing literature and developing and testing a new theoretical framework using three different quantitative datasets and specially-collected qualitative data and by triangulating the results. The theoretical framework generated hypotheses on a wider array of areas than had been explored in most of the studies that had been conducted previously. Overall, the data provided support for these hypotheses which suggests a high level of internal validity in the study findings.

7.3.2 Data Sources

An important limitation in the study is that the national and local surveys from which the quantitative data were drawn were designed and initiated before the theoretical framework had been developed. Thus, only a sub-set of the causal pathways through which orphanhood was hypothesised to translate into increased psychosocial distress could be tested in each data set. In other respects, the different data sets complemented each other. The Zimbabwe OVC Baseline Survey provided a large national sample from which statistically robust estimates of the size and strength of associations between orphanhood (and different forms of orphanhood) could be derived. The Manicaland Child Cohort Study sample was much smaller but provided more in-depth

quantitative and qualitative data on the causal pathways through which orphanhood was hypothesised to result in increased psychosocial distress.

Similarly, a limitation of the Zimbabwe OVC Baseline Survey was that it was cross-sectional in nature which makes it difficult to draw firm inferences on the direction of causality, for example, between psychosocial distress and sexual behaviour risks. The Manicaland Child Cohort Survey collected prospective longitudinal data with high follow-up rates and comprised primarily newly orphaned children which should have made it possible to distinguish the sequence of events. However, difficulties experienced in linking individuals' records from the successive survey rounds (particularly problematic for out-migrants) limited the opportunities for exploiting these data. This is a problem I hope to address when I return to Zimbabwe. The Manicaland HIV/STD Prevention Study data provided some useful data on risky behaviour and other adult outcomes in individuals who had been orphaned when children. However, inclusion and recall bias may have affected the results and prospective data following individuals experiencing psychosocial distress in childhood are needed to properly establish whether this affects outcomes in adulthood (Blair, Stewart et al. 2003; Barbarin and Richter 2007).

A further limitation in the national survey is that the study districts were purposively sampled to over-represent the poorest areas. Therefore caution has to be applied in extrapolating the results to Zimbabwe as a whole. Both of the surveys excluded children living in institutions or on the street and may have missed others amongst the worst affected groups if these children are particularly mobile. In the Manicaland Child Cohort Study, this potential bias was partially addressed by identifying orphaned children from fertility histories collected in individual adult (i.e. when last seen prior

to death) and verbal autopsy interviews and by attempting to follow-up children who out-migrated from the study areas between rounds.

Children whose orphan status was inconsistently reported had to be excluded from the analysis. In most cases, these were probably double orphans. The misclassification or misreporting could have been caused by family members trying to protect children under their care. Alternatively, they may have been non-orphans or single orphans who were misreported as double orphans in the hope of material gain. These inconsistencies raise further questions as to the accuracy of the data on orphan status. Since the completion of this thesis, a colleague from the Manicaland Study (Laura Robertson) has carried out further investigations on the extent and causes of misreporting of orphan status. The reasons found were similar to those raised in section 4.4.1.4.

Strength of the Manicaland Child Cohort Survey was that it collected over-lapping data on psychosocial distress from children and their caregivers. This helped to highlight the dilemmas that arise when two data sources differ in their reporting of the same events. The analysis showed that children's reports on their own psychosocial well-being are probably more reliable which poses a further dilemma in knowing how to obtain reliable data for very young children. On the other hand, children could have exaggerated their psychosocial distress in the hope of getting help. After the interviews, children were given exercise books, soap, ballpoint pens and pencils as tokens of appreciation for their time which might have made them respond in a positive light. The Manicaland Child Cohort Study was part of a much bigger population-based Manicaland HIV/STD Prevention Project and the local people have known about the project activities over a long period. Loyalty to its activities could

also have made them respond positively. Using children's own reports on their well-being (as was also done in the national survey) helped to enhance children's agency (i.e. helping them participate in issues that pertain to them).

7.3.3 Orphans and Resilience

An important limitation of the thesis is that it focussed on problems faced by children, thereby viewing them as passive rather than as survivors and actors in their own right. When the research was conceived, there was a lack of evidence as to whether orphaned children were more likely to experience severe psychosocial distress than other children. Therefore, a primary objective was to establish whether or not this was the case so as to inform assessments of the need for and design of appropriate programmes of psychosocial support. Furthermore, at this time, research evidence indicated that meeting children's basic material needs alone was not a guarantee for sustaining children's psychosocial well-being, especially with the advent of HIV/AIDS (Foster 2002, Richter 2004a, Makame et al 2002, Atwine et al 2005). In the original theoretical framework (Figure 1.2), child resilience *was* reflected as a factor that could moderate the relationship between parental loss and psychosocial distress. However, no data were collected on resilience in the survey questionnaires, mainly because these were prepared before the theoretical framework had been developed (s7.3.2), and, consequently, this perspective could not be reflected satisfactorily in the principal findings.

According to Summerfield (2004), research and practice that centre around child - or all human - welfare tends to focus on investigations of risk factors and the design of programmes and services that may reduce the impact of these factors.

However, risk factors are not the only predictors of outcomes for both children and adult who experience severe adversity. Observations have been made elsewhere that not all human beings succumb to the effects of risk which have led to the emergence of investigation into protective factors and resilience. Thus, Summerfield's call is for more attention to how this knowledge can be developed and to devising interventions that promote resilience as a means of achieving positive outcomes for all human beings. Thus, he highlights the positives in people's lives which families, governments and programme implementers, aided by the availability of a conducive environment and resources, can enable children to sail through adversity and realise their goals. This would have been a useful focus especially in a resource-poor setting like Zimbabwe.

Resilience is said by Newman (2005) to be a process through which people, including children, are able to continue or resume a long-term positive trend in growth and adaptation despite exposure to adversity. Resilience is also said to be a dynamic ongoing active capacity which, in children can develop over a lifespan. Children can learn to cope with adversity through interacting with family members and the community and other environmental factors can be at play.

Increasingly, evidence is emerging on children as survivors of adversity and on the coping mechanisms they employ. These include survival and coping in circumstances of extreme deprivation and neglect (Smith et al 2003), socioeconomic distress (Husson and Chassin 2004, Mawoneke 2001,) disasters including HIV/AIDS (Ayieko 2004; Kintosa et al 2000, Boyden 2003, Stein 2003), wars, and

even being in a foreign land as unaccompanied children (NHS 2003, Runyan 1998, Billing et al 2002,).

Smith et al (2003 p555) wrote of the survival and recovery of Czechoslovakian twins who were denied all forms of human contact and kept in a bare unheated cellar by their father and step mother after their mother had died. They were deprived of food and intellectual and social stimulation apart, from what they could provide for themselves. They lived in this kind of situation from the age of 18 months to when they were seven years old. When they were discovered, they had the mental age of a 3 year old. A single middle-aged woman who had great experience of taking care of children adopted them. The woman gave them all emotional security and the intellectual stimulation they had been lacking. Despite the severe deprivation and neglect they had encountered, the twins, because of the change in their environment managed to catch up with the stream of children of their own age and graduated from high school at the age of 17 years. They had normal happy married lives and both had secure jobs.

The above example and the quotes from children interviews that follow shows that children do not always crumble in the face of adversity.

"My parents could not raise the fees so I decided that staying at home was not helping at all. I chose to go and work instead of sitting around doing nothing [she has a brother who is in school but he also works to raise his fees]."

Female non-orphan, aged 15 years, working as a maid

(CCQ-Roadside trading centre)

"Sometimes things just fall into place and we survive. This is why we go to church. We are so grateful for this. Church members do come here for fellowship and I do attend.... I buy the surf and Delight (the index child) does my laundry and his. If I fail to raise money for basics in the house including his fees (Delight's), Talent (another 18 year-old double orphan in the household) might come up in with the money. In fact, Talent provides for most of our basic needs. He sells sweets at school and kapenta (small fish dried and salted) by the shop doors after school hours. In a day, he can raise Zim$700,000. I also collect and sell empty bottles. I use the money to buy relish, other things we may need in the house and laundry washing powder."

Male double orphan's caregiver, aged 18 years, caring for his two male maternal cousins (aged 17 and 16 years), who are also double orphans.

(Caregiver Key Informant Interview, Site 7)

Given a conducive environment and appropriate support and resources, children are capable of rising above their strife and prospering. In the current study, exploring children's resilience would have helped programmers in resource poor settings to tap and support children's resilience and coping mechanisms. It would have helped to highlight that not all children are cracking under the effects of HIV/AIDS. Thus, viewing all OVC as having problems sends the wrong signal to programmers and implementers that all OVC are in a dire situation and are therefore in need of assistance. For those coping already, the blanket assistance may not make much impact if it is not suitable for them. Thus, resilience needs to be further understood in terms of why some children come out of adversity with little or no scratches (Smith et al 2003, Boyden 1998).

There is some evidence in the current study of coping and resilience which can be highlighted. For example, we hypothesised that parental loss had grave implications for children's educational attainment. However, though orphans were more likely than non-orphans to drop out of school following parental loss, the lack of differences in educational attainment (5 Ordinary level passes) indicates that, although parental loss is traumatising, orphans can do as well in terms of educational attainment as non-orphans. Given the chance, they do well despite their family environment or circumstances (Chapter 6: Table 6.2a and 6.2c). The reason could be that orphans, rather than dwelling on their grief, plough their energies into working hard for the betterment of their future. A similar observation was made by Makame et al 2002 in their study in Tanzania. Thus, for orphaned children their most likely hinderance is limited access to financial and material resources, which may facilitate realisation of their aspirations. The desire to fight on and improve themselves stays with them:

"Given the chance to go to school, I would study hard for the betterment of my future"

Male paternal orphan, aged 17 years

(Children's focus group discussion, Site 12)

"... it is not that orphans are dull ... what makes most of us live a life of struggle (surviving from hand to mouth) is because we were not given the chance to get a better education ... we were hard-working at school. What failed us were resources."

65 year-old male

(Focus group discussion with former orphans)

Thus, what this shows is that, in many affected children, adversity does not kill the desire and the will to learn.

"I'm not going to school at present ... I think I can raise money for school fees from selling agricultural produce but I have nothing to call my own which I can sell."

Male maternal orphan, aged 14 years

(Children's focus group discussion, Site 9)

Another example of resilience is the decline in psychosocial distress levels over time observed in children in the national and local surveys. This is despite their experiencing repeated adversity in terms of parental, caregiver, sibling and other current household-related deaths. The effects of parental loss seem to be reduced over time, especially in the case of mothers who did and when parent(s) died further into the past.

We also hypothesised that frequent changes in caregiver and being separated from siblings would increase psychosocial distress in orphaned and vulnerable children. Double and maternal orphans were found to be at increased risk of experiencing these circumstances (Table 7.2). However, these hypothesised determinants did not show significant associations with heightened levels of psychosocial distress (Table 7.1). Understanding what made children in these circumstances cope and be resilient would be help resolve pre-conceived notions that adversity always has detrimental rather than positive effects on orphaned and vulnerable children.

These examples therefore provide some evidence that orphaned children are not just being passive actors but are also capable of responding positively to address the difficulties they face.

One final example of this is provided by an adolescent female maternal orphan interviewed in a roadside trading settlement in Manicaland who reported having relocated on her own initiative to stay with newly-acquired paternal relatives where she had found that fitted in very well:

"Life is better now that I decided to come and stay with my paternal aunt here in Watsomba. I was not happy where I was staying with my maternal aunt in Mutare. She was a divorcee and would take it out on us. Here I am happy. I have enough to eat. I know my aunt struggles to get us what we want and she is not well herself but we are a happy family. We have to work hard sometimes but I don't mind because I know my aunt is giving it her best to see to it that we go to school and that there is food in the house."

Female double orphan, aged 16 years -
(Survey interview, Site 9)

Better understanding of the meaningful relationships that children form in their immediate environments (including with their caregivers) on the one hand, and of how the higher expectations exerted on them by their caregivers, on the other hand, can help them to realise who they are (**I am**), what resources and capabilities they have at their disposal which they can use to improve themselves (**I have**), and what they can do for themselves to improve their situation (**I can**), will help a lot in advancing forms of assistance for children. The double orphan appreciated her

situation and realised she had to try and save herself by relocating. The aunt she moved in with struggled to make ends meet but, at the same time, she made sure that the children were happy and taught them to work for their keep, in a nice way, thereby helping the children to appreciate work for their future benefit.

Further research is needed to understand the factors that are at play which help some children to overcome adversity when others succumb to it.

7.3.4 Data Analysis – Psychosocial Distress Variables

The theoretical framework was designed to include all forms of psychosocial distress (Figure 1.2), reflecting the findings from the literature review which indicated that not all children, following adversity, experience psychosocial distress in a similar way. Principal component analysis was applied to the multiple factor variables measured in the study but only gave meaningful results for symptoms of depression/anxiety. This was the case in the data from both the national (Zimbabwe OVC Baseline Survey) and local (Manicaland Child Cohort Survey) level surveys. In the study in Manicaland, the questionnaire was based on the WHO Self-Report Questionnaire, which had previously been tested for applicability in several African countries and was also found to be appropriate in the current context. Nevertheless, it failed to provide data from which measures of other dimensions of psychsocial distress could be obtained. As a consequence, in the current study, we were unable to establish whether OVC were more likely than other children to suffer heightened levels of these other forms of psychosocial distress.

The resulting focus on depression remains useful given that very few studies have evaluated the impact of HIV-associated orphanhood on any form of psychosocial distress and that previous work in the orphan field has tended to focus on depression (Kendler et al 2002, Kessler 1997, Avison and McAlpine 1992).

However, our inability to make comparisons for forms of psychosocial distress other than depression could mean that some of the findings of the study are only partially valid. The internal validity of the results for depression was good (i.e. the answers to different questions correlated in the expected ways); however, there was no measure of external validity (i.e. whether the depression variable accurately describes psychosocial distress as measured in a different way) in the study. Thus, for example, it was not possible to tell whether the measure of psychosocial distress used in the study would provide a higher score for someone contemplating suicide than for someone suffering from a different form of psychosocial distress.

Another possible example of this problem could be the finding that girls in the study were more likely to report depression than boys. This finding is frequently observed for depression (Avison and McAlpine 1992, Bowlby 1998) but may or may not hold true for other forms of psychosocial distress. The difference observed may reflect that, in many cultures, it is viewed as not manly to complain about things. Thus, females may have reported freely about how they felt whilst males could have held it in in a manly way.

However, it might also be true that females are indeed biologically more vulnerable to depression or (as suggested by members of the focus groups in

Manicaland) it could be that exposure to more proximate causes of depression differs by gender. Increased levels of psychosocial distress witnessed in girls compared to boys could be explained in terms of cultural gender roles and obligations. Most of the HIV/AIDS-related burden of caring for the sick and children and for making sure there is food on the table falls on women and the girl child (Mutangadura 2000). Girls' being constantly in the home performing demanding roles that are inappropriate for their age leaves them subject to verbal and physical abuse and may expose them to witnessing the suffering of household members as they care for them. Boys' roles are less controlled and less centred around the home where most of the suffering takes place. They may have time to vent their frustrations and can roam freely and mix with friends or share their burden.

These are important concerns. However, it should be noted that use of the depression variable did reveal elevated levels of psychosocial distress amongst both orphaned girls and orphaned boys, when the analysis was stratified by gender.

7.4 Original Contributions of the Thesis to the Literature

7.4.1 Relationship of Findings to the Wider Literature

Despite the substantial investments being made in programmes to provide psychosocial support for children orphaned and made vulnerable by HIV/AIDS, the study of psychosocial distress amongst these children is a relatively new development, especially in Africa (Foster 2002; Richter, Manegold et al. 2004b; Horizons Report 2005; Barbarin and Richter 2007). Little work has been done to develop theory in this

area and early empirical studies have generally been cross-sectional and small-scale with only small numbers of selected determinants being tested (Makame, Ani et al. 2002; Atwine, Cantor-Graae et al. 2005; Gilborn, Apicella et al. 2006; He and Ji 2007). According to Barnes and colleagues, the problems children face can only be tackled if we are able to understand the nature and quantify the extent of the various deprivations they experience (Barnes, Wright et al. 2007). The results obtained from the national and local studies conducted in this thesis are based on larger samples than most previous studies and cover a wide variety of determinants derived from theory.

The current study confirmed previous findings about the particular vulnerability of girls (Avison and McAlpine 1992; Lengua and Stormshak 2000; Makame, Ani et al. 2002; Sacker and Wiggins 2002; Atwine, Cantor-Graae et al. 2005; Jorm, Windsor et al. 2005; Nyamukapa, Gregson et al. 2008). For example, Makame et al. (2002) and Atwine et al. (2005) in their studies of the psychological well-being of orphans in Tanzania and Uganda found that girls were at greater risk of internalising problems and depression, respectively. Girls have also been recorded as being at higher risk of clinical cancer and depression in economic deprivation and HIV/AIDS care-giving studies (Sevellen, Sarna et al. 1998; Kelly 2002; O'Sullivan 2004; Atwine, Cantor-Graae et al. 2005). Girl's increased psychosocial distress is thought to be caused by being burdened by care roles, lack of nice clothes and other hygiene and general physical appearance enhancing materials such as soap, lotion, make-up and perfume which deprive them of chance to enhance or maintain their social status among peers (Foster, Makufa et al. 1997; Kelly 2000; Kelly 2002).

Our findings are in line with a growing number of studies that provide evidence for increased psychosocial distress amongst orphans. For example, in an early study in

Zimbabwe, Foster et al (1997) found orphans to be more likely to be fearful, suffer from anxiety, stress and stigma. Manuel's study of orphans and their caregivers found orphans to be more unhappy and less likely to have a trusted friend (Volle, Tembo et al. 2002). In a new study, Wild, Flisher, Laas and Robertson (in press cited in Cluver and Gardner (2007)) are reported to have found orphans as being more likely to be depressed and experience anxiety and low self-esteem than non-orphans. Other studies are also finding evidence that different forms of orphanhood (i.e. double, maternal or paternal) can cause psychosocial distress (Poulter 1997; Makame, Ani et al. 2002; Atwine, Cantor-Graae et al. 2005; Chatterji, Dougherty et al. 2005).

The thesis results are also broadly consistent with findings from other studies on factors on the causal pathway between orphanhood and psychosocial distress. Although a variety of different measures have been used in the different studies, they all tend to indicate and highlight the risks that may arise as a result of being orphaned and deprived of proper care and enjoyment of childhood (Poulter 1996; Poulter 1997; Pollard and Lee 2003). Studies in Tanzania, Kenya, Uganda and Zambia also found that orphans are at an increased risk of suffering from psychosocial distress if their emotional, physical, material and spiritual needs are not met (Foster, Makufa et al. 1997; Sengendo and Nambi 1997; Makame, Ani et al. 2002; Nyambedha, Wandibba et al. 2003; Oburu 2004; Atwine, Cantor-Graae et al. 2005).

Orphans and other vulnerable children's life experiences, such as having a disrupted childhood due to care roles, financial difficulties that see them drop out of school, and loss of familial environment and love and nurturing from caring adults contribute to their suffering from psychosocial distress (Nampanya-Serpell 2000; Chatterji, Dougherty et al. 2005; Yamba 2005). Makame et al (2002) found associations between

being out-of-school and deprivation such as hunger and ill-treatment in form of physical punishment (mainly at school) with internalising of problems. Studies done in London, Zambia and Uganda found that children who went out of their way to help in the home reported being more worried about their future and that of their ailing parents (Reid 1993; Poulter 1997; Sengendo and Nambi 1997; Pollard and Lee 2003). Other sources of their worry were their lack of adequate care skills and fear of being infected. Our finding of an association between residence in urban areas and increased psychosocial distress is similar to an earlier report from Zambia of orphans experiencing more emotional disturbance with 89% of them reporting being unhappy (Nampanya-Serpell 2000).

Associating with HIV/AIDS-infected family members meant they were not spared from being stigmatised and discriminated against by relatives and community members (Dearden and Becker 1997; Chatterji, Dougherty et al. 2005). Furthermore, while carrying out their roles within and outside the home, orphans and especially girls, may be subjected to sexual and/or physical abuse (Richter, Manegold et al. 2004b; Richter 2006a; Richter, Foster et al. 2006b). In the current study, we found very few reported cases of sexual abuse. Nonetheless, since the onset of HIV/AIDS there has been a noticeable increase in child and teenage rape cases in Zimbabwe (Foster and Williamson 2000; van Resburg, Phil et al. 2005; Shaw 2008).

In a recent study in South Africa, King, De Silva et al (2007) and Cluver and Gardner (2007) found orphans to be twice as likely to suffer from depression, anxiety, and peer problems, and five times as likely to develop post-traumatic stress as other children. Orphans were also found to be more likely to go hungry than non-orphans. When factors such as being in school, food assistance, receiving a grant, and adult

employment were controlled for, the effects of orphanhood on depression were observed to reduce - which suggests that these factors contributed to the depression observed (Cluver and Gardner 2006; Cluver and Gardner 2007; Cluver and Gardner 2007; Cluver, Gardner et al. 2007; King, De Silva et al. 2007).

The thesis results also reaffirm the dangers faced by OVC in terms of high-risk sexual behaviour and poor educational outcomes and employment prospects (ActionAID 2004; Birdthistle, Floyd et al. 2008). Recent studies done in South Africa by Barbarin and Richter (2007) and by Cluver and Gardner (2006 & 2007) found links between orphanhood, poverty, conduct problems and risky behaviour (Barnes, Wright et al. 2007).

Inconsistencies between children's and caregiver's reports on children's psychosocial well-being have been noted in previous studies in Western countries (Sloper 2000; Joslin and Harrison 2002; Muris and Meesters 2002; Kazak, Boeving et al. 2005). However, this is the first study in Zimbabwe to replicate these findings.

7.4.2 Original Aspects

The originality of the thesis lies in the development and testing of a new holistic theoretical framework on psychosocial distress amongst orphans using empirical data. Although theoretical frameworks highlighting the effects of AIDS-related orphanhood on children have been developed before, this thesis is the first to develop such a framework that focuses on psychosocial distress and to test this framework using empirical data.

The study was the first to identify specific moderating and mediating factors in the relationship between orphanhood and psychosocial distress in Zimbabwe. Understanding these factors and how their effects vary in different settings is important in the identification and development of appropriate and effective interventions. In Zimbabwe, all forms of orphan were found to be at risk of increased psychosocial distress. Factors that moderated this relationship included gender, age and residence in a town or commercial estate. Factors found to mediate (i.e. to lie on the causal pathway) the relationship varied by form of orphanhood but included trauma, stigma and discrimination, increased poverty, inadequate care, child labour or abuse, residence in a child-headed household, being unrelated to the closest adult, and being out-of-school. The study also found that greater psychosocial distress contributed to the pattern of early initiation of sexual activity amongst orphaned teenagers.

The study was the first to use the WHO Self Report Questionniare-20 (Beusenberg and Orley 1994) to measure psychosocial distress in children in Zimbabwe and the item questions corresponded well with descriptions of symptoms given by local people in focus group discussions conducted after the surveys. In a recent study done in Zimbabwe, another tool was developed and validated through the use of etic and emic models of illness. Etic criteria involved translating a UK-designed Revised Clinical Interview Schedule (CISR) into the local language (*Shona*), testing it on 110 patients with conspicuous psychiatric morbidity. UK studies have shown a cut-off score of 11/12 yielded optimum discrimination of cases. Emic criteria involved using the clinical judgement of the care provider - rating whether the patient was suffering from mental problems (Patel, Simunyu et al. 1997; Patel, Todd et al. 1998; Patel, Flisher et al. 2007) - which also had similar questions to those listed by our focus group

participants and matched some of those in the WHO Self Report Questionnaire (SRQ-20). The WHO Self Report Questionnaire was developed and tested with the developing world in mind and has been used in over 30 studies in developing countries. While developing a context or culturally-specific and acceptable questionnaire is possible, the difficulty lies in its use and comparability with other different settings. The listings of psychosocial distress symptoms prepared by the focus group members were no different from those sampled from the WHO SRQ-20 questionnaire items which suggests that the measure is appropriate in the Zimbabwe context and could be appropriate for use in comparable studies elsewhere.

Another original aspect of the study was the use of focus group discussions and interview participants' recorded comments on their overall assessment of the interviewing process and the project as a whole to evaluate the sensitivity of the study methods to children and caregiver's feelings. In general, the questions were said to be informative and not upsetting. Both caregivers and children said they found the exercises to have been a learning experience which gave them information and awareness about their own needs and what they could do about their situations. However, children found the term "AIDS orphan" to be stigmatising and preferred not to be called or referred to as orphans. They preferred being referred to by their names. Issues that came out of the discussions were that programmes should help people define the problem, own it and then find solutions to their problems and not to dish out solutions and help without consultation.

7.5 Policy Implications

Many child agencies and interventions have been put in place by the Zimbabwean government and non-governmental organisations but few of these are based on

evidence and consultation. Most children who become orphaned are likely to be exposed to risk factors for increased psychosocial distress so measures need to be put in place to help children to avoid living in poverty and experiencing stigma and discrimination, child labour, abuse and too many responsibilities.

The findings of greater psychosocial distress in girls, younger children and all forms of orphans indicate the need for more psychosocial support for these different groups. In Zimbabwe, the plight of the girl child has been on the development agenda for many years. The study results must be interpreted with caution because of the possibility of greater under-reporting by boys. However, they suggest that a lot still has to be done to achieve emancipation of the female gender in terms of household chores and production responsibilities. The research helps to confirm the need to revamp current approaches to girls' plight if their situation is to be improved. The prohibitive costs of drugs, lack of quality care and support for those living with infection, and deteriorating health services mean that the threat of girls never enjoying their childhood to the full will be with them for a very long time if nothing is done (Foster 2002; Franz, Lensche et al. 2002; Matthews and Power 2002; Sacker and Wiggins 2002; Hong, McCarthy Veach et al. 2005).

The national survey results indicating increased psychosocial distress among children in poorer households suggest that intensified poverty alleviation (e.g through cash transfers to households), especially amongst female- and grandparent-headed households, would help to reduce levels of psychosocial distress (Ainsworth, Ghosh et al. 1995; Quisumbing and Maluccio 1999; Mutangadura 2000; Matshalaga 2004). However, other factors were also involved and no evidence was found for poverty being on the causal pathway between psychosocial distress and early sexual risk

behaviour. Therefore it might be concluded that there is need for programmes of psychosocial support which extend beyond poverty alleviation.

Social connectedness, defined as being related to the closest adult and receiving meaningful support from this adult, was found to be associated with reduced psychosocial distress. Thus, support that enables orphaned and other vulnerable children to remain in households with close relatives could also reduce psychosocial distress.

The findings that orphaned children experience greater psychosocial distress, that school enrolment has a protective effect against psychosocial distress, and that psychosocial distress and being out-of-school (Gregson, Waddell et al. 2001; Gregson, Nyamukapa et al. 2005; Nyamukapa, Gregson et al. 2008) are (independently) associated with increased risk of early sexual activity have important policy implications. Supporting families in keeping orphaned children in school could be an effective way of reducing psychosocial distress amongst orphans (Kelly 2004) and could also be a powerful means of protecting orphans from early HIV infection (Birdthistle, Floyd et al. 2008). Measures such as provision of school materials by Government, relaxing the requirement for compulsory school uniforms, and increases in Government-subsided secondary education would help a lot of children to remain in school. Education needs to be looked at not only in terms of literacy and numeracy but also as an opportunity to nurture psychosocial well-being, good behaviour and employment skills.

Though the percentage of children reporting experience of stigma and discrimination (6%) may appear to be small, their strong association with psychosocial distress

should be a major cause for concern particularly since child labour (33%) and physical abuse (14%) are common and possibly related. There is therefore a need for child protection and care rules to be enforced.

7.6 Future Research Needs and Directions

A number of further research needs are apparent from this study.

The theoretical framework is a new one and appears to capture many of the factors that cause orphans to have increased psychosocial distress and some of the important consequences of psychosocial distress in Zimbabwe. However, some aspects of the framework could not be tested with the available data and still require empirical validation in the Zimbabwe context. These include: (i) the potential moderating effects of children's resilence and differences in the nature of parental illness; (ii) the causes and effects of other childhood psychosocial disorders such as attention deficit, conduct behaviour, eating and learning difficulties, post-traumatic stress, psychosomatic disorders, bipolar disorders and schizophrenia; (iii) other possible immediate/short-term consequences of psychosocial distress such as adjustment problems, low self-esteem and street life; (iv) long term/cumulative effects into early adulthood such as partnership and family instability and destroyed family networks, non-transfer of intergenerational skills, and poverty; and finally (v) national level (development) consequences including implications for political and social stability. For other aspects of the framework, the posited relationships could plausibly occur in either direction (e.g. risky behaviour could increase psychosocial distress and *vice versa*) and therefore need to be investigated using prospective study designs.

The theoretical framework was developed from the literature on orphanhood and psychosocial distress in sub-Saharan Africa as a whole and is intended to be of relevance beyond Zimbabwe. In principle, the framework allows for the possibility that many of the moderating factors, causal pathways and consequences of psychosocial distress in orphans will vary in importance according to the local culture and socio-economic context and the scale and stage of the local HIV epidemic. However, it needs to be tested and validated under a variety of contexts before its wider applicability can be inferred.

Further research needs to be done to develop and validate the tools used to measure psychosocial distress in children in African populations in the context of HIV/AIDS epidemics. In particular, more research is needed to develop improved methods for interviewing children on sensitive personal subjects such as their psychosocial status. Whilst the children consulted after the survey in Manicaland reported that they had found the interviews to be a positive experience, some negative aspects were identified which need to be addressed. In addition, some possible sources of bias in reporting were identified. These need to be investigated in greater depth and, if possible, methods should be developed to address or correct for them.

The thesis relied mainly on quantitative work to support its various observations. Anecdotal material from qualitative interviews and focus group discussions were also used in interpreting the quantitative findings. However, it must be be emphasised that a fully-fledged qualitative study was not undertaken. As a consequence, further qualitative research is needed to generate hypotheses particularly on resilience and forms of coping and gendered ways in which orphans respond to their adverse outcomes.

It was noted earlier that NGO and other programmes offering psychosocial support to OVCs in countries with generalised HIV epidemics have rarely been evaluated scientifically. Now that some progress has been made in developing tools and methods for collected and analysing data on psychosocial distress in children in sub-Saharan Africa, a systematic attempt should be made to evaluate and compare the effectiveness of alternative intervention approaches in a range of different contexts (Makame, Ani et al. 2002; Atwine, Cantor-Graae et al. 2005; Horizons Report 2005).

It is still thought that care for children affected by HIV/AIDS can be provided best in sub-Saharan African settings by the extended family. However, it is also clear that, in circumstances of major HIV/AIDS epidemics and extreme poverty, extended families cannot cope on their own and external assistance is needed (Foster, Makufa et al. 1997; Heckman, Somlai et al. 1998; Foster 2000; Giarrusso, Silverstein et al. 2000; Hamra, Ross et al. 2005; Gilborn, Apicella et al. 2006). This assistance must be provided in a sensitive way that supports and facilitates rather than undermines the family's own efforts. Relatively little scientific research has been done to seek the views and ideas of caregiver's, relatives and other community members as to how this can best be achieved (Subbarao, Mattimore et al. 2001; Veale, Quigley et al. 2001; Nalugoda, Gray et al. 2004). Such research is required so as to come up with meaningful programmes that will serve the interests of children in different environments. In addition, it could be useful to study local people's beliefs and knowledge on the developmental needs of children, how these affect children's adult life-chances and what the community could do to safeguard these needs.

Despite the findings that orphaned children, on average, experience heightened psychosocial distress which sometimes translates into adverse outcomes and reduced opportunities later in life, many children in these circumstances appear to cope remarkably well. Resilience is one area that has been understudied in the African context. Studies have shown that children are not passive actors within society; some have been known to overcome their problems and excel (Bowlby 1998; Smith, Cowie et al. 2003). Tapping into such success stories, no matter how small, could help other children to cope in similar situations (Dearden and Becker 1997; Sherr, Barnes et al. 1997; London, Leblanc et al. 1998; Kaliati, Madzinga et al. 2002; Mturi, Mazibuko et al. 2003; Anderson and Doyal 2004; Thurman, Snider et al. 2006).

Finally, with the increased risk of teenage HIV-infection, particularly among orphaned girls, there is need to look at societal barriers to HIV-prevention and protection (i.e. delaying sex, using condoms, gels etc.) and how these sexual taboos can be broken or how best these could be addressed within an HIV/AIDS prevention context.

7.7 Conclusion

In this thesis, I developed a new theoretical framework to aid understanding of the relationships between parental loss, psychosocial distress and the consequences of psychosocial distress during childhood, adolescence and early adulthood. Empirical data from national and local sources was used to validate tools for collecting data on psychosocial distress from children and their caregivers and to evaluate the framework. The substantive results were generally consistent with and extend findings from other published studies and provide detailed information on orphaned children's

circumstances in Zimbabwe and evidence to support many of the associations hypothesised in the framework.

Children's psychosocial distress has very major negative effects on their well-being and life chances and outcomes and receives very little attention in most developing countries because of it invisibility and the unavailability of measuring tools, treatment methods and skilled professionals. It is hoped that studies such as this will help to inform the development of effective evidence-based policies and programmes.

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Appendices

Appendix 1

Manicaland Child Cohort Study Questionnaires

a) Extended Family and Household Members Questionnaire

b) Child and Caregiver Questionnaire

BEST COPY

AVAILABLE

Variable print quality

PAGE NUMBERING AS ORIGINAL

MANICALAND HIV/STD PREVENTION STUDY: CHILD COHORT STUDY (ROUND 3)

CHILD & CAREGIVER QUESTIONNAIRE — *FORM H*

CHILD1 number:

Questionnaire processing dates:

Consent form	
Corrections completed	
Data entered	

CURRENT DWELLING IDENTIFICATION

Details from extended family & household members questionnaire

		FIRST (GIVEN) NAME	FAMILY NAME
Q101/2	Child's name:		

Q103 Child category - *at main survey follow-up**: ☐

Q104 Village/compound/township:

NAME (FIRST THEN FAMILY)		EXTENDED FAMILY & HOUSEHOLD LINE NO.

Q105/7 Head of household:

Q108/10 Primary caregiver**:

	CHILD	CAREGIVER
Q111/2 Study site reference (EFHQ):		
Q113/4 Household number (EFHQ):		
Q115/6 Line no. (EFHQ):		
Q117/8 MUT3NO (if any):		

INTERVIEWER VISIT

		1	2	3
Q119	Date:			
Q120	Time:			
Q121	Interviewer:			
Q122	Result***:			
Q123	Child category - *at current interview date**: (Pre-enter in the R0(corrected), R1 and R2 boxes, the child's category at the time of the original household survey (corrected in round 1 if applicable) and at rounds 1 and 2; enter in the R3 box, the child's orphan status now)	R0(corrected)	R1	R2	R3

CHECKED BY SUPERVISOR

Q124/5 Signature & date:

*CHILD CATEGORY

Non-orphan	1
Paternal orphan	2
Maternal orphan	3
Double orphan	4
Deceased	99
Other (specify)	8

***RESULT CODES

Completed	1
Not at home	2
Caregiver refused	3
Child refused	4
Partially completed	5
Child sick/hospital	6
Other (specify)	8

**PRIMARY CAREGIVER

Person who spends the most time looking after the child on a day-to-day basis. This person will normally be a close female relative.

EXTENDED FAMILY & HOUSEHOLD MEMBERS FORM (R3)

Q. No:

"Now I would like to get some information about the members of your extended family"... Include the Index Child (CHILD) as Line #1.

LINE NO	EXTENDED FAMILY MEMBERS: FIRST (GIVEN) NAME	EXTENDED FAMILY MEMBERS: FAMILY NAME	SEX	AGE	SURVIVAL STATUS	HEALTH	CHILDREN (LIVING)	MARITAL STATUS	RELATED TO CHILD	SUPPORT FOR CHILD & HOUSEHOLD			PARENTS SURVIVAL (CHILDREN <18 YEARS OLD)		EDUCATION EMPLOYMENT				RESIDENCE & VISITS		
Q024	Q025	Q026	Q027	Q028	Q029	Q030	Q031	Q032	Q033	Q034	Q035	Q036	Q037	Q038	Q039	Q040	Q041	Q042	Q043	Q044	Q045	Q046	Q047	Q048
Circle line no. of head of CHILDs household	Prepare genogram with child & caregiver. Copy names of index child's: (i) Parents & (full) siblings (ii) Paternal relatives: *grandparents, great uncles & aunts, father's siblings & their spouses & children, father's previous & other wives & their children (half brothers/sisters)* (iii) Maternal relatives: *as for paternal*		Is/was (NAME) male or female?	In which month/ year was (NAME) born?	Is (NAME) still alive? If no, record date of death	Is (NAME) in good health, suffering recurring sickness or seriously ill?	How many of his/her own *natural (biological)* children does (NAME) have who are still alive?	What is (NAME)'s current marital status?	How is this person related to (CHILD)? Indicate paternal or maternal	Has (NAME) ever been (CHILD)'s primary caregiver?	Estimated total value of (NAME)'s assistance to (CHILD) in the last 12 months	Estimated total value of (NAME)'s other contributions to household income in last 12 mths	Is (NAME)'s *natural (biological)* father still alive?	Year died.	Is (NAME)'s *natural (biological)* mother still alive?	Year died.	What is the highest level of education (NAME) has completed	In which sector of employment does (NAME) work?	What type of work does (NAME) do?	Does (NAME) stay in this house on a regular basis?	Where did (NAME) stay last night?	How many nights is it since (NAME) last slept in this house?
			M F Mth	Yr	Y N DK Mth	Yr	(A) Number	(B)	(C) P M	Y N DK	ZS'000	ZS'000	Y N DK	Year	Y N DK	Year	Lvl Yrs	(E)	(F)	Y N	(G)	#
01	Index child		1 2		1 2 8				1 2	1 2 8			1 2 8		1 2 8					1 2		
02	Caregiver		1 2		1 2 8				1 2	1 2 8			1 2 8		1 2 8					1 2		
03			1 2		1 2 8				1 2	1 2 8			1 2 8		1 2 8					1 2		
04			1 2		1 2 8				1 2	1 2 8			1 2 8		1 2 8					1 2		
05			1 2		1 2 8				1 2	1 2 8			1 2 8		1 2 8					1 2		
06			1 2		1 2 8				1 2	1 2 8			1 2 8		1 2 8					1 2		
07			1 2		1 2 8				1 2	1 2 8			1 2 8		1 2 8					1 2		
08			1 2		1 2 8				1 2	1 2 8			1 2 8		1 2 8					1 2		
09			1 2		1 2 8				1 2	1 2 8			1 2 8		1 2 8					1 2		
10			1 2		1 2 8				1 2	1 2 8			1 2 8		1 2 8					1 2		
11			1 2		1 2 8				1 2	1 2 8			1 2 8		1 2 8					1 2		
12			1 2		1 2 8				1 2	1 2 8			1 2 8		1 2 8					1 2		
13			1 2		1 2 8				1 2	1 2 8			1 2 8		1 2 8					1 2		
14			1 2		1 2 8				1 2	1 2 8			1 2 8		1 2 8					1 2		
15			1 2		1 2 8				1 2	1 2 8			1 2 8		1 2 8					1 2		
16			1 2		1 2 8				1 2	1 2 8			1 2 8		1 2 8					1 2		
17			1 2		1 2 8				1 2	1 2 8			1 2 8		1 2 8					1 2		
18			1 2		1 2 8				1 2	1 2 8			1 2 8		1 2 8					1 2		
19			1 2		1 2 8				1 2	1 2 8			1 2 8		1 2 8					1 2		
20			1 2		1 2 8				1 2	1 2 8			1 2 8		1 2 8					1 2		

Calculate:

Q049 **Number of *extended family members*: Aged under 15 years** ☐ Q050 **Aged 15-64 years** ☐ Q051 **Aged over 65 years** ☐ **Tick here, if a further continuation sheet is used:** ☐

EXTENDED FAMILY & HOUSEHOLD MEMBERS FORM

Q. No:

"Now I would like to get some information about the other people who stayed in this homestead in the last month"...

LINE NO	OTHER PERSONS		SEX	AGE	HEALTH	CHILDREN (LIVING)	MARITAL STATUS	RELATED TO CHILD		SUPPORT FOR CHILD & HOUSEHOLD			PARENTS SURVIVAL (CHILDREN <18 YEARS OLD)				EDUCATION		EMPLOYMENT		RESIDENCE & VISITS		
Q024	Q025	Q026	Q027	Q028	Q030	Q031	Q032	Q033	Q034	Q035	Q036	Q037	Q038	Q039	Q040	Q041	Q042	Q043	Q044	Q045	Q046	Q047	Q048
Circle line no. of head of CHILDs house-hold	List names of other people who stayed in this homestead in the last month		*Is (NAME) male or female?*	*In which month/ year was (NAME) born?*	*Is (NAME) in good health, suffering recurring sickness or seriously ill?*	*How many of his/her own natural (biological) children does (NAME) have who are still alive?*	*What is (NAME)'s current marital status?*	*How is (CHILD) related to this person?* Indicate paternal/ maternal		*Has (NAME) ever been (CHILD)'s primary caregiver?*	Estimated total value of (NAME)'s assistance to (CHILD) in the last 12 months	Estimated total value of (NAME)'s other contribution to household income in last 12 mths	*Is (NAME)'s natural (biological) father still alive?*	Year died.	*Is (NAME)'s natural (biological) mother still alive?*	Year died.	*What is the highest level of education (NAME) has completed*	*In which sector of employ-ment does (NAME) work?*	*What type of work does (NAME) do?*	*Does (NAME) stay in this house on a regular basis?*	*Where did (NAME) stay last night?*	*How many nights is it since (NAME) last slept in this house?*
			M F	Mth Yr	Code A	Number	Code B	(C)	P M	Y N DK	ZS'000	ZS'000	Y N DK	Year	Y N DK	Year	Lvl	Yrs	Code E	Code F	Y N	Code G	#
30 1			1 2						1 2	1 2 8			1 2 8		1 2 8						1 2		
30 2			1 2						1 2	1 2 8			1 2 8		1 2 8						1 2		
30 3			1 2						1 2	1 2 8			1 2 8		1 2 8						1 2		
30 4			1 2						1 2	1 2 8			1 2 8		1 2 8						1 2		
30 5			1 2						1 2	1 2 8			1 2 8		1 2 8						1 2		
30 6			1 2						1 2	1 2 8			1 2 8		1 2 8						1 2		
30 7			1 2						1 2	1 2 8			1 2 8		1 2 8						1 2		
30 8			1 2						1 2	1 2 8			1 2 8		1 2 8						1 2		
30 9			1 2						1 2	1 2 8			1 2 8		1 2 8						1 2		
31 0			1 2						1 2	1 2 8			1 2 8		1 2 8						1 2		
31 1			1 2						1 2	1 2 8			1 2 8		1 2 8						1 2		
31 2			1 2						1 2	1 2 8			1 2 8		1 2 8						1 2		

Calculate:

Q052 *Number of co-resident household members:* Aged under 15 years ☐ Q053 Aged 15-64 years ☐ Q054 Aged over 65 years ☐ Tick here, if a further continuation sheet is used: ☐

CODES (A)
- 01 Good health
- 02 Recurring sickness
- 03 Serious illness

CODES (B)
- 01 Single
- 02 Married, cohabiting or >12m
- 03 Divorced or separated
- 04 Widowed

CODES (C)
- 01 Natural father/mother
- 02 Father's co-wife/-wife
- 03 Sister
- 04 Brother
- 05 Aunt
- 06 Uncle
- 07 Grandmother
- 08 Grandfather
- 09 Cousin
- 11 No relation
- 10 Other relation (specify): (Line no. & rel'ship)

CODES (D)

Level:
- 0 None
- 1 Primary
- 2 Secondary
- 3 Higher
- 8 Don't know

Years passed completed:
- 0 Less than one year completed
- 98 Don't know

CODES (E)
- 1 Estates (tea, coffee, forestry etc.)
- 2 Manufacturing or trading trade
- 3 Police or army
- 4 Education
- 5 Health sector
- 6 Services or retail (shops)
- 7 Informal sector: trading
- 8 Informal sector: subsistence agriculture
- 9 Student
- 10 Unemployed
- 11 Other (specify) _____

CODES (F)
- 1 Professional or managerial
- 2 Self-employed: small business
- 3 Skilled labour
- 4 Manual/unskilled

CODES (G)
- 1 In this homestead
- 2 Locally
- 3 Harare
- 4 Mutare
- 5 Rusape
- 6 Other town
- 7 Small town/growth point
- 8 Estate/rural commercial
- 9 Roadside business centre
- 10 Rural business centre
- 11 Communal resettlement

REF.	QUESTIONS & FILTERS	CODING CATEGORIES			SKIP TO
Q055	*What is the main source of drinking water for members of your household?*	Piped into residence	1		
		Private tap in yard or plot	2		
		Communal tap	3		
		Own well or borehole	4		
		Other well or borehole	5		
		Protected spring	6		
		Other (specify)	10		
Q056	*What kind of toilet facility does your household have?*	Flush toilet	1		
		Blair toilet	2		
		Pit latrine	3		
		Other (specify)	4		
		No facilities	5		- Q058
Q057	*Is this toilet facility used by members of your household alone, shared with neighbours, or is it communal?*	Household alone	1		
		Shared with neighbours	2		
		Communal	3		
Q058	*Does your household have:*		Y	N	
	Electricity?	Electricity	1	2	
	A refridgerator?	Refridgerator	1	2	
	A radio?	Radio	1	2	
	A television?	Television	1	2	
Q059	Record house type.	Pole and dagga structure	1		
		Brick house - thatched roof	2		
		Brick house - tiled/sheeting roof	3		
		Cabin/other	8		
Q060	Observe and record type of floor of the main dwelling.	Natural floor (earth/sand/dung)	1		
		Rudimentary (planks/palm/bamboo)	2		
		Finished (wood/cement/carpet...)	3		
Q061	*Have any major improvements been made to your homestead in the last 12 months?*	Yes	1		
		No	2		- Q064
Q062	Describe the main improvements.	_____			
		_____			
Q063	Name of person/organization who paid the most towards these improvements.	_____			
	Line no. from this questionnaire (if any).				
Q064	*Does any member of your household own:*		Y	N	
	A bicycle?	Bicycle	1	2	
	A motorcycle?	Motorcycle	1	2	
	A car?	Car	1	2	
	A tractor?	Tractor	1	2	
Q065	*How many cattle does your household own?*	Number of cattle			
Q066	*Were any of the following household assets brought to the household at the time when the child moved in?*		In	Out	
	Read through list & tick all assets mentioned.	Radio			
	Enter code "1" in "In" column if "yes" & code "2" if "no".	Television			
		Bicycle			
		Furniture			
		Refridgerator			
		Kitchen/cooking equipment			
		Cattle			
		Other (specify)			
Q067	*Were any of these assets sold or removed from the household in the last 12 months?*	Read through list (Q066) again. Enter code "1" in "Out" column (Q066) if "yes" & code "2" if "no".			
Q068	*Were these assets sold or removed for any of the following reasons?*		Y	N	
	Read through list & tick all reasons mentioned.	Medical expenses	1	2	
		Funeral or memorial costs	1	2	
		Removed by relatives after death	1	2	
		School fees	1	2	
		Other (specify)	1	2	

MANICALAND HIV/STD PREVENTION STUDY: CHILD COHORT STUDY (ROUND 3)

CHILD & CAREGIVER QUESTIONNAIRE — *FORM H*

CHILD1 number:

Questionnaire processing dates:
Consent form
Corrections completed
Data entered

CURRENT DWELLING IDENTIFICATION

Details from extended family & household members questionnaire

FIRST (GIVEN) NAME — FAMILY NAME

Q101/2 Child's name: _____ _____

Q103 Child category - *at main survey follow-up**: ☐

Q104 Village/compound/township: _____

NAMES (FIRST THEN FAMILY) — EXTENDED FAMILY & HOUSEHOLD Q LINE NO.

Q105/7 Head of household: _____ _____ ☐

☐

Q108/10 Primary caregiver**: _____ _____

CHILD — CAREGIVER

Q111/2 Study site reference (EFHQ): ☐ ☐

Q113/4 Household number (EFHQ): ☐ ☐

Q115/6 Line no. (EFHQ): ☐ ☐

Q117/8 MUT3NQ (if any): ☐ ☐

INTERVIEWER VISIT

		1	2	3
Q119	Date:	— —	— —	— —
Q120	Time:	— —	— —	— —
Q121	Interviewer:	— —	— —	— —
Q122	Result***:	☐	☐	☐
Q123	Child category - *at current interview date**: (Pre-enter in the R0(corrected), R1 and R2 boxes, the child's category at the time of the original household survey (corrected in round 1 if applicable) and at rounds 1 and 2; enter in the R3 box, the child's orphan status now)	R0 (corrected) ☐	R1 ☐	R2 ☐	R3 ☐

CHECKED BY SUPERVISOR

Q124/5 Signature & date: _____ ____

*CHILD CATEGORY

Non-orphan	1
Paternal orphan	2
Maternal orphan	3
Double orphan	4
Deceased	99
Other (specify)_____	8

***RESULT CODES

Completed	1
Not at home	2
Caregiver refused	3
Child refused	4
Partially completed	5
Child sick/hospital	6
Other (specify)_____	8

**PRIMARY CAREGIVER
Person who spends the most time looking after the child on a day-to-day basis. This person will normally be a close female relative.

Questions to be addressed to the Child's current Primary Caregiver.
Ask all (relevant) questions for each person in turn starting with the child's natural (biological) father. Indicate but do *not* repeat questions where a person has more than one role (e.g.: caregiver's spouse & household head).

REF	QUESTIONS & FILTERS	CODING CATEGORIES	FATHER	MOTHER	PRIMARY CAREGIVER	CAREGIVER'S SPOUSE	HOUSEHOLD HEAD	PREVIOUS CAREGIVER	PREV CARER'S SPOUSE	PREV HOUSEHOLD HEAD
Q201	**Write the names of each of the following relatives, caregivers etc.**									
Q202	**Enter line number from Extended Family & Household Members Questionnaire (if any).**	**Line number**								
Q203	**Enter code for family relationship of CHILD to this person. (Codes C from EF&HM questionnaire).**	**Code**								
Q204	**Indicate whether paternal or maternal relative.**	**Paternal** 1 **Maternal** 2 **N/A** 99			1 2 99	1 2 99	1 2 99	1 2 99	1 2 99	1 2 99
Q205	**Indicate sex of person.**	**Male** 1 **Female** 2			1 2		1 2	1 2		1 2
Q206	**Record whether this person is Child's natural father or mother.**	**Father** 1 (Next column) **Mother** 2 (Next column) **Neither** 3			1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3
Q207	**Record whether this person is Child's current primary caregiver.**	**Yes** 1 (Next column) **No** 2					1 2			1 2
Q208	**Record whether this person is Child's current household head.**	**Yes** 1 (Next column) **No** 2						1 2	1 2	
Q209	**Record whether this person is Child's previous caregiver or spouse of previous caregiver.**	**Previous caregiver** 1 (Next section) **Previous caregiver's spouse** 2 (Next section) **Not previous caregiver** 3								1 2 3
Q210	***In what month and year was this person born?***	**Month** **Year** **Don't know (year)** 98								
Q211	***Is this person still alive?***	**Yes** 1 (Goto Q213) **No** 2 **Don't know** 98 (Goto Q213)								
Q212	***In what month and year did this person die?*** (Go to Q214).	**Month** **Year** **Don't know (year)** 98								

REF	QUESTIONS & FILTERS	CODING CATEGORIES		FATHER	MOTHER	PRIMARY CAREGIVER	CAREGIVER'S SPOUSE	HOUSEHOLD HEAD	PREVIOUS CAREGIVER	PREV CARER'S SPOUSE	PREV HOUSEHOLD HEAD
Q213	*In the last few months has he/she been in good health, experienced recurring sickness, or been seriously ill?*	Good health	(Goto Q215)	1	1	1	1	1	1	1	1
		Recurring sickness		2	2	2	2	2	2	2	2
		Seriously ill		3	3	3	3	3	3	3	3
		Don't know	(Goto Q215)	98	98	98	98	98	98	98	98
Q214	*What was the main symptom of the illness?*	Fever - malaria		1	1	1	1	1	1	1	1
		Fever - non-malaria		2	2	2	2	2	2	2	2
		Sickness/vommiting		3	3	3	3	3	3	3	3
		Diarrhoea/weight loss		4	4	4	4	4	4	4	4
		Swollen lymph nodes		5	5	5	5	5	5	5	5
		Skin complaints/rashes		6	6	6	6	6	6	6	6
		Genital conditions		7	7	7	7	7	7	7	7
		Flu/pneumonia		8	8	8	8	8	8	8	8
		Accident/wound		9	9	9	9	9	9	9	9
		Tuberculosis		10	10	10	10	10	10	10	10
		Kaposi's sarcoma		11	11	11	11	11	11	11	11
		Other		12	12	12	12	12	12	12	12
Q215	*How many times does/did this person visit a bar or beerhall on average per month?*	Number of times									
Q216	*What was the highest level of education that this person reached?*	None		0	0	0	0	0	0	0	0
		Primary		1	1	1	1	1	1	1	1
		Secondary		2	2	2	2	2	2	2	2
		Higher		3	3	3	3	3	3	3	3
		Don't know	(Goto Q218)	98	98	98	98	98	98	98	98
Q217	*How many years did this person complete at this level?*	Years									
		Don't know		98	98	98	98	98	98	98	98
Q218	*In what sector of employment does (or did) this person work?*	Estates		1	1	1	1	1	1	1	1
		Manufacturing / building		2	2	2	2	2	2	2	2
		Police or army		3	3	3	3	3	3	3	3
		Education		4	4	4	4	4	4	4	4
		Health sector		5	5	5	5	5	5	5	5
		Services or retail shops		6	6	6	6	6	6	6	6
	For previous caregiver, previous caregiver's spouse & previous head of household, questions now refer to the time Child was looked after by them.	Informal: petty trading (veg etc)		7	7	7	7	7	7	7	7
		Informal: subsistence agric		8	8	8	8	8	8	8	8
		Student		9	9	9	9	9	9	9	9
		Unemployed: excl agric	(Goto Q220)	10	10	10	10	10	10	10	10
		Other		11	11	11	11	11	11	11	11

REF	QUESTIONS & FILTERS	CODING CATEGORIES		FATHER	MOTHER	PRIMARY CAREGIVER	CAREGIVER'S SPOUSE	HOUSEHOLD HEAD	PREVIOUS CAREGIVER	PREV CARER'S SPOUSE	PREV HOUSEHOLD HEAD
Q219	***What type of work does/did this person do?***	**Professional or managerial**		1	1	1	1	1	1	1	1
		Skilled labour		2	2	2	2	2	2	2	2
		Manual/unskilled labour		3	3	3	3	3	3	3	3
		Self-employed: retail shops		4	4	4	4	4	4	4	4
		Self-employed: informal sector		5	5	5	5	5	5	5	5
Q220	***Does (did) this person own the following?***	**Bicycle**		1	1	1	1	1	1	1	1
		Motorcycle		2	2	2	2	2	2	2	2
		Car		3	3	3	3	3	3	3	3
		Tractor		4	4	4	4	4	4	4	4
	Assets must be in working order.	**Scotch-kart**		5	5	5	5	5	5	5	5
		Radio		6	6	6	6	6	6	6	6
	Excludes assets owned communally. (i.e.: by household or family as a group.)	**Television**		7	7	7	7	7	7	7	7
		Refridgerator		8	8	8	8	8	8	8	8
		Cooker (electric)		9	9	9	9	9	9	9	9
		Cattle		10	10	10	10	10	10	10	10
Q221	***Which church does (did) this person belong to?***	**Traditional**		1	1	1	1	1	1	1	1
		Methodist		4	4	4	4	4	4	4	4
		Anglican		5	5	5	5	5	5	5	5
		Roman Catholic		6	6	6	6	6	6	6	6
		ZAOGA		7	7	7	7	7	7	7	7
		Apostolic Faith Mission		8	8	8	8	8	8	8	8
		Marange Apostolic		9	9	9	9	9	9	9	9
		Zviratidzo Apostolic		12	12	12	12	12	12	12	12
		Other Apostolic		13	13	13	13	13	13	13	13
		Zionist		15	15	15	15	15	15	15	15
		Mughodi		20	20	20	20	20	20	20	20
		Other		17	17	17	17	17	17	17	17
		None		97	97	97	97	97	97	97	97
Q222	***What is this person's current marital status?***	**Single**	(Goto Q224)	0	0	0	0	0	0	0	0
		Widowed	(Goto Q224)	1	1	1	1	1	1	1	1
	For deceased persons, ask for their marital status when they died.	**Divorced**	(Goto Q224)	2	2	2	2	2	2	2	2
		Separated	(Goto Q224)	3	3	3	3	3	3	3	3
	***Married here included cohabiting and long-term (>12 months) partners.**	**Married***		4	4	4	4	4	4	4	4
		Don't know	(Goto Q224)	98	98	98	98	98	98	98	98
Q223	***Which of the following describes the couple's living arrangements best?***	**Live together all of the time**		1	1	1	1	1	1	1	1
		Live together but occasionally apart for work reasons		2	2	2	2	2	2	2	2
		Live together but separated for a period every year for work (i.e.: seasonal employment)		3	3	3	3	3	3	3	3
	For deceased persons, ask for living arrangements in the year before death.	**Live apart but regular/frequent cohabitation (i.e.: return visits)**		4	4	4	4	4	4	4	4
		Live apart, infrequent cohabitation		5	5	5	5	5	5	5	5

REF	QUESTIONS & FILTERS	CODING CATEGORIES	FATHER	MOTHER	PRIMARY CAREGIVER	CAREGIVER'S SPOUSE	HOUSEHOLD HEAD	PREVIOUS CAREGIVER	PREV CARER'S SPOUSE	PREV HOUSEHOLD HEAD
Q224	***How long has (or had) this person been living in this dwelling?***	**Years**	yrs	yrs	yrs	yrs	yrs	yrs	yrs	yrs
		Since birth	995	995	995	995	995	995	995	995
		Never	999	999	999	999	999	999	999	999
Q225	***How long has (or had) this person been living in (NAME OF VILLAGE)?***	**Years** (Goto Q228)	yrs	yrs	yrs	yrs	yrs	yrs	yrs	yrs
		Since birth (Goto Q230)	995	995	995	995	995	995	995	995
		Don't know (Goto Q228)	998	998	998	998	998	998	998	998
		Never	999	999	999	999	999	999	999	999
Q226	***What type of place is/was his/her current (or, if died, most recent) place of residence?***	**Large town or city**	1	1	1	1	1	1	1	1
		Small town	2	2	2	2	2	2	2	2
		Growth point	3	3	3	3	3	3	3	3
		Commercial estate / mine	4	4	4	4	4	4	4	4
		Roadside business centre	5	5	5	5	5	5	5	5
		Rural business centre	6	6	6	6	6	6	6	6
		Communal / resettlement	7	7	7	7	7	7	7	7
Q227	***How long has/had this person been living in this other place?***	**Years**	yrs	yrs	yrs	yrs	yrs	yrs	yrs	yrs
		Since birth (Goto Q230)	995	995	995	995	995	995	995	995
		Don't know	998	998	998	998	998	998	998	998
Q228	***What type of place is/was his/her previous place of residence?***	**Large town or city**	1	1	1	1	1	1	1	1
		Small town	2	2	2	2	2	2	2	2
		Growth point	3	3	3	3	3	3	3	3
		Commercial estate / mine	4	4	4	4	4	4	4	4
		Roadside business centre	5	5	5	5	5	5	5	5
		Rural business centre	6	6	6	6	6	6	6	6
		Communal / resettlement	7	7	7	7	7	7	7	7
Q229	***Why did he/she move/come to this area?***	**Work**	1	1	1	1	1	1	1	1
		Partner's work	2	2	2	2	2	2	2	2
		Marriage	3	3	3	3	3	3	3	3
		Lost job	4	4	4	4	4	4	4	4
		Establish rural home	5	5	5	5	5	5	5	5
		Ill health - own	6	6	6	6	6	6	6	6
		Care for sick relative	7	7	7	7	7	7	7	7
		Visit relatives	9	9	9	9	9	9	9	9
		Care for own children	11	11	11	11	11	11	11	11
		Care for relative's children	12	12	12	12	12	12	12	12
		Other	18	18	18	18	18	18	18	18
Q230	***Did (CHILD) move to this area before, at the same time as, or after the parent or caregiver?***	**Before** (Goto Q201)	1	1	1			1		
		Same time (Goto Q201)	2	2	2			2		
		After (Goto Q201)	3	3	3			3		
		Child always here (Goto Q201)	4	4	4			4		
		Not applicable (Goto Q201)	97	97	97			97		
		Don't know (Goto Q201)	98	98	98			98		

Questions to be addressed to the Child's Primary Caregiver.

REF.	QUESTIONS & FILTERS	CODING CATEGORIES		SKIP TO
Q301	*Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?*	Can trust people Cannot trust people	1 2	
Q302	*Would you say that, most of the time, people try to be helpful, or are they are mostly just looking after themselves?*	People helpful People not helpful	1 2	
Q303	*Which of the following groups exist in your home area and which are you a member of?* **For those where he/she is a member:** *Would you say that this group functions: (1) well; (2) OK; or (3) poorly?*	Church groups Women's groups Co-operative Farmers group Burial society Savings club (RCS) Youth group Sports club AIDS group Political party Traditional/cultural	1 2 3 4 5 6 7 8 9 10 11	Exist / Member Rating
Q304	*What is the principal activity of the group you spend the most time with?*	Code from Q303 None	 99	- Q401
Q305	*Do group members discuss: (1) formally; (2) informally; or (3) both?* *Do members of the group advise each other on how to avoid HIV/AIDS in either formal or informal discussions?*	Formally Informally Both None	1 2 3 4	Meet / HIV
Q306	*How often does the group meet?*	Weekly Monthly Less often	1 2 3	
Q307	*Is the group sponsored by a church, school, political party, NGO or other organisation?* Record name of organisation:	Church School Political party NGO Employer Other	1 2 3 4 5 8	
Q308	*What proportion of the group are:* *(1) Male?* *(2) Aged under 20 years?* *(3) Married?* *(4) Have received secondary education?*	Record as %s.		%
Q309	*Does the group assist or meet with:* *(1) Other groups of the same type?* *(2) Other groups of different types?* *(3) Other members of the community?*			Assists / Meets / Neither 1 / 2 / 3 1 / 2 / 3 1 / 2 / 3
Q310	*How many members of the group consume alcohol during or after the meetings?*	All or most Some None or very few	1 2 3	
Q311	*Are the group meetings generally co-operative or conflictual?*	Co-operative Conflictual	1 2	
Q312	**Record details of others present at this point.**	Children under 10 Husband/wife Other males Other females		Yes / No 1 / 2 1 / 2 1 / 2 1 / 2

Questions to be addressed to the Child's Primary Caregiver.

REF.	QUESTIONS & FILTERS	CODING CATEGORIES	BOYS	GIRLS	SKIP TO
Q401	*How many boys and girls under the age of 18 years stay in this homestead?*				
Q402	*How many of these boys and girls are being looked after by you and how many are being looked after by other members of the household?* Check totals agree with Q401.	Respondent Other members			
Q403	*How many of the boys and girls that you are looking after have:* *(a) Both parents alive* *(b) Father died, mother alive* *(c) Father alive, mother died* *(d) Both parents died* Check totals agree with Q402.	Totals			
Q404	Fill in Child-Carer History Form. Start with current Index Child. Check that number of children listed as staying in same homestead agrees with Q402.	Done			
Q427	*How many of the boys and girls that other household members look after have:* *(a) Both parents alive* *(b) Father died, mother alive* *(c) Father alive, mother died* *(d) Both parents died* Check totals agree with Q402.	Totals	BOYS	GIRLS	
Q428	*How many siblings does (CHILD) have who are still alive?* n.b.: "sibling" here is a child born to the same father and mother.	Number None			- Q430
Q429	*How many of these siblings are staying in the following locations:* "Roadside" here means tarred road. Check totals agree with Q428.	In this homestead Large city or town Growth point Commercial estate/mine Roadside business centre Rural business centre Communal/resettlement Totals			
Q430	*How many siblings did (CHILD) have who died in the last 3 years when they were under 18 years old?*	Number None			- Q432
Q431	*List first names of deceased siblings and record:* *(a) Highest education level reached* *(b) Age at death* *(c) Year of death* Sex: 1. Male; 2. Female Education level: 0. None 1. Primary 2. Secondary Education years: years reached at this level		Name	Sex	Education: Lev / Yrs	Death details: Age / Year

Children cared for primarily by the respondent in the last 3 years - n.b.: excluding other children staying in the same homestead as the carer who are looked after mainly by other household members.

LINE NO	CHILD'S NAME: FIRST (GIVEN) NAME	FAMILY NAME	RELATIONSHIP (respondent to child)	DATE OF BIRTH	AGE	SEX	PARENTS HEALTH/SURVIVAL: Father Health	Father Yr died	Mother Health	Mother Yr died	EDUCATION: Highest grade completed		Still in school	Fees paid by which relative?	CARE DETAILS: Period of care In	Period of care Out	Location of care From	Location of care To	Why moved In	Why moved Out	CURRENT CAREGIVER (relationship)
Q405	Q406	Q407	Q408	Q409	Q409A	Q410	Q411	Q412	Q413	Q414	Q415	Q416	Q417	Q418	Q419	Q420	Q421	Q422	Q423	Q424	Q425	Q426
				Mth / Yr	Years	M / F	H S D DK		H S D DK		Lev	Yrs	Y N DK	Rel code	Caregiver?	Mth Yr	Mth Yr					
1	INDEX CHILD			/		1 2	1 2 3 98		1 2 3 98				1 2 98		Y(1) N(2)	/	/					
2				/		1 2	1 2 3 98		1 2 3 98				1 2 98		Y(1) N(2)	/	/					
3				/		1 2	1 2 3 98		1 2 3 98				1 2 98		Y(1) N(2)	/	/					
4				/		1 2	1 2 3 98		1 2 3 98				1 2 98		Y(1) N(2)	/	/					
5				/		1 2	1 2 3 98		1 2 3 98				1 2 98		Y(1) N(2)	/	/					
6				/		1 2	1 2 3 98		1 2 3 98				1 2 98		Y(1) N(2)	/	/					
7				/		1 2	1 2 3 98		1 2 3 98				1 2 98		Y(1) N(2)	/	/					
8				/		1 2	1 2 3 98		1 2 3 98				1 2 98		Y(1) N(2)	/	/					
9				/		1 2	1 2 3 98		1 2 3 98				1 2 98		Y(1) N(2)	/	/					
10				/		1 2	1 2 3 98		1 2 3 98				1 2 98		Y(1) N(2)	/	/					
11				/		1 2	1 2 3 98		1 2 3 98				1 2 98		Y(1) N(2)	/	/					
12				/		1 2	1 2 3 98		1 2 3 98				1 2 98		Y(1) N(2)	/	/					
13				/		1 2	1 2 3 98		1 2 3 98				1 2 98		Y(1) N(2)	/	/					
14				/		1 2	1 2 3 98		1 2 3 98				1 2 98		Y(1) N(2)	/	/					
15				/		1 2	1 2 3 98		1 2 3 98				1 2 98		Y(1) N(2)	/	/					
16				/		1 2	1 2 3 98		1 2 3 98				1 2 98		Y(1) N(2)	/	/					
17				/		1 2	1 2 3 98		1 2 3 98				1 2 98		Y(1) N(2)	/	/					
18				/		1 2	1 2 3 98		1 2 3 98				1 2 98		Y(1) N(2)	/	/					

RELATIONSHIP

1	Natural father
2	Natural mother
3	Father's new/co-wife
4	Sister
5	Brother
7 6	Aunt - paternal/maternal
9 8	Uncle - paternal/maternal
11/10	Grandmother - paternal/maternal
13/12	Grandfather - paternal/maternal
15/14	Cousin - paternal/maternal
16	Other relation(specify)
17	No relation

HEALTH/MORTALITY

1	H(ealthy)
2	S(ick)
3	D(ied)
98	D(on't) K(now)

LOCATION

1	Urban
2	Rural
3	Estates (tea,coffee,forestry)
4	Mines
98	Don't know

SCHOOL LEVELS

0	None
1	Primary
2	Secondary
3	Higher

MOVE REASONS

1/2	Father/mother became ill
3/4	Father/mother died
5/6	Father/mother lost job
7	Caregiver(other) ill
8	Caregiver(other) died
9/10	Father/mother remarried
11/12	Father/mother left for new area
13	Caregiver had to look after sick relative
14	To attend school near caregiver's residence
15	Move to a new school (e.g. primary to secondary)
16	Left school - insufficient funds to pay fees
17	Left school - expelled (pregnancy etc.)
18	Left school - failed exams
19	Left school - other (specify)
20	Child married
21	Other (specify)

Questions to be addressed to the child's Primary Caregiver.

REF.	QUESTIONS & FILTERS	CODING CATEGORIES		SKIP TO
Q432	*When did (CHILD) start staying with you?*		month [ ] year [ ]	
Q433	*Before (CHILD) came to stay with you, where was he/she staying?* Record name of place below.	In this homestead	1	
		Locally	2	
		Harare	3	
		Mutare	4	
		Rusape	5	
		Other town	6	
		Small town/growth point	7	
		Estate/mine(commercial)	8	
		Roadside business centre	9	
		Rural business centre	10	
		Communal/resettlement	11	
Q434	*What was the reason that (CHILD) left his/her previous caregiver?*	Father ill	1	
		Mother ill	2	
		Father died	3	
		Mother died	4	
		Father lost job	5	
		Mother lost job	6	
		Caregiver (other) became ill	7	
		Caregiver (other) died	8	
		Father remarried	9	
		Mother remarried	10	
		Father left for new area	11	
		Mother left for new area	12	
		Caregiver had to look after sick relative	13	
		Attend school near caregiver's residence	14	
		Move to new school	15	
		Left school-insufficient funds to pay fees	16	
		Left school-expelled (pregnancy etc.)	17	
		Left school-failed exams	18	
		Left school-other(specify)	19	
		Child married	20	
		Other(specify)	21	
Q435	*Which was the most important factor in the family's decision to place (CHILD) in this particular homestead?* If (CHILD) was already resident here, ask why they decided to keep him/her here.	Live with most suitable caregiver	1	
		Cost of living in locality	2	
		Availability of living space	3	
		Household relatively well-off	4	
		Close to a good school	5	
		Other (specify)	8	
Q436	*Which was the most important factor in the family's decision to place (CHILD) with you (i.e. the caregiver)?*	Relationship to child	1	
		Residence in rural household	2	
		Ability to cope with the task	3	
		Experience of child care	4	
		Other (specify)	8	
Q437	*Were you consulted before it was decided that (CHILD) should come to stay with you?*	Yes	1	
		No	2	
Q438	*Was (CHILD) consulted before it was decided that he/she should come to stay with you?*	Yes	1	
		No	2	

Questions to be addressed to the Child's Primary Caregiver.

REF.	QUESTIONS & FILTERS	CODING CATEGORIES		SKIP TO
			Before *Since*	
Q439	*Do / did you have regular contact with (CHILD'S) natural parents before and since he/she came to stay with you?*	Yes No Own natural child Both parents died	1 1 2 2 3 3 4 4	
Q440	*Does (CHILD) stay in your (or your spouse's) own homestead or is the homestead owned by somebody else?*	Yes No	1 2	
Q441	*Are you or your spouse the head of the household in which (CHILD) stays?*	Yes - self Yes - spouse No	1 2 3	
Q442	*Do you (or your spouse) provide food for (CHILD) on a day-to-day basis?*	Yes No	1 2	
Q443	*Who makes the largest contribution within the family to growing and/or paying for (CHILD'S) food?* Enter the line number of the relative from the Extended Family & Household Members Questionnaire (page ii).	EF&HMQ line number Other (specify) _____	96	
Q444	*Has (CHILD) been sick in the last 12 months?* Daily activities are activities such as playing with other kids, going to school etc. If CHILD has been with the caregiver for less than 12 months, ask for the time they have stayed together.	Yes - not able to perform daily activities Yes - able to perform daily activities No	1 2 3	- Q447
Q445	*Did you care for (CHILD) when he/she was sick on a day-to-day basis?*	Yes No	1 2	
Q446	*Who within the family paid the most towards the costs of (CHILD'S) treatment?* See Q443.	EF&HMQ line number Other (specify) _____ No treatment sought	96 3	
Q447	*Did you (or your spouse) pay for (CHILD'S) school fees for last term?*	Yes - self Yes - spouse No - paid by someone else No - fees not paid Child out of school	1 2 3 4 99	
Q448	*Who within the family paid the most towards the costs of (CHILD'S) school fees in the last 12 months?* See Q443.	EF&HMQ line number PLAN International BEAM Other (specify) _____ No - fees not paid Child out of school	91 92 96 97 99	
Q449	*Who within the family paid the most towards the costs of (CHILD'S) school uniform and equipment in the last 12 months?* See Q443.	EF&HMQ line number PLAN International BEAM Other (specify) _____ No - fees not paid Child out of school	91 92 96 97 99	

Questions to be addressed to the Child's Primary Caregiver.

REF.	QUESTIONS & FILTERS	CODING CATEGORIES		SKIP TO
Q450	*Have you (or your spouse) bought a pair of shoes for (CHILD) in the last 12 months?*	Yes No	1 2	
Q451	*Who within the family paid the most towards the costs of (CHILD'S) clothing in the last 12 months?* See Q443.	EF&HMQ line number Other (specify) _____ No - no clothes bought	96 97	
Q452	Note EF&HMQ line numbers of adult relatives (CHILD) visited for more than one week in the last 6 months.			
Q453	*Did the household as a whole receive assistance in the last 6 months from a non-family source because orphaned children stay here?*	Yes No No orphans in homestead I.e.: assistance that *all children* staying in the homestead benefited from.	1 2 8	- Q455 - Q455
Q454	*Which organizations were these and what forms of assistance did they provide?* Enter organization codes from the list below. Children's school fees Children's school clothing & equipment Healthcare costs Clothing (not for school) Blankets Food Agricultural inputs (seed, fertilizer etc.) Other (specify) _____ Donor codes 1. PLAN International 2. World Vision 3. Red Cross 4. Catholic Relief Service 8. Other (specify) _____ NGO codes 11. FACT 12. FOST 13. Africare 18. Other (specify) "Chief": i.e.: general community assistance.	Gov't Donor NGO CBO Chief CBO codes 21. Church 22. Women's group 23. Co-operative 24. Farmers group 25. Burial society 26. Savings club 27. Youth group 28. Sports club 29. AIDS group 30. Political party		
Q455	*Did the household receive assistance exclusively for the support of this child from a non-family source in the last 6 months?*	Yes No	1 2	- Q501
Q456	*Which organizations were these and what forms of assistance did they provide?* Enter organization codes from Q454 as appropriate. Children's school fees Children's school clothing & equipment Healthcare costs Clothing (not for school) Blankets Food Agricultural inputs (seed, fertilizer etc.) Other (specify) _____	Gov't Donor NGO CBO Chief		
Q457	*What criteria were applied to decide whether this child should be given assistance?* Prompt & tick all those that apply.	Gov't Donor NGO CBO Chief Household income Double orphan Maternal orphan Any orphan Child malnurished Child sick Child's age <15 Child's sex Child-headed household Other (specify) Don't know		

Questions to be answered by the Child with assistance from the Primary Caregiver where necessary (e.g.: if the Child is under 7 yrs).

REF.	QUESTIONS & FILTERS	CODING CATEGORIES		SKIP TO
Q501	Record gender of CHILD.	Male Female	1 2	
Q502	*In what month and year were you born?*		month / year	
Q503	*How old were you at your last birthday?* Check consistency with Q502.	Age in completed years	years	
Q504	*What is the name of your natural father?*	_____		
Q505	Confirm identity of natural father on birth certificate or other official document.	Birth certificate Other (specify) _____ No official document	1 2 97	
Q506	*Is your natural father still alive?*	Yes No Don't know	1 2 98	- Q508
Q507	*In which year did he die?*	Year of death Don't know	 98	
Q508	*What is the name of your natural mother?*	_____		
Q509	Confirm identity of natural mother on birth certificate or other official document.	Birth certificate Other (specify) _____ No official document	1 2 97	
Q510	*Is your natural mother still alive?*	Yes No Don't know	1 2 98	- Q512
Q511	*In which year did she die?*	Year of death Don't know	 98	
Q512	Record the following details on the child's Life History form (next page): (a) Father's health/mortality status (b) Father's employment status (c) Mother's health/mortality status (d) Mother's employment status			
Q513	Record the child's residence history on the Life History form.			
Q514	Record the child's head of household & primary caregiver details at each age on the Life History form.			
Q515	*Were there any times in your life when:* *(1) There was no adult living with you where you were staying?* *(2) You were living in a children's home or an orphanage?* *(3) You were living on the streets?* An adult for this purpose would be someone aged 18 years or above.	Yes No Yes No Yes No	Ever? / Age first? / Total time 1 / 2 — yrs 1 / 2 — yrs / 1 / 2 — yrs 1 / 2 — yrs	
Q516	In the second column of Q515, record the age when each experience first occurred.			
Q517	In the third column of Q515, record the total time CHILD has spent in each of these situations.			

Ask Child and Primary Caregiver to describe the Child's circumstances at each successive birthday.

REF.	CHILD'S CIRCUMSTANCE	CHILD'S BIRTHDAY																	
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Q512	Father's health/mortality status																			
Q512	Father's employment status																			
Q512	Mother's health/mortality status																			
Q512	Mother's employment status																			
Q513	Location of residence																			
Q513	Reason for moving residence																			
Q514	Head of household (relationship to child)																			
Q514	Primary caregiver (relationship to child)																			
Q514	Caregiver (Paternal or Maternal relative)																			
Q514	Reason for changing caregiver																			
Q518	School level at birthday (incl repeats)																			
Q518	School grade/form at birthday (incl repeats)																			
Q543	School location																			
Q544	Reason for change of school																			
Q545	Principal school fee payer (relationship)																			

HEALTH/MORTALITY
1. H(ealthy)
2. S(ick)
3. D(ied)
98 D(on't) K(now)

EMPLOYMENT
1. Estates: tea, coffee, forestry ...
2. Manufacturing or building trade
3. Police or army
4. Education
5. Health sector
6. Services or retail shops
7. Informal: petty trading (veg etc.)
8. Informal: subsistence agriculture
9. Student
10. Unemployed (excluding agriculture)
11. Other (specify)

HOUSEHOLD HEAD / CAREGIVER / SCHOOL FEE PAYER: RELATIONSHIP TO CHILD
1. Natural parent
2. Father's new/co-wife
3. Sister
4. Brother
5. Aunt
6. Uncle
7. Grandmother
8. Grandfather
9 Cousin
10. Other relation
11. No relation
12. NGO
13. BEAM/Government

RESIDENCE
1. Katiyo
2. ELITE
3. Bonda Mission
4. Honde Mission
5. Selborne
6. Sheba
7. Nyazura
8. Nyanga
9. Watsomba
10. Nyabadza/Nyahukwe
11. St. Killians Mission
12. St Theresa's Mission
13. Harare
14. Mutare
15. Rusape
16. Other

RESIDENCE / SCHOOL CHANGE: REASONS
1. Father became ill
2. Mother became ill
3. Father died
4. Mother died
5. Father lost job
6. Mother lost job
7. Caregiver (other) became ill
8. Caregiver (other) died
9. Father remarried
10. Mother remarried
11. Father left for another area
12. Mother left for another area
13. Caregiver had to look after a sick relative
14. To attend school near caregiver's residence
15. Move to a new school (e g.: primary or secondary
16. Left school - insufficient funds to pay fees
17. Left school - expelled (pregnancy etc.)
18. Left school - failed exams
19. Left school - other (specify)
20. Child married
21. Other (specify)

SCHOOL CODES
0. None
1. Primary
2. Secondary
3. Higher

G1 .. Primary school grades
F1 ... Secondary school grades

SCHOOL LOCATION
1. Urban
2. Rural - subsistence farming
3. Rural - estates (tea/coffee/forestry ...)
4. Mines
98. Don't know

Questions to be answered by the Child with assistance from the Primary Caregiver where necessary (e.g.: if the Child is under 7 yrs).

REF.	QUESTIONS & FILTERS	CODING CATEGORIES			SKIP TO
Q518	Record the child's school level and grade on at each birthday on the Life History Form showing even repeats.				
Q519	*Are you currently enrolled in school?*	Yes No	1 2		- Q521
Q520	*Why are you not in school?*	Insufficient funds Found job Inadequate exam passes Needed to help at home Marriage Pregnancy/childbirth - voluntarily Pregnancy - expelled Expelled from school (other) Had to look after a sick relative Other (specify)	1 2 4 5 6 7 8 10 12 11		- Q526 - Q526 - Q526 - Q526 - Q526 - Q526 - Q526 - Q526 - Q526 - Q526
Q521	*Did you miss school for more than one week at a time during the last 12 months?*	Yes No	1 2		- Q523
Q522	*What was the main reason for your missing school?*	Fees not paid Needed at home - care for sick relative Needed at home - care for young children Needed at home - to work in fields Suspended from school (self) Illness (self) Didn't feel like going (self) To give brother/sister chance Working to raise fees No school in new area Other (specify)	1 2 3 4 5 6 7 8 9 10 11		
Q523	*Do you possess the correct school uniform for the school you are attending?*	Yes No	1 2		- Q526
Q524	*Was the uniform new when it was given to you or had it been used before?*	New Second-hand	1 2		
Q525	*How many years old is the uniform now?*	Years			
Q526	*What is the highest grade of school that you have completed successfully?*		Level	Grade/Form	
		None	0		- Q528
		Primary	1	1-7	then Q533
		Secondary	2	1-6	
		Higher	3		- Q531
Q527	*How many times have you had to repeat a grade or form?*	No. of repeats			
Q528	*Can you read a letter or newspaper in any language?*	Yes No	1 2		
Q529	*Did you obtain a pass in the Grade 7 exam?*	Yes No	1 2		
Q530	If child is under 15 years of age, go to Q543.				
Q531	*How many "O" level passes do you have?*	No. of passes			
Q532	*How many "A" level passes do you have?*	No. of passes			
Q533	*Have you obtained any vocational or technical qualifications?* If yes, record the name of the qualification.	Yes No	1 2		

Questions to be answered by the Child with assistance from the Primary Caregiver where necessary (e.g.: if the Child is under 7 yrs).

REF.	QUESTIONS & FILTERS	CODING CATEGORIES		SKIP TO
Q534	*How do you rate your performance in school compared to others of your age?*	Above average Average Below average	1 2 3	
Q535	*What is the highest educational or vocational qualification you expect to achieve?*	No qualifications Grade 7 exam 'O' levels 'A' levels Vocational qualification University degree	1 2 3 4 5 6	- Q537 - Q537
Q536	*Why do you not expect to achieve a vocational qualification or degree?*	Insufficient funds for fees etc. Expect to get a job first Inadequate exam passes Leave school to look after a sick relative Don't know Other (specify)	1 2 3 4 98 8	
Q537	*Can the risk of HIV infection be reduced by having sex with only one faithful, uninfected partner?*	Yes No	1 2	
Q538	*Can the risk of HIV infection be reduced by using condoms?*	Yes No	1 2	
Q539	*Can a healthy-looking person have HIV?*	Yes No	1 2	
Q540	*Can a person get HIV from mosquito bites?*	Yes No	1 2	
Q541	*Can a person get HIV by sharing a meal with someone who is infected?*	Yes No	1 2	
Q542	*Are people like yourself getting infected with HIV at the moment?*	Yes No	1 2	
Q543	*Do you think you might already be infected with HIV yourself?*	Yes No	1 2	- Q545
Q544	*How do you think you might have got infected?* Indicate most likely way.	Infected at birth From a sexual partner Mosquito bite Shared utensils Other (specify)	1 2 3 4 8	
Q545	*Do you think there are things you can do which will prevent you from getting infected in the future?*	Yes No	1 2	
Q546	Enter school location at each birthday on Life History Form.			
Q547	Enter reasons for each change of school on the Life History Form.			
Q548	Enter the details of the principal fees payer at each age for the child on the Life History Form.			

Questions to be answered by the Child with assistance from the Primary Caregiver where necessary (e.g.: if the Child is under 7 yrs).

REF.	QUESTIONS & FILTERS	CODING CATEGORIES			SKIP TO
Q549	*Are there any other children of school-going age (6-18 yrs) staying with you in your homestead?*	Yes No Don't know	1 2 98	____	- Q552 - Q552
Q550	*How many of these children are your siblings?* i.e.: both natural parents are the same.	Brothers Sisters None of either		____ ____ ____	- Q552
Q551	*How many of these siblings are having their school fees paid for by:* _____ _____ Check total agrees with Q550.	Father Mother Father/mother's pension Grandmother (maternal) Grandmother (paternal) Brother / sister Uncle / aunt (paternal) Uncle / aunt (maternal) Cousin Other relative NGO (record name) BEAM / Government Other (specify) Not yet started school Left school		Brothers Sisters ____	
Q552	Note whether the child is aged 7 yrs or above.	Under 7 7 or over	1 2	____	- Q555
Q553	*For how many months was the child breastfed after he/she was born?*	Months Don't know		____ ____	
Q554	*Did anyone other than the child's natural mother ever feed the child at the breast?*	Yes No Don't know	1 2 98	____	
Q555	*Do you have a card where (CHILD'S) vaccinations are written down?*	Yes - seen Yes - not seen No	1 2 3	____	- Q557 - Q557
Q556	Copy vaccination date for each vaccination from the card. Write "44" in "Day" column if card shows vaccination done but no date.	BCG Polio 1 Polio 2 Polio 3 Diptheria 1 Diptheria 2 Diptheria 3 Measles		Day Month Year ____	
Q557	*Please tell me if (CHILD) ever received a BCG vaccination against tuberculosis (TB) - that is, an injection in the right arm or shoulder?*	Yes No Don't know	1 2 98	____	

Questions to be answered by the Child with assistance from the Primary Caregiver where necessary (e.g.: if the Child is under 7 yrs).

REF.	QUESTIONS & FILTERS	CODING CATEGORIES		SKIP TO
Q558	*Please tell me if (CHILD) ever received a polio vaccination - that is, drops in the mouth?*	Yes No Don't know	1 2 98	
Q559	*Please tell me if (CHILD) ever received a diptheria (DPT) vaccination - that is, an injection given in the thigh, sometimes at the same time as polio drops?*	Yes No Don't know	1 2 98	
Q560	*Please tell me if (CHILD) ever received an injection to prevent measles?*	Yes No Don't know	1 2 98	
Q561	*Is (CHILD) ill with a fever or diarrhoea today?*	Yes No Don't know	1 2 98	
Q562	*Has (CHILD) been ill with a fever or diarrhoea at any time in the last 2 weeks?*	Yes - fever Yes - diarrhoea Yes - both Neither	1 2 3 4	- Q567
Q563	*Did you seek advice or treatment for the illness?*	Yes No	1 2	- Q567
Q564	*Where did you seek advice or treatment?* Tick main / most used place.	Hospital Clinic VCW Pharmacy N'anga Faith healer Private doctor Other (specify)	1 2 3 4 5 6 7 8	
Q565	*Was any drug or other treatment prescribed?*	Yes No	1 2	- Q567
Q566	*Was the full course of treatment acquired and given to the child?*	Yes No	1 2	
Q567	*Were you admitted to hospital?*	Yes No	1 2	
Q568	*In the last few months have you been in good health, experienced recurring minor illnesses or been seriously ill?*	Good health Recurring sickness Serious illness	1 2 3	
Q569	*How long is it since you last experienced an illness?*	Days/weeks More than one year ago	days weeks 97	- Q572
Q570	*What was the main symptom of the illness?*	Fever - malaria (incl. cerebral) Fever - non-malaria Sickness/vommiting Diarrhoea/weight loss Swollen lymph nodes Skin complaints/rashes Genital conditions: incl. STDs Flu/pneumonia Accident/wound Tuberculosis Kaposi's sarcoma Other (specify)	1 2 3 4 5 6 7 8 9 10 11 12	

Questions to be answered by the Child with assistance from the Primary Caregiver where necessary (e.g.: if the Child is under 7 yrs).

REF.	QUESTIONS & FILTERS	CODING CATEGORIES		SKIP TO
Q571	*Where did you seek assistance?* Tick main / most used place.	Hospital - admitted	11	
		Hospital - not admitted	12	
		Clinic	2	
		VCW	3	
		Pharmacy	4	
		N'anga	5	
		Faith healer	6	
		Private doctor	7	
		Other (specify)	10	
		None	99	
Q572	*How many days during the last seven days were you given the following to eat?*	Fresh cow or goat milk		
		Commercially prepared baby formula		
		Tinned, powdered of other milk		
		Fruit juice		
		Sadza, porridge, bread or thin gruel		
		Pumpkin, squash, sweet potatoes or carrots		
		Potatoes or other food made from tubers		
		Green leafy vegetables		
		Mango or pawpaw		
		Other fruits - oranges, bananas or tomatoes		
		Beans, groundnuts or peanut butter		
		Meat, poultry, fish or eggs		
		Cheese or yoghurt		
Q573	Record which of the following the Child had to eat at each meal time yesterday. Fresh cow or goat milk Commercially prepared baby formula Tinned, powdered of other milk Fruit juice Sadza, porridge, bread or thin gruel Pumpkin, squash, sweet potatoes or carrots Potatoes or other food made from tubers Green leafy vegetables Mango or pawpaw Other fruits - oranges, bananas or tomatoes Beans, groundnuts or peanut butter Meat, poultry, fish or eggs Cheese or yoghurt Other (specify)		B'fast	Lunch / Dinner
			1	1
			2	2
			3	3
			4	4
			5	5
			6	6
			7	7
			8	8
			9	9
			10	10
			11	11
			12	12
			13	13
			88	88
Q574	*Have you gone to bed hungry any night in the last week?*	Yes	1	
		No	2	
		Don't know	98	
Q575	Measure and record Child's weight in kilograms.	Kgs		
		Refused		
Q576	Measure and record Child's height in centimetres.	Cms		
		Refused		
Q577	Measure and record skinfold thickness in centimetres.	Cms		
		Refused		
Q578	Take and record the child's temperature. in degrees celcius.	Degrees celcius		
		Refused		

Questions to be answered by the Child (ages 7 years & above) in the *absence* of the Primary Caregiver.

REF.	QUESTIONS & FILTERS	CODING CATEGORIES		SKIP TO
Q601	*Have you ever worked to earn money outside of the household?*	Yes No	1 2	- Q603
Q602	*Which of these forms of work have you done?*		*Yes* *No*	
		Selling vegetables / other petty trading	1 2	
		Working for another family in the fields	1 2	
		Working on an estate	1 2	
		Working in a shop	1 2	
		Other formal sector employment (specify)	1 2	
		Other (specify)	1 2	
Q603	*Which of these duties have you performed in the homestead?*		*Yes* *No*	
		Work in the fields	1 2	
		Childcare	1 2	
		Caring for sick relatives	1 2	
		Cleaning	1 2	
		Cooking meals	1 2	
		Fetching firewood	1 2	
Q604	*How many hours have you spent working in the fields in the last week?*	Hours		
Q605	*Do you have a pair of shoes?*	Yes No	1 2	- Q608
Q606	*Were these shoes new when they were given to you?*	New Second hand	1 2	
Q607	*How many years old are your newest pair of shoes now?*	Years		
Q608	*In the last week, have you gone to school without having had anything to eat?* If on holiday, ask for last week at school.	Yes No	1 2	
Q609	*Have you received any form of punishment from an adult in your household in the last month?*	Yes No	1 2	- Q611
Q610	*What form of punishment did you receive?*	Missed meal(s) Early bed Toys confiscated Beating Housework Other (specify)	1 2 3 4 5 8	
Q611	*Have you been beaten by an adult member of your household in the last month?*	Yes No	1 2	- Q613
Q612	*On how many different occasions have you been beaten in the last month?*	No. of times		
Q613	*Overall, are you treated: (i) better; (ii) the same; or (iii) worse than other children of your age and sex who live in the same household?*	Better Same Worse	1 2 3	- Q616 - Q616
Q614	*What do you think is the reason that you are treated less well?*	Orphan Foster child (not orphan) Other (specify)	1 2 8	
Q615	*In what ways are you treated less well?* Prompt: ask each in turn.		*Yes* *No*	
		Given more/worse chores	1 2	
		Punished more often	1 2	
		Less food	1 2	
		Less pocket money	1 2	
		Fewer/older clothes	1 2	
		Other (specify)	1 2	
Q616	Note whether child is aged 15 or above.	Under 15 15 or over	1 2	- Q701

Questions to be answered by the Child (ages 15 years & above) in the *absence* of the Primary Caregiver.

REF.	QUESTIONS & FILTERS	CODING CATEGORIES		SKIP TO
Q617	*Have you ever smoked cigarettes or tobacco?*	Yes No	1 2	- Q619
Q618	*In the last 24 hours, how many times did you smoke?*	No. of times		
Q619	*Have you ever had an alcoholic drink?*	Yes No	1 2	- Q621
Q620	*In the last week, how many alcoholic drinks have you had?*	No. of times		
Q621	If respondent is male, go to Q623.			
Q622	*Have you ever experienced a pregnancy?*	Yes No	1 2	
Q623	*How many times have you had sexual intercourse in the last month?*	No. of times (>0) None	 999	- Q625
Q624	*Have you ever had sexual intercourse?*	Yes No	1 2	- Q626
Q625	*How old were you when you first had sex?*	Age (years)	yrs	
Q626	*On the first occasion you had sex, how old was the person you had sex with?*	Age (years)	yrs	
Q627	*The first time you had sex, was it voluntary or were you forced?*	Voluntary Forced No response / don't know	1 2 8	
Q628	*How many different sexual partners have you had in your lifetime?*	No. of partners		
Q629	*Have you ever received or given money in exchange for sex?*	Yes No	1 2	
Q630	*Have you ever been married or in a long-term or cohabiting relationship?* Relationships of 12 months or more should be treated as "long-term".	Yes No	1 2	- Q633
Q631	*How old were you when you first became married?*	Age (years)	yrs	
Q632	*Are you currently widowed, divorced or separated from your most recent spouse/partner?*	Widowed Divorced Separated Still in union	1 2 3 4	
Q633	For males: *Some men experience pain during urination or have a discharge from the penis. Have you ever noticed such a discharge or pain?* For females: *Some women experience an unusual discharge from the vagina or pain in the lower stomach. Have you ever noticed such a discharge or pain?*	Yes - discharge & pain (both) Yes - discharge only Yes - pain only No Don't know Clarify which & tick boxes as appropriate.	1 2 3 4 98	
Q634	*Some (wo)men experience sores in the genital area. Have you ever noticed any such sores?*	Yes No	1 2	
Q635	*Last time this happened, how many days was it from the time you first noticed the symptoms to the time you sought treatment at a hospital of clinic?*	Less than 7 days 7 days or more Never sought medical treatment	1 2 98	- Q701
Q636	*Why did you delay before seeking medical treatment?*	Medical services not effective Could not afford STDs not serious Other (specify)	1 2 3 4	

Questions to be answered *separately* by the Child alone (ages 12 & above) and also by the Primary Caregiver (all ages).
I.e.: where children are aged 12-15, the questions should be addressed (separately) to both the Child and the Primary Caregiver.
When put to the Caregiver, the questions should be rephrased into the third person (e.g.: does the Child have trouble sleeping? etc.)

REF.	QUESTIONS & FILTERS	CODING CATEGORIES	Child	Caregiver	SKIP TO
Q701	*Do you often have headaches?*	Yes No	1 2	1 2	
Q702	*Is your appetite poor?*	Yes No	1 2	1 2	
Q703	*Do you sleep badly?*	Yes No	1 2	1 2	
Q704	*Are you easily frightened?*	Yes No	1 2	1 2	
Q705	*Do your hands shake?*	Yes No	1 2	1 2	
Q706	*Do you feel tense, nervous or worried?*	Yes No	1 2	1 2	
Q707	*Is your digestion poor?*	Yes No	1 2	1 2	
Q708	*Do you have trouble thinking clearly?*	Yes No	1 2	1 2	
Q709	*Do you cry more than usual?*	Yes No	1 2	1 2	
Q710	*Do you feel more unhappy than usual?*	Yes No	1 2	1 2	
Q711	*Do you find it difficult to enjoy your daily activity?*	Yes No	1 2	1 2	
Q712	*Do you find it difficult to make decisions?*	Yes No	1 2	1 2	
Q713	*Is your daily work suffering?*	Yes No	1 2	1 2	
Q714	*Are you able to play a useful part in life?*	Yes No	1 2	1 2	
Q715	*Have you lost interest in things?*	Yes No	1 2	1 2	
Q716	*Do you feel a worthless person?*	Yes No	1 2		
Q717	*Has the thought of ending your life been in your mind?*	Yes No	1 2		
Q718	*Do you feel tired all the time?*	Yes No	1 2		
Q719	*Do you have uncomfortable feelings in your stomach?*	Yes No	1 2	1 2	
Q720	*Are you easily tired?*	Yes No	1 2	1 2	

Questions to be answered by the Primary Caregiver (*not* in the presence of the Child).
Re-emphasise confidentiality of information provided.

REF.	QUESTIONS & FILTERS	CODING CATEGORIES		SKIP TO
Q721	*Does the child complain of headaches?*	Yes No	1 2	
Q722	*Does the child frequently have stomach ache or vomitting?*	Yes No	1 2	
Q723	*Does the child complain of biliousness?*	Yes No	1 2	
Q724	*Does the child wet the bed or pants?*	Yes No	1 2	
Q725	*Does child soil or lose control of bowels?*	Yes No	1 2	
Q726	*Does child have temper tantrums?*	Yes No	1 2	
Q727	*Does child ever have tears on arrival at school or refuses to go to school?*	Yes No Not in school	1 2 99	
Q728	*Does the child play truant from school?*	Yes No Not in school	1 2 99	
Q729	*Does the child stammer / stutter?*	Yes No	1 2	
Q730	*Is there any other speech difficulty?*	Yes No	1 2	- Q732
Q731	*What form does the speech difficulty take?*	Liaping Cannot say words properly Other (specify)	1 2 8	
Q732	*Does the child ever steal?*	Yes No	1 2	- Q736
Q733	*Does the stealing involve: (i) minor pilfering; (ii) sums of money; or (iii) stealing of big things?* Tick biggest only.	Minor pilfering Sums of money Stealing big things	1 2 3	
Q734	*Where is the stealing done?*	In the home Elsewhere Both home & elsewhere	1 2 3	
Q735	*How does the child do the stealing?*	On his/her own With other children/adults Sometimes on own, sometimes with others	1 2 3	
Q736	*Is there any eating difficulty?*	Yes No	1 2	- Q738
Q737	*What form does the eating difficulty take?*	Faddiness Not eating enough Eating too much	1 2 3	
Q738	*Is there any sleeping difficulty?*	Yes No	1 2	- Q740
Q739	*What form does the sleeping difficulty take?*	Trouble going to sleep Waking early in the morning Both	1 2 3	

Questions to be answered by the Primary Caregiver *(not* in the presence of the Child).

REF.	QUESTIONS & FILTERS	CODING CATEGORIES		SKIP TO
Q740	*Is the child very restless / often jumping up and down / hardly sitting still?*	Yes No	1 2	
Q741	*Is he/she a squirmy, fidgety child?*	Yes No	1 2	
Q742	*Does he/she often destroy others' belongings?*	Yes No	1 2	
Q743	*Does he/she frequently fight with other children?*	Yes No	1 2	
Q744	*Is he/she much liked by other children?*	Yes No	1 2	
Q745	*Is he/she often worried about many things?*	Yes No	1 2	
Q746	*Does he/she tend to do things on his/her own?*	Yes No	1 2	
Q747	*Is he/she irritable / quick to "fly off the handle"?*	Yes No	1 2	
Q748	*Does he/she appear miserable, unhappy, tearful or distressed?*	Yes No	1 2	
Q749	*Does he/she have twitches, mannerisms or tics of face or body?*	Yes No	1 2	
Q750	*Does he/she frequently suck thumb or finger?*	Yes No	1 2	
Q751	*Does he/she frequently bite nails or fingers?*	Yes No	1 2	
Q752	*Is he/she often disobedient?*	Yes No	1 2	
Q753	*Is he/she unable to settle to anything for more than a few moments?*	Yes No	1 2	
Q754	*Is he/she fearful or afraid of new things or situations?*	Yes No	1 2	
Q755	*Is he/she over-particular or fussy?*	Yes No	1 2	
Q756	*Does he/she often tell lies?*	Yes No	1 2	
Q757	*Does he/she bully other children?*	Yes No	1 2	
Q758	Note whether child is aged over 15 years.	Under 15 15 or over	1 2	• Q801
Q759	*Has he/she ever had sexual intercourse?* Go to next section if Child is male.	Yes No	1 2	• Q801
Q760	*Has she ever been pregnant?*	Yes No	1 2	

Questions to be answered by the Primary Caregiver and Child together.

REF.	QUESTIONS & FILTERS	CODING CATEGORIES	SKIP TO
Q801	Current contact details.	Contact person Telephone number Address Nearest business centre PO Box	
Q802	Local village community worker.	Full name of person Address Nearest business centre	
Q803	School currently attended by Child.	Name of school Address	
Q804	Place Child would be most likely to go if he/she moved to a different caregiver.	Full name of person Telephone number Address Nearest business centre Village/town Nearest school Nearest church Chief	
Q805	Place Caregiver would be most likely to go to if moved from this place. n.b.: This should be different to Q804.	Full name of person Telephone number Address Nearest business centre Village/town Nearest school Nearest church Chief	
Q806	Record details of 2 *other* persons who keep in regular contact with Child and who have *telephones*.		PERSON 1 / PERSON 2
		Full name of person	
		Telephone number	
		Address	
		Village/town	
		Relationship to Child	
Q807	Record respondents' comments on the interview and your own observations in the spaces given below. Give Child token of appreciation.		

CAREGIVER'S COMMENTS

CHILD'S COMMENTS

ENUMERATOR'S COMMENTS Include any extra information that may aid follow-up.

Appendix 2

Manicaland Study Individual Questionnaire (Round 3)

INDIVIDUAL QUESTIONNAIRE

FORM B

MUT3 number:

Questionnaire processing dates:
Consent form
Corrections completed
Data entered

QUESTIONNAIRE IDENTIFICATION

Q101 **Census district:** _____ **EA:** ☐☐☐

Q102 **Village:** _____

Q103 **Name of head of household:** _____

Q104 **Category of respondent:** Date left R2 area | R2 MUTNO ☐☐☐

Q105 **Study site reference:** R2 ☐☐☐

Q106 **Household number:** R2 ☐☐☐

Q107 **Line number on household questionnaire:** R2 ☐☐☐

INTERVIEWER VISIT

		1	2	3
Q108	**Date:**	—	—	—
Q109	**Time:**	—	—	—
Q110	**Interviewer:**	—	—	—
Q111	**Result**:**	☐	☐	☐

CHECKED BY SUPERVISOR

Q112 **Signature:** _____

Q113 **Date:** _____

*RESPONDENT CATEGORY

Follow-up respondent (from R2)	1
New respondent: previously under age	2
New respondent: non-regular visitor	3
New respondent: spouse or co-wife interviewed before	4
New respondent: in-migrant (since R2)	5
New respondent: selected but unavailable R2	6
New respondent: selected but refused R2	7
New respondent: household missed R2	9
New respondent: over age R1 or R2	10
Other (specify) _____	8

**RESULT CODES

Completed	1
Not at home	2
Refused	3
Partially completed	4
Sick/hospital	5
Other (specify) _____	8

REF.	QUESTIONS & FILTERS	CODING CATEGORIES		SKIP TO
Q201	Record the current time (24 hour clock).	Hour / Minutes	__ __	
Q202	Record gender of respondent.	Male Female	1 2	
Q203	*In what month and year were you born?*		__ __ __ __	
Q204	*How old were you at your last birthday?* Check consistency with Q203.	Age in completed years	__	- If 19+, go to Q215
Q205	*Is your natural father still alive?*	Yes No Don't know	1 2 98	- Q209 - Q209
Q206	*In which year did he die?*	Year of death Don't know	__ __ __ __ 98	
Q207	*Were you living with your father on a regular basis when he was:* *(1) in good health; and (2) unwell?*		N/A / Yes / No Well: 1 / 2 Sick: 9 / 1 / 2	
Q208	*Where were you living when your father was:* *(1) in good health?* *(2) unwell?* *(3) after he passed away?*		Well / Sick / Died This household: 1 / 1 / 1 Local household: 2 / 2 / 2 Harare: 3 / 3 / 3 Mutare: 4 / 4 / 4 Rusape: 5 / 5 / 5 Other town (specify): 6 / 6 / 6 Estate / mine (specify): 7 / 7 / 7 Other rural (specify): 8 / 8 / 8 N/A: died in accident: / 99 /	
Q209	*Is your natural mother still alive?*	Yes No Don't know	1 2 98	- Q214 - Q214
Q210	*In which year did she die?*	Year of death Don't know	__ __ __ __ 98	
Q211	*Who was the main person responsible for looking after you when your mother was:* *(1) in good health?* *(2) unwell?* *(3) after she passed away?*		Well / Sick / Died Natural mother: 1 / 1 / 1 Father's new/co-wife: 2 / 2 / 2 Sister: 3 / 3 / 3 Brother: 4 / 4 / 4 Aunt: 5 / 5 / 5 Uncle: 6 / 6 / 6 Grandmother: 7 / 7 / 7 Grandfather: 8 / 8 / 8 Cousin: 9 / 9 / 9 Other relation (specify): 10 / 10 / 10 No relation: 11 / 11 / 11 N/A: died in accident: / 99 /	- Q213 - Q213 - Q213 - Q213
Q212	Record whether these were paternal or maternal relatives.	Paternal Maternal	1 / 1 / 1 2 / 2 / 2	
Q213	*Where were you living when your mother was:* *(1) in good health?* *(2) unwell?* *(3) after she passed away?* Tick one box in each column.		Well / Sick / Died This household: 1 / 1 / 1 Local household: 2 / 2 / 2 Harare: 3 / 3 / 3 Mutare: 4 / 4 / 4 Rusape: 5 / 5 / 5 Other town: 6 / 6 / 6 Estate or mine: 7 / 7 / 7 Other rural: 8 / 8 / 8 N/A: died in accident: / 99 /	

REF.	QUESTIONS & FILTERS	CODING CATEGORIES		SKIP TO
Q214	Record father and/or mother's SITE/HHID/LINE if recorded in the household surveys.	Father Mother Neither	____ ____ 98	
Q215	*Are you currently enrolled in school full-time?*	Yes No	1 2	- Q218
Q216	*How old were you when you left school?*	Age in completed years Never been to school	yrs 99	- Q220
Q217	*What was your reason for leaving school?* If parents decided, probe for the underlying reason.	Insufficient funds Found a job To go to college or university Inadequate exam passes Needed to help at home Marriage Pregnancy/childbirth - voluntarily Pregnancy - expelled Caught having sex - expelled Expelled - other reasons Other (specify)	1 2 3 4 5 6 7 8 9 10 11	
Q218	*How many "O" level passes do you have?*	No. of passes		
Q219	*What is the highest grade of school you have completed?* For "years", enter number of years (excl. repeats) at highest level reached.	None Primary Secondary Higher	Level: 0 1 2 3	Years: 1-7 1-6 1-6 - Q221 1-6 - Q222
Q220	*Can you read a letter or newspaper in any language?*	Yes No	1 2	
Q221	*Did you obtain a pass in the Grade 7 exam?*	Yes No or not attempted	1 2	
Q222	*How long have you been living in this homestead?*	Years Since birth Visitor	yrs 995 996	
Q223	*How far is your homestead from the nearest ... ?*	Town/Growth point Business centre Tarred road	kms.	
Q224	*How long have you been living in (NAME OF VILLAGE)?*	Years Since birth Visitor	yrs 995 996	- Q227
Q225	*What type of place was your previous place of residence?* Record place of current home if the respondent is a visitor. "Roadside" here means a tarred road. Record the name of the place.	Large town or city Small town Growth point Commercial estate/mine Roadside business centre Rural business centre Communal/resettlement area	1 2 3 4 5 6 7	
Q226	*Why did you move/come to this area?*	Work Partner's work Marriage Lost job Establish rural home Ill health - own Ill health - relative (specify) Visit relatives Parents moved Divorced/separated from spouse Other (specify)	1 2 3 4 5 6 7 9 10 11 12	
Q227	*In the last three years, have you lived outside this community for a period of one month or more?*	Yes No Not applicable (visitor: Q224)	1 2 996	- Q229 - Q229

REF.	QUESTIONS & FILTERS	CODING CATEGORIES	SKIP TO

Q228 Record total no of months away & details of longest absence. Use codes from Q225 & Q229.

	Total	Longest Abs.	Place	Reason
Last three years				
Last twelve months				

Q229 *How many days and nights have you spent during the last month visiting the following places?*

Ask for and enter number of days and then nights for each. NB: last month only. Request reason for most recent visit to each place.

1. To visit rural home - harvest or holidays
2. To visit rural home - other
3. To visit husband/wife in town/estate
4. To visit other relatives
5. To attend a funeral
6. To buy/sell produce or shopping
7. To attend hospital or clinic or see doctor
8. To attend school or college/university
9. For work purposes
10. To visit friends
11. To visit boyfriend/girlfriend
12. Other reasons

	days	nights	reason
Harare			
Mutare			
Rusape			
Nyazura			
Nyanga			
Watsomba			
Other cities/towns			
Nyabadza/Nyahukwa			
Hauna			
Katiyo			
Eastern Highlands Estate			
Aberfoyle			
Sheba/St.Augustine's			
Selbourne			
Honde Mission			
Bonda Mission			
St Killian's Mission			
St Theresa's Mission			
Other rural areas			

Q230 *Which church denomination do you belong to?*

Traditional	1	
Methodist	4	
Anglican	5	
Roman Catholic	6	
ZAOGA	7	
Apostolic Faith Mission	8	
Marange Apostolic	9	
Zviratidzo Apostolic	12	
Other Apostolic (specify)	13	
Zionist	15	
Mughodi	20	
Other (specify)	17	
None	97	- Q233

Q231 *How long have you been a member of this church?*

Years		
Since birth	995	- Q233

Q232 *What was your reason for joining a different church?*

Record name of previous church.

Marriage: spouse's church	1	
Conversion / born again	2	
Sickness	3	
Family misfortune	4	
Church beliefs better	5	
Moved to a new area	6	
Other (specify)	8	

Q233 Record ethnicity.

Black	1	
Other (specify)	8	- Q235

Q234 *Which tribe do you belong to?*

Also, record totem and whether Mozambican.

Totem ____

Mozambican? ____

Manyika	1	
Ndau	2	
Maungwe	3	
Zezuru	4	
Korekore	5	
Karanga	6	
Ndebele	7	
Nyanja	19	
Sena	20	
Malawian	44	
Other (specify)	12	

REF.	QUESTIONS & FILTERS	CODING CATEGORIES		SKIP TO
Q235	*Have you ever been circumcised?*	Yes No	1 2	 - Q237
Q236	*How old were you when this was done?*	Age in years	___	
Q237	*In which sector of employment do you work?*	Estates: tea, coffee, forestry etc Manufacturing or building trade Police or army Teacher: primary school Teacher: secondary school Nurse Services or retail: shops Informal: petty trading (veg etc) Informal: subsistence agriculture Student Unemployed: excl. agriculture Other (specify)	1 2 3 4 5 6 7 8 9 10 11 12	 - Q240 - Q240 - Q240 - Q240
Q238	*What type of work do you do?*	Professional or managerial Self-employed: small business Skilled labour Manual/unskilled labour	1 2 3 4	
Q239	*How many days is it since the last time you were paid?*	Number of days	___ days	
Q240	*How many times have you visited a bar or beer-hall in the last month?*	Number of times	___	- Q243 unless '0'
Q241	*Did you ever drink alcohol at beer halls on a regular basis?*	Yes No	1 2	 - Q243
Q242	*What was the reason you stopped drinking at beer halls?*	Church rules Got married Other (specify) Don't know	1 2 8 98	
Q243	*Do you drink alcohol on your own?*	Yes No	1 2	 - Q245
Q244	*When you drink alcohol, do you usually have more than 3 beers in one night?*	Yes No	1 2	
Q245	*Do you smoke cigarettes?*	Yes No	1 2	
Q246	*Do you take any drugs for pleasure?*	Yes No	1 2	
Q247	*Have you ever been married or in a long-term or cohabiting relationship?* Relationships of 12 months or more should be treated as "long-term".	Yes No	1 2	 - Q295
Q248	*How many such relationships have you experienced in your lifetime?*	Include current relationships.	___	
Q249	*How old were you when you first entered such a relationship?*	Age (Years)	___	
Q250	*How long did this first relationship last?*		___ ___	
Q251	*How many times in your life have you broken up with a marital partner?*	Check consistency with Q248.	___	- If none, go to Q262
Q252	*How many years is it since you last experienced divorce or separation?*		___	
Q253	*Was it you or your spouse who ended this relationship?*	Self Spouse	1 2	

REF.	QUESTIONS & FILTERS	CODING CATEGORIES			SKIP TO
Q254	*What was the reason for the breakdown of this relationship?*	Respondent thought to be unfaithful	1		
		Spouse thought to be unfaithful	2		
		Respondent HIV+	3		
		Spouse HIV+	4		
		Failure to have children	5		
		Domestic violence	6		
		Irreconcilable differences	7		
		Respondent seriously ill	8		
		Spouse seriously ill	9		
		Other (specify)	10		
Q255	*For how long had you been married to this person?*			___ ___	
Q256	*Where did you and this spouse live together when you were married?* Tick up to two places.	In this household	1		
		Locally	2		
		Harare	3		
		Mutare	4		
		Rusape	5		
		Other city or town	6		
		Estate/mine (commercial)	7		
		Rural (communal/resettlement)	8		
Q257	*How long after this divorce/separation was it before you married again?*			___ ___	- Q259
		Not yet remarried	99		
Q258	*Why have you not remarried?*	HIV+: so unsafe to have sex	1		
		Ill health	2		
		Fear of AIDS	3		
		Sake of children	4		
		Not found partner	5		
		Other (specify)	8		
		Don't know	98		
Q259	*How long after this divorce/separation was it before you had sex again?*			___ ___	- Q261
		Not yet restarted	99		
Q260	*Why have you not had sex again?*	HIV+: so unsafe to have sex	1		- Q262
		Ill health	2		- Q262
		Fear of AIDS	3		- Q262
		Sake of children	4		- Q262
		Not found partner	5		- Q262
		Not yet remarried	6		- Q262
		Other (specify)	8		- Q262
		Don't know	98		- Q262
Q261	*How many different people did you have sex with between the time your previous marriage ended and the time you remarried?* I.e. not including the old and new spouses.				
Q262	*How many times in your life has a marital partner of yours passed away?* Check consistency with Q248 & Q251.				- If none, go to Q272
Q263	*How many years is it since a marital partner of yours passed away?*			___	
Q264	*For how long had you been married to your (most recent) deceased spouse?*			___ ___	
Q265	*Where did you and this spouse live together when you were married?* Enter codes from Q256.	Place 1			
		Place 2			
Q266	*What was the cause of your partner's death?*	Accident/homicide	1		
		HIV/AIDS related	2		
		Tuberculosis	3		
		Malaria	4		
		Other (specify)	8		
		Don't know	98		

REF.	QUESTIONS & FILTERS	CODING CATEGORIES		SKIP TO
Q267	*How long after this spouse died was it before you married again?*		[ ] [ ] months / years	- Q269
		Not yet remarried	99 [ ]	
Q268	*Why have you not remarried?*	HIV+: so unsafe to have sex	1 [ ]	
		Ill health	2 [ ]	
		Fear of AIDS	3 [ ]	
		Sake of children	4 [ ]	
		Not found partner	5 [ ]	
		Under 1yr since partner died	6 [ ]	
		Other (specify)	8 [ ]	
		Don't know	98 [ ]	
Q269	*How long after this spouse died was it before you had sex again?*		[ ] [ ] months / years	- Q271
		Not yet restarted	99 [ ]	
Q270	*Why have you not had sex again?*	HIV+: so unsafe to have sex	1 [ ]	- Q272
		Ill health	2 [ ]	- Q272
		Fear of AIDS	3 [ ]	- Q272
		Sake of children	4 [ ]	- Q272
		Not found partner	5 [ ]	- Q272
		Under 1yr since partner died	6 [ ]	- Q272
		Other (specify)	8 [ ]	- Q272
		Don't know	98 [ ]	- Q272
Q271	*How many different people did you have sex with between the time your previous marriage ended and the time you remarried?* I.e. not including the old and new spouses.		[ ]	
Q272	*Are you currently widowed, divorced or separated from your most recent spouse/partner?*	Widowed	1 [ ]	- Q295
		Divorced	2 [ ]	- Q295
		Separated	3 [ ]	- Q295
		Still in union	4 [ ]	
Q273	*How many spouses/regular partners do you have at present?* For women, ask how many other wives her husband has.	(Not zero!)	[ ]	
		Ask questions Q274 to Q290 for first spouse, then the second, and so on ...		
Q274	*How old was your partner at his/her last birthday?*	Age in completed years	[ ][ ]	
		Don't know	[98]	
Q275	*How old were you when this partnership started?*	Age in completed years	[ ][ ]	
		Don't know	[98]	
Q276	*Did you and your spouse have an HIV test before you agreed to get married?*	Self only tested	[2]	
		Partner only tested	[3]	
		Neither tested	[4]	- Q278
		Not yet 'married'	[5]	- Q278
		Both tested seperately	[11]	
		Both tested together	[12]	- Q278
Q277	*Did you tell each other your results?* Ask equivalent if only one tested.	Yes	[1]	
		No	[2]	
Q278	*Has this person ever been widowed or divorced?*	Yes: widowed	[1]	
		Yes: divorced	[2]	
		Yes: both	[3]	
		No	[4]	
Q279	*Did you marry this person because he was/is married to your sister and she died or is unable to have children?*	Inherited	[1]	
		Sister infertile	[2]	
		Neither	[3]	

REF.	QUESTIONS & FILTERS	CODING CATEGORIES		SKIP TO
Q280	*Do you know the HIV status of this person now and whether it is the same as your own?*	Yes: same as mine Yes: different to mine Yes: don't know mine No	1 2 3 4	
Q281	*In the last few months has he/she been in good health, experienced recurring minor illnesses or been seriously ill?*	Good health Recurring sickness Serious illness	1 2 3	
Q282	*Which of the following describes your and your spouse/partner's living arrangements best?*		1 2 3 4	
	(1) Live together all of the time		1 1 1 1	
	(2) Live together but occasionally apart for work reasons		2 2 2 2	
	(3) Live together but separated for a period every year for work reasons (ie: seasonal employment).		3 3 3 3	
	(4) Live apart but regular/frequent cohabitation (i.e.: return visits)		4 4 4 4	
	(5) Live apart, infrequent cohabitation		5 5 5 5	
Q283	*How long has he/she been living in (NAME OF VILLAGE)?*	Years Since birth Stays elsewhere	__ __ __ __ 995 995 995 995 996 996 996 996	- Q286 - Q285
Q284	*Why did he/she move to this area?* Specify which relative:	Work Partner's work Marriage Lost job Establish rural home Ill health (own) Ill health (relative) Other (specify)	1 1 1 1 2 2 2 2 3 3 3 3 4 4 4 4 5 5 5 5 6 6 6 6 7 7 7 7 9 9 9 9	
Q285	*What type of place was his/her previous place of residence?* Record current residence if spouse usually stays elsewhere. Record the name of the place.	Large town or city Small town Growth point Estate/mine Roadside BC Rural BC Communal area	1 1 1 1 2 2 2 2 3 3 3 3 4 4 4 4 5 5 5 5 6 6 6 6 7 7 7 7	
Q286	*In the last 12 months, has he/she lived outside this community for a period of one month or more?*	Yes No Don't know	1 1 1 1 2 2 2 2 98 98 98 98	- Q288
Q287	Record total no. of months away & details of longest absence. Use codes from Q226 & Q229.	Total months away Longest: months Longest: place Longest: reason	[ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]	

REF.	QUESTIONS & FILTERS	CODING CATEGORIES					SKIP TO
			1	2	3	4	
Q288	*How many nights during the last month did he/she stay in each of the following places?* Ask for and enter number of nights in each place. NB: last month only. Enter "98" if respondent does'nt know.	Harare					
		Mutare					
		Rusape					
		Nyazura					
		Nyanga					
		Watsomba					
		Other cities/towns					
		Nyabadza/Nyahukwa					
		Hauna					
		Katiyo					
		Eastern Highlands Est.					
		Aberfoyle					
		Sheba/St. Augustine's					
		Selbourne					
		Honde Mission					
		Bonda Mission					
		St Killian's Mission					
		St Theresa's Mission					
		Other areas					
Q289	*Which church denomination does he/she belong to?*	Traditional	1	1	1	1	
		Methodist	4	4	4	4	
		Anglican	5	5	5	5	
		Roman Catholic	6	6	6	6	
		ZAOGA	7	7	7	7	
		Apostolic Faith Mn.	8	8	8	8	
		Marange Apostolic	9	9	9	9	
		Zviratidzo Apostolic	12	12	12	12	
		Other Apostolic (spec)	13	13	13	13	
		Zionist	15	15	15	15	
		Mughodi	20	20	20	20	
		Other (specify)	17	17	17	17	
		None	97	97	97	97	
Q290	*Has he/she been circumcised?*	Yes	1	1	1	1	
		No	2	2	2	2	
		Don't know	98	98	98	98	
Q291	*Has he/she visited a bar or beer-hall in the last month?*	Yes	1	1	1	1	
		No	2	2	2	2	
		Don't know	98	98	98	98	
Q292	*What is the highest grade of school your partner has completed?*	None	0	0	0	0	
		Primary	1	1	1	1	
		Secondary	2	2	2	2	
		Higher	3	3	3	3	
Q293	*In which sector of employment does he/she work?*	Estates	1	1	1	1	
		Manuf'trg/building	2	2	2	2	
		Police/army	3	3	3	3	
		Teacher: primary	4	4	4	4	
		Teacher: secondary	5	5	5	5	
		Nurse	6	6	6	6	
		Services/retail: shops	7	7	7	7	
		Informal: trading	8	8	8	8	- Q295
		Informal: incl agric	9	9	9	9	- Q295
		Student	10	10	10	10	- Q295
		Unemployed: excl. agr	11	11	11	11	- Q295
		Other (specify)	12	12	12	12	
Q294	*What type of work does he/she do?*	Prof/manage't	1	1	1	1	
		Self-employed	2	2	2	2	
		Skilled labour	3	3	3	3	
		Manual/unskilled	4	4	4	4	
Q295	*Did you vote in the last national or local elections?*	Yes			1		
		No			2		
Q296	*Do youth play any role in local community leadership and decision-making?*	No role			1		
		Minor role			2		
		Significant role			3		

REF.	QUESTIONS & FILTERS	CODING CATEGORIES			SKIP TO
Q299	*Which of the following groups exist in your home area and which are you a member of?* For those where he/she is a member: *Would you say that this group functions: (1) well; (2) OK; or (3) poorly?*			Exist / Member / Rating	
		Church groups	1	[ ] / [ ] / [ ]	
		Women's groups	2	[ ] / [ ] / [ ]	
		Co-operative	3	[ ] / [ ] / [ ]	
		Farmers group	4	[ ] / [ ] / [ ]	
		Burial society	5	[ ] / [ ] / [ ]	
		Savings club (RCS)	6	[ ] / [ ] / [ ]	
		Youth group	7	[ ] / [ ] / [ ]	
		Sports club	8	[ ] / [ ] / [ ]	
		AIDS group	9	[ ] / [ ] / [ ]	
		Political party	10	[ ] / [ ] / [ ]	
Q2991	*What is the principal activity of the group you spend the most time with?*	Code from Q299			
		None	99	[ ]	- Q301
Q2992	*Do group members discuss: (1) formally; (2) informally; or (3) both?* *In either formal or informal discussions, do group members advise each other on:* *(a) how to avoid HIV/AIDS?* *(b) care for people with HIV/AIDS?* *(c) support for orphaned children?*			Meet / Avoid HIV / Care / Orphan	
		Formally		1 / 1 / 1 / 1	
		Informally		2 / 2 / 2 / 2	
		Both		3 / 3 / 3 / 3	
		None		4 / 4 / 4 / 4	
Q2993	*How often does the group meet?*	Weekly	1	[ ]	
		Monthly	2	[ ]	
		Less often	3	[ ]	
Q2994	*Is the group sponsored by a church, school, political party, NGO or other organisation?* Record name of organisation: _____	Church	1	[ ]	
		School	2	[ ]	
		Political party	3	[ ]	
		NGO	4	[ ]	
		Employer	5	[ ]	
		Other _____	8	[ ]	
		None	99	[ ]	
Q2995	*What proportion of the group are:* *(1) Male?* *(2) Aged under 20 years?* *(3) Married?* *(4) Have received secondary education?*	Record as %s.		DK / %	
				998 / [ ]	
				998 / [ ]	
				998 / [ ]	
				998 / [ ]	
Q2996	*Does the group assist or meet with:* *(1) Other groups of the same type?* *(2) Other groups of different types?* *(3) Other members of the community?*			Assists / Meets / Neither	
				1 / 2 / 3	
				1 / 2 / 3	
				1 / 2 / 3	
Q2997	*How many members of the group consume alcohol during or after the meetings?*	All or most	1	[ ]	
		Some	2	[ ]	
		None or very few	3	[ ]	
Q2998	*Are the group meetings generally co-operative or conflictual?*	Co-operative	1	[ ]	
		Conflictual	2	[ ]	

INDIVIDUAL QUESTIONNAIRE: **INVITATION TO JOIN THE STUDY**

Explain the purpose of the study - including potential benefits nationally and to the community.
Explain what is involved in participating in the study - show/read invitation letter and consent form.
Ask about and discuss any concerns the respondent might have.
Seek consent to participate in the study - request signature on consent form.

REF.	QUESTIONS & FILTERS	CODING CATEGORIES			SKIP TO
Q301	Indicate whether the respondent wishes to join/continue in the study.	Yes	1	[ ]	- Q303
		No	2	[ ]	
Q302	Indicate the main reason why he/she does not wish to participate. * Ask for an appointment if reason is insufficient time.	Insufficient time*	1	[ ]	
		DBS samples	3	[ ]	
		Information too personal	4	[ ]	
		Other (specify)	8	[ ]	
Q303	Record details of others present at this point.			Yes / No	
		Children under 10		[ ] / [ ]	
		Husband/wife		[ ] / [ ]	
		Other males		[ ] / [ ]	
		Other females		[ ] / [ ]	

REF.	QUESTIONS & FILTERS	CODING CATEGORIES			SKIP TO
Q401	10-15 minutes of informal discussion first to build rapport, trust & stress absence of prejudice. Explain the need to ask questions on the respondent's own experience of sexual relationships. Stress the importance of providing accurate information. Stress that strict confidentiality will be maintained - request privacy.				
Q402	*How old were you when you had sex for the first time?* Explain what we mean by "having sex".	Age in years Not yet had sex	 99	 __	 - Q406
Q403	*At what point before you had sex for the first time, did you speak to your partner and agree to have sex? Or did it just happen without you ever specifically talking about it?*	Talked in advance/agreed to have sex Happened without discussion/agreement Can't remember/don't know	1 2 3	 	
Q404	*The first time you had sex, did you use any method of contraception?*	Yes No Don't know/no response	1 2 98	 	 - Q407 - Q407
Q405	*Which method did you use?*	Condoms Other modern Traditional	1 2 3	 	- Q407 - Q407 - Q407
Q406	*What is the main reason you have not yet started to have sexual relations?*	Too young Not met partner Not yet married Risk of pregnancy Risk of HIV/AIDS Other (specify)	1 2 3 4 5 8	 	- Q413 - Q413 - Q413 - Q413 - Q413 - Q413
Q407	*How many days is it since you last had sex?* Skip to Q402 if less than one month.	 More than one year	 99	___ 	
Q408	*What is the main reason you are currently abstaining from sexual relations?* Options 1-4 could refer to the respondent or (if male) to his regular partner.	Current pregnancy Recent birth Terminal abstenance Self or partner has an STD Currently living apart Risk of catching HIV/AIDS Risk of passing on HIV/AIDS Religious reasons Not currently married Self or partner has HIV/AIDS Other (specify)	1 2 3 4 5 6 7 8 9 10 20	 	
Q409	*Did you use condoms throughout the last time you have sex?*	Yes No	1 2	 	
Q410	*Did you know the HIV status of the person you had sex with and whether it was the same as your own?*	Yes: same as mine Yes: different to mine Yes: don't know mine No	1 2 3 4	 	
Q411	*How many different sexual partners did you have before you got married?* If not yet married, ask for number of partners so far.	Number of partners "Married" here includes long-term and cohabiting unions - ie: as in Q249.		__	
Q412	*If you took a guess, how many partners other than yourself (and any co-wives) do you think your current spouse/partner has had in the last 12 months?*	Number of non-regular partners		__	
Q413	Indicate data collection method used. For secret voting: (i) explain the procedure and the confidentiality safeguards carefully. (ii) enter fieldwork code on voting slips.	Secret voting Interview* *Re-interviews MUST be conducted using the same method as in Round 2.	R2: 1 / 2	R3: 1 / 2	

REF.	QUESTIONS & FILTERS	CODING CATEGORIES	SKIP TO
Q414	***How many different regular sexual partners have you had in your lifetime?*** ***By regular, I mean someone you have been having sex with for a year or more.***	**Number of partners**	[ ] 1
Q415	***For how many years have you been using condoms every time you have sex with a regular partner?*** ***If you do not use condoms with your current regular partner(s), write "0".***	**Years**	[ ] 2
Q416	***How many different non-regular sex partners have you had in your lifetime?***	**Number of partners**	[ ] 3
Q417	***For how many years have you been using condoms every time you have sex with a non-regular sexual partner?*** ***If you don't use condoms with non-regular sexual partners now, please write "0".*** ***If you have never had a non-regular sexual partner, please write "P".***	**Years**	[ ] 4
Q418	***Of the non-regular sexual partnerships you have had in your lifetime, how many did you hope at the time would become regular partners?***	**Number of partners**	[ ] 5
Q419	***How many different regular sexual partners have you had in the last two years?*** **For re-interview respondents...** ***In other words, since we came last time.***	**Number of regular partners**	[ ] 1
Q420	***How many different non-regular sexual partners have you had in the last two years?*** **For re-interview respondents...** ***In other words, since we came last time.***	**Number of non-regular partners**	[ ] 2
Q421	***How many different sexual partners have you had in the last 12 months?***	**Number of partners**	[ ] 3
Q422	***How many of these partners were you having sex with for the first time?***	**Number of new partners in last 12 months (stress)**	[ ] 4
Q423	***How many of these new partners did you meet at a bar or beer hall?***	**Stress still talking about the last 12 months**	[ ] 5
Q424	***How many sexual relationships do you consider yourself to be involved in at the moment?***	**Number of current relationships**	[ ] 6
Q425	***How many different partners have you had sex with in the last month?***	**Number of partners in last month (total)**	[ ] 7

INDIVIDUAL QUESTIONNAIRE:	**SEXUAL RELATIONSHIPS**	*Q. No:*

REF.	QUESTIONS & FILTERS	CODING CATEGORIES	SKIP TO
Q426	Explain that you now wish to ask some questions about the last three persons the respondent had sex with. Note: *no longer any time restriction.* Stress that these may be people he/she had sex with only once. If secret voting is being used, ask the respondent to enter a "P" in each box on the voting slip. If he/she has not had any sexual relations in the last month.		
Q427	*How many times have you had sexual intercourse with this partner in the last 2 weeks?*	Number of times LAST | PREVIOUS	1
Q428	*On how many of these occasions did you and your partner use condoms throughout?*	Number of times	2
Q429	*What was the month and year when you last had sexual intercourse with this person?*	Month first then year	3
Q430	*What was the month and year when you had sexual intercourse with this person for the first time?*	Month first then year	4
Q431	*Where were you when you had sex with this person for the first time?* If secret voting is being used, show respondent the picture codes.	Code	5
Q432	*How many years old is this person?*	Age in years	6
Q433	*Do you expect to have sex with this person again in the future?*	Yes No	7
Q434	*Is this person married to someone other than yourself?*	Yes No Don't know	8
Q435	*Have you given or received money in exchange for sex with this person in the last month?*	Yes No	9
Q436	*Did this person ever attend secondary school?*	Yes No Don't know	10
Q437	*Does this person often drink alcohol at bars or beer-halls?*	Yes No	11
Q438	Record details of others present at this point.	Children under 10 Y(1) N(2) Husband/wife Y(1) N(2) Other males Y(1) N(2) Other females Y(1) N(2)	
Q439	*Have you (or your partner) ever practiced dry sex?* i.e.: inserting some herbs/substance to dry the vagina before having sexual intercourse.	Yes 1 No 2 - Q451 Not heard of dry sex 8 - Q451	
Q440	*How often do you practice dry sex?*	Almost always 1 Sometimes 2 Seldom 3	

INDIVIDUAL QUESTIONNAIRE:	**SAMPLE COLLECTION**

Q451	Explain that you would now like to collect some samples so that tests for HIV and other sexually transmitted infections can be carried out. Explain that these tests are being done for research purposes only. However, free VCT for HIV and free treatment for STIs is available at the local health centre. Stress that strict confidentiality will be maintained.		
Q452	Blood spot sample obtained.	Yes 1 No - note reason. 2	

REF.	QUESTIONS & FILTERS	CODING CATEGORIES		SKIP TO
Q501	*In the last few months have you been in good health, experienced recurring minor illnesses or been seriously ill?*	Good health Recurring sickness Serious illness	1 2 3	- Q503
Q502	*In the last 2 years, how many times have you had an injection for medical purposes?*			
Q503	*How long is it since you last experienced an illness?*	Days/weeks (days / weeks) More than one year ago	 97	 - Q508
Q504	*What was the main symptom of the illness?*	Fever - malaria (incl. cerebral) Fever - non-malaria Sickness/vomiting Diarrhoea/weight loss Swollen lymph nodes Skin complaints/rashes Genital conditions: incl. STDs Flu/pneumonia Accident/wound Tuberculosis Other (specify)	1 2 3 4 5 6 7 8 9 10 12	
Q505	*Where did you seek assistance?* Check whether assistance sought from more than one source.	Hospital/clinic only Clinic & n'anga Clinic & faith healer N'anga only Faith healer only Other (specify) No-one	1 3 5 7 8 10 97	- Q508 - Q507 - Q507 - Q508 - Q508
Q506	*Did you visit the n'anga (faith healer) before or after going to the clinic?*	Before Same time After	1 2 3	
Q507	*Why did you seek assistance from the n'anga (or faith healer)?* Tick up to two options.	Clinic treatment not effective Spiritual cure needed Witchcraft suspected Holy water/bath or prayer Other (specify)	1 2 3 4 8	
Q508	*How true are the following statements for you in the last 3 months?* Ask each in turn. (1) very much, (2) a little, (3) not really	I have felt depressed I have felt life was not worth living I have felt lonely I have felt content	1 2 3 1 2 3 1 2 3 1 2 3	
Q509	For men: *Some men experience pain during urination or have a discharge from the penis. During the last 12 months, have you noticed any such pain or discharge?* For women: *Some women experience an unusual discharge from the vagina or pain in the lower stomach. During the last 12 months, have you noticed such a discharge or pain?*	Yes - discharge & pain (both) Yes - discharge only Yes - pain only No Don't know Clarify which & tick boxes as appropriate.	1 2 3 4 98	- Q511 - Q511
Q510	*Have you ever experienced a discharge from the penis (vagina)?*	Yes No or don't know	1 2	
Q511	*Some (wo)men experience sores in the genital area. During the last 12 months, have you noticed any such sores?*	Yes No Don't know	1 2 98	- Q513
Q512	*Have you ever experienced such sores?*	Yes No or don't know	1 2	
Q513	*When you last experienced a pain, discharge or sores in the genital area, did you seek assistance from any of the following?*	Hospital/clinic only Clinic & n'anga Clinic & faith healer N'anga only Faith healer only Other (specify) No-one Not had such symptoms	1 2 3 4 5 8 97 98	 - Q523 - Q523 - Q523 - Q523 - Q523
Q514	*How long was it between the time when you first noticed symptoms and when you first sought help at a health clinic?*	Days and weeks (days / weeks)		
Q515	*How satisfied were you with the service that you received at the clinic?*	Very satisfied Reasonably satisfied Not satisfied	1 2 3	
Q516	*Did the healthworker carry out a physical examination of the symptoms?*	Yes No	1 2	
Q517	*What form of treatment did you receive?* Check whether more than one.	Injections Pills/tablets Other (specify) _____ None	1 2 8 99	
Q518	*Have the symptoms continued or returned since you were last treated at the clinic?*	Continued Returned Now stopped	1 2 3	

REF.	QUESTIONS & FILTERS	CODING CATEGORIES		SKIP TO
Q519	*How much were you charged for the treatment?*		R$	
Q520	*Was money deducted from your wages as a charge for the treatment?*	Yes No Not employed Don't know	1 2 97 98	
Q521	*Did you receive counselling at the clinic?* Explain the nature of counselling.	Yes No Don't know	1 2 98	
Q522	*Were you given "contact slips" and did you pass these on to your recent sexual partner(s) so that they could receive treatment?*	Received & passed on Received, not passed on Not received Don't know	1 2 3 98	
Q523	*Did you abstain from sexual intercourse or use condoms during the last time you experienced these symptoms?*	Abstained from sex Used condoms Neither	1 2 8	
Q524	*Have you thought about having an HIV test?*	No Yes: but not done anything Yes: and found out how to get one Yes: and planning to have a test Had a test	1 2 3 4 5	- Q526
Q525	*If cheap treatment was available for HIV/AIDS, would you have an HIV test?*	Yes No Don't know	1 2 98	
Q526	*What were - or would be - your reason(s) for going for a test?* Probe - may be several reasons.	Ill & want to get best treatment Partner sick or died Past risky behaviour Partner's risky behaviour Past transfusion/injections General concern Contemplating marriage Contemplating having a child Insurance policy Avoid infecting partner(s) Life planning Child sick or died Spouse/partner tested HIV+ Wanted re-assurance not infected Prevent mother-to-child infection Doctor/nurse suggested it Other (specify) _____	1 2 3 4 5 6 8 9 10 11 12 14 15 16 17 18 20	
Q527	*What factors deter(ed) you from having an HIV test?* Ie: possible implications of finding out he/she is HIV+. Probe - may be several reasons.	Psychological effects Stigma & discrimination Possible divorce/separation Job loss Fatalism - no cure Positive result accelerates death Could not face friends/family Fear - of being HIV+ Fear - of violence Harm to partner Lack of confidentiality Too expensive Other (specify) _____	1 2 3 4 5 6 8 11 12 13 14 15 10	
Q528	Explain that a service is currently available at a nearby health clinic where members of the study can discuss and receive advice on the advantages and disadvantages of finding out their HIV infection status with a fully qualified nurse. People who wish to know their status will be given their test results but attending the clinic will NOT mean you have to receive your results. Stress that the service is fully optional and confidential. The respondent and his/her partners are encouraged to attend together - if they want.			
Q529	*Do you know of any place where you can go for voluntary counselling and testing (VCT) for HIV/AIDS?* Ie. other than the temporary service in Q528.	Yes - certain Yes - maybe Unsure No	1 2 3 8	
Q530	*How far is it from this place to the nearest voluntary counselling and testing centre?*	Don't know	98	- Q534
Q531	*What type of place is this?* "Roadside" here means a tarred road. Record the name of the place.	Large town or city Small town Growth point Commercial estate/mine Roadside business centre Rural business centre Communal/resettlement area	1 2 3 4 5 6 7	
Q532	*How often is VCT available at this place?*	Daily Weekly or monthly Only occasionally No longer available Don't know	1 2 3 8 98	

REF.	QUESTIONS & FILTERS	CODING CATEGORIES		SKIP TO
Q533	*What is the name of the organisation that provides this service?* If respondent not had test (Q524) go to Q570.	New Start / PSI FACT BRTI Hospital/clinic (ANC/PMTCT) Hospital/clinic (other) Don't know Other (specify) _____	2 3 4 5 6 98 8	
Q534	*On how many different occasions have you had an HIV test?*		___	- If "0" go to Q570
Q535	*How long is it since you last had an HIV test?*	Period	___ mths ___ yrs	
Q536	*Did you have this test because: (1) you were told to; (2) you decided to on your own; or (3) you were persuaded to?*	Told Decided Persuaded	1 2 3	
Q537	*The last time you had an HIV test, how far did you have to travel from where you were living at the time to where you had the test?*		___ kms	
Q538	*In what type of place was the test done?* "Roadside" here means a tarred road. Record the name of the place.	Large town or city Small town Growth point Commercial estate/mine Roadside business centre Rural business centre Communal/resettlement area	1 2 3 4 5 6 7	
Q539	*How often was VCT available at this place at the time you had the test?*	Daily Weekly or monthly Only occasionally No longer available Don't know	1 2 3 8 98	
Q540	*What is the name of the organisation that was providing the VCT service?*	New Start / PSI FACT BRTI Hospital/clinic (ANC/PMTCT) Hospital/clinic (other) Don't know Other (specify) _____	2 3 4 5 6 98 8	
Q541	*How much did you have to pay for your HIV test?*		ZS	
Q542	*Did you receive counselling before you agreed to have the test?* Explain what is meant by counselling.	Yes No	1 2	
Q543	*Did you receive pre-test counselling on your own, with your partner, or in a group?*	Single Couple Group	1 2 3	
Q544	*How long did the pre-test counselling take?*	Time	___ hrs ___ mins	
Q545	*How satisfied were you with the pre-test counselling?*	Very satisfied Satisfied Not satisfied	1 2 3	
Q546	*After the pre-test counselling, did you feel fully prepared for having the test?*	Fully prepared Partly prepared Unprepared	1 2 3	
Q547	*Did you collect your test results?*	Yes No	1 2	
Q548	*Did you receive counselling after receiving the results?*	Yes No	1 2	
Q549	*Did you receive post-test counselling on your own, with your partner, or in a group?*	Single Couple Group	1 2 3	
Q550	*How long did the post-test counselling take?*		___ hrs ___ mins	
Q551	*How satisfied were you with the post-test counselling?*	Very satisfied Satisfied Not satisfied	1 2 3	
Q552	*How would you rate the counselling you were given on how to protect yourself (or your partners) from HIV in the future?*	Good OK Poor	1 2 3	
Q553	*Do you feel you can protect yourself (or your partners) from getting HIV in the future?*	Yes No Not sure	1 2 98	
Q554	*Do you feel able to inform current and future sexual partners about your HIV infection status?*	Yes No Not sure	1 2 98	

Q555 *Did you feel pleased that you had decided to get tested?*
Yes 1
No 2

Q556 *After the HIV test, did you:*

	More	Same	Less
(1) Use condoms more or less than before?	1	2	3
(2) Start having more or fewer sexual partners?	1	2	3
(3) Increase or reduce the number of times you speak about HIV/AIDS with others?	1	2	3

Q557 *Was the result of this HIV test positive?*
Yes 1
No 2
Don't know 98 - Q562
Prefers not to say 99 - Q562

Stress that do not have to answer these questions but information is confidential.

Q558 *With whom have you shared your HIV test result? Has their response been supportive or non-supportive?*

Read through list and tick all that apply.

	Shared	Supportive
Spouse/regular partner	1	1 2
Father	2	1 2
Mother	3	1 2
Other relative (specify)	4	1 2
Employer	5	1 2
Other (specify)	6	1 2
No one	8	

Q559 *After getting your HIV test result, how many times have you?*

	Many times	Several times	Once	None
(1) Received follow-up counselling	1	2	2	8
(2) Received medical treatment	1	2	2	8
(3) Received legal or welfare support	1	2	2	8
(4) Experienced stigma or discrimination	1	2	2	8
(5) Experienced violence or aggression	1	2	2	8

Q560 *Did you join a post-test club or a group for people living with HIV/AIDS and, if so, are you still a member?*

	Still	Was	Never	
Post-test club	1	2	3	
PLWHA	1	2	3	
Neither			8	- Q562

Q561 *How would you rate the helpfulness of this group in regard to:*

(1) very helpful, (2) helpful, (3) not helpful

	PTC	PLWHA
Emotional/social support		
Protecting others from infection		
Advice on keeping healthy		

Q562 *When you went for this HIV test, did you go together with a spouse or someone you were thinking of getting married to?*
Yes: spouse 1
Yes: prospective spouse 2
No 3 - Q564
N/A: no regular partner 8 - Q569

Q563 *Was the result of your partner's HIV test the same as the result of your own test?*
Yes 1 - Q565
No 2 - Q565

Q564 *Did you give the result of your HIV test to the person you were married to at the time you had the test?*
Yes 1
No 2
N/A: no regular partner 8 - Q569

Q565 *Did you and your partner separate after you received your test results?*
Yes 1
No 2 - Q567

Q566 *Whose decision was it to separate?*
Own decision 1 - Q569
Partner's decision 2 - Q569
Joint decision 3 - Q569
Other (specify) _____ 8 - Q569

Q567 *How often have you had sex with this partner since you got your (latest) HIV test results?*
Never 1 - Q569
Occasionally 2
Frequently 3

Q568 *How often have you used condoms with this partner since you got these HIV test results?*
Never 1
Sometimes 2
Always 3

Q569 *Have you thought about having another HIV test?*
Yes 1
No or don't know 2

Q570 *Have you ever heard of drugs for treating people who have HIV/AIDS?*
Yes 1
No 2 - Q601

Q571 *Do drugs exist now that:*

Name of drugs	Yes	No	DK	Work?
(a) provide a complete cure for HIV/AIDS?	1	2	98	
(b) stop HIV from causing AIDS?	1	2	98	

Q572 *Do you know the names of these drugs?* Enter responses under Q571.

Q573 *Do you think these drugs work?* (1) yes; (2) no; (98) don't know. Enter responses under Q571. Go to Q601 unless knows of ARVs.

Q574 *Are there any unpleasant side effects or do you have other concerns about these drugs?* Record details.
Yes: side effects 1
Yes: other concerns 2
No 3
Don't know 98

Q575 *For how long does someone with HIV need to take these drugs?*
Rest of life 3
Don't know 98

REF.	QUESTIONS & FILTERS	CODING CATEGORIES		SKIP TO
Q576	*From whom can these drugs be obtained?*	Traditional healer Hospitals/clinics/pharmacies Don't know	1 2 98	- Q578
Q577	*What is the nearest place to your homestead that these drugs can be obtained?*	Local clinic/pharmacy District hospital Mutare or Harare Outside Zimbabwe Don't know	1 2 3 4 98	
Q578	*Do you think these drugs will be available in your area soon?*	Yes No or don't know	1 2	
Q579	*Do you know a relative, friend or neighbour who has received drugs that stop HIV from causing AIDS?* *Note relationship of closest relative.	Relative* Friend/neighbour Work colleague Someone else No one	1 2 3 4 8	- Q581
Q580	*Is this person now in good health?*	Yes No Don't know	1 2 98	
Q581	*Do you think you would be able to get these drugs if you ever needed them?*	Yes - go to Q601 if Q557 not 'yes' No or don't know	1 2	
Q582	*What is the main reason you would not be able to get these drugs?*	Too expensive Not available locally Other (specify) Don't know	1 2 8 98	- Go to Q601 if Q557 not 'yes'
Q583	*Have you ever taken any drugs yourself that stop HIV causing AIDS?*	Yes No	1 2	- Q585
Q584	*What is the main reason you have not started taking these drugs?*	Too expensive Not available locally Not permitted by church Side effects Not needed: In good health Other (specify) Don't know	1 2 3 4 5 8 98	- Q601 - Q601 - Q601 - Q601 - Q601 - Q601 - Q601
Q585	*How long is it since you first took these drugs?*		[ ] [ ]	
Q586	*Have you stopped taking the drugs?*	Yes No	1 2	- Q588
Q587	*Why have you stopped taking the drugs?*	Too expensive Not available locally Not permitted by church Side effects Not needed: In good health Other (specify) Don't know	1 2 3 4 5 8 98	- Q593 - Q593 - Q593 - Q593 - Q593 - Q593 - Q593
Q588	*Are there particular times when you take the drugs?*	All the time When feeling unwell When can afford or paid for Other (specify)	1 2 3 8	
Q589	*Do you sometimes forget to take the drugs?*	Never Occasionally Quite often	1 2 3	
Q590	*Do you know the name for the type of drugs you are taking?*	ARVs Combivir Cotrimoxazole Other (specify) Don't know	1 2 3 8 98	
Q591	*How much is one month's supply of drugs?*		23	
Q592	*Who pays for these drugs?*	Available free Self Relative Friend Employer	1 2 3 4 5	
Q593	*Since you started taking the drugs, have you recovered from your illness?*	Fully recovered Some improvement/still unwell No improvement/worse Healthy when started treatment	1 2 3 4	
Q594	*After you started taking the drugs, did you:* (1) Start having sex more or less than before? (2) Use condoms more or less than before? (3) Start having more or fewer sexual partners? (4) Increase or reduce the number of times you speak about HIV/AIDS with others?		More / Same / Less 1 / 2 / 3 1 / 2 / 3 1 / 2 / 3 1 / 2 / 3	
Q595	*Have you experienced any unpleasant side effects since you started the treatment?*	Yes No	1 2	

REF.	QUESTIONS & FILTERS	CODING CATEGORIES		SKIP TO
Q601	***Now I would like to ask you some questions about HIV and AIDS.***			
Q602	***Please tell me all the ways that an adult can get HIV infection and AIDS?*** ***Are there any other ways?*** Tick code 1 for each way mentioned spontaneously. Then proceed down the column, reading the description of each possible way not mentioned spontaneously. Make entries in the "probed" column as follows: 1 Yes: HIV can be transmitted this way 2 No: HIV cannot be transmitted this way 98 Don't know		Spont / Probed	
		Sex with a person with HIV/AIDS	1 /	
		Touching a person with AIDS	1 /	
		Mosquito bites	1 /	
		Blood transfusion	1 /	
		Injection with a dirty needle	1 /	
		Sharing utensils with a person with HIV/AIDS	1 /	
		Ritual scarification	1 /	
		Other (specify) _____	1 /	
Q603	***Do you know of any factors which are likely to increase the chances that a person will get HIV and AIDS?*** Ask in same way as Q602.		Spont / Probed	
		Sex with a prostitute	1 /	
		Many sex partners	1 /	
		Other STDs present	1 /	
		Using condoms	1 /	
		Witchcraft or spiritual curse	1 /	
		Other (specify) _____	1 /	
Q604	***What are the ways in which an infant or child could have become infected with HIV?*** Ask in same way as Q602.		Spont / Probed	
		At birth - if mother infected	1 /	
		Witchcraft or spiritual curse	1 /	
		Mosquito bites	1 /	
		Injection with a dirty needle	1 /	
		Breastfed by infected woman	1 /	
		Blood transfusion	1 /	
		Other (specify) _____	1 /	
Q605	***Are all babies born to women who have HIV born with the infection?***	Yes	1	
		No	2	
		Don't know	98	
Q606	***Can all people infected with HIV be identified by looking at them?***	Yes	1	
		No	2	
		Don't know	98	
Q607	***Would you be willing to take care of a family member with AIDS?***	Yes	1	
		No	2	
		Don't know	98	
Q608	***How long does it usually take for a person infected with HIV to develop symptoms?***	Number of years or months	__ __	
		Don't know	998	
Q609	***How many people do you know who either died from AIDS or have the disease now?***	Number (>0)		
		Doesn't know of any	998	- Q613
Q610	***Of these people, how many live(d) in your household; in the same village/town; and how many live(d) somewhere else?*** Enter numbers of people in each category.	Household		
		Village/town		
		Somewhere else		
Q611	***What was your relationship to each of these people?*** Enter numbers of people in each category.	Spouse/partner		
		Father or mother		
		Son or daughter		
		Other relative		
		Friend or neighbour		
		Work colleague		
		Someone else		

REF.	QUESTIONS & FILTERS	CODING CATEGORIES		SKIP TO
Q612	*Did you help to take care of any of these people on a daily basis?*	Yes No	1 2	
Q613	*Have you been at risk of getting infected with HIV in the past?*	Yes No Don't know	1 2 98	- Q615 - Q615
Q614	*What was the reason you were at risk of getting infected?*	Had multiple sex partners Regular partner had many partners Other partner with many partners Many friends/relatives dying of AIDS Other (specify) Don't know	1 2 3 5 6 98	
Q615	*If you are not infected, do you think you are in danger of getting infected now or in the future?*	Yes No Don't know	1 2 98	- Q617
Q616	*Why do you think you might become infected?* Do not prompt, but ask if any other reasons.	Has multiple sex partners (now) Regular partner had many partners Might marry a person who is already infected Many friends/relatives dying of AIDS Future partner may have other partners Other (specify)	1 2 3 4 5 8	
Q617	*If you did become ill with AIDS, do you think you would be able to get help from your neighbours?*	Yes No Don't know	1 2 98	
Q618	*Is there discrimination in the community against people with AIDS?*	Yes No	1 2	
Q619	*If you thought your spouse/regular was having sexual intercourse with a casual partner(s) without using condoms, could you persuade him/her to stop?*	Yes No No regular partner Don't know	1 2 96 98	

Q620 *Which of the following statements would you say was true?*

		True	Not true
(1)	I have one partner who has other partners but does not always use condoms.	1	2
(2)	My spouse/partner would not use condoms with me on a regular basis.	1	2
(3)	I have more than one partner because I need the money and the possibility of dying from AIDS is remote.	1	2
(4)	I pay/get paid for sex because my friends do and because they encourage me.	1	2
(5)	There is no point trying to avoid AIDS as I am probably already infected.	1	2
(6)	I could avoid AIDS by sticking to one partner or always using condoms.	1	2
(7)	I am more likely to die from an accident or other illness than from AIDS.	1	2
(8)	Condom use within marriage is becoming more widely accepted in this area.	1	2
(9)	Condoms significantly reduce the pleasure of having sex.	1	2
(10)	These days, most married men are faithfull to their wives.	1	2
(11)	Drinking beer is an essential form of entertainment and relaxation for men.	1	2
(12)	My friends have changed their sexual behaviour to prevent HIV	1	2
(13)	The changes I need to make to prevent HIV are a lot to ask	1	2
(14)	I find it difficult to maintain my commitment to safe sex	1	2
(15)	I am less worried about getting HIV now that treatments have improved	1	2
(16)	I believe that new drug therapies make people with HIV less infectious	1	2

Read out each in turn.

REF.	QUESTIONS & FILTERS	CODING CATEGORIES			SKIP TO
Q621	*Do you think there are things you can do which will prevent you from becoming infected with HIV in the future?*	Yes No Don't know NA (for those already infected only)	1 2 98 99		- Q624
Q622	*Are you or your spouse/partner currently taking any steps to avoid HIV and AIDS?*	Yes No	1 2		- Q624
Q623	*What steps are you or your spouse/partner currently taking?* Do not prompt, but ask if any other steps. Stress that includes actions taken by regular partner.	Sticking to one partner - self Sticking to one partner - spouse Condoms - self/spouse Condoms - self/casual partners Condoms - spouse/casual partners Femidoms - self/spouse Femidoms - self/casual partners Femidoms - spouse/casual partners Avoiding bars - self Avoiding bars - spouse Abstaining from sex Choosing younger partners Choosing HIV- partners: tested Choosing HIV- partners: untested Avoiding widow(er)s VCT - self VCT - spouse Other (specify)	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 20		
Q624	*From what places or persons can condoms and/or femidoms be obtained locally?* Do not prompt, but ask if any other places. If available, ask whether charge or free. If condoms/femidoms mentioned in Q622: *From what place or person was the last condom (femidom) you used obtained?*	Partner Shop/pharmacy Hospital/clinic Family planning centre Community based distributor Bar/beerhall/hotel Peer educator FACT employee/volunteer Africare (Only) outside the area Other (specify)	Available: Charge: 11 11 11 11 11 11 11 11 11 11 11	Available: Free: 12 12 12 12 12 12 12 12 12 12 12	Obtained
Q625	*Have you ever discussed ways of avoiding HIV/AIDS with your regular partner?*	Yes No No regular partner NA (for those already infected only)	1 2 96 99		- Q628
Q626	*Have you and your regular partner started using a new method of family planning since hearing about HIV/AIDS?*	Yes No	1 2		- Q628
Q627	*Which method(s) were you using before you heard about AIDS and which are you using now?*	Pill Condoms Femidoms Sterilization Other (specify) _____ No methods being used		Before / Now	
Q628	*Have you heard about any meetings or other activities about HIV and AIDS?*	Yes No	1 2		- Q632
Q629	*Have you attended any meetings or other activities about HIV and AIDS?*	Yes No	1 2		- Q632
Q630	*Were any of these activities held locally or only somewhere else?*	Local area Elsewhere only - specify location.	1 2		- Q632

REF.	QUESTIONS & FILTERS	CODING CATEGORIES	SKIP TO

Q631 ***How many meetings have you attended in your area in the past 2 years that were held by the following people at the following places?***

If attended: ***how effective were these meetings in persuading people to change their sexual behaviour?***
1. Very effective;
2. Fairly effective; or
3. Ineffective.

If meetings attended at other locations, note the organisation and the most common meeting location.

	Work	School	Clinic	Bar	Other	Rural
			Hosp	Bill		
FACT (FLAG)						
FACT (Other)						
ZNFPC						
Ministry of Health						
Local council						
Africare						
Local people/leaders						
FACT peer educators						
Other peer educators						
Employer						
BRTI						
Don't know						

Q632 ***How many times in the last month have you heard HIV/AIDS mentioned ...***
1. On television
2. On the radio
3. In a newspaper
4. In informal conversations

TV	1	[ ]
Radio	2	[ ]
Newspaper	3	[ ]
Conversations	4	[ ]

Q633 **Record details of others present at this point in the interview.**

	Yes	No
Children under 10	1	2
Husband/wife	1	2
Other males	1	2
Other females	1	2

REF.	QUESTIONS & FILTERS	CODING CATEGORIES		SKIP TO
Q701	*Now I would like to talk to you about pregnancy and childbirth. Have you ever given birth (fathered a child)*?*	Yes No	1 2	- Q706
Q702	*Do you have any sons or daughters who are now living with you?*	Yes No	1 2	- Q704
Q703	*How many sons live with you? How many daughters live with you?*	Sons at home Daughters at home		
Q704	*Do you have any sons or daughters who are alive but do not live with you?*	Yes No	1 2	- Q706
Q705	*How many sons are alive but do not live with you? How many daughters are alive but do not live with you?*	Sons elsewhere Daughters elsewhere		
Q706	*Have you ever given birth to (or fathered) a boy or girl who was born alive but later died?* If no, probe: *Any (other) boy or girl who cried or showed any sign of life but only survived a few hours or days?*	Yes No	1 2	- Q708
Q707	*How many boys have died in this way? And how many girls died in this way?*	Boys who died Girls who died		
Q708	Sum answers to Q703, Q705 and Q707. Enter total.	Total		
Q709	*In total, then, how many live births have you had (fathered)?* Compare response with total in Q708. If numbers are different, probe and correct Q701-Q708, as necessary.			
Q710	If no births (Q708):			- Q722

*Note: For male respondents use question wordings indicated in brackets.

Q711 *"Now I would like to talk to you about all your births, whether still alive or not, since we saw youlast time, starting with the first one you had".*

Record names of all births in Q712. Record multiple births (twins, triplets etc) on separate lines.
Compare the follow-up list (number of births & date of first interview) and CHCs to confirm the identity of the earliest new birth.

Q712	Q713	Q714	Q715	Q716	Q717	Q718	Q719	Q720
What name was given to your (first/ next) baby?	Record single (S) or multiple (M) birth status.	*Is (NAME) a boy or a girl?*	*In what month/year was (NAME) born?* Ask for Child Health Card (CHC) as evidence of date of birth. Tick CHC box if date confirmed.	*Was PMTCT received?* If yes, ask which type.	*Is (NAME) still alive?*	*How old was (NAME) at his/her last birthday?* Record age in completed years.	If alive: *Is (NAME) living with you?*	If dead: *How old was (NAME) when he/she died?* If "1 year": *How many months old was (NAME) when he/she died?* Record days if ≤ 1 month; months if < 2 years.
01 (NAME)	S 1 M 2	Boy 1 Girl 2	Month / Year / CHC?	NVP 1 AZT 2 Other 3 No/Dk 8	Yes 1 No 2 (Goto Q720)	Age in yrs	Yes 1 No 2 Place (Q225) (Go to next birth)	Days / Months / Years
02 (NAME)	S 1 M 2	Boy 1 Girl 2	Month / Year / CHC?	NVP 1 AZT 2 Other 3 No/Dk 8	Yes 1 No 2 (Goto Q720)	Age in yrs	Yes 1 No 2 Place (Q225) (Go to next birth)	Days / Months / Years
03 (NAME)	S 1 M 2	Boy 1 Girl 2	Month / Year / CHC?	NVP 1 AZT 2 Other 3 No/Dk 8	Yes 1 No 2 (Goto Q720)	Age in yrs	Yes 1 No 2 Place (Q225) (Go to next birth)	Days / Months / Years
04 (NAME)	S 1 M 2	Boy 1 Girl 2	Month / Year / CHC?	NVP 1 AZT 2 Other 3 No/Dk 8	Yes 1 No 2 (Goto Q720)	Age in yrs	Yes 1 No 2 Place (Q225) (Go to next birth)	Days / Months / Years
05 (NAME)	S 1 M 2	Boy 1 Girl 2	Month / Year / CHC?	NVP 1 AZT 2 Other 3 No/Dk 8	Yes 1 No 2 (Goto Q720)	Age in yrs	Yes 1 No 2 Place (Q225) (Go to next birth)	Days / Months / Years
06 (NAME)	S 1 M 2	Boy 1 Girl 2	Month / Year / CHC?	NVP 1 AZT 2 Other 3 No/Dk 8	Yes 1 No 2 (Goto Q720)	Age in yrs	Yes 1 No 2 Place (Q225) (Go to next birth)	Days / Months / Years
07 (NAME)	S 1 M 2	Boy 1 Girl 2	Month / Year / CHC?	NVP 1 AZT 2 Other 3 No/Dk 8	Yes 1 No 2 (Goto Q720)	Age in yrs	Yes 1 No 2 Place (Q225) (Go to next birth)	Days / Months / Years
08 (NAME)	S 1 M 2	Boy 1 Girl 2	Month / Year / CHC?	NVP 1 AZT 2 Other 3 No/Dk 8	Yes 1 No 2 (Goto Q720)	Age in yrs	Yes 1 No 2 Place (Q225) (Go to next birth)	Days / Months / Years

Q712	Q713	Q714	Q715		Q716	Q717	Q718	Q719
What name was given to your (first/ next) baby?		*Is (NAME) a boy or a girl?*	*In what month/year was (NAME) born?*	*Was PMTCT received?*	*Is (NAME) still alive?*	*How old was (NAME) at his/her last birthday?*	If alive: *Is (NAME) living with you?*	If dead: *How old was (NAME) when he/she died?*
	Record single (S) or multiple (M) birth status.		Ask for Child Health Card (CHC) as evidence of date of birth. Tick CHC box if date confirmed.	If yes, ask which type.		Record age in completed years.		If "1 year": *How many months old was (NAME) when he/she died?* Record days, if ≤ 1 month; months, if ≤ 2 years.
09 (NAME)	S 1 / M 2	Boy 1 / Girl 2	Month / Year / CHC?	NVP 1 / AZT 2 / Other 3 / No/Dk 8	Yes 1 / No 2 (Goto Q720)	Age in yrs	Yes 1 / No 2 / Place (Q225) (Go to next birth)	Days / Months / Years
10 (NAME)	S 1 / M 2	Boy 1 / Girl 2	Month / Year / CHC?	NVP 1 / AZT 2 / Other 3 / No/Dk 8	Yes 1 / No 2 (Goto Q720)	Age in yrs	Yes 1 / No 2 / Place (Q225) (Go to next birth)	Days / Months / Years
11 (NAME)	S 1 / M 2	Boy 1 / Girl 2	Month / Year / CHC?	NVP 1 / AZT 2 / Other 3 / No/DK 8	Yes 1 / No 2 (Goto Q720)	Age in yrs	Yes 1 / No 2 / Place (Q225) (Go to next birth)	Days / Months / Years
12 (NAME)	S 1 / M 2	Boy 1 / Girl 2	Month / Year / CHC?	NVP 1 / AZT 2 / Other 3 / No/Dk 8	Yes 1 / No 2 (Goto Q720)	Age in yrs	Yes 1 / No 2 / Place (Q225) (Go to next birth)	Days / Months / Years

Q721 Tick here, if further sheet used: ☐ Number of births listed above. / Number of births listed at Round 2. / Total.

Q722 Compare Q708 with total number of births in history above (Q720). ☐
If numbers are different, probe and reconcile.
If numbers are the same, check:
For each birth: year of birth is recorded.
For each living child: current age is recorded.
For each dead child: age at death is recorded.
For age at death 12 months: probe to determine exact number of months.

Q723 For men: go to Q838.
For women: check follow-up checklist for pregnancy at time of Round 2 visit.
Pregnant - self-report [1] / Not pregnant [3] - Q727

Q724 *At the time we saw you last you were pregnant, what was the outcome of that pregnancy?*
Live birth [1] / Miscarriage/still birth [2] - Q726

Q725 *After how many months of the pregnancy did the miscarriage/stillbirth occur?*
Months ☐ - Q727

Q726 *What name was given to this baby?* _____
Check whether this name appears on the list above at the appropriate time. If not, investigate.

Q727 *How many pregnancies have you had in the last 3 years including any current pregnancy?*
One or more ☐ / None ☐ - Q836 & Q838.

REF.	QUESTIONS & FILTERS		MOST RECENT PREGNANCY	PREVIOUS PREGNANCY	PREVIOUS PREGNANCY	PREVIOUS PREGNANCY
Q801	*Are you pregnant now?*	Yes No Not sure	1 2 - Q803 98 - Q803			
Q802	*For how many months have you been pregnant?*	Number	- Q804			
Q803	*When did your most recent (or "this" for previous pregs) pregnancy end?* Stress: including miscarriages.		month yr	month yr	month yr	month yr
Q804	*At the time you became pregnant, did you want to become pregnant then, did you want to wait until later, or did you not want to become pregnant at all?*	Then Later No more	1 2 3	1 2 3	1 2 3	1 2 3
Q805	*Did you continue to have sex with your spouse/regular partner during this pregnancy?*	Yes No (Go to Q808) N/A (Go to Q808)	1 2 8	1 2 8	1 2 8	1 2 8
Q806	*Why did you continue to have sex during this pregnancy?*	To avoid partner having other relationships Other Don't know	1 2 8	1 2 8	1 2 8	1 2 8
Q807	*Did you use condoms every time you had sex during the pregnancy?*	Yes No	1 2	1 2	1 2	1 2
Q808	*Have you seen anyone for antenatal care during this pregnancy?*	Yes No (Go to Q821)	1 2	1 2	1 2	1 2
Q809	*After how many months of the pregnancy did you first go for an antenatal check-up?*	Months				
Q810	*Whom have you seen?*	Doctor/nurse Midwife - med'l TBA or midwife Other	1 2 3 8	1 2 3 8	1 2 3 8	1 2 3 8
Q811	*Where did you see this person?* Go to Q814 if local.	Local clinic/hosp'l Other clinic/hosp'l At home Other	1 2 3 8	1 2 3 8	1 2 3 8	1 2 3 8
Q812	*What type of place was this clinic located in?*	Large town Small town Growth point Estate/mine Roadside BC Rural BC Communal/resettlem't	1 2 3 4 5 6 7	1 2 3 4 5 6 7	1 2 3 4 5 6 7	1 2 3 4 5 6 7
Q813	*Why did you attend this place rather than your local clinic?*	PMTCT available More convenient Other (specify for last)	1 2 8	1 2 8	1 2 8	1 2 8
Q814	*Was treatment available for PMTCT at this clinic at the time you attended?*	Yes No Don't know	1 2 98	1 2 98	1 2 98	1 2 98
Q815	*Did you discuss having an HIV test with a nurse or counsellor?*	Yes No	1 2	1 2	1 2	1 2
Q816	*Did you have an HIV test while attending for check-ups for this pregnancy or did you already know your status?*	Yes No: knew status No: did not want (Go to Q821)	1 2 3	1 2 3	1 2 3	1 2 3
Q817	*Did you collect the result of this test?*	Yes No or N/A	1 2	1 2	1 2	1 2
Q818	*Do you have HIV infection?* Stress confidential but voluntary.	Yes No (Go to Q821) No response (Go Q821)	1 2 3	1 2 3	1 2 3	1 2 3

INDIVIDUAL QUESTIONNAIRE: RECENT PREGNANCY HISTORY

RIT.	QUESTIONS & FILTERS		MOST RECENT PREGNANCY	PREVIOUS PREGNANCY	PREVIOUS PREGNANCY	PREVIOUS PREGNANCY
Q819	*Did you receive any treatment to prevent the baby from getting infected? If so, what type?*	Yes: NVP tablet Yes: other (specify) No	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
Q820	*Did the baby receive any treatment?*	Yes: syrup No Yes: other (specify)	1 2 8	1 2 8	1 2 8	1 2 8
Q821	*Was the baby delivered at a clinic/hospital or at home?*	Clinic Home Still pregnant	1 2 3	1 2 3	1 2 3	1 2 3
Q822	*Did you have any injections during this pregnancy?*	Yes No	1 2	1 2	1 2	1 2
Q823	*Did you receive any blood transfusions during this pregnancy?* If still pregnant (Q801), go to Q837.	Yes No Don't know	1 2 98	1 2 98	1 2 98	1 2 98
Q824	*Did this pregnancy end in a miscarriage, abortion or stillbirth?*	Yes No (Go to Q827)	1 2	1 2	1 2	1 2
Q825	*How many months pregnant were you when this pregnancy ended?*		___ months	___ months	___ months	___ months
Q826	*Was this pregnancy ended intentionally because you knew or suspected you might have HIV?*	Yes No Rather not say	1 2 3	1 2 3	1 2 3	1 2 3
Q827	*Has your period returned since this pregnancy ended?*	Yes No (Go to Q829)	1 2	1 2	1 2	1 2
Q828	*For how many months after this pregnancy ended did you not have a period?*		___ months	___ months	___ months	___ months
Q829	*Have you resumed sexual relations since this pregnancy ended?*	Yes No (Go to Q832)	1 2			
Q830	*For how many months after this pregnancy ended did you not have sexual relations?* If 4 months or more, go to Q832.		___ months	___ months	___ months	___ months
Q831	*Why did you resume having sex early after this pregnancy ended?* If pregnancy ended in miscarriage, etc (check Q823), go to Q835.	To avoid partner having other relationships Other Don't know	1 2 8	1 2 8	1 2 8	1 2 8
Q832	*Did you ever feed this baby at the breast?*	Yes No (Go to Q835)	1 2	1 2	1 2	1 2
Q833	*Are you still breastfeeding?*	Yes (Go to Q836) No Child has died	1 2 98			
Q834	*For how long did you breastfeed this baby:* Exclusively? In total? If total ≥ 6 mths, go to Q836.	 Months Months	 ___ ___	 ___ ___	 ___ ___	 ___ ___
Q835	*Why did you not breastfeed this baby (for longer)?*	Baby sick or died Mother sick Risk of HIV Pregnant Resumed sex Other	4 5 6 7 8 12	4 5 6 7 8 12	4 5 6 7 8 12	4 5 6 7 8 12
Q836	*How long ago did your last menstrual period start?* If less than one month, record answer as "0" months.	Months Years Before last birth Never menstruated	 95 96			
Q837	Ask for date when the pregnancy before this one ended: If less than 3 years ago, go to next column and Q803.					

REF.	QUESTIONS & FILTERS			
Q838	*For how much of the last 2 years have you and your regular partner been using a method of contraception?*	None Some of the time Most/all of the time Not sure	1 2 3 98	- Q901
Q839	*Which were the main methods you used?* Tick maximum of two methods.	Pill Injections Condoms Femidoms Sterilization Safe period Withdrawal Other (specify)	1 2 3 4 5 6 7 9	
Q840	*What were your main reasons for wanting to delay or prevent another pregnancy?* Probe for other reasons, but do not prompt.	Enough children Birth spacing Child HIV+ risk Child orphan risk Mother HIV+: accelerate AIDS Not yet ready to have children Other (specify)	1 2 3 4 5 6 9	
Q901	Record current time.	Hour and minutes		
Q902	*What are your views of the value of this research?*	Useful Do not see the point No opinion		1 2 98
Q903	Record respondent's comments and your own observations in the space below. Give respondent a copy of the research results sheet and ask if he/she has any questions. Remind respondent of arrangements for HIV VCT and STD treatment.			

RESPONDENT'S COMMENTS:

On the research?

Further HIV prevention, care and support activities needed?

ENUMERATOR'S OBSERVATIONS:

Appendix 3

Government of Zimbabwe / UNICEF

OVC Baseline Survey 2004/05

Questionnaires

Enumerator #			Household #		

Government of Zimbabwe and UNICEF
Household OVC Baseline Survey

Introduction to HH

Your household has been randomly selected to participate in this survey on behalf of MPSLSW and UNICEF. We are gathering information from many thousands of households such as yours to enable us to get a clear picture of what the situation is like in terms of your household's health, education and social status. This information will assist in planning and assessing the usefulness of the forthcoming UNICEF two year programme. We hope you are willing to answer the questions we have prepared and thank you in advance for giving us your time. Please be assured that any and all information you give us will be treated with the utmost confidentiality. Note also that we are not here to provide your household with any gifts or handouts but only to collect information for planning purposes. Describe UNICEF core business.

Enumerator to Complete

Date of interview_____ Enumerator Name_____

Province _____ District _____

Ward name _____ EA name _____

Village name _____

Geocode from Map:

Province	District	Ward	Sector	EA number

Basic Information : *(Head of HH or wife/husband)*

(A) How would you describe the Land Sector of this community? *(circle only one option)*

1. Communal area
2. Small holding / Old resettlement/ old small scale commercial
3. A1 newly resettled
4. A2 newly resettled
5. Large scale commercial farm not resettled
6. City
7. Town
8. Growth point
9. Mining centre
10. Other, specify _____

(B) What are this household's (main) livelihood types? How do members keep busy? *Probe and discuss to capture all modes of activity and income generation (Circle all that apply and specify where required)*

1. Farming
2. Gold panning / informal gold mining
3. Other informal mining
4. Formal mining
5. Fishing
6. Market gardening
7. Commercial farm worker currently employed including A2 employees
8. Farm owner
9. Vending – all kinds including flea markets
10. Piece jobs / casual labour
11. Knitting, Sewing
12. Formal employment – specify _____
13. Other informal employment – specify _____
14. Other – specify _____

(C) Is any member of this HH a displaced former commercial farm worker 1 = Yes 2 = No

SECTION A : General HH Information : Master Table

To Head of HH or wife/husband (or any competent adult). Please provide details of all persons normally residing in this household – starting with the head of HH and his/her spouse – a HH is defined as the group of people normally eating and living in this dwelling place – information on those temporarily absent (1 month or less) at the time of interview should be included in the following master table but do not include visitors who usually live in other households and are only visiting temporarily (less than 1 month). For those aged 0-24 please continue to next pages as relevant using the SAME line numbers. Those 0-2yrs answer Q11-19, those 3-4 yrs answer Q11-19 and 23-29, those 5-17yrs answer Q11-29, those 18-24yrs answer Q23-29

						For ALL aged 10+	For FEMALES aged 10-59	For ALL OF THOSE AGED 15+		
LINE #	**1**.Please give me the names of all the persons who usually live in your household starting with the head of HH and then the wife or husband *(for reference only)*	**2**.What is the relationship of NAME to the head of the household ? *(see codes below)*	**3**. Is NAME male or female? **1 = Male** **2 = Female**	**4**.How old was NAME *at last birthday* (*years*) *(if less than one year put 0)*	**5**. Has NAME been very sick for at least 3 months during the past 12 months? By very sick I mean that NAME was too sick to work or do normal activities around the house for at least 3 of the past 12 months **1 = Yes** **2 = No** **3 = Don't know**	**6**. What is NAME 's Marital status ? *(see codes below)*	**7**. Is NAME pregnant now? **1 = Yes** **2 = No** **3 = Don't know or unsure**	**8**.What is the highest Level of formal Education completed by NAME? *(see codes below)*	**9**. Can NAME read in English, Shona or Ndebele ? **1 = Yes** **2 = No** **3 = Don't know**	**10** Can NAME write in English, Shona or Ndebele ? **1 = Yes** **2 = No** **3 = Don't know**
01										
02										
03										
04										
05										
06										
07										
08										
09										
10										
11										
12										
13										
14										
15										

Codes for Q2 Relationship to head of HH

1 = Head
2 = Wife or husband
3 = Son/daughter
4 = Son/daughter in law
5 = Parent
6 = Parent in law
7 = Brother/sister
8 = Brother/sister in law
9 = Grandchild
10= Niece / nephew
11 = Niece / Nephew in law
12 = Cousin
13 = Grandparent
14=Adopted/foster/stepchild
15= Other relative
16 = Domestic worker
17 = Lodger
18= Other non relative

Codes for Q6 Marital Status

1 = Married/ cohabiting partner
2 = Widowed
3 = Divorced / separated
4 = Single, never married, single parent who has never married
5 = Other, specify

Codes for Q8 Level of education completed

0 = None
1 = grade 1
2 = grade 2
3 = grade 3
4 = grade 4
5 = grade 5
6 = grade 6
7 = grade 7
8 = Form 1
9 = Form 2
10= Form 3
11=Form 4
12= Upper or lower 6
13= Higher education
14 = Other, specify (e.g. sub A, standard 5)

SECTION A : General HH Information : Master Table continued

For those aged 0-17 continue from the previous page using the SAME line numbers

LINE # and NAME	**11**. Is NAME's natural mother alive? **1 = Yes Skip to Q13 2 = No 3 = Don't know Skip to Q15**	**12**. If NO in Q11, how many years ago did NAME's mother die? **1 = less than 1 2 = 1 or more but less than 3 3 = 3 or more but less than 5 4 = 5 or more yrs All responses SKIP to Q15**	**13**. If YES in Q11 does she live in this HH? **1 = Yes skip to Q15 2 = No**	**14**. If NO in Q13 has NAME's mother been very sick for at least 3 months during the past 12 months? By very sick I mean that NAME's mother was too sick to work or do normal activities around the house for at least 3 of the past 12 months **1 = Yes 2 = No 3 = Don't know**	**15**. Is NAME's natural father alive? **1 = Yes Skip to Q17 2 = No 3 = Don't know Skip to Q19**	**16**. If NO in Q15 how many years ago did NAME's father die? **1 = less than 1 2 = 1 or more but less than 3 3 = 3 or more but less than 5 4 = 5 or more yrs All responses SKIP to Q19**	**17**. IF YES in Q15 does he live in this HH? **1 = Yes skip to Q19 2 = No**	**18**. If NO in Q17 has NAME's father been very sick for at least 3 months during the past 12 months? By very sick I mean that NAME's father was too sick to work or do normal activities around the house for at least 3 of the past 12 months **1 = Yes 2 = No 3 = Don't know**	**19**. Does NAME have a birth certificate? If NO PROBE Has NAME's birth been registered with the Civil authority? **1 = Has a certificate 2 = Registered but no certificate 3 = Birth not registered 4 = Don't know**
01									
02									
03									
04									
05									
06									
07									
08									
09									
10									
11									
12									
13									
14									
15									

If NAME is aged 5-17 years write his/her name and line number in the table below and continue with questions 20-22
If NAME is aged 3-4 years skip to Q23 on the next page
If NAME is less than 3 years old SKIP to the next person

Line #	NAME	**20** Does NAME have something to cover him/her at nights while sleeping? *(blanket, cloth) Access to covering not ownership)* **1 = Yes 2 = No 3 = Don't know**	**21** Does NAME have a pair of shoes? (*not shared, usable, include slippers, patapata, etc.)* **1 = Yes 2 = No 3 = Don't know**	**22** Does NAME have at least two sets of clothing? **1 = Yes 2 = No 3 = Don't know**

SECTION A : General HH Information : Master Table continued

For those aged 3-24 continue from previous pages using the SAME line numbers

LINE # and NAME	**23**.Did NAME attend school at any time during the current school year (2004)? **1 = Yes** **2 = No skip to next person** **3 = Don't know skip to next person** ***PROBE to ensure capture any ECDC formal or not***	**24**. If YES in Q23, during this school year what level was NAME attending? *Codes below* If NAME is in preschool SKIP to Q28	**25**. If YES in Q23 during this school year what grade was NAME attending? *Codes below*	**26**. If YES in Q23 has NAME dropped out of school this year (2004)? I mean was NAME absent from school for 2 consecutive weeks at any time during this school year? **1 = Yes** **2 = No skip to Q28** **3 = Don't know skip to Q28**	**27**. If YES in Q26 what were the MAIN reasons for NAME dropping out of school this year? *Codes below for up to 2 reasons*		**28**. Is NAME currently attending school (3rd term 2004) **1 = Yes** **2 = No skip to next person** **3 = Don't know skip to next person** **IF NAME is in pre-sch skip to next person**	**29**. If YES in Q28 did NAME receive any educational assistance during this term (3rd term 2004)? I mean any assistance including stationery, books, uniforms, fees, etc but not school feeding *Multiple response circle all that apply* **1 = Yes, BEAM** **2 = Yes, Dist Aids Fund** **3 = Yes, ETRP** **4 = Yes, Humanitarian Org.** **5 = Community financing** **6 = Yes, other specify** **7 = NO** **8 = Don't know**
01								
02								
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								

Q27 Other : Line # SPECIFY Line # SPECIFY

CODES for Q24	CODES for Q25	CODES for Q27	Explanation Q29 –
1 = Preschool **2 = Primary school** **3 = Secondary school** **4 = Other college or training institute**	**1 = grade 1** **2 = grade 2** **3 = grade 3** **4 = grade 4** **5 = grade 5** **6 = grade 6** **7 = grade 7** **8 = Form 1** **9 = Form 2** **10= Form 3** **11=Form 4** **12= Upper or lower 6** **13= Higher education**	**1 = Illness of child/youth** **2 = Illness of other HH member** **3 = Death in HH** **4 = Became orphaned** **5 = Caring for sick** **6 = Pregnant / causing pregnancy** **7 = Expelled other than pregnancy** **8 = Relocation/transfer/moved** **9 = Financial reasons – including $ for fees, books, uniforms, stationery, etc** **10= Employment** **11= Marriage** **12= Child abuse** **13= Transport/distance too far** **14 = Child too young** **15 = No birth certificate** **16 = Flooded rivers, no bridges, too much rain** **17 = Truancy, naughty child** **17= Other, specify**	ETRP is Education Transition and Reform Programme

Instructions to Enumerator – When Master Table is complete (3 pages) put letters against the line numbers on page 2 for all of those who will be needed in later sections.
0-17 years Section C1; 0-4 years Section C2; 12-24 years Section D; 12-17 years Section E

SECTION B : General HH Information

Preferably address the following questions to a knowledgeable senior woman in the HH

30. What is the main source of drinking water for members of your household? *(We are talking about the main source used for most of the year)*	**1** = Piped from river, stream or dam without treatment *SKIP to Q32* **2** = Piped into your own dwelling, *SKIP to Q32* **3** = Piped into your yard or plot, *SKIP to Q32* **4** = Public tap or standpipe, *SKIP to Q32* **5** = Tube well or borehole **6** = Protected dug well **7** = Unprotected dug well **8** = Protected spring **9** = Unprotected spring **10** = Rainwater, gathered in a tank **11** = Tanker truck **12** = Cart with small tank **13** = Surface water – river, dam, lake, pond, stream, river bed **14**= Other specify_____
31. If option 5-14 in Q30 is this source seasonal?	**1** = Seasonal (sometimes water not available / source dries up) **2** = Perennial (water available all through the year in all seasons)
32. If option 1-6 in Q30 does this source currently require repair or rehabilitation?	**1** = Requires repair, that is some part of it is broken and needs to be fixed **2** = Requires rehabilitation, that is it is old and needs work done on it even though nothing is broken **3** = No attention needed
33 What is the distance to this source of water? PROBE	**1** = On Premises **2** = Less than 500m **3** = Between 500m and 1 km **4** = More than 1 km
34 What kind of toilet facility do members of your household usually use?	**1** = Flush toilet **2** = Ventilated improved pit latrine (VIP/Blair) **3** = Non VIP pit latrine **4** = Composting toilet (e.g. 2 pits side by side - one used, other composts) **5** = Bucket toilet **6** = No facility / bush / field – SKIP to Q38 **7** = Other specify
35 Do you own this facility?	**1** = Yes **2** = No
36 Do you share this facility with other households?	**1** = Yes **2** = No (Skip to Q38) **3** = Not applicable
37 If YES in Q36 how many households altogether use this facility?	# of HH if less than 10 ☐ **99** = 10 or more HH **98** = Don't know
38 Does this household have a refuse pit, bin or bag?	**1** = Yes **2** = No
39 The last time the youngest child aged 0-5 years passed stools what was done to dispose of the stools? *PROBE if child aged 2 or less*	**1** = Child used latrine or toilet **2** = Put/rinsed into toilet or latrine **3** = Put/rinsed into drain or ditch **4** = Thrown into garbage **5** = Buried **6** = Left in the open **7** = Other specify _____ **8** = Don't know **9** = No children aged 0-5 years

SECTION B : General HH Information continued

Preferably continue to address the following questions to a senior woman in the HH

CIRCLE the number which represents the answer provided

	YES	NO
40 Does your household have		
A. ZESA electricity (available)?.....	1	2
B. Solar Electricity (available)?.....	1	2
C. A working radio ?.....	1	2
D. A working television ?.....	1	2
E. A functional mobile telephone / cellphone ?.....	1	2
F. A functional non-mobile telephone ?.....	1	2
G. A working refrigerator ?.....	1	2

	YES	NO
41 Does any member of this household own		
A. A watch or clock ?.....	1	2
B. A bicycle (not a tricycle)?.....	1	2
C. A motorcycle or motor scooter ?.....	1	2
D. An animal drawn cart ?.....	1	2
E. A car or a truck ?.....	1	2
F. A push cart?	1	2
G. A wheel barrow.....	1	2

42 What measures does your household normally take to protect members from mosquitoes while they are sleeping? *(Circle all that apply – multiple response)*	**1** = Mosquito nets **2** = Mosquito coils **3** = Herbs in house or burn herbs **4** = Sprays in house **5** = Creams or lotions **6** = Burn dung (*cow, elephant, other)* **7** = Burn other things (*paper, egg crates, other)* **8** = Other specify _____ _____ **9** = No measures taken
43 Does your household have any mosquito nets that can be used while sleeping?	**1** = Yes **2** = No SKIP to Q53
44 *IF YES ABOVE* How many mosquito nets does your household have? *If 7 or more nets record 7*	**Number of nets** ☐

SECTION B : General HH Information continued

	NET 1	NET 2	NET 3
45 *Ask respondent to show you the nets in the household. If more than 3 nets use an additional questionnaire. Ask all questions for net 1, then start with net 2 etc..*	**1 =** Seen **2 =** Not Seen	**1 =** Seen **2 =** Not Seen	**1 =** Seen **2 =** Not Seen
46 how long ago did your household obtain this net? *If less than 1 month record 00*	**Months ago** ☐ **95** = More than 24 months ago **98** = Not sure	**Months ago** ☐ **95** = More than 24 months ago **98** = Not sure	**Months ago** ☐ **95** = More than 24 months ago **98** = Not sure
47 *What is the brand of this mosquito net?* **A = Permanet - long lasting insecticide treated** **B = Olyset - long lasting insecticide treated** **C = Unknown brand long lasting insecticide treated** **D =Conventional Insecticide treated net** **E =Conventional Untreated net**	**A** = Brand A **B** = Brand B **C** = Brand C **D** = Brand D **E** = Brand E **F =** Other, specify **G =** Not sure	**A** = Brand A **B** = Brand B **C** = Brand C **D** = Brand D **E** = Brand E **F =** Other, specify **G =** Not sure	**A** = Brand A **B** = Brand B **C** = Brand C **D** = Brand D **E** = Brand E **F =** Other, specify **G =** Not sure
48 When you got the net was it already treated with an insecticide to kill or repel mosquitoes?	**1 =** Yes **2 =** No **3 =** Not sure	**1 =** Yes **2 =** No **3 =** Not sure	**1 =** Yes **2 =** No **3 =** Not sure
49 Since you got the mosquito net was it ever soaked or dipped in a liquid to repel mosquitoes or bugs?	**1 =** Yes **2 =** No skip to Q51 **3 =** Not sure skip to Q51	**1 =** Yes **2 =** No skip to Q51 **3 =** Not sure skip to Q51	**1 =** Yes **2 =** No skip to Q51 **3 =** Not sure skip to Q51
50 How long ago was the net last soaked or dipped? *If less than 1 month record 00*	Months ago ☐ **95 =** More than 24 months ago **98 =** Not sure	Months ago ☐ **95 =** More than 24 months ago **98 =** Not sure	Months ago ☐ **95 =** More than 24 months ago **98 =** Not sure
51 Did anyone sleep under this net last night?	**1 =** Yes **2 =** No skip to next net **3 =** Not sure skip to next net	**1 =** Yes **2 =** No skip to next net **3 =** Not sure skip to next net	**1 =** Yes **2 =** No skip to next net **3 =** Not sure skip to next net
52 Who slept under this net last night? *PROBE ask and check Anyone else?* *Write the names and record the line numbers from the master table* *For household members listed on page 2 only.*	**Name**_____ **Line #** _____	**Name**_____ **Line #** _____	**Name**_____ **Line #** _____
	Name_____ **Line #** _____	**Name**_____ **Line #** _____	**Name**_____ **Line #** _____
	Name_____ **Line #** _____	**Name**_____ **Line #** _____	**Name**_____ **Line #** _____
	Name_____ **Line #** _____	**Name**_____ **Line #** _____	**Name**_____ **Line #** _____
	Name_____ **Line #** _____	**Name**_____ **Line #** _____	**Name**_____ **Line #** _____

Continue with next net or if no more nets go to Q53

SECTION B : General HH Information continued

53 CHECK with Q4 in the master table – Are there children aged 0-17 years in the HH ?	**1** = Yes **2=** No (Skip to Q57)		
54 I would like to ask you about any formal, organized help or support that your household may have received for any children aged 0-17 years and for which you did not have to pay. By formal, organized support I mean help provided by someone working for a programme . This programme could be government, private, religious, charity, NGO, donor or community based. Throughout this section we will refer to the last 12 months – that is since November 2003.		**YES**	**NO**
A. In the last 12 months has your household received any medical support for the children such as medical care, supplies or medicine (excluding vaccinations) for which you did not have to pay? (*Include clinic treatment provided it was for free)*	Medical	**1**	**2**
B. In the last 12 months has your household received any emotional or psychological support for the children such as companionship, counseling from a trained counselor, or spiritual support for which you did not have to pay? *IF NO SKIP TO D*	Emotional 12	**1**	**2**
C. If YES in B, Did your household receive any of this emotional support in the past 3 months?	Emotional 3	**1**	**2**
D. In the last 12 months has your household received any material support for the children such as clothing or financial support (not food and not schooling) for which you did not have to pay? *IF NO SKIP TO F*	Material 12	**1**	**2**
E. If YES in D, Did your household receive any of this material support in the past 3 months?	Material 3	**1**	**2**
F. In the last 12 months has your household received any food support for the children such as supplementary feeding at school or in the village or take home dry rations for underweight children via the clinics or schools or similar? *IF NO SKIP TO H*	Food12	**1**	**2**
G. If YES in F, Did your household receive any of this food support in the past 3 months?	Food3	**1**	**2**
H. In the last 12 months has your household received any social support for the children such as help in household work, training for a caregiver, or legal services for which you did not have to pay? (*HH member trained as a caregiver for HH, vocational training for youths)) IF NO SKIP TO J*	Social 12	**1**	**2**
I. If YES in H, Did your household receive any of this social support in the past 3 months?	Social 3	**1**	**2**
J. CHECK Are there children aged 6-17 in the HH? If NO Skip to Q55	Eligibility	**1**	**2**
K. In the last 12 months has your household received any support for the children's schooling such as allowances, fees, free admission, uniforms, books or supplies, for which you did not have to pay?	Schooling	**1**	**2**

Only for HH with Children aged 0-17 years – if NO children SKIP to Q57	
55 Thinking about all the children aged 0-17 years in this household, can you tell me if their parents or guardians or caregivers have made plans or arrangements for someone to care for their children in the event of their death(s)? *PROBE – have arrangements have been made for someone to care for the children, for their education, for asset or property transfer, etc – formal or informal*	**1** = Yes, plans made for all children in the household **2** = Yes, plans made for some of the children in the household **3** = No plans made for any of the children, SKIP to Q57 **4** = Don't know, SKIP to Q57
56 *If YES (1 or 2) above*, can you tell me all about the plans that have been made? *PROBE What plans or arrangements have the parents/guardian/care givers made in respect of care for their children should they die?* ***(Multiple response)***	**1** = Extended family will take care of the children (confirmed) **2** = Extended family will take care of the children (assumed) **3** = Guardian (other than extended family) appointed **4** = Oral will **5** = Written will **6** = Insurance **7** = Savings **8** = Extended family will share assets and property **9** = Other, specify_____

SECTION B : General HH Information continued

57 CHECK with Q5 in the master table – Are there 1+ adults chronically ill in the HH ?	**1** = Yes **2**= No (Skip to Q59)		
58 I would like to ask you about any formal, organized help or support that your household may have received for a very sick adult and for which you did not have to pay. By formal, organized support I mean help provided by someone working for a programme . This programme could be government, private, religious, charity, NGO, donor or community based. Throughout this section we will refer to the last 12 months – that is since November 2003		**YES**	**NO**
A. In the last 12 months has your household received any medical support for the sick person such as medical care, supplies or medicine (excluding vaccinations) for which you did not have to pay? (*Include clinic treatment provided it was for free) IF NO SKIP TO C*	Medical 12	**1**	**2**
B. If YES in A, Did your household receive any of this support at least once a month whilst this person was sick?	Medical30	**1**	**2**
C. In the last 12 months has your household received any emotional or psychological support for the sick person such as companionship, counseling from a trained counselor, or spiritual support for which you did not have to pay? *IF NO SKIP TO E*	Emotional 12	**1**	**2**
D. If YES in C, Did your household receive any of this emotional support in the past 30 days?	Emotional30	**1**	**2**
E. In the last 12 months has your household received any material support for the sick person such as clothing or financial support (not food) for which you did not have to pay? *IF NO SKIP TO G*	Material 12	**1**	**2**
F. If YES in E, Did your household receive any of this material support in the past 30 days?	Material 30	**1**	**2**
G. In the last 12 months has your household received any food support for the sick person such as dry rations of porridge, maize, oil, beans or similar? *IF NO SKIP TO I*	Food12	**1**	**2**
H. If YES in F, Did your household receive any of this food support in the past 30 days?	Food30	**1**	**2**
I. In the last 12 months has your household received any social support for the sick person such as help in household work, training for a caregiver, or legal services for which you did not have to pay? *(HH member is trained as a caregiver for HH) IF NO SKIP TO Q59*	Social 12	**1**	**2**
J. If YES in I, Did your household receive any of this social support in the past 30 days?	Social 30	**1**	**2**

59 Now I would like to ask you a few more questions about your household. Think back over the past 12 months. Has any usual member of your household who lived in the household for 1 month or more, died in the past 12 months? (*Include death of infants even if less than 1 month)(Include deaths in hospital of normal HH members)*	**1** = Yes **2** = No (Skip to Q65) **3** = Don't know (Skip to Q65)
60 How many household members died in the last 12 months?	**# of persons** ☐

61 What was the name of the person who died most recently (in the last 12 months)? *(If more than 1 death)* and before him/her? *(If more than 2 deaths*) and before that?	**62** Was NAME male or female? **MALE FEMALE**		**63** How old was NAME when s/he died? *Write down # of years (For under 1yrs, write months or days)*	**64** Was NAME very sick for at least 3 months during the past 12 months before s/he died? By very sick I mean that NAME was too sick to work or do normal activities around the house for at least 3 of the 12 months. **YES** **NO** **DK**		
	1	**2**	☐☐	**1**	**2**	**3**
	1	**2**	☐☐	**1**	**2**	**3**
	1	**2**	☐☐	**1**	**2**	**3**

SECTION C1 : Children aged 0-17 years

Please identify each child aged 0-17 years from the master table. Insert their names and line numbers in the table below and address all the remaining questions in the table to the mother/carer of each child. If more than 7 children use additional questionnaires.

Line #	NAME	**65** Has NAME had an illness with a cough at any time in the last 2 weeks? **1 = Yes** **2 = No SKIP to next person** **3 = Don't know** **SKIP to next Person**	**66** When NAME had this illness with a cough did he/she breathe faster than usual with short, quick breaths or have difficulty with breathing? **1 = Yes** **2 = No SKIP to next person** **3 = Don't know** **SKIP to next person**	**67** When NAME had this illness did he/she have a problem in the chest or a blocked or runny nose? **1 = Blocked /runny nose** **SKIP to next person** **2 = Problem in the chest** **3 = Both of these** **4 = Don't know** **SKIP to next person** **5 = None of these** **SKIP to next person**	**68** Did you seek advice or treatment for the illness outside the home? **1 = Yes** **SKIP to Q70** **2 = No** **3 = Don't know SKIP to next person**	**69** If NO advice or treatment sought, why did you not seek advice or treatment? *Codes Below* *Write Down all that apply* **ALL SKIP To next person**	**70** If advice or treatment was sought from where did you seek this care? *Codes Below* *Write down All that Apply* **If codes 1-6 are NOT chosen SKIP to Next person**	**71** If clinical care sought, was any medicine or drugs prescribed or recommended for his/her illness? **1 = Yes** **2 = No SKIP to next person** **3 = Don't know SKIP to next person**	**72** If drugs prescribed did NAME take these drugs for his/her illness? **1 = Yes** **SKIP to Next person** **2 = No** **3 = Don't know** **SKIP to Next person**	**73** If the prescribed drugs or medicine was not taken by NAME, Please can you tell me why NAME did not take this medicine *Codes Below* *Write down All that apply*

Codes for Q69	Codes for Q70	Codes for Q73
1 = Illness not serious enough	1 = Hospital	1 = Illness not serious enough
2 = Could not afford costs of advice or treatment	2 = Health center/clinic	2 = Could not afford prescribed medicine
3 = Could not afford transport costs to go to place of treatment	3 = Village or community or farm health worker	3 = Prescribed medicine not available
4 = Transport not available to go to place of treatment	4 = Mobile/outreach clinic	4 = Could not afford transport costs to go to buy medicine
5 = Religious reasons (e.g. Vapostori)	5 = Private doctor	5 = Transport not available to go to buy medicine
6 = Cultural or traditional beliefs or reasons	6 = Pharmacy or chemist	6 = Don't know
7 = Clinic or health facility closed	7 = Shop or drug or medicine seller	7 = Other, specify
8 = No responsible or able bodied person available to accompany child to place of treatment	8 = Traditional healer	
9 = Other, specify	9 = Faith healer	
	10 = Relative or friend	
	11 = Other, specify	

SECTION C2 : Children aged 0-4 years

Please identify every child aged 0-4 years from the Master table. Write down their names and line numbers and address the questions in the table below to the mother/carer of each child. If more than 4 children use additional questionnaires

						For THOSE AGED 0-11 MONTHS				For Those aged 12-23 months REFER to the Health Card and/or PROBE			
Line #	**NAME**	**74** Does NAME have a health card? *Ask to See Card* **1 = Yes seen 2 = Yes but not seen 3 = No 4 = Don't know**	**75** What is NAME's date of birth? *Write down Date of Birth (DD/ MM/ YY)*	**76** How many months old is NAME? *Write down the number 0-59 months*	**77** Has NAME had diarrhoea in the past 2 weeks? **1 = Yes 2 = No 3 = Don't know**	**78**. Is NAME currently being breast fed? **1 = Yes 2 = No skip to Q81 3 = Don't know skip to Q81**	**79**. IF YES in Q78, has NAME ever been given any other food or liquid (including water) in addition to breast milk? **1 = Yes 2 = No skip to Q81 3 = Don't know skip to Q81**	**80**. If YES in Q79, at what age was the additional food or liquid first given? *Give age in months*	**81**. How is NAME currently being fed? *See codes below check with previous answers*	**82**. Has NAME ever received a BCG vaccination? This is usually given soon after birth in the shoulder or top of the arm and often leaves a scar. **1 = Yes 2 = No 3 = Don't know**	**83**. How many DPT vaccinations has NAME received? This is an injection in the right thigh often given at the same time as polio and is recommended to be given 3 times before the age of 12 months *write down a number, DK if not known, and 00 if none*	**84**. How many Polio vaccinations has NAME received? This is drops in the child's mouth often given at the same time as DPT and is recommended to be given 3 times before the age of 12 months *write down a number, DK if not known, and 00 if none*	**85**. Has NAME ever had an injection to prevent measles? **1 =Yes 2 = No 3 = Don't know**

CODES for Q81

1 = Breast milk only excluding even water
2 = Breast milk plus other solids or liquids including water or gripe water any kind of formula or family pot
3 = Commercial formula only
4 = Commercial formula plus other solids or liquids including water but excluding breast milk
5 = Home made formula only
6 = Home made formula plus other solids or liquids including water but excluding breast milk
7 = Family pot

FOR THOSE AGED 6-59 MONTHS		
86. Did NAME receive Vitamin A supplement in the past 6 months. *Show the capsule and explain* **1 = Yes 2 = No 3 = Don't know**	**87**.Weight measure for NAME – kgs to 2 decimal places *Write AB if no measure taken*	**88**.Height measure for NAME – cms to 2 decimal places *Write AB if no measure done*

HH Identifier _____
Write NAME of HH or identifying feature

Enumerator #			Household #				

Government of Zimbabwe and UNICEF
Household OVC Baseline Survey
Female MODULES

Random Sampling for Section D : One female aged 12-17 and one female aged 18-24
If there are no females aged 12-17 in the household select two females aged 18-24. If there are no females aged 18-24 select two females aged 12-17. If there are less than two females in the 12-24 age group substitute one or more of them with males from this age group.
If there is only one female aged 12-17 then she should be interviewed and similarly if there is only one female aged 18-24.
If there are 2+ females aged 12-17 follow the random sampling procedure described below. Similarly if there are 2+ females aged 18-24.

<u>How to do the random Sampling</u>
Refer to the Master Table and write down in the appropriate column in the table below all the line numbers for the age group in which you are interested. Write down in the last row of this table, the total number of females in this age group in the household.

PERSON NUMBER	LINE NUMBERS 12-17 YEARS	LINE NUMBERS 18-24 YEARS
1		
2		
3		
4		
5		
6		
7		
8		
Total # in household		

The total # in the HH in this age group identifies the column you should move to in the next table below.
The last digit of this questionnaire number identifies the row you should move to in the table below
The number in the box where the chosen row and column meet is the person number to be selected from this age group – put a circle around her line number in the appropriate column in the table above.

Last digit of this questionnaire number	Total number of particular age group in the household							
	1	2	3	4	5	6	7	8
0	*1*	*2*	*2*	*4*	*3*	*6*	*5*	*4*
1	*1*	*1*	*3*	*1*	*4*	*1*	*6*	*5*
2	*1*	*2*	*1*	*2*	*5*	*2*	*7*	*6*
3	*1*	*1*	*2*	*3*	*1*	*3*	*1*	*7*
4	*1*	*2*	*3*	*4*	*2*	*4*	*2*	*8*
5	*1*	*1*	*1*	*1*	*3*	*5*	*3*	*1*
6	*1*	*2*	*2*	*2*	*4*	*6*	*4*	*2*
7	*1*	*1*	*3*	*3*	*5*	*1*	*5*	*3*
8	*1*	*2*	*1*	*4*	*1*	*2*	*6*	*4*
9	*1*	*1*	*2*	*1*	*2*	*3*	*7*	*5*

SECTION D : Young People aged 12-24 years
Young FEMALES aged 12-24 years

*Ask each selected person the following questions in **complete confidence**. Do not let one respondent see the answers given by another respondent. CHECK to see if anyone is listening or will be able to hear the conversation between you and the respondent. With each respondent aged 12-17 years continue onto Section E before moving to next respondent.*

Line #	Name	F88. Have you ever heard of an illness called AIDS? 1 = Yes 2 = No skip to QF94 3 = Don't know skip to QF94	F89. Is it possible for a health looking person to have the HIV virus? 1 = Yes 2 = No 3 = Don't know/not sure	F90. Can people reduce their chances of getting the HIV virus that causes AIDS by having just one sex partner who is not infected and who has no other partners? 1 = Yes 2 = No 3 = Don't know/not sure	F91 Can people reduce their chances of getting the HIV virus by using a condom every time they have sex? 1 = Yes 2 = No 3 = Don't know/not sure	F92. Can people get the HIV virus from mosquito bites? 1 = Yes 2 = No 3 = Don't know/not sure	F93. Can people get the HIV virus by sharing food with a person who has HIV? 1 = Yes 2 = No 3 = Don't know/not sure

Carry forward the names and # of the people selected above. Now I need to ask you some questions about sexual activity in order to gain a better understanding of some family life issues. The information you supply will remain strictly confidential

#	Name	F94 How old were you when you first had sexual intercourse (if ever) *Give age in years or write 99 if never. If NEVER skip to Section E if respondent is aged 12-17 or to next person if she is aged 18-24*	F95 Have you had sexual intercourse in the past 12 months? 1 = Yes 2 = No SKIP to Section E if respondent is aged 12-17 or to next person if she is aged 18-24	F96 The most recent time you had sexual intercourse in the past 12 months was a condom used? 1 = Yes 2 = No 3 = Don't know	F97 What is your relationship to the man with whom you most recently had sexual intercourse? 1 = Husband / cohabiting partner 2 = Boyfriend/fiance 3 = Other friend 4 = Casual acquaintance 5 = Other, specify	F98 How old is this man with whom you most recently had sexual intercourse? *Write down age in years – PROBE about how old? – give approximate age*	F99 With this most recent man with whom you had sexual intercourse would you say that you had it because you wanted to or because you were forced to it against your will? 1 = Wanted to 2 = Forced to 3 = Refuse to answer/no response

SECTION D : Young People aged 12-24 years continued

Young FEMALES aged 12-24 years

*Ask each selected person the following questions in **complete confidence**. Do not let one respondent see the answers given by another respondent. CHECK to see if anyone is listening or will be able to hear the conversation between you and the respondent. With each respondent aged 12-17 years continue onto Section E before moving to next respondent.*

Line #	NAME	**F100** Have you had sexual intercourse with any <u>other</u> man in the past 12 months? 1 = Yes 2 = No skip to Section E if respondent is aged 12-17 or to next person if respondent is aged 18-24	**F101** The next most recent time you had sexual intercourse with another man, was a condom used? 1 = Yes 2 = No 3 = Don't know	**F102** What is your relationship to this other man? 1 = Husband / cohabiting partner 2 = Boyfriend/ fiance 3 = Other friend 4 = Casual acquaintance 5 = Other, specify	**F103** How old is this other man with whom you next most recently had sexual intercourse? *Write down age in years – PROBE about how old? – give approximate age*	**F104** With this next most recent man with whom you had sexual intercourse would you say that you had it because you wanted to or because you were forced to it against your will? 1 = Wanted to 2 = Forced to 3 = Refuse to answer/ no resp	**F105** Other than these two men have you had sexual intercourse with any other man in the past 12 months? 1 = Yes 2 = No Skip to Section E if respondent is aged 12-17 or to next person if respondent is aged 18-24	**F106** In total with how many different men have you had sexual intercourse in the past 12 months? *Write down number of partners*

SECTION E: ALL FEMALE Youths 12-17

Continue from Section D with those youths aged 12-17 who were randomly selected. Then consult the Master table and identify any other FEMALE youth aged 12-17. Record her name and line number from the Master table. Ask each person the following questions in ***complete confidence****. Do not let one respondent see the answers given by another respondent. CHECK to see if anyone is listening or will be able to hear the conversation between you and the respondent. Reassure the respondent – you are not asking these questions to make her unhappy but rather to see what the real situation is and thereby plan programmes and activities that can help her and others like her in similar situations.*

		I am curious to know how often you have or have not felt a certain way during the past week. Please tell me whether							
Line #	**NAME**	**F107** You were having headaches	**F108** You were happy	**F109** Your appetite was poor	**F110** You were having problems sleeping	**F111** You felt good about yourself	**F112**. You were feeling tense, nervous or worried	**F113** You were having digestion (tummy) problems	**F114** You were crying without being provoked

CARRY forward # and names		**I am curious to know how often you have or have not felt a certain way during the past week. Please tell me whether .....**							
Line #	**NAME**	**F115** You were finding it difficult to enjoy your daily activities	**F116** You were losing interest in things	**F117** You were feeling lonely	**F118** You were finding it difficult to concentrate on things	**F119**. Your health was good	**F120** You were feeling that people were not being friendly to you	**F121** You were feeling tired	**F122** You were thinking of killing yourself.

		Question : What one adult do you spend the most time with?										
Line #	**NAME**	**F123** What is his/her name? *Write down the name*	**F124** What is NAMES's relationship to you? *CODES below*	**F125** Does NAME support and encourage you?	**F126** Does NAME give you attention and listen to you?	**F127** Does NAME show you affection?	**F128** Does NAME praise you?	**F129** Does NAME comfort you?	**F130** Does NAME trust you?	**F131** Does NAME provide for your necessities?	**F132** Does NAME buy you things?	**F133** Does NAME spend time with you?

CODES for all questions except F123 and F124	CODES for F124
1 = Never 2 = Sometimes 3 = Often 4 = Always	**1 = Mother 2 = Father 3 = Grandparent 4 = Aunt or Uncle 5 = Older sibling 6 = Guardian 7 = Social worker 8 = Adult friend 9 = Other specify**

OPEN QUESTION Do you want to tell me anything more about this person? (*Write down what is said – continue overleaf if necessary)*

Appendix 4

Focus Group Discussion Topic Guide

Focus Group Discussion & Key Informant Interview – Topic Guides

1.0 Generic Procedures

The topic guides were designed to address the research objectives outlined in s2.6.1 of the main thesis. The guides and data collection procedures were developed based on the literature on gathering information from children (Schenk and Williamson 2005, Cluver and Gardner 2007), previous research - including experience in conducting focus group discussions FGDs and key informant interviews (KII) - in the study communities, the theoretical framework, and good practice in qualitative research (Strauss 1987, Heaton 2004, Wolcott 1994, Silverman 2006, Miles 1994).

The following standard procedures were used in the FGDs and KIIs:

- Discussions held in convenient central locations in four sites chosen to represent the different socio-economic contexts covered by the Manicaland Child Cohort Survey
- Individual participants chosen at random from lists of Manicaland Child Cohort Survey participants meeting the relevant selection criteria. Lists of selected individuals given to Village community health workers (VCWs) for tracing and invitation to meetings. VCWs asked to replace those who could not be traced with individuals of the same sex, age and orphan status (as applicable)
- 8-12 participants per group, 2-3 hours per session
- Discussions held in *Shona*, the local language in the study areas
- FGDs conducted by two researchers – a facilitator (the student) and a recorder

- Introduction - facilitator introduces herself and colleagues; group members make self-introductions; facilitator explains the central purpose of the FGD/KII
- FGDs and KIIs recorded on tape; additional information captured on flip charts
- Participants to help with data capture, under supervision, to break the monotony
- Where possible, children / caregivers in FGDs split into groups and asked to discuss topics and then feed back to the full group
- Drinks, snack or lunch provided for participants

2.0 Topic Guides

The following section shows the topics covered in the FGDs and reflects the structure of the actual topic guides that were used in the study. However, not all topics (or sub-topics) were covered in all of the FGDs. This was either because they were not relevant or appropriate for particular groups (e.g. children) or because they could not be covered due to time constraints. Where this was the case is indicated in the text below. In addition to the relevant sections below, former orphans, were asked to discuss the impact that being orphaned when children had had on their lives.

2.1 Evaluation of Theoretical Framework

Objective: To evaluate the appropriateness of the framework used to the research context

- Local Community Definition of an Orphan

"In the olden days, orphan was a word that was rarely used to refer to children who had lost parents? Is this still the same today?"

"How does the community define an orphan?"

- Definition of Psychosocial Distress

Participants are asked to consider the following question:

"In the questionnaires, we used a series of questions developed by the World Health Organisation to establish whether children were suffering from psychosocial distress. We would like to find out how well these questions match your own understandings of the nature and symptoms of psychosocial distress.

[NB this was mentioned as background; participants were not shown the WHO questions]. *Please can you briefly describe for me what you consider to be the main symptoms of psychosocial distress?"*

- Assessment of the Local Appropriateness and Representativeness of the Theoretical Framework

"After reading about the research that has been done before on children and psychosocial distress, we came up with this picture representing what we thought could happen to children who lose their parents ..."

Participants are shown a simplified picture of the theoretical framework used for the study.

"... Do you think this is an appropriate way of looking at the changes that take place in children's lives when they lose their parents?"

Facilitator takes the group through the framework step by step:

Moderating factors – e.g. gender

Immediate effects

Intermediate effects

Psychological problems

Short-term consequences

Long-term consequences

National level (development) consequences

2.2 Evolution of Extended Family Support for OVC

Objective: To evaluate the extended family system's effectiveness in meeting OVC's psychosocial needs

- Extended Family Support for Orphans

"Is the extended family able to recognise and meet orphans' psychosocial needs [as discussed in the theoretical framework]*?"*

"Can we say that the extended family is coping with the numbers of orphans being released into the system by HIV/AIDS?"

"What are the visible signs of the extended family's coping or trying to cope? What are the visible signs of failing to cope? Note that the research results indicate that there are very few children from the study areas who are living in child-headed households."

- Community Responsibilities towards Orphans

"In the olden days, what role did the communities have towards orphans and vulnerable children? Were they always successful in meeting their roles? Where they failed, what problems could be attributed to the failure of community?"

"Have these roles since changed? What could have brought about the change and what are the implications of the changes for orphans' adult life chances?"

"Today, does the community feel it has a responsibility towards orphans? What role is being played by the community towards orphans or what system has been put in place to cater for the needs of orphans in the community?

- Other Sources of Support for OVC

"What other types of assistance are being availed to OVC in the communities?"

"Are these forms of support helping to ameliorate OVC's psychosocial problems? In what way are they meeting the psychosocial needs of the children and in what way are they failing?" Is the kind of support being offered appropriate? If not, what could be improved?"

2.3 Evaluation of Data Collection Procedures used in the MCCS

[Children and/or Caregivers only]

Objective: To evaluate the methods used in the study to collect sensitive data from children

- Study aims

"The aims of the study were: to quantify orphan rates; to describe the socio-demographic and family background and household circumstances of children who become orphaned; to describe the changes taking place within the extended family system and child care arrangements in the face of AIDS; and to assess the effects and cumulative outcomes of orphan experience in relation to children's prospective adult-life chances. Do you think that the study managed to meet its aims? Please state your reasons."

- Reliability of Information Collected

"Do you think the interviewers got truthful responses from the children and their caregivers? If not, what could have been the contributing factors? How best can true responses be obtained from children and their caregivers?"

- Sensitivity of Study Methods

"How appropriate were the methods as a method of getting sensitive data from children? i.e. Including the separation between caregiver and child interviews. What do you want to see changed in the methods? [Caregivers only ...] *Did you*

have any problems or notice any emotional or behaviour change in the child after the interviews? How did you and the child resolve these problems?"

"Do you think that the interviewers were sensitive to the plight of orphans?"

"Did you find any of the questions upsetting? Which questions or sections of the questionnaire were emotionally upsetting to you / the children?"

2.4 Interpretation of Quantitative Findings

Objective: To seek explanations for the quantitative study results.

- Review of quantitative study findings

"Why do girls experience more psychosocial distress than boys? What do you think could be contributing to these findings? How can this be minimised?"

"Why do you think residing in the following types of households was linked to increased levels of psychosocial distress in children/orphans? ...

Commercial estates
Poorer households
Household headed by a male
Households headed by non-relatives
Not being enrolled in school."

"More maternal orphans were married than any other group? What could be the explanation for the early marriages found among this group?"

Appendix 5

Publication

"HIV-Associated Orphanhood and Children's Psychosocial Distress: Theoretical Framework Tested with Data from Zimbabwe"

C.A. Nyamukapa, S. Gregson, B. Lopman, S. Saito,

H.J. Watts, R. Monasch, M. Jukes.

American Journal of Public Health, 98(1): 133-141.

HIV-Associated Orphanhood and Children's Psychosocial Distress: Theoretical Framework Tested With Data From Zimbabwe

Constance A. Nyamukapa, MSc, Simon Gregson, DPhil, Ben Lopman, PhD, Suzue Saito, MSc, Helen J. Watts, MSc, Rooland Monasch, MSc, and Matthew C.H. Jukes, PhD

Objectives. We measured the psychosocial effect of orphanhood in a sub-Saharan African population and evaluated a new framework for understanding the causes and consequences of psychosocial distress among orphans and other vulnerable children.

Methods. The framework was evaluated using data from 5321 children aged 12 to 17 years who were interviewed in a 2004 national survey in Zimbabwe. We constructed a measure of psychosocial distress using principle components analysis. We used regression analyses to obtain standardized parameter estimates of psychosocial distress and odds ratios of early sexual activity.

Results. Orphans had more psychosocial distress than did nonorphans. For both genders, paternal, maternal, and double orphans exhibited more-severe distress than did nonorphaned, nonvulnerable children. Orphanhood remained associated with psychosocial distress after we controlled for differences in more proximate determinants. Maternal and paternal orphans were significantly more likely than were nonorphaned, nonvulnerable children to have engaged in sexual activity. These differences were reduced after we controlled for psychosocial distress.

Conclusions. Orphaned adolescents in Zimbabwe suffer greater psychosocial distress than do nonorphaned, nonvulnerable children, which may lead to increased likelihood of early onset of sexual intercourse and HIV infection. The effect of strategies to provide psychosocial support should be evaluated scientifically. (*Am J Public Health.* 2008;98:133–141. doi:10.2105/AJPH.2007.116038)

HIV epidemics in sub-Saharan Africa are giving rise to ever larger numbers of orphaned children. Between 1990 and 2010, the Joint United Nations Programme on HIV/AIDS estimates that the total number of children younger than 18 who have lost 1 or both parents to AIDS will increase from 550 000 (1.9% of all orphans) to 18.4 million (36.8%).[1] The devastating sociodemographic effects of HIV epidemics[1–3] have raised widespread concern about the psychosocial effects of orphanhood,[4–6] and substantial funds are being invested in programs to provide psychosocial support to orphans.[7–9]

In a small study of 41 pairs of orphans and nonorphans, Makame et al.[10] found that orphans had higher scores for internalizing problems compared with nonorphans and that nearly 3 times as many orphans as nonorphans had contemplated suicide. However, the empirical basis for understanding the extent, nature, causal mechanisms, and consequences of orphanhood in the context of large-scale HIV epidemics remains extremely weak.[4,6,11]

There has been progress in developing theoretical frameworks on the effects of HIV-associated orphanhood.[12] However, there has been relatively little focus on developing frameworks that identify the causal pathways through which orphan experience can lead to psychosocial distress or the consequences of psychosocial distress for child development.[1,13] Such frameworks have not previously been tested with data.

Our study had 2 objectives: first, to propose a new theoretical framework for studying the causes and consequences of psychosocial problems among orphans and other children made vulnerable by HIV/AIDS and, second, to test and evaluate aspects of this framework using data from a large-scale, population-based, national survey in Zimbabwe.

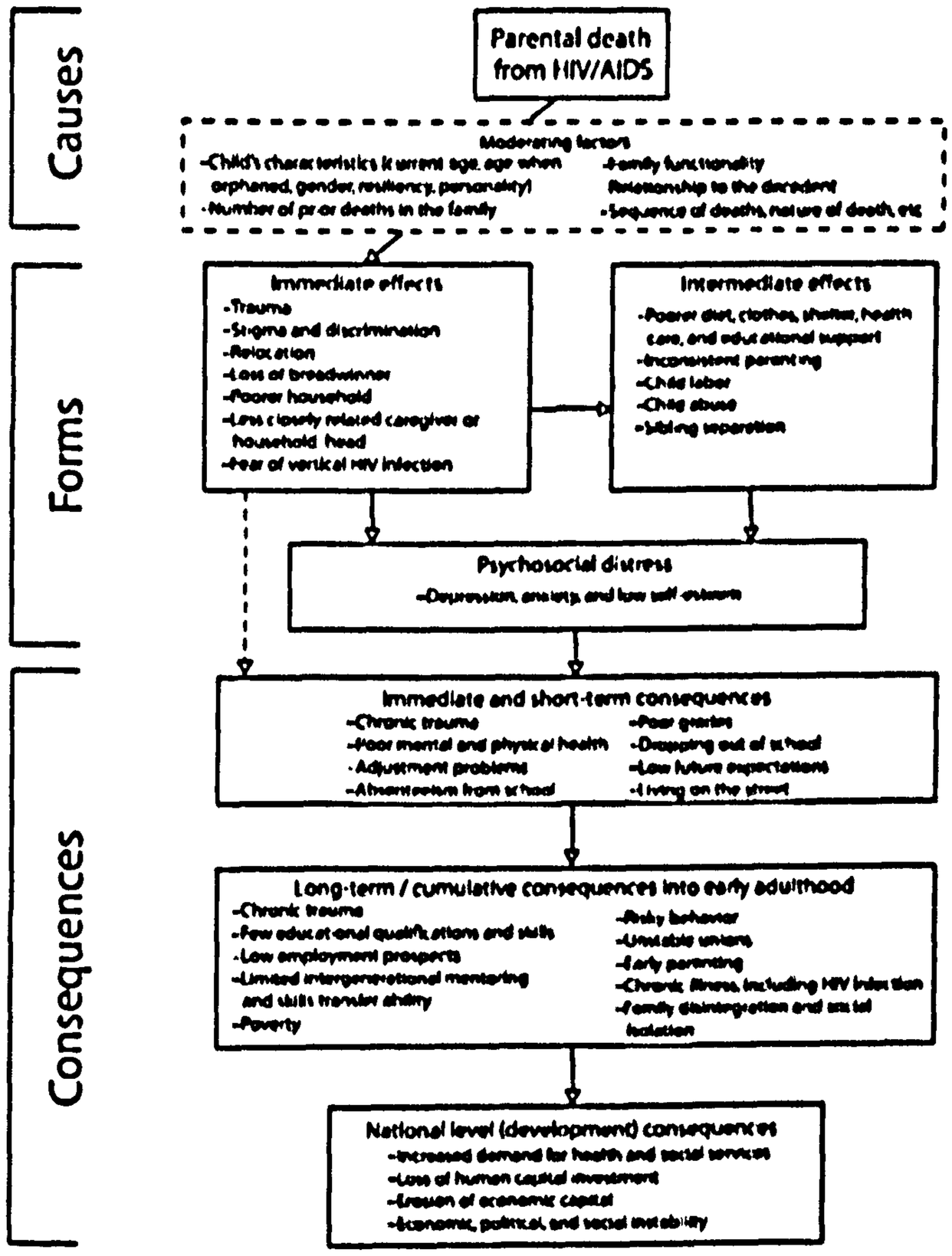
METHODS

Theoretical Framework

Our aim (Figure 1) was to identify and improve understanding of interrelationships between (1) HIV/AIDS-associated parental illness and death, (2) the psychosocial distress that manifests in children affected by HIV/AIDS, and (3) children's development and future life chances. Our theoretical framework was developed from literature that addresses causes and consequences of psychosocial distress among children from developed and developing countries.

We proposed that the effect of parental (or other caregiver) loss is moderated by the number, sequence, and timing of previous deaths in the family and the cause of parental death, by the child's characteristics, and by family and other social and contextual circumstances,[14] which inhibit or facilitate the development of psychosocial distress. Children may experience a number of shocks and changes before or immediately after the death of the parent. These include trauma and major adjustments in place of residence, childcare arrangements, and available financial resources.[15,16] These changes may be so devastating and demanding that they cause psychosocial distress including depression, anxiety, and low self-esteem.[4,10] However, some of the changes in children's circumstances may be more subtle and have a less direct and more gradual effect on their psychosocial well-being. Over time, orphaned children may develop a sense of relative deprivation as their poorer circumstances coupled with stigma and discrimination result in their continually having reduced access to services and material resources.[4,10]

We hypothesized that psychological distress resulting from parental illness and loss could have a number of immediate or



Note. Dotted line indicates that the pathway does not involve psychosocial distress. The effects of the different processes in the framework are expected to vary depending on the social context.

FIGURE 1—Theoretical framework on the causes and consequences of psychosocial distress among children orphaned and made vulnerable by HIV/AIDS.

short-term adverse consequences during childhood including chronic trauma, adjustment problems, low future expectations, poor health, reduced school attendance and performance, school drop-out, and living on the streets.[4,10] The compounding effects of problems that result from parental and caregiver loss, and other life stressors experienced during childhood, may affect the opportunities an orphaned child will be able to access during adulthood and his or her ability to capitalize on these opportunities.[17,18] For example, chronic trauma and low qualifications and skills could translate into limited employment prospects, early parenting, unstable relationships, social isolation, poverty, and behaviors that predispose toward poor health outcomes, including HIV infection.[19]

Disadvantages and psychosocial distress experienced during childhood not only affect orphans' ability to capitalize on occupational and social opportunities for their own survival as adults but also have implications for their ability to contribute to national development. Failure to carve out productive lives for themselves will result in their being dependent on government and relatives for health and social services and may mean that their children will endure a further cycle of poverty and ill health. Inability to cater to their own needs and those of their children would render current generations of orphans a threat to future economic, political, and social security.

Life Circumstances in Zimbabwe

The theoretical framework was evaluated in Zimbabwe. The predominant traditional cultures are patrilineal (i.e., lineage is recognized through the father's line) and patrilocal (i.e., the wife moves in with the husband's family or to the husband's community) and based around a strong extended family system but are being eroded by forces of socioeconomic development.[20,21] Nonorphaned children generally live with their biological parents but may reside with other relatives for socialization, education, and other reasons. Paternal orphans typically live with their mothers but the circumstances of children whose mothers have died vary; some live with their fathers and stepmothers, whereas others stay with maternal relatives or elderly grandparents.[22]

Children divide their time between home and school duties. Typically, duties at home include washing dishes, sweeping the yard, fetching water, weeding and watering plants, and preparing meals. School attendance is mandatory at the primary school level and continues to provide a good standard of education in academic and vocational skills to prepare students for the minimum of 5 O-level exam passes (taken by students around age 15) needed for employment in the country's shrinking but still relatively substantial formal sector. Attending school is also important in socialization (e.g., through inculcation of roles and responsibilities, provision of role models, and opportunities to form friendships) and offers access to counseling from teachers and links to important resources including life skills and HIV/AIDS education.[23] However, illness or death of household members is increasingly common because of HIV/AIDS and can result in children failing to attend school, because fees go unpaid or the children are needed at home to carry out household chores.[21] Lack of school materials such as uniforms and even clean clothes can make orphans and other children from poor families miss school because they feel ashamed of their appearance.

Data

We tested the relations between orphanhood, psychosocial status and selected mediating factors, and the consequences of psychosocial

distress on patterns of sexual intercourse using data from the Survey on Orphans and Other Vulnerable Children in Rural and Urban High Density Zimbabwe 2004. The survey was designed to improve understanding of the circumstances of orphans and vulnerable children and to collect baseline values for outcome indicators. The survey was sponsored by the Government of Zimbabwe and UNICEF as part of the Government of Zimbabwe–UNICEF–European Union Country Orphan and Vulnerable Children Program.

The survey was designed on the basis of international guidelines for orphan and vulnerable children research[24] and is detailed elsewhere.[25] Briefly, the survey was conducted between November and December 2004 in 21 purposively selected districts of Zimbabwe. The districts were selected on the basis of poverty and education levels. In each district, 8 census enumeration areas were selected initially according to probability proportional to size, from which 5 were purposively chosen to ensure representative geographical coverage. In Zimbabwe, census enumeration areas are delineated to contain around 100 households. Thus, approximately 500 eligible households were expected to be found in each district. Assuming an average of 0.7 orphans per household, it was expected that approximately 350 orphans would be enumerated in each district.

The survey was conducted in 2 parts. In an initial household survey, data were collected for the general demographic, socioeconomic, and health status of all household members. Two children (1 boy and 1 girl) aged 12–17 years were then selected at random from each household and asked questions that related to psychosocial distress and sexual intercourse. Up to 3 visits were made for each of the 2 interviews (household and individual) to maximize participation. Questionnaires were translated into the 2 most common local languages (Shona and Ndebele) and then back-translated into English and checked to ensure the accuracy of the original translation. Given the sensitive nature of some of the questions, children were interviewed on their own by enumerators of the same gender.

Data Analysis

Orphans were subdivided into those who had lost both of their parents (double orphans), their mother only (maternal orphans), and their father only (paternal orphans). In a recent study in eastern Zimbabwe, 82% of orphaned children had a parent living with HIV 3 years previously.[26] Vulnerable children were defined as those who were either living in a household that experienced the death of an adult other than a parent in the last year or who lived in a household with a chronically ill person.

The outcome measure of psychosocial distress was derived from emotional, psychological, physical, behavioral, and social-connectedness questions (available as a supplement to the online version of this article at http://www.ajph.org) purposively selected from the Child Behavior Checklist, Rand Mental Health Inventory, and Beck's Depression Inventory.[27–30] Similar questions have been used successfully in studies in Bulawayo, Zimbabwe,[31] and other settings in sub-Saharan Africa.[10,32–35] Principle components analysis[36] was used to reduce the number of variables and to identify the underlying structure. We conducted separate analyses for social connectedness and psychosocial distress variables. In each case, the first factor was the only factor to account for more than 10% of the variance (98.2% for social connectedness and 22.7% for psychosocial distress) and was used as the outcome measure in the primary analyses. All variable loadings on this factor were more than 0.3 for both social connectedness and psychosocial distress. The Cronbach α test[37] was applied to all variables that contributed to each outcome measure, to assess the internal consistency of the measures used. Power calculations indicated that the sample size in the Zimbabwe survey was sufficient to detect an effect of orphanhood on the psychosocial distress outcome variable (an estimated effect size of 0.17 with 90% power at a significance level of 95%, assuming an equal standard deviation for the outcome in both groups).

Ordinary least squares regression was used to calculate standardized parameter estimates and test for associations between orphanhood and vulnerable child experience and psychosocial distress, and to assess the effects of the hypothesized immediate and intermediate determinants including gender, school enrollment, relationship to household head, location of residence, poverty (living in the poorest quintile of households as measured by the Demographic and Health Surveys wealth index[38]), social connectedness, and external support. These effects were tested initially in age-adjusted models and then in multivariate models. Logistic regression was used to test the hypothesized associations between psychosocial distress and having started to have sexual intercourse, after we controlled for possible confounding variables. To limit confounding with orphan and vulnerable child status, the hypothesized determinants of psychosocial distress and early sexual intercourse were evaluated initially in nonorphaned, nonvulnerable children.

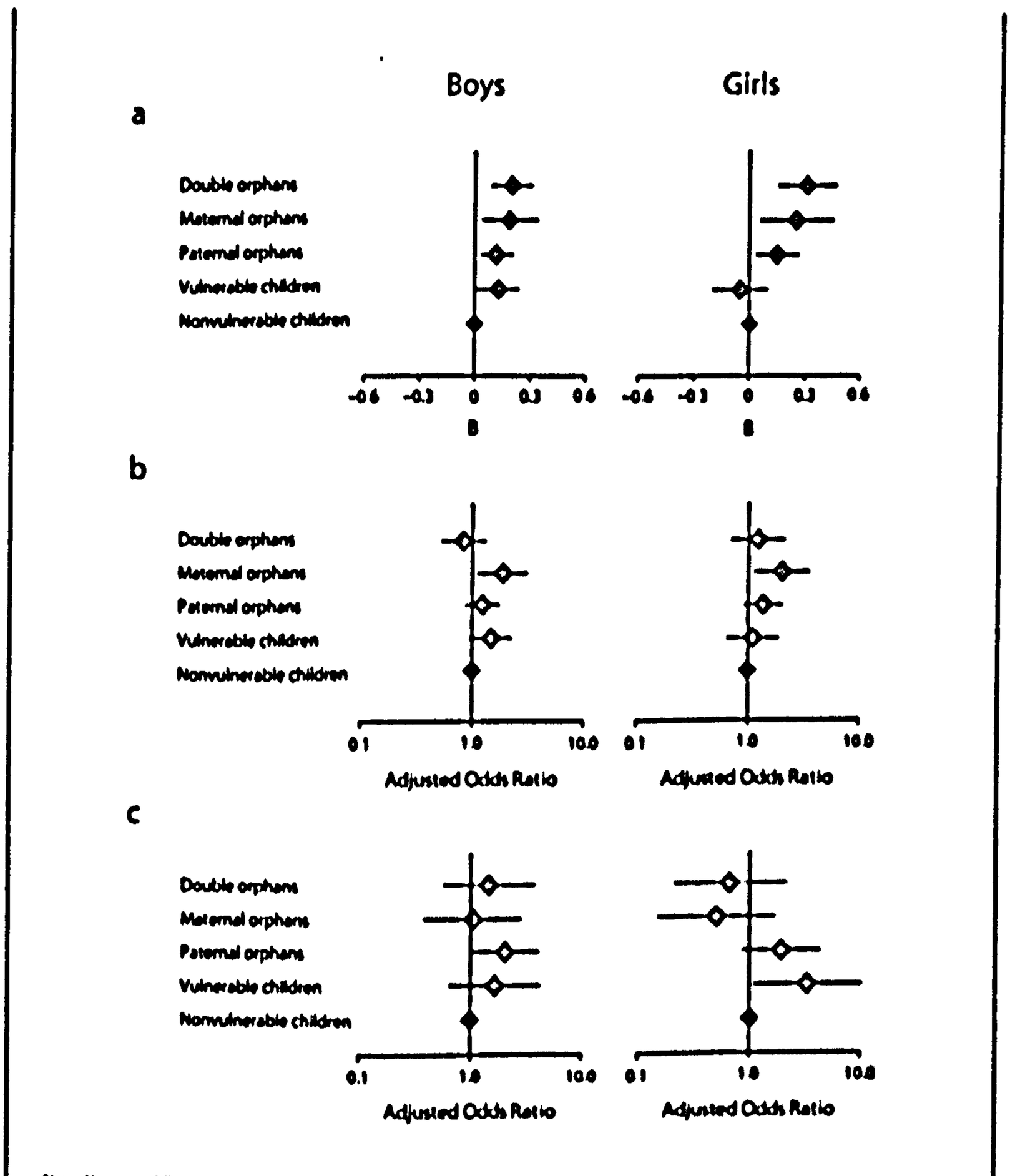
RESULTS

A total of 12 356 households were identified. These households contained 31 415 children aged 0 to 17 years, of whom 13 688 (44%) were orphaned or vulnerable children and 451 (1.5%) had missing information on their parental or vulnerability status. Of the 5328 individuals aged 12 to 17 years selected for our study, 5295 (99%) were interviewed about their psychosocial well-being and experiences of sexual intercourse. Of these, 87% (n = 4660: 548 double orphans; 281 maternal orphans; 1123 paternal orphans; 543 nonorphaned, vulnerable children; and 2165 nonorphaned, nonvulnerable children) had complete information on psychosocial distress and social connectedness variables. Cronbach's α was 0.76 and 0.78, respectively, for the psychosocial distress (16 items) and social connectedness (9 items) variables, which indicated high levels of internal consistency.

Overall, girls were found to have more psychosocial distress than did boys (B = 0.30; 95% confidence interval [CI] = 0.21, 0.40). No difference was found between younger (aged 12–14 years) and older (aged 15–17 years) children ($P = .6$). Compared with nonorphans, orphans had more psychosocial distress for both boys (B = 0.13; 95% CI = 0.06, 0.20) and girls (B = 0.20; 95% CI = 0.11, 0.29) and at younger (B = 0.14; 95% CI = 0.07, 0.22) and older (B = 0.18; 95% CI = 0.10, 0.27) ages. Orphans whose fathers or mothers had died within the last year showed signs of more-severe psychosocial distress than did

those whose parents had died further into the past (data not shown), but these differences were not significant ($P>.05$). For both genders, each type of orphan exhibited more-severe distress than did nonorphaned, nonvulnerable children (Figure 2). Nonorphaned, vulnerable boys, but not girls, also showed evidence of more psychosocial distress compared with nonorphaned, nonvulnerable children. (B=0.13; 95% CI=0.01, 0.24).

As explained in the "Methods" section, the intermediate or more-proximate determinants of psychosocial distress in children were initially identified in nonorphaned, nonvulnerable children. The results of the bivariate and multivariate analyses were very similar, so only the results from the multivariate analysis are reported here. Variables that were positively associated with psychosocial distress were residing in an urban area (B=0.16; 95% CI=0.04, 0.28), on a commercial farm (B=0.46; 95% CI=0.08, 0.84), in a poor household (B=0.14; 95% CI=0.04, 0.24) or in a household that had received external support (B=0.21; 95% CI=−0.01, 0.44), and being unrelated to the closest caregiver (B=0.14; 95% CI=0.03, 0.24). Residing in a household headed by a woman (B=−0.11; 95% CI=−0.19, −0.02) and receiving psychosocial support from the closest caregiver (B=−0.05; 95% CI=−0.09, −0.01) had protective effects against psychosocial distress. No significant effects were observed for relationship to household head or age of household head. It should be noted, however, that in some cases, lack of significant results in the above determinants could be the result of low numbers of nonorphaned, nonvulnerable children who had experienced these circumstances.



Note. Horizontal lines represent the 95% confidence intervals.

FIGURE 2—Effects of orphan and vulnerable child status on (a) psychosocial distress, (b) early sexual intercourse, and (c) high-risk sexual intercourse: Survey on Orphans and Other Vulnerable Children in Rural and Urban High Density Zimbabwe 2004.

Table 1 shows the frequencies of the hypothesized sociodemographic determinants of psychosocial distress by form of orphan or vulnerable child experience. Nonorphaned, vulnerable children and maternal orphans were the most likely to be found in towns and commercial farms. Double and paternal orphans were found disproportionately in poorer households and those headed by women and more frequently reported having received external support and being out of school. All types of orphaned and vulnerable children were more likely than were nonorphaned, nonvulnerable children to be living in a household headed by a person younger than 20 and, with the exception of nonorphaned, vulnerable children, were more likely to be found in households headed by a nonrelative and to be unrelated to their closest adult. Overall (i.e., including among respondents of both genders regardless of whether they had ever had sexual intercourse), reports of forced sexual intercourse were relatively rare but were more common among paternal orphans.

After we controlled for differences in exposure to sociodemographic determinants of psychosocial distress that were hypothesized to lie on the causal pathway between orphanhood and psychosocial distress, the strength of the observed associations was reduced (Table 2). However, these associations remained statistically significant.

Of the children surveyed, 10.5% (251 out of 2398) of boys and 8% (181 out of 2262) of girls aged 12 to 17 years reported having had sexual intercourse. Overall, orphaned and vulnerable children were more likely to

TABLE 1—Adjusted Odds Ratios (AORs) for Selected Sociodemographic Determinants of Psychosocial Distress Among Children Aged 12 to 17 Years, by Type of Experience: Survey on Orphans and Other Vulnerable Children in Rural and Urban High Density Zimbabwe, 2004

Determinant	Double Orphans			Maternal Orphans			Paternal Orphans			Other Vulnerable Children			Nonorphaned, nonvulnerable children, No. (%)
	No. (%)	AOR (95% CI)	P	No. (%)	AOR (95% CI)	P	No. (%)	AOR (95% CI)	P	No. (%)	AOR (95% CI)	P	
Total sample	548 (100)			281 (100)			1123 (100)			543 (100)			2165 (100)
Location: Urban and commercial farms vs subsistence farms	70 (13)	1.0 (0.8, 1.3)	.969	46 (17)	1.3 (0.9, 1.9)	.098	128 (12)	0.9 (0.7, 1.1)	.298	85 (16)	1.4 (1.1, 1.8)	.011	273 (13)
Poverty[a]: Poorest quintile vs higher	128 (23)	1.6 (1.2, 2.1)	<.001	43 (15)	0.9 (0.6, 1.3)	.577	232 (21)	1.3 (1.1, 1.6)	.003	87 (16)	1.0 (0.7, 1.2)	.758	359 (17)
Gender of household head: Women vs men	266 (49)	2.8 (2.3, 3.3)	<.001	87 (31)	1.3 (1.0, 1.7)	.055	854 (76)	9.3 (7.8, 11.0)	<.001	160 (30)	1.2 (1.0, 1.5)	.061	552 (26)
Relationship to household head													
Not related vs related or self	24 (4)	2.3 (1.4, 3.9)	.001	17 (6)	3.4 (1.9, 6.1)	<.001	41 (4)	2.0 (1.3, 3.2)	.002	10 (2)	1.0 (0.5, 2.1)	.915	39 (2)
Self	10 (2)	...		5 (2)	...		8 (1)	...		10 (2)	...		0 (0)
Age of household head, y: <20 vs ≥20	26 (5)	11.5 (5.4, 24.8)	<.001	6 (2)	5.8 (1.7, 14.1)	.003	19 (2)	4.1 (1.8, 9.2)	.001	15 (3)	7.0 (3.0, 16.1)	<.001	9 (0)
Relationship to closest adult: Not related vs related	125 (23)	1.5 (1.2, 1.9)	.001	59 (21)	1.4 (1.0, 1.9)	.042	217 (19)	1.3 (1.0, 1.5)	.020	80 (15)	0.9 (0.7, 1.2)	.618	341 (16)
Support from closest adult: Social Connectedness (index)	548 (100)	-0.03 (-0.1, 0.1)	.499	281 (100)	0.00 (-0.1, 0.1)	.966	1123 (100)	-0.04 (-0.1, 0.0)	.201	543 (100)	0.02 (-0.1, 0.1)	.661	2165 (100)
External psychosocial support: Some support vs no support	34 (6)	2.2 (1.5, 3.4)	<.001	11 (4)	1.4 (0.7, 2.9)	.361	51 (5)	1.6 (1.1, 2.3)	.017	19 (4)	1.2 (0.7, 2.0)	.511	64 (3)
School enrollment: Not enrolled vs enrolled	174 (33)	1.5 (1.2, 1.9)	<.001	79 (30)	1.2 (0.9, 1.6)	.300	330 (30)	1.3 (1.1, 1.6)	.002	127 (24)	1.8 (1.4, 2.3)	.702	522 (24)
Sexual abuse: Forced sexual intercourse vs none	2 (0)	2.1 (0.4, 11.7)	.367	0 (0)	...		10 (1)	5.8 (1.6, 20.9)	.007	0 (0)	...		4 (0)
Chronically ill adult in household: Yes vs no	43 (8)	...		16 (6)	...		138 (12)	...		214 (39)	...		0 (0)

Note. CI = confidence interval. Double orphans had lost both of their parents, maternal orphans had lost their mother only, and paternal orphans had lost their father only. Vulnerable children were defined as those who were either living in a household that experienced the death of an adult other than a parent in the last year or who lived in a household with a chronically ill person.

[a]Poverty was measured as quintiles derived from the Demographic and Health Surveys wealth index.

have had sexual intercourse than were nonorphaned, nonvulnerable children, but the difference was not statistically significant for either gender (boys: 11.4% vs 9.3%; age-adjusted odds ratio [OR] = 1.25; 95% CI = 0.95, 1.64; girls: 9.2% vs 6.7%; age-adjusted OR = 1.35, 95% CI = 0.98, 1.86). Maternal orphans (boys: age-adjusted OR = 1.88; 95% CI = 1.13, 3.15; girls: age-adjusted OR = 2.01; 95% CI = 1.15, 3.49), and paternal orphans (both genders combined: gender and age-adjusted OR = 1.29; 95% CI = 1.00, 1.67) but not double orphans (both genders combined, $P \geq .99$) were more likely than were nonorphaned, nonvulnerable children to have started having sexual intercourse (Figure 2). Other vulnerable children were also more likely to have started having sexual intercourse, but the difference was not statistically significant (both genders combined, $P = .087$).

When the analysis was restricted to unmarried individuals, maternal orphans (adjusted OR = 1.70; 95% CI = 1.11, 2.63), paternal orphans (adjusted OR = 1.41, 95% CI = 1.07, 1.86), and vulnerable children (adjusted OR = 1.58; 95% CI = 1.11, 2.24) were all more likely than were nonorphaned, nonvulnerable children to report commencement of sexual intercourse, but there was still no difference for double orphans ($P \geq .99$).

Of those who had started having sexual intercourse, 56% (141 out of 251) of the boys and 44% (79 out of 181) of the girls reported high-risk sexual intercourse. Overall, orphaned or vulnerable children who had started to have sexual intercourse were nonsignificantly more likely to have had high-risk sexual intercourse than were their nonorphaned, nonvulnerable counterparts (boys: 59.3% vs 52.0%; adjusted OR = 1.60, 95% CI = 0.93, 2.75; girls: 48.1% vs 40.6%; adjusted OR = 1.38; 95% CI = 0.75, 2.56). Male paternal orphans (adjusted OR = 1.96; 95% CI = 1.00, 3.82) and female nonorphaned, vulnerable children (adjusted OR = 3.09, 95% CI = 1.09, 8.76) were more likely than were nonorphaned, nonvulnerable children to have had high-risk sexual intercourse (Figure 2).

Once again, the results of the univariate and multivariate analyses of intermediate determinants for sexual intercourse debut among nonorphaned, nonvulnerable children

TABLE 2—Effect of Orphan and Vulnerability Status on Psychosocial Distress Among Children Aged 12 to 17 Years After Accounting for the Effects of Observed Intermediate Determinants: Survey on Orphans and Other Vulnerable Children in Rural and Urban High Density Zimbabwe, 2004

Determinant	Double Orphans			Maternal Orphans			Paternal Orphans			Nonorphaned, nonvulnerable children,[b] No.
	No.	B[a] (95% CI)	P	No.	B[a] (95% CI)	P	No.	B[a] (95% CI)	P	
Age- and gender-adjusted models: Orphan	548	0.25 (0.16, 0.34)	<.001	281	0.22 (0.10, 0.34)	<.001	1123	0.13 (0.06, 0.20)	<.001	2165
Multivariate models										
Orphan	548	0.21 (0.11, 0.30)	<.001	281	0.19 (0.07, 0.30)	.002	1123	0.12 (0.04, 0.20)	.003	2165
Location (compared with subsistence farms): Urban and commercial farms	70	0.21 (0.10, 0.31)	<.001	46	0.19 (0.07, 0.30)	.001	128	0.17 (0.07, 0.27)	.001	273
Poverty: Poorest quintile[c]	128	0.14 (0.04, 0.23)	.004	43	0.10 (0.00, 0.20)	.056	232	0.10 (0.02, 0.19)	.018	359
Gender of household head: Woman	266	-0.08 (-0.16, 0.00)	.047	87	-0.11 (-0.19, -0.02)	.012	854	-0.05 (-0.12, 0.03)	.211	552
Age of household head: <20 y	26	0.61 (0.27, 0.95)	<.001	6	0.75 (0.26, 1.24)	.003	19	0.01 (-0.35, 0.37)	.954	9
Relationship of closest adult: Not related	125	0.14 (0.04, 0.23)	.004	59	0.14 (0.04, 0.25)	.006	217	0.17 (0.08, 0.25)	<.001	341
Support from closest adult: Social Connectedness (index)	548	-0.03 (-0.07, 0.01)	.100	281	-0.05 (-0.09, -0.01)	.010	1123	-0.04 (-0.07, -0.01)	.014	2165
External psychosocial support: Some support (compared with none)	34	0.31 (0.12, 0.50)	.002	11	0.22 (0.00, 0.44)	.049	51	0.14 (-0.04, 0.32)	.117	64
School enrollment status: Out of school	174	0.15 (0.06, 0.24)	.001	79	0.20 (0.11, 0.29)	<.001	320	0.22 (0.14, 0.30)	<.001	502
R^2		.054			.043			.044		

Note. CI = confidence interval. Double orphans had lost both of their parents, maternal orphans had lost their mother only, and paternal orphans had lost their father only. Vulnerable children were defined as those who were either living in a household that experienced the death of an adult other than a parent in the last year or who lived in a household with a chronically ill person.

[a]Adjusted standardized parameter estimate from ordinary least squares regression comparing orphaned and vulnerable children to nonorphaned, nonvulnerable children.

[b]No difference was observed among nonorphaned vulnerable children compared with nonorphaned, nonvulnerable children in the age- and gender-adjusted model ($P = .316$).

[c]Poverty was measured as quintiles derived from the Demographic and Health Surveys wealth index.

were similar for both genders. Therefore, only the results of the multivariate analysis are reported. No longer being enrolled in school was associated with early onset of sexual intercourse (boys: adjusted OR = 2.52; 95% CI = 1.61, 3.94; girls: adjusted OR = 2.23; 95% CI = 1.06, 1.75; girls: adjusted OR = 1.23; 95% CI = 1.01, 1.50). Among girls living in a household headed by a woman was associated with early sexual intercourse (adjusted OR = 1.81; 95% CI = 1.02, 3.19). Among both genders, greater poverty showed a nonsignificant reduction in the likelihood of sexual intercourse, but the numbers of cases were small. Care must be taken when interpreting these results, because the associations identified could be the result of reverse causality (e.g., early onset of sexual intercourse could lead to leaving school at a younger age or psychosocial distress rather than vice versa).

After also adjusting for differences in location of residence, exposure to extreme poverty, gender of household head, school enrollment, and psychosocial distress (Table 3), only maternal orphans remained associated with early onset of sexual intercourse (adjusted OR = 1.71; 95% CI = 1.14, 2.55). Unmarried maternal orphans were more likely than were unmarried nonorphaned, nonvulnerable children to be living in a household headed by a grandparent, which in turn was associated with increased risk of having sexual intercourse. After further adjusting for relationship to household head, maternal orphans also ceased to show a significant association with early onset of sexual intercourse among unmarried individuals ($P = .2$).

Being out of school and increased psychosocial distress were positively and independently associated with early onset of sexual intercourse for each form of orphanhood and vulnerability, regardless of whether those who were already married were included ($P < .005$, in all cases). Residence in the poorest quintile of households was associated with reduced likelihood of early onset of sexual intercourse in each orphanhood or vulnerability status subgroup.

TABLE 3—Effect of Orphan and Vulnerable Children Status on Onset of Sexual Intercourse Among Children Aged 12 to 17 Years After Accounting for Effects of Psychosocial Distress and Other Observed Intermediate Determinants: Survey on Orphans and Other Vulnerable Children in Rural and Urban High Density Zimbabwe, 2004

Determinate	Double Orphans			Maternal Orphans			Paternal Orphans			Other Vulnerable Children			Nonorphaned, nonvulnerable children, No.
	No.	AOR[a] (95% CI)	P	No.	AOR[a] (95% CI)	P	No.	AOR[a] (95% CI)	P	No.	AOR[a] (95% CI)	P	
Age- and gender-adjusted models: Orphaned and vulnerable children	548	0.97 (0.69, 1.39)	.875	281	1.95 (1.34, 2.84)	.001	1123	1.29 (1.00, 1.67)	.049	543	1.34 (0.96, 1.87)	.087	2165
Multivariate models													
Orphaned and vulnerable children	548	0.78 (0.54, 1.13)	.196	281	1.71 (1.14, 2.55)	.009	1123	1.07 (0.80, 1.47)	.667	543	1.29 (0.91, 1.83)	.149	2165
Location (compared with subsistence farms): Urban and commercial farms	70	0.79 (0.50, 1.25)	.313	46	0.74 (0.46, 1.19)	.211	128	0.80 (0.53, 1.20)	.278	94	0.74 (0.47, 1.19)	.222	273
Poverty: Poorest quintile	128	0.56 (0.36, 0.86)	.008	43	0.61 (0.38, 0.95)	.029	222	0.70 (0.49, 1.00)	.049	87	0.69 (0.45, 1.05)	.086	359
Gender of household head: Woman	256	1.29 (0.94, 1.78)	.117	87	1.42 (1.02, 1.97)	.036	854	1.18 (0.88, 1.59)	.273	160	1.53 (1.12, 2.10)	.008	552
School enrollment status: Out of school	174	3.76 (2.77, 5.11)	<.001	79	3.39 (2.48, 4.64)	<.001	320	3.55 (2.72, 4.65)	<.001	127	3.76 (2.78, 5.09)	<.001	502
Psychosocial distress: Greater variable score	548	1.34 (1.18, 1.53)	<.001	281	1.31 (1.15, 1.49)	<.001	1123	1.24 (1.10, 1.39)	<.001	543	1.35 (1.18, 1.54)	<.001	2165
Pseudo-R^2		.156			.176			.159			.172		

Note. AOR = adjusted odds ratio; CI = confidence interval. Double orphans had lost both of their parents, maternal orphans had lost their mother only, and paternal orphans had lost their father only. Vulnerable children were defined as those who were either living in a household that experienced the death of an adult other than a parent in the last year or who lived in a household with a chronically ill person.

[a]Odds ratios were adjusted for age and gender and, in multivariate models, observed determinants of commencement of sexual intercourse.

DISCUSSION

In 2005, HIV prevalence among adults aged 15 to 49 years and the number of children aged 0 to 14 years orphaned by HIV/AIDS in Zimbabwe were estimated at 20% (range: 17%–24%) and 1 050 000, respectively.[39] Against the backdrop of this large-scale, maturing epidemic, we found evidence that orphaned adolescents had elevated psychosocial distress and were more likely than were nonorphaned, nonvulnerable children to have begun sexual activity. Differences in age, gender, place of residence, exposure to severe poverty, relationship to household head, school enrollment, and support from closest adult and from external sources explained only a small part of the increased psychosocial distress seen in orphaned children. However, more pronounced psychosocial distress showed an independent association with early onset of sexual intercourse.

Our findings are consistent with those from previous studies that have also found increased psychosocial distress among girls, orphans, and children living in poverty or not enrolled in school.[8,9,11] However, our study, to our knowledge, was the first to obtain statistically robust measurements from a large national sample, to distinguish the effects by type of orphan experience, and to apply data to a theoretical framework for understanding how psychosocial distress can arise among orphaned and vulnerable children and the consequences during and after childhood.

Limitations

The cross-sectional nature of the survey made it difficult to draw firm inferences on directions of causality—e.g., between psychosocial distress and early sexual intercourse. Nonetheless, our results were consistent with the causal pathway hypothesized in the conceptual framework, wherein parental death causes psychosocial distress, which in turn leads to early onset of sexual intercourse. The data suggest that poverty and not being in school can mediate the relationship between form of orphanhood and psychosocial distress. However, because the determinants tested here explained only a small part of the increase in psychosocial distress, factors such as trauma, stigma, and discrimination, which

could not be measured using the current data, might also be important.

In a study in eastern Zimbabwe,[40] children reported that being in poorer households and being out of school were sources of distress. For example, poverty could result in lack of presentable clothing, which could lead to absence from social gatherings or visits to relatives and created difficulties in finding friends. Children who did not attend school lacked information and felt excluded from social circles. However, within households, it was said that orphans could receive less-preferential treatment in the allocation of resources, including clothing, than the families' own biological children. Among children in school, orphans had less time for and less help with homework compared with nonorphans.

Poorer districts were purposefully selected in the Survey on Orphans and Vulnerable Children in Rural and Urban High Density Zimbabwe 2004, so the data probably overrepresent poorer households; therefore, we cannot be certain that the relations found between orphanhood, psychosocial distress, and early onset of sexual intercourse hold at a national level. Although our summary indicator of psychological distress showed good internal reliability, as with all such questionnaire-based assessments applied to new populations, we cannot be sure that the measure captured all culturally important aspects of psychosocial distress, nor can we be certain that the weightings assigned to variables (through principle components analysis) reflect their intrinsic seriousness ("thinking of killing yourself" vs "being happy").

Conclusions

The substantive findings of the study provide important new information to guide policy on forms of psychosocial support and optimal targeting strategies for orphans and vulnerable children. The results suggest that all forms of orphans are at increased vulnerability to psychosocial distress and may be in need of support. Although the statistical models explained only a part of this increased vulnerability, the results did confirm—for those aged 12 to 17 years—earlier suggestions[23] that school enrollment can help to mitigate the psychosocial distress associated with orphanhood. Similarly, extreme poverty, which was indicated by being in a household in the poorest quintile, was found to be associated with psychosocial distress for all types of orphans, so targeted alleviation of poverty could also have a part to play.

Social connectedness, defined as being related to the closest adult and receiving meaningful support from this adult, was associated with reduced psychosocial distress. Thus, support that enables orphaned and vulnerable children to remain in households with close relatives could also reduce psychosocial distress. A negative association has been found between external psychosocial support and greater psychosocial distress, which is troubling; however, this could reflect that successful targeting outweighed the initial effectiveness of these programs.

In Zimbabwe, median age at first sexual intercourse is later than in many other African countries (18 years among girls and 19 years among boys[41]). Nevertheless, our finding that maternal orphans, in particular, are at risk for early onset of sexual intercourse is consistent with findings from other studies in urban and rural areas, which have shown a consequent increase in HIV infection among adolescent girls.[42,43] Thus, programs to reduce psychosocial distress among orphaned and vulnerable children could contribute to reducing the spread of HIV infection. ■

About the Authors

Constance A. Nyamukapa, Simon Gregson, Ben Lopman, Helen J. Watts, and Matthew C.H. Jukes are with the Department of Infectious Disease Epidemiology, Imperial College London, London, England. Suzue Saito and Rashmi Monasch are with UNICEF, Harare, Zimbabwe.

Requests for reprints should be sent to Constance Nyamukapa, Department of Infectious Disease Epidemiology, Imperial College London, Norfolk Place, London W2 1PG, UK (e-mail: c.nyamukapa03@imperial.ac.uk).

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Contributors

C.A. Nyamukapa, S. Gregson, and M.C.H. Jukes developed the theoretical framework, designed the study, and drafted the article. B. Lopman and H.J. Watts assisted with the statistical analysis. S. Saito and R. Monasch coordinated the Survey on Orphans and Other Vulnerable Children in Rural and High Density Zimbabwe 2004 and prepared the data for analysis. All authors contributed to the study design, interpretation of the results, and writing the article.

Human Participation Protection

Ethical clearance was obtained for the survey from the Government of Zimbabwe's Ministry of Public Service, Labor, and Social Welfare, the Ministry of Education, Sports and Culture, and the National AIDS Council.

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