Alcohol Misuse in Sexual Health Clinics:

*Examining the Opportunity and Challenges to Intervene*

**THESIS SUBMITTED FOR EXAMINATION**

**FOR THE DEGREE OF**

**DOCTOR OF PHILOSOPHY**

Rahil Sanatinia

Centre for Psychiatry  
Division of Brain Sciences  
Faculty of Medicine  
Imperial College London  
December 2016
Declaration of originality

I, Rahil Sanatinia, declare that the thesis titled ‘Alcohol Misuse in Sexual Health Clinics: Examining the Opportunity and Challenges to Intervene’ is my own work. I confirm that I have provided the source appropriately where I have quoted the published work of others. I have designed and conducted the mixed methods study. I have conducted and analysed all the qualitative interviews. I have used and analysed the quantitative data collected as part of the main SHEAR trial.

Copyright Declaration

The copyright of this thesis rests with the author and is made available under a Creative Commons Attribution Non-Commercial No Derivatives licence. Researchers are free to copy, distribute or transmit the thesis on the condition that they attribute it, that they do not use it for commercial purposes and that they do not alter, transform or build upon it. For any reuse or redistribution, researchers must make clear to others the licence terms of this work.
Acknowledgements

I would like to express my gratitude to all the people who generously dedicated their time, provided support, shared knowledge, and contributed to this thesis.

I am most grateful to my supervisor, Professor Mike Crawford, for his tremendous academic guidance, continuous support and constructive feedback on my work throughout my research. I feel very privileged to have had the opportunity to work with such an enthusiastic, hardworking and tenacious scientist who has always trusted my abilities and encouraged me to improve my academic skills, to pursue developing new ones and broadening my research horizon whilst reminding me of the importance of a healthy work-life balance.

I have been very fortunate to also work with Professor Peter Tyrer and benefit from his wealth of knowledge. His wise words and advice have helped me stay positive and hopeful about my academic career prospects.

I am thankful to Professor Helen Ward, Professor Anne Lingford Hughes and Dr Tim Weaver for their helpful feedback during early and late stage assessments; Baptiste Leurent for his advice on statistical analysis, and Madeline Dean for her hard work and contributions to data collection.

This thesis would not have been possible without the help of all of those individuals who took part in my research and those who generously shared information during the interviews. I should thank all staff working at the clinics and alcohol health workers who agreed to reflect on and share their experience.

Lastly, I would like to thank my amazing family who have always supported me and my decisions; my mother for her never ending love, my father for teaching me integrity and my brothers for always bringing a smile to my face during difficult times.
Abstract

Introduction: Alcohol brief interventions appear to be effective when delivered in emergency medical settings. Clear links between alcohol use and poor sexual health have led to suggestions that this approach should be extended to sexual health clinics. The SHEAR study (Sexual Health and Excessive Alcohol, Randomised trial) examined the effectiveness of brief intervention compared to control treatment over a six month period. In this thesis I explore the process and outcomes of alcohol brief interventions in sexual health clinics in the context of this trial.

Methods: I analysed quantitative and qualitative data in a convergent parallel design and used a grounded theory approach to generate a mid-range theory.

Results: Over two thirds (68.49%) of those screened were excessive drinkers and those drinking excessively were more likely to have had unprotected sex whilst feeling drunk (difference in proportion = 17.69, [95% CI 13.06 to 21.56], p < 0.001).

While 98.8% received Brief Advice, only 20.4% accepted further intervention from an Alcohol Health Worker. The only factor to predict acceptance of the full intervention was reason for attendance, with those presenting for a sexual health check-up being more likely to receive the full intervention (difference in proportion=15.94, [95% CI 3.76 to 26.97], p-value=0.010). Making a ‘link’ between attendance and drinking did not affect people’s willingness for further intervention.

I propose the mid-range theory of ‘perpetual appraisal’ which is salient in many professional and personal interactions and helps explain the lack of uptake and effectiveness of alcohol brief intervention when delivered in sexual health clinics.

Conclusion: Focus on ‘teachable moment’ to implement alcohol interventions does not suit the sexual health setting. Whilst people attending these clinics generally accept being asked questions about drinking, most do not appreciate the label of ‘excessive drinker’. Targeted interventions in sexual health clinics and more upstream research are warranted.
List of abbreviations

ABI: Alcohol Brief Intervention
AHW: Alcohol Health Worker
ANARP: Alcohol Needs Assessment Research Project
AOD: Alcohol and Other Drugs
ASSIST: Alcohol, Smoking and Substance Involvement Screening Test
AUDIT: Alcohol Use Disorders Identification Test
AUDs: Alcohol Use Disorders
BA: Brief Advice
BI: Brief Intervention
CAGE: Cut down, Annoyed, Guilty, Eye-opener
CDC: Centre for Disease Control
CHD: Coronary Heart Disease
CSO: Clinical Studies Officer
DSM-IV: Diagnostic and Statistical Manual of Mental Disorders - Fourth edition
EPHPP: Effective Public Health Practice Project Quality Assessment Tool
FAST: Fast Alcohol Screening Test
GP: General Practitioner
GT: Grounded Theory
GUM: Genitourinary Medicine
HIV: Human Immunodeficiency Virus
HPA: Health Protection Agency
HPV: Human Papillomavirus
MI: Motivational interviewing
M-SASQ: Modified Single Alcohol Screening Question
MSM: Men who have sex with men
Natsal: National Survey of Sexual Attitudes and Lifestyles
NICE: National Institute for Health and Care Excellence
PAT: Paddington Alcohol Test
**PID**: Pelvic Inflammatory Disease

**RCP**: Royal College of Physicians

**RCT**: Randomised Controlled Trial

**SHEAR**: Sexual Health and Excessive Alcohol: Randomised trial

**SH**: Sexual Health

**SIPS**: Screening and Intervention Programme for Sensible drinking

**SPSS**: Statistical Package for Social Sciences

**STD**: Sexually Transmitted Disease

**STI**: Sexually Transmitted Infection

**WHO**: World Health Organization
Chapter 1  Introduction

1.1  Sexual Health
    1.1.1  Sexually Transmitted Infections: epidemiology
    1.1.2  Teenage pregnancy
    1.1.3  Risky sexual behaviours
    1.1.4  UK Government response
    1.1.5  Sexual health clinics

1.2  Alcohol and sexual health

1.3  Excessive drinking
    1.3.1  Alcohol use disorder (AUD)
    1.3.2  Alcohol guidelines, recommended levels
    1.3.3  Alcohol and health
    1.3.4  Alcohol and mental health
    1.3.5  Alcohol consumption: current picture

1.4  Screening, identification and intervention for alcohol use disorders
    1.4.1  UK government alcohol strategies
    1.4.2  Alcohol brief intervention
    1.4.3  Alcohol intervention in sexual health settings

1.5  Why this thesis?

1.6  Thesis overarching aim(s)

Chapter 2  Systematic review of the literature

2.1  Method
    2.1.1  Search strategy
    2.1.2  Selection criteria

2.2  Results
    2.2.1  Experimental studies
    2.2.2  Observational studies

2.3  Narrative summary of the results of the literature review
    2.3.1  Prevalence of excessive drinking in sexual health settings
    2.3.2  Feasibility and acceptability
    2.3.3  Uptake of alcohol intervention in sexual health settings
    2.3.4  Effectiveness of alcohol intervention in sexual health settings
Chapter 3 Methods ........................................................................................................... 79

3.1 Methodology ................................................................................................................. 83
  3.1.1 What is Grounded theory? ....................................................................................... 83
  3.1.2 Why did I choose Classic (Glaserian) Grounded Theory? ....................................... 84

3.2 Study setting .................................................................................................................. 88

3.3 Qualitative components ............................................................................................... 92
  3.3.1 Stages of theoretical sampling ................................................................................. 93
  3.3.2 Tools used for collecting qualitative components .................................................... 103
  3.3.3 Analysis procedures: qualitative components ............................................................ 107

3.4 Quantitative components ............................................................................................. 111
  3.4.1 Rationale for collecting each set of quantitative data ................................................. 114
  3.4.2 Study measures for quantitative components ............................................................ 123
  3.4.3 Analysis procedures: quantitative components ......................................................... 130

3.5 Merging, interpretations and extant literature review .................................................... 139

3.6 Rigor in grounded theory .............................................................................................. 140

3.7 Reflective account ......................................................................................................... 142

3.8 Ethical considerations .................................................................................................... 143

Chapter 4 Results I- Qualitative components .................................................................. 144

4.1 Recipients of alcohol intervention .................................................................................. 144

4.2 Key findings from the interviews with recipients of alcohol intervention ....................... 149
  4.2.1 Instant reactions ....................................................................................................... 152
  4.2.2 Adopted strategy .................................................................................................... 155
  4.2.3 On second thoughts ............................................................................................... 164

4.3 Trial experience as the deliverer of Brief Advice (sexual health clinic staff) .................. 174
  4.3.1 Is the patient’s drinking a “real” problem? .............................................................. 175
  4.3.2 Even if it is a problem is it our role to fix it? ............................................................. 178
  4.3.3 Assuming it is our role, how far should we go to fix it? ........................................... 181
  4.3.4 Even if we go the “extra mile” to fix it, will it be fixed? ............................................ 182

4.4 Findings from interviews with the providers of Brief Intervention (AHWs) ..................... 184
  4.4.1 Novelty .................................................................................................................. 184
  4.4.2 Tailor making ........................................................................................................ 189
  4.4.3 Endorsement and integration ................................................................................ 191

4.5 Summary of the findings from qualitative data ............................................................... 192
  4.5.1 Intervention recipients ............................................................................................ 192
4.5.2 Intervention providers - Sexual health clinicians ......................................................... 195
4.5.3 Intervention providers - Alcohol Health Workers ....................................................... 198
4.6 A theoretical elaboration of findings from qualitative data analysis ....................... 201

Chapter 5 Results II- quantitative components ................................................................. 209
5.1 Screening and identification .......................................................................................... 209
  5.1.1 Descriptive analyses of the study sample characteristics ........................................ 212
  5.1.2 Demographic and clinical characteristics of excessive and non-excessive drinkers .......................................................... 216
  5.1.3 Concurrent validity and predictive values of M-SASQ ........................................... 218
  5.1.4 Drinking behaviour of participants in the three months prior to the follow-up ...... 223
  5.1.5 Risky sexual behaviour and drinking excessively: prevalence and correlation ...... 225
5.2 Uptake of the Brief Intervention ................................................................................. 231
  5.2.1 Socio-demographic and clinical characteristics ...................................................... 231
  5.2.2 Sexual behaviour and drinking characteristics ........................................................ 234
5.3 Subgroup analyses on the effectiveness of Brief Intervention ..................................... 237
5.4 Summary results from staff survey ............................................................................ 242
5.5 Summary of the findings from quantitative data ......................................................... 243
  5.5.1 Identification of ‘excessive’ drinkers and their sexual behaviour ........................... 243
  5.5.2 Uptake of intervention ............................................................................................ 245
  5.5.3 Effectiveness ........................................................................................................... 246
  5.5.4 Staff attitude survey ............................................................................................... 246

Chapter 6 Discussion ........................................................................................................... 247
6.1 Merging ......................................................................................................................... 248
  6.1.1 Screening and identification ..................................................................................... 249
  6.1.2 Uptake of intervention ............................................................................................ 253
  6.1.3 Effectiveness ........................................................................................................... 257
6.2 Strengths and limitations ............................................................................................. 259
6.3 Interpretations and extant literature ........................................................................... 264
  6.3.1 Screening, identification, delivery ........................................................................... 265
  6.3.2 Effectiveness ........................................................................................................... 271
6.4 Recommendations ....................................................................................................... 282
  6.4.1 Implications for clinical practice ............................................................................. 282
  6.4.2 Implications for future research .............................................................................. 288
6.5 Conclusion ................................................................................................................. 293

References: .................................................................................................................. 296
Appendices .................................................................................................................. 306

List of Tables, Diagrams, and Figures

Table 2-1 Summary of the review of the literature on alcohol interventions in sexual health clinics in temporal order ................................................................. 51
Table 2-2 EPHPP Quality Assessment Tool Ratings for the studies included in the literature review..68
Table 3-1 Characteristics of the three clinics that the SHEAR trial took place ............................ 89
Table 4-1 Demographic characteristics of the participants interviewed at the pilot phase ........ 145
Table 4-2 Demographic characteristics of the participants interviewed near the time of the SHEAR trial six-month follow-up .................................................................... 146
Table 4-3 Clinical characteristics of the participants interviewed at the pilot phase ................ 147
Table 4-4 Clinical characteristics of the participants interviewed near the time of the SHEAR trial six-month follow-up ................................................................................ 148
Table 5-1 Comparison of demographic characteristics (age, gender) of those screened/not screened at baseline ......................................................................................... 212
Table 5-2 Comparison of demographic characteristics of those who consented to screening according to their M-SASQ status ......................................................... 213
Table 5-3 Demographic characteristics of all consented participants according to their completion of six-month follow-up interview ................................................................... 214
Table 5-4 Demographic characteristics of M-SASQ positive (randomised) group according to the completion of six-month follow-up interview ................................................. 215
Table 5-5 Demographic characteristics of M-SASQ Negative (non-eligible) group according to the completion of six-month follow-up interview .......................................................... 216
Table 5-6 Demographic and clinical characteristics of all participants who completed the follow-up interview according to their AUDIT-C score status ............................................. 217
Table 5-7 Predictive values of M-SASQ alcohol screening tool ............................................... 222
Table 5-8 Drinking behaviour of participants at six-month follow-up according to their M-SASQ status at baseline ......................................................................................... 224
Table 5-9 Comparison of risky sexual behaviour in the three months preceding the follow-up interview according to AUDIT-C status ............................................................... 227
Table 5-10 Comparison of risky sexual behaviours among participants in the three months prior to follow-up interview according to their M-SASQ status at baseline ................................. 228
Table 5-11 Comparison of sexual behaviour in the three months preceding the follow-up interview according to AUDIT-C status (OR adjusted for demographic and clinical characteristics) ................................................................. 230
Table 5-12 Socio-demographic and clinical characteristics of the SHEAR participants in the intervention arm of the trial (N=402) based on their uptake of further intervention from an AHW 233
Table 5-13 Comparative analysis of sexual behaviour and drinking characteristics of those who received/did not receive Brief Intervention from an AHW ........................................ 235
Table 5-14 Binary logistic regression on the association between reason for presenting to the sexual health clinics and receiving further intervention (BI) from an AHW by SHEAR trial participants ..... 236
Table 5-15 Subgroup analyses of the impact of Brief Intervention in reducing average alcohol units consumed on drinking days ............................................................................................................. 238
Table 5-16 Difference in outcomes and significance of interaction terms for each subgroup analysis ....................................................................................................................................................... 240
Table 5-17 Results from staff survey ............................................................................................................................................................................................................................................. 242

Diagram 2-1 PRISMA Flow Diagram of systematic review as of 15 November 2012................................. 49
Diagram 3-1 Describes the convergent parallel design of the thesis, details of various data sources and stages of data collection and analysis............................................................................................................................................. 82
Diagram 3-2 PhD Thesis in the context of SHEAR Trial................................................................................................................................. 91
Diagram 3-3 Sampling matrix for qualitative interviews............................................................................................................................................ 99
Diagram 3-4 Flow Diagram of the thesis sample selection in the context of SHEAR trial................. 113
Diagram 4-1 The emergent themes and subthemes from interviews with recipients of alcohol intervention ...................................................................................................................................................... 151
Diagram 4-2 Stacked Venn diagram presents the overlap of emergent categories ...................... 204
Diagram 4-3 An illustration of how the process of ‘perpetual appraisal’ may give rise to conflicting emotions ........................................................................................................................................................................ 206
Diagram 5-1 Stages of sample recruitment ................................................................................................................................. 211
Diagram 6-2 presents the convergent parallel design of the thesis, details of various data sources and stages of data collection and analysis and findings ................................................................. 295

Figure 5-1 Difference in outcomes in each subgroup................................................................................................. 241
Figure 6-1 Proposed typology for recipients of alcohol intervention in sexual health clinics............. 279
Chapter 1  Introduction

In this chapter I will provide background to and the rationale for conducting this thesis. To achieve this, the following are discussed:

a) I will provide some background information about sexual health, what it entails and current efforts to achieve a better sexual health. One of the most challenging areas in the context of sexual health is effective management of sexually transmitted infections (STIs); I will detail the epidemiology of such infections and the associated risk factors, describe the status of sexual health in the UK and the strategies that the UK government has employed over the recent years to tackle the increasing rates of STIs.

b) Alcohol has repeatedly been highlighted as playing an important role in risky sexual behaviour and increased rates of STIs (Cooper, 2006), (Weinhardt and Carey, 2000), (Cooke et al., 2010). I will present a brief overview of the current research regarding this issue.

c) In view of the potential role that drinking might play in sexual health I will discuss the definition of Alcohol Use Disorders (AUDs), and explain the terminologies frequently used in the field of alcohol research, and categories of excessive drinking.

d) Subsequently I will examine the evidence for interventions to address drinking problems with a focus on available evidence on interventions for excessive alcohol use in primary care settings, and whether there is a role for alcohol interventions in the context of sexual health clinics.
e) I will introduce the SHEAR trial which this thesis was conducted in parallel with. The SHEAR study is a randomised controlled trial examining the effectiveness of providing alcohol intervention to people attending sexual health clinics who are identified to be drinking excessively.

f) I will conclude the chapter by outlining the overarching aims and objectives of this thesis with a view to addressing gaps in the current knowledge.
1.1 Sexual health

The phrase 'sexual health' covers not only clinical and epidemiological aspects of prevention and treatment of infections but also takes into account the right of individuals to have a safe and satisfying sexual life. The working definition introduced by the World Health Organization (WHO) captures this inherent complexity: “Sexual health is a state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled.” (WHO, 2006)

1.1.1 Sexually Transmitted Infections: epidemiology

Sexually transmitted infections (STIs) are infections that spread mainly through sexual contact. Effective screening and treatment of STIs is still one of the most challenging areas in the context of efforts to improve sexual health. It is estimated that about one million individuals develop a sexually transmitted infection including the human immunodeficiency virus (HIV) every day. Rates of STIs vary in different countries as well as in various regions of each country. At present, there are no centralised surveillance systems for reporting rates of new infections by sexual health services. Available data suggest that the prevalence of STIs is higher in residents of urban areas, young adults and those not in a permanent relationship (WHO, 2007).
In the United States, STIs are a major health issue. According to the data from the Centres for Disease Control and Prevention annual report, there are 20 million new STI cases every year estimated to cost the health care system around $16 billion (CDC, 2013). It is worth mentioning that the surveillance data reported by CDC include only data on chlamydia, gonorrhoea and syphilis, whereas some common STIs, such as Human Papillomavirus (HPV) and genital herpes are not required to be reported to health authorities (www.cdc.gov/std/stats). In the European Union it is difficult to access accurate data on the trends and incidence of new STIs, mainly because there is no comprehensive system for reporting and keeping data on STIs and on screening and treatment services across the region.

In the United Kingdom there has been a steady rise in the number of new STIs in the past decade. The figures published by the Health Protection Agency (HPA) in August 2010 demonstrate a record level of 482,696 (nearly half a million) new diagnoses which equals an increase of almost 12,000 more cases from the 2008 figures. This report also reveals that young adults between 15-24 years and women are more at risk of acquiring sexually transmitted infections (STIs); 10% of all young adults between 15-24 years with a confirmed diagnosis of an STI, will have a re-infection within a year. Men who have sex with men (MSM) are also at a greater risk for developing STIs; about 66% of syphilis and 36% of gonorrhoea cases in England were seen among this group (HPA, 2009). Furthermore, figures from HPA also highlight variations among different regions in England. London has the poorest sexual health in England; fourteen London boroughs are among the top 20 Primary Care Trusts with the highest incidence rates of STIs. A significant number of new STI diagnoses in 2008 were made in the capital and the rate of teenage pregnancy in London in 2007 (46 per 1,000) was higher than the average for England. Data from 2008 also show that 40% of HIV, syphilis and
gonorrhoea cases were reported from London. A quarter of genital herpes cases and 20% of genital chlamydia and warts were also reported from London (PHE, 2010). The Health Protection Agency annual report published in 2013 showed that the increasing trend in new diagnoses of STIs (by 5%) was continuing (HPA, 2013). Whilst the most recent PHE report published in 2016 shows a 3% decrease in the total number of new STI diagnoses, there has been an increase in diagnoses of syphilis and gonorrhoea between 2014 and 2015, 20% and 11% repetitively (PHE, 2016).

Potential resistance to the drugs used for gonorrhoea treatment is the other worrying issue which was raised by the Health Protection Agency in 2009. Lab tests show that the bacteria are becoming less sensitive to the drugs currently used to treat the infection. The same concerns have been raised in reports published subsequently (Ison, 2012). Some STIs do not show any symptoms at early stages, and therefore remain undiagnosed and untreated for quite some time. Untreated chlamydia and gonorrhoea infections in women can result in Pelvic Inflammatory Disease (PID) leading to future infertility.

STIs not only pose psychological and physiological harms to the individuals, but also increase the risk of human immunodeficiency virus (HIV) transmission. The number of individuals living with HIV in Europe is relatively small in comparison with other parts of the world such as countries in Asia or Africa. However, a high number of new HIV diagnoses are still being reported each year in Western and Central Europe. There has been an increase in the number of reported HIV diagnoses from 12,748 in 2000 to 24,703 in 2009 in Western Europe. In 2009, the United Kingdom, Belgium and Portugal had the highest rates. As of the end of 2009, HPA estimates that around 86,500 people were living with HIV in the UK including those who were
not diagnosed. About a quarter of these people were believed not to be aware of their infection; 6,630 new HIV diagnoses (4,400 men and 2,230 women) were made in 2009 in the UK. This was the highest number reported from the countries in the WHO European Region. Following adjustments for missing data it is estimated that 54% of the new cases in the UK acquired their infection through heterosexual contacts and that 42% were among men who have sex with men (MSM). The number of newly diagnosed HIV cases is still high among certain groups like MSM with four out of five having acquired their infection in the UK. In 2008 the prevalence of HIV in residents of London was 5 in 1,000 adults (15-59 years old).

1.1.2 Teenage pregnancy

Although there has been a 51% decrease in the rate of teenage pregnancy since 1998, the UK has one of the highest rates of teenage pregnancy in Western Europe. Figures published by the Office for National Statistics show that the under 18 conception rate for 2014 was at 22.9 conceptions per thousand women aged 15 to 17, the lowest figure since 1969 when the rate was 45,495 conceptions to women aged under 18. The overall estimated number of conceptions in women under the age of 18 fell by 6% - from 24,306 in 2013 to 22,653 in 2014. Despite the overall improvements, there are variations in the conception rates under the age of 18 across England and Wales. Whilst the under 18 conception rate in 2014 was the highest in the North East (30.2 per thousand women aged 15 to 17), the South East and South West had the lowest rate (18.8). Maintaining the downward trend and improving the state of sexual health in all regions, remain a priority in the Department of Health Framework for Sexual Health Improvement in England (ONS, 2016b).
1.1.3 Risky sexual behaviours

Unprotected sex and having multiple sexual partners increase the risk of acquiring STIs. Concurrent sexual partnership could potentially increase the risk of STI transmission if there is no consistent use of condoms. In a survey carried out in the US about 11% of men reported concurrent sexual relationships in the year preceding the survey (Adimora et al., 2007). A group of researchers in the US analysed data from 2002 US Family Growth survey to find out the demographics and risk factors for concurrent sexual partnership among women. The analysed data pertained to 7643 women for the period of one year preceding the survey; the total prevalence of concurrent sexual partnership was reported to be around 8% after required adjustments. Young age, marital status of formerly or never married, Black ethnicity, young age at first sexual intercourse, having a non-monogamous sexual partner, having sex whilst high on drugs or alcohol, binge drinking and using drugs (crack or cocaine) were shown to be associated with sexual concurrency (Adimora et al., 2011). Previous studies have shown that concurrent partnerships are more common among those attending sexual health clinics. A study of a sample of 973 individuals attending an STI clinic showed that 64% had concurrent steady and non-steady sexual partners during the three months before the survey. Male gender and using alcohol and drugs were correlated with concurrent sexual partnerships (Senn et al., 2009).

The National Survey of Sexual Attitudes and Lifestyles (Natsal) was first carried out in 1990 and repeated in 2000 and 2010 across Britain. In 2000 they conducted interviews with 11,161 respondents (4762 men, 6399 women). The respondents reported more risky sexual behaviours (e.g. higher numbers of sexual partners, homosexual partnership, concurrent sexual partnership, heterosexual anal sex and payment for sex) compared to the 1990 survey;
for many of these variables the change was significant (OR > 1.5). More interestingly, changes between the two surveys were greater for women than for men and greater for those living outside London. The authors of the main report of study findings argue that the difference observed between the two surveys could be attributed to both real changes such as cohabiting patterns, and also to more honest replies from the survey respondents in reporting risky behaviours. This may indicate a tendency towards more homogenised sexual behaviour patterns, social acceptability of and/or a more tolerant attitude towards these rather sensitive issues. The gap between gender shows an even further decrease in the most recent round of Natsal (Mercer et al., 2013).

1.1.4 UK Government response

In 2001 the UK government introduced the first national strategy for sexual health and HIV: ‘Better prevention, Better services, Better sexual health’ (DH, 2001), (Adler et al., 2002). The aim was to address the high incidence of STIs, unintended pregnancy and to improve sexual health services in the UK. It was developed with the aim of modernising sexual health services in order to offer a standard level of screening and treatment services across the country; some preventive measures were also set out in the action plans. In response, some practical toolkits were developed, among which was “practical tips for self-esteem building and sexual health promotion”. Since then, there have been improvements in some areas such as an overall drop in teenage pregnancy rates, better and quicker access to sexual health services, and launching the national Chlamydia screening programme.
Despite these efforts, according to the latest figures published by the Health Protection Agency, approximately 440,000 diagnoses of STIs were made in England in 2014 which shows only a small decrease compared to the 2013 figures. The prevalence is still highest among heterosexual young people under the age of 25 and in men who have sex with men (MSM); new cases of gonorrhoea continue to rise sharply. Syphilis and gonorrhoea diagnoses among MSM are still on the rise as well which is believed to be related to risky sexual behaviour (PHE, 2015)

1.1.5 Sexual health clinics

In Britain, there is a system in place solely for the management, screening and treatment of STIs. Sexual health clinics which are sometimes called Genitourinary Medicine (GUM) clinics provide a variety of services and STI screening procedures including HIV testing. Systems of collecting and reporting data on the incidence rates and trends of STIs, emphasis on testing large numbers of people through the National Chlamydia Screening Programme along with availability of more sensitive tests for gonorrhoea and herpes mean that a larger number of STI cases can be identified. However the high incidence rates of STIs over the past decade is also attributable to poor sexual health and that some high risk groups continue to engage in risky sexual behaviour.
1.2 Alcohol and sexual health

Existing research suggests there is a positive relationship between excessive drinking and risky sexual behaviour (Cooper, 2006), (Weinhardt and Carey, 2000), (Cooke et al., 2010). However, it is not yet clear if this relationship is a causal one or whether these two forms of behaviour share common risk factors. Cook and colleagues conducted a systematic review of the literature published from 1995 to 2003 on the association between STIs and problematic alcohol drinking. Although their review suggests that there is a positive relationship between problem drinking and increased risk of STIs, they argue that this relationship has not been well explored in the existing literature. One major limitation is that in many of these studies, problem drinking has not been defined. They emphasise the need for further research to collect and analyse event level data on heavy drinking before sex to better explore the causal relationship between the two (Cook and Clark, 2005).

Research carried out subsequently, also supports the view that alcohol use and risky sexual behaviour are linked. A study on 520 patients attending a sexual health clinic in Southampton, UK concluded that binge drinking is heavier in this group than it is among people in the general population. The participants in this study reported drinking 13 units on a usual night and 26 on a ‘heavy night’. The researchers identified that in total, 86% of clinic attendants were excessive drinkers, 77% drank before sex with a new partner and 32% thought their attendance was related to drinking. In their sample 19% of women said they had an unwanted pregnancy of which 28% had been drinking before the event (Standerwick et al., 2007).

Hutton and colleagues carried out a cross sectional study to examine the relationship between binge drinking and risky sexual behaviour in a sample of 671 patients of an STI clinic in the US. They also explored gender differences in relation to these associations. In their
sample, 30% of women and 42% of men were identified as binge drinkers. They found a strong link in women who binged compared to non-bingers and abstainers in terms of engaging in risky sexual behaviour (anal sex); this correlation was not observed in the male participants. Having multiple sex partners and a diagnosis of gonorrhoea was nearly twice and five times respectively, in female bingers compared to their non-binger counterparts (Hutton et al., 2008). Furthermore, a recent study demonstrated that binge drinking is common among young (18-29 years old) frequent night clubbers and that 62% of participants reported sex under the influence of alcohol. Men were more likely to report both binge drinking and alcohol before recent sex. Young age was correlated with being less safe in sex under the influence of alcohol (Wells et al., 2010). Alcohol is also shown to increase the risk of HIV infection. In a review of the literature to explore this association, the authors conclude that drinking alcohol before or at the time of a sexual encounter increases the chance of new HIV infection by 87%; the risk was shown to be higher among binge drinkers compared to non-binge drinkers (Baliunas et al., 2010).

Some researchers have attempted to explain this relationship by exploring the possibility of causality. In a longitudinal prospective study on a cohort of 1265 individuals born in New Zealand, researchers found evidence of a causal link between alcohol misuse and development of new STIs; they argue that in their study there was little evidence suggesting that this association could be explained by other covariates (Boden et al., 2011).

It has been argued that when assessing the relationship between alcohol and risky sexual behaviour, demographic characteristics and social context should also be taken into account. To examine this hypothesis, Vanable and colleagues analysed event-level data from 1,712 MSM participants. They showed the effect of alcohol on risky sexual behaviour might be
different according to the context in which alcohol is used so that sexual encounters with a primary partner were not affected by alcohol use. However, drinking four or more drinks was shown to be associated with higher rates of unprotected anal sex with a non-primary sexual partner (Vanable et al., 2004). Other similar studies support this finding that partner characteristics may have an impact on the association between risky sexual behaviour and alcohol use. In a cross sectional study of a sample (n = 1419) of STI clinic attendants the researchers found no relationship between condom use and substance (alcohol, drugs or combined) use. However, in their subsequent analyses they considered gender and partner type as well; gender specific analyses showed that women were more likely to have sex without condom with a non-primary partner if they both were drinking but such an association was not observed among men or for drug use (Scott-Sheldon et al., 2009).

Pedersen et al. tested factors affecting the relationship between drinking and sex related alcohol expectancy - the belief that drinking would lead or enhance the possibility of a sexual encounter. The relationship between sex related alcohol expectancies and alcohol drinking behaviour was shown to be affected by the individuals’ relationship status and gender. The highest level of correlation was seen in females actively dating but not in a permanent relationship. In males, the correlation seemed not to be affected by their relationship status. In both groups high levels of expectancy were related to high levels of alcohol consumption (Pedersen et al., 2009). It has also been suggested that the effects of alcohol on sexual risk taking is partly due to alcohol’s effect on subjective sexual arousal in men and women (George et al., 2009).

Additionally, recreational drug use is suggested to increase and/or be associated with engaging in risky sexual behaviour (Heiligenberg et al., 2012) and more so among specific
subgroups such as HIV positive men who have sex with men (Dirks et al., 2012). Mitcheson and colleagues used the data from 2003 Mixmag survey to explore the drug use patterns and the sexual behaviour among a sample of dance drug users. Mixmag is a magazine with the focus on dance music and clubbing culture. The data were collected from 1,015 individuals living in the UK with the mean age of 24.1 years. Overall, 83.5 % of respondents reported unprotected sex in the previous year. Inconsistent condom use in the case of two or more sexual partners in the year preceding the survey was 39.2% in men and 41.1% in women. Alcohol was found to be the most prevalent drug (88.6%) used in the previous month and LSD the least (6%); ecstasy (69%) and cannabis (64.3%) were next on the list (Mitcheson et al., 2008).

1.3 Excessive drinking

As discussed above, excessive drinking has been frequently linked to poor sexual health; in this section I will provide some details about the definition of excessive drinking and the extent of this problem in the UK. I will then provide a summary of available evidence on interventions for alcohol related problems with a focus on those being offered in the context of sexual health settings.
1.3.1 Alcohol use disorder (AUD)

The level of alcohol that someone consumes is viewed as lying on a spectrum which ranges from drinking responsibly and sociably within the recommended levels to alcohol dependence. Various terms are used to capture and define this wide range of drinking patterns. Alcohol use disorder (AUD), alcohol misuse, excessive alcohol consumption and binge drinking are among the terms used in this field. Drinking is considered safe if it is within the recommended limits and does not lead to harm to health or other negative consequences.

Using alcohol units is a means of quantifying the amount of pure alcohol that alcoholic beverages contain; one unit of alcohol equals to 7.9 grams or 10 millilitre of pure alcohol (ethanol). This is roughly the amount of alcohol that an average adult body can metabolise within an hour, meaning that after this period there will be no or very little alcohol in their system. Alcoholic drinks vary in their alcohol content, thus the number of units in each drink is calculated based on the size of the drink as well as the strength of that specific drink: (Strength (ABV) x Volume (ml) ÷ 1,000 = units). However, serving sizes are not necessarily equal to one unit. A half pint of a normal strength beer, or a standard pub measure (35 ml) of spirits contain one unit of alcohol. NHS recommendations with regards to alcohol consumption is that women should avoid drinking more than 2-3 units, and men should avoid drinking more than 3-4 units in a day on a regular basis. Regular basis is defined as every day or on most days of the week. There is also a recommended weekly limit of 21 units for men and 14 units for women. This information is available on the NHS choices website and can be accessed via the web link below:

http://www.nhs.uk/Livewell/alcohol/Pages/alcohol-units.aspx.
Alcohol Misuse is a term referring to three patterns of drinking: hazardous, harmful and dependent. Hazardous drinking is a pattern of alcohol consumption which increases the risk of alcohol associated harms to the user (Parker et al., 2008). Some only consider harms to physical and mental health, whereas others include social harms as well. This pattern is of public health significance although the disorder may not be apparent in the individual user (Parker, 1995). Harmful drinking is used when the drinking pattern results in damage to the health of the individual; the consequences could be physical or mental. Although harmful drinking is usually accompanied by social consequences, they on their own do not warrant the diagnosis. Alcohol dependence is characterised by a combination of cognitive, behavioural and physiological symptoms. The main diagnostic criteria include: a strong desire to use, physical withdrawal symptoms if not used, developing tolerance to alcohol and impaired ability to control drinking (WHO, 1992).

Problematic drinking, excessive drinking and binge drinking are the other terms used when referring to drinking patterns which are not safe. Problematic drinking is mainly used to indicate a pattern of drinking which has the potential to cause problems and is very similar to the term hazardous drinking. Excessive drinking is usually used to refer to a form of drinking that exceeds a predefined acceptable level. Currently, hazardous drinking and excessive drinking are regarded as quite similar. However, according to the International Classification of Diseases, excessive drinking is considered equivalent to intoxication and categorised into episodic and habitual (Babor et al., 1994).

Binge drinking - The phrase binge was originally used to describe a situation where a person who is alcohol dependent would consume alcohol continuously and possibly over a few days
up to a level they would not be able to drink any more (Berridge et al., 2009), (Jellinek, 1960). More recently this term has been used to refer to drinking high amounts of alcohol in a fairly short period of time and more often over a period called a 'single session'. For research purposes, it is even more specified, and refers to drinking more than certain number of units of alcohol in a single day or on one single session. In the UK, it is defined as drinking twice the daily recommended level on a single day which is six for women and eight for men as described in the Alcohol Harm Reduction Strategy for England (GOV, 2003, GOV, 2004).

1.3.2 Alcohol guidelines, recommended levels

In 1987, the UK government introduced ‘sensible drinking guidelines’ which were adopted from the Royal College of Physicians’ (RCP) report produced the same year: ‘The medical consequences of alcohol abuse; a great and growing evil’ (Tomson, 1987). The recommendation was to avoid drinking more than 21 and 14 units a week for men and women respectively. Additionally, it was recommended that individuals should have two or three alcohol-free days in every week and also avoid drinking the total units’ allowance in one or two sessions.

In 1995, in view of research evidence becoming available at the time on health benefits of moderate drinking, the government carried out a new review (DH, 1995). As a result, the Department of Health announced some changes to the previous sensible drinking guidelines. Two significant changes from the previous recommendation were the emphasis on daily limits and advice that regular drinking of between three and four alcohol units by men and between two and three for women would not bear significant health risks. It was also mentioned that people should not consistently drink three or more units a day due to the progressive adverse
impacts on health. They also recommended that people at risk of Coronary Heart Disease (CHD) who are either abstainers or drink infrequently, should consider light drinking (Robins et al., 1995), (DH, 1995). However, these new guidelines were not fully endorsed by the Royal Colleges of Physicians, Psychiatrists, and General Practitioners (RCGP, 1995), (Marmot et al., 1995). As Griffith Edwards argued the new daily limits sanction increased weekly alcohol consumption as high as 55% more for men and 33% more for women (Edwards, 1996). Since 1995, the government’s guidelines have remained the same in general terms with only some minor changes introduced. ‘Regular’ is defined as drinking every day or most days of the week. The terminology of ‘safe’, ‘hazardous’ and ‘harmful’ have now changed to ‘low risk’, ‘increasing risk’ and ‘high risk’.

### 1.3.3 Alcohol and health

"Alcohol is the world’s third largest risk factor for disease burden; it is the leading risk factor in the Western Pacific and the Americas and the second largest in Europe" (WHO, 2014), (Babor et al., 2010). It is estimated that 4.5% of the global burden of disease and injury is attributed to alcohol with figures of 7.4% and 1.4% for men and women respectively (WHO, 2011). There is an abundance of literature suggesting that there is a causal relationship between alcohol and some health conditions. There is strong evidence that alcohol is carcinogenic to humans and is confirmed to be causally linked to developing oral cavity, pharynx, larynx, oesophagus, liver, colorectal and female breast cancer (Baan et al., 2007). In a systematic review, when summarising the current evidence, the authors provide a list of such conditions including some cancers, heart conditions, neuropsychiatric disorders and liver cirrhosis (Rehm et al., 2010).
Other studies that have identified the effects of alcohol consumption on premature mortality show that moderate drinking is associated with some beneficiary survival effects (Di Castelnuovo et al., 2006). Some of these beneficial properties of alcohol are attributed to reducing cardiovascular risk (Di Castelnuovo et al., 2002). However, the notion of cardiovascular protective effects of alcohol is highly debated in current literature (Shaper et al., 1988), (Corrao et al., 2000). One recurrent criticism concerns the selection of reference groups; in many of these studies former drinkers were considered in the same category as never drinkers. In a recent meta-analysis, the authors conclude that the risk of cardiovascular events is significantly higher among former drinkers compared to that of those who have been long term abstainers but only if mortality is the end point of estimations; such correlation was not observed for morbidity measures (Roerecke and Rehm, 2010). Furthermore, in a systematic review the researchers found out that the beneficial effects of light to moderate drinking on ischemic heart disease (IHD), stroke and diabetes mellitus were only present if they were not accompanied by heavy drinking episodes. Heavy drinking was defined as consuming 60 grams or above of pure alcohol in one day (Rehm et al., 2010). It has been further discussed how current guidelines for drinking are only based on some short term outcomes such as socio-psychological consequences, and fail to account for the relationship between drinking and the risk of future cancer (Latino-Martel et al., 2011). Nutt and colleagues in their study used multi-criteria decision analysis (MCDA) modelling to assess the harms caused by different drugs; each drug was rated for its potential harm to the individual and to others. Whilst heroin, crack cocaine and methamphetamine scored highest with regards to the harm to the individual, alcohol, heroin and crack cocaine were the most harmful to others and alcohol scored highest in terms of total harm (Nutt et al., 2010).
1.3.4 Alcohol and mental health

The relationship between mental health and drinking alcohol is complex and multifaceted; the topic has attracted attention from various research perspectives. There is an abundance of literature on mental health disorders and comorbid substance use in the epidemiologic studies of adults in the general population. In a review of published literature on this association in high income countries, the authors confirm the strong relationship between mental health and alcohol use disorders with up to 10% of male depression attributable to alcohol in some European countries (Jane-Llopis and Matytsina, 2006). In one of their reviewed studies the average lifetime prevalence of any mood disorder was 20% and 26% among people with alcohol problems and dependence, respectively; the results for anxiety disorders are similar (Kathleen et al., 1998).

There seem to be gender differences in the association between alcohol use disorders and depression; it has been suggested that in female alcoholics, depression precedes alcohol problems whilst the order is opposite in males (Helzer and Pryzbeck, 1988). There is also evidence that females with better psychological wellbeing drink less (Green et al., 2001). Data from a follow-up study of the general population in Canada indicate that women who have five or more drinks per drinking session show greater risks of major depression later in life (Wang and Patten, 2001). In a study to further assess the coincidental nature of depression and alcohol use disorders the authors demonstrate that history of depression and frequency of depressive symptoms increase the risk of future heavy drinking behaviour in women with relative risks of 2.60 and 1.09 respectively (Dixit and Crum, 2000).
In an attempt to address inconsistencies in the published research on depression and alcohol, Graham and colleagues conclude that the strongest relationship exist in females and only with drinking large alcohol amounts in a drinking session but not drinking frequency or volume. The results of their study also suggest that when compared to life time abstainers, light drinking does not provide protection against major depression (Graham et al., 2007).

Although there is strong evidence suggesting that poor mental health and excessive drinking are correlated, some studies have demonstrated that moderate drinking is associated with a better psychological health (Peele and Brodsky, 2000). In a prospective cohort study on women, the authors found a J-shaped relationship between psychological distress and drinking habits, such that both abstinence and heavy drinking were associated with higher levels of depressive/anxiety symptoms compared to light/moderate drinking patterns. The authors suggest that this relationship in the abstainer group was not due to "sick quitters" effect (Alati et al., 2005). This should, however, be interpreted with caution as it is hard to draw firm conclusions about whether consuming alcohol at moderate levels directly causes these positive outcomes or certain drinking habits are part of a more complex and broader picture whereby individual, psychological, social, cultural and environmental factors play the more significant and effective role in enhancing overall wellbeing (El-Guebaly, 2007). It has also been argued that the inconsistencies in the literature on the relationship between moderate drinking and better psychological outcomes compared to abstinence or heavy drinking might be due to the fact that many of these studies do not take into account different levels of moderate and heavy drinking and therefore lack precision in defining the drinking pattern deemed to be beneficial to psychological wellbeing (Paschall et al., 2005).
1.3.5 Alcohol consumption: current picture

Levels of alcohol consumption have increased in the past two decades in the United Kingdom and alcohol has also become much more affordable (about 75% between 1980 and 2008) over the same period (hscic, 2009). The estimated cost of alcohol related harm to the NHS in England is £2.7 billion based on 2006/2007 prices. According to the report published by the NHS Health and Social Care Information Centre in 2010, 71% of men and 56% of women above the age of 16 drank on at least one day in the week before the survey in 2008 and their average weekly consumption was 16.8 and 8.6 units respectively (hscic, 2010). Furthermore, 38% of men and 29% of women said they drank more than the NHS recommended levels (three/four units) on at least one day in the week prior to the survey. In total, 15% of women and 22% of men stated that they had drunk over six/eight units on at least one day in the week prior to the survey. A slight change was seen in the next report which was published in 2011. Results from this report demonstrate that 69% of men and 55% of women above the age of 16 drank on at least one day in the week before the survey in 2009, and that their average weekly consumption was 16.4 and 8.0 units respectively (hscic, 2011). Furthermore, 37% of men and 29% of women said they drank more than NHS recommended levels (three/four units) on at least one day in the week prior to the survey. Drinking over six/eight units was reported from 13% of women and 20% of men respectively; they stated that they had done so on at least one day in the week prior to the survey.

A report published by the Joseph Rowntree Foundation in 2009, highlighted some of the changes in patterns of alcohol consumption that have occurred over the past few decades in the UK (Smith and Foxcroft, 2009). The authors of this report argue that although average alcohol consumption has increased substantially among both men and women, this increase
has been particularly marked among women over 25, which in turn results in narrowing the gender gap. There is evidence that the number of individuals who drink under the age of 16 has slightly decreased compared to the figures from 1988. However, it also seems that the average alcohol consumption by those who do drink in this age group has substantially increased. The highest figures are seen among 11-13 year old boys. Additionally, university students in the UK are considered to be drinking more than those in Europe or North America. Levels of binge drinking are reported to be higher among both male and female UK undergraduate students compared to their cohort in the general population and their counterparts in the USA (Gill, 2002).

In January 2016, the government introduced new drinking guidelines which recommend that “adults do not regularly drink more than 14 units in a week, with these units being spread over at least 3 days” (DH, 2016). The Opinions and Lifestyle Survey asks respondents how much they drank on their heaviest drinking day. Taking the new recommendations into account, new tables were produced for the data obtained in 2014 to reflect the new drinking guidelines. The most recent survey on drinking habits published in 2016 show that men were three times more likely to report that had drunk over 14 units on their heaviest drinking day than women, 12% and 4% respectively (ONS, 2016a).
1.4 Screening, identification and intervention for alcohol use disorders

1.4.1 UK government alcohol strategies

The UK government has published a number of reports on alcohol strategy proposing a range of schemes to address alcohol problems. Emphasis on early identification and treatment of individuals with alcohol use problems, and providing training to health professionals for screening alcohol problems are amongst the proposed strategies. Although GP surgeries, inpatient settings, and emergency departments were mentioned as potential points of patient contact for targeted alcohol screening and intervention in these reports, sexual health clinics were not referred to as ‘capturing’ clinical settings (GOV, 2004, GOV, 2007), (Latino-Martel et al., 2011).

The Alcohol Needs Assessment Research Project (ANARP) was the first national alcohol needs assessment in England and was carried out during a six month period in 2004. The aim of this project was to explore areas where better identification and referral of alcohol use disorders (AUDs) was needed. One of the key points raised by this project was the low rate of identification and referral of AUDs by GPs; only one in 67 men and one in 82 women with hazardous/harmful drinking patterns were identified by their GPs. They also showed that GPs were less likely to be aware of AUD among younger patients compared to older ones (Drummond et al., 2005).
1.4.2 Alcohol brief intervention

In the government's alcohol strategy published in March 2012, alcohol screening and brief intervention is mentioned as a strongly evidence based approach to identify those drinking at risky levels and to provide help to individuals who need it (GOV, 2012). Brief intervention for alcohol misuse is a form of opportunistic intervention where a presentation to healthcare services is used to deliver a health message and give advice on a matter which the individual is not seeking help for at the time and is often not the primary concern. A number of randomised controlled trials have tested the efficacy and/or effectiveness of such interventions in different primary care settings. Existing research suggests that it is feasible and acceptable to screen individuals attending primary care settings for possible alcohol use disorders. A meta-analysis of randomised controlled trials (up to 2006) showed that brief intervention for alcohol is effective and that there is no significant difference between efficacy and effectiveness trials. According to this meta-analysis, brief interventions can reduce drinking up to five UK standard alcohol units in those who receive them. Further analysis showed there is no significant improvement with multiple sessions compared to a single session of brief intervention (Kaner et al., 2009b). It has been argued whilst alcohol screening and brief intervention at the community level is cost effective, there are practical issues and implementation challenges, and that alcohol interventions in specific groups such as women, young people and ethnic minorities have not been adequately explored (Gual and Sabadini, 2011). In the most recent review of systematic reviews published on alcohol brief intervention in primary care settings this issue was further examined (O'Donnell et al., 2014). The authors conclude that cumulative evidence from 56 trials supports the belief that alcohol brief interventions are effective in reducing problematic drinking. This review identifies the gaps in
the current knowledge including: active ingredients, the optimum content/format of the intervention packages, and the effectiveness among specific patient groups such as pregnant women, those from ethnic minority and younger/older age group. Whilst a considerable number of research studies have examined the efficacy and effectiveness of alcohol brief interventions, the impact of socioeconomic status on participating in studies of alcohol brief intervention, further acceptance of the offer of alcohol brief intervention, and attending the appointment to receive such intervention have not been fully investigated. Littlejohn in a review of the existing literature, addressed this question and categorised the impact of socioeconomic status into three main areas: a) the impact on willingness to take part in alcohol brief intervention trials, b) the impact on attending to receive the brief intervention in those who take part in the alcohol intervention trials, and c) the effect that socioeconomic status might have on the outcomes in those who receive the brief intervention. Littlejohn concludes that whilst there is no evidence that socioeconomic factors have an impact on the effectiveness of brief intervention for hazardous and harmful drinking patterns, factors affecting the willingness to participate in the trials of alcohol brief intervention are not fully explored (Littlejohn, 2006). Out of the 18 papers included in this review, 12 reported data on the proportion of people who were identified as drinking excessively but declined to take part in the research. Although over a third declined (mean = 38%, SD = 21.41, [95% CI 25.89 to 50.15]) only two of these papers provide a comparison between the clinical and demographic characteristics of those who did and did not take part in the study. One of the studies suggest that older age, male gender, and higher drinking levels are associated with willingness to take part. However, employment status and education level were not shown to be determining factors (Aalto and Sillanaukee, 2000), (Senft et al., 1997). In another study the authors looked
at demographic factors and presenting symptoms as potential mediators for accepting the offer of brief intervention in an emergency department setting. Age and gender were not shown to predict acceptance of the offer of intervention but those presenting with head injuries, falls and accidents were less likely to be amenable to take up the offer of intervention. The authors suggest that a possible explanation is that these events are attributed to factors other than alcohol (possibly ‘bad luck’) by patients (Patton et al., 2004a). Longabaugh et al. conclude that in their sample of emergency department patients the two factors associated with greater readiness to change are: the degree of aversiveness of the injury and the perception that alcohol has been the contributing factor; therefore, they suggest successful interventions need to focus on highlighting risks (Longabaugh et al., 1995). Furthermore, staff attitude and drinking behaviour might have an impact on the effectiveness of alcohol interventions. In a five year audit of staff at an emergency department with an established routine practice for alcohol screening, 98% said that the emergency department is a suitable place to screen problem drinking and that the treatment can be effective. However, 63% of the respondents said they drink excessively at least once a month and 30% on a weekly basis (Huntley et al., 2004).

Important factors to consider when designing research on alcohol brief interventions in primary care settings include screening process, the threshold for identification of the problematic drinking behaviour needing intervention, and the subsequent intervention format. The decision about which alcohol screening tool to choose is based on factors such as ease of use, the time it takes to complete and the accuracy of the tool. It also depends on the setting in which the screening and intervention procedures will take place. So far, various screening tools have been used including The Fast Alcohol Screening Test (FAST) (Hodgson et
al., 2002), the Alcohol Use Disorders Identification Test (AUDIT) (Saunders et al., 1993), AUDIT-C (Bush et al., 1998), Paddington Alcohol Test (PAT) (Patton et al., 2004b), and the Modified Single Alcohol Screening Question (M-SASQ) (Canagasaby and Vinson, 2005).

Furthermore, the term brief intervention has been used to describe a variety of intervention methods ranging from Brief Advice (BA) with/without an educational leaflet to the offer of an appointment with an alcohol specialist worker for a detailed and more thorough intervention based on the motivational interviewing (MI) techniques (Miller and Rollnick, 2002). In the context of emergency departments, Touquet and Brown differentiate Brief Advice (BA) from Brief Intervention (BI); they argue that BA only takes two minutes and can be delivered by any emergency department doctor or nurse, but BI is more detailed and should only be delivered by a specialist alcohol worker (Touquet and Brown, 2009).

The SIPS (Screening and Intervention for Sensible Drinking) research programme was set up with the aim of identifying the optimal screening and brief intervention tools for alcohol use problems in accordance with the government’s call to tackle the alcohol problem in England—“National Alcohol Harm Reduction Strategy for England”. It consisted of three parallel studies in three different settings: Primary Health care setting (PHC), Accident and Emergency Department (AED), and Criminal Justice system (CJS) (Coulton et al., 2009b), (Kaner et al., 2009a), (Newbury-Birch et al., 2009). These studies set out to answer questions regarding the screening tools (FAST vs. M-SASQ), screening strategies (targeted vs. universal) and intervention methods (Leaflet only, Brief Advice, Brief Intervention or a combination). The findings from the SIPS studies conducted in primary care did not support the hypothesis that more intensive interventions would be more effective in reducing excessive drinking (Kaner et al., 2013). The exploratory study in the criminal justice system proved that it is feasible to
screen people for alcohol use disorders in this setting and that both shorter screening tools (FAST and M-SASQ) compared to the AUDIT as the gold standard have acceptable screening properties with area under the curves of 0.97 and 0.92, respectively (Coulton et al., 2012). The findings from the trial in the emergency departments suggest that screening and brief intervention is difficult to implement and that screening followed by simple feedback is the most feasible and least costly approach (Coulton et al., 2009a).

### 1.4.3 Alcohol intervention in sexual health settings

Although current national guidelines recommend that adults attending sexual health clinics should be screened for alcohol use disorder (NICE, 2010), at the moment, patients presenting to these clinics are not routinely screened for harmful alcohol use (RCP, 2011). There is very little data on the effectiveness of opportunistic screening and interventions for alcohol misuse in sexual health settings and existing interventions are not specifically tailored for these settings. Whilst the findings from previous research suggest that acceptability of screening for alcohol misuse to patients attending sexual health services is relatively high (Lane et al., 2008), uptake of interventions in this setting may be limited (Crawford et al., 2004a), (Appel et al., 2006), (Thorley et al., 2012). Furthermore, factors facilitating or hindering the uptake of interventions and issues affecting the successful delivery of alcohol interventions in the context of sexual health clinics have not been explored.

As part of my literature review, I conducted a systematic search of existing research that has been published on alcohol screening and brief intervention in sexual health settings. I set out to explore the extent to which issues relating to screening and delivery of alcohol brief
intervention in sexual health clinics had been examined regarding the a) prevalence of excessive drinking, b) acceptability of alcohol screening, c) uptake, and d) effectiveness of alcohol brief intervention in the context of sexual health clinics. In the next chapter, I will describe the search strategy and the findings from this literature review. It is worth highlighting that I did not include the literature on theoretical perspectives in the background review. Relevant theory will be discussed and critically considered in the discussion chapter.

1.5 Why this thesis?

In order to explore some of the uncertainties in extant literature and examine factors contributing to or hindering successful delivery of alcohol interventions in the context of sexual health clinics, I conducted this thesis in parallel with the SHEAR trial (Sanatinia et al., 2012). To put my research into context, I will provide a summary of the SHEAR trial protocol and describe how my specific research questions will shed light on the process of delivering and receiving alcohol brief interventions in sexual health clinics.

The SHEAR study (Sexual Health and Excessive Alcohol, Randomised trial) is a two-parallel arm, single blind, individually randomised controlled trial which examines the effects and cost-effectiveness of brief intervention compared to control treatment on alcohol use, sexual behaviour and quality of life over a six month period in people who attend sexual health clinics and consume excessive alcohol (Appendix 1). A consecutive sample of people attending three sexual health clinics in London are screened for excessive alcohol consumption provided they consent to the initial screening, are over the age of 19 and able to communicate in English.
sufficiently well to complete the baseline assessment (Sanatinia et al., 2012). Potential participants are asked to answer questions on lifestyle (i.e. smoking, alcohol, exercise, and frequency of eating red meat, fruits, and vegetables), sexual behaviour and health related quality of life. The alcohol screening tool is the Modified-Single Alcohol Screening Question (M-SASQ) which is the modified version of Single Alcohol Screening Question (SASQ) (Canagasaby and Vinson, 2005). The original screening question asks: “when was the last time, you had more than four/five drinks (four for women and five for men) in one day?”. This is according to the US standard drinks in which one drink contains 14 grams ethanol. As in the UK, a standard drink has eight grams ethanol, the question is modified to six/eight drinks on one occasion. The other change is that in the modified version, individuals are asked about the frequency of drinking at this level and possible answers range from ‘never’ to ‘daily’. The cut off point for the identification of hazardous drinking is: drinking more than six/eight drinks on one session at least once a month. Those identified as drinking excessively will then be allocated to either active treatment (Brief Advice and referral for Brief Intervention) or control treatment (a leaflet on healthy living). Throughout this trial, Brief Advice (BA) is defined as one to two minutes of feedback relating attendance to drinking and given by any member of staff, doctor or nurse. Brief Intervention (BI) is 20-30 minutes, structured and only done by an alcohol health worker (AHW) (Touquet and Brown, 2009). The primary outcome for the study is the mean weekly units of alcohol consumption during the three months prior to the follow-up interview, and the main secondary outcome is the proportion of participants who report unprotected sex during this period.

According to the definitions provided by Medical Research Council (MRC) the SHEAR trial evaluates a complex intervention (Craig et al., 2008). The primary (mean weekly alcohol
consumption) and secondary (incidence of unprotected sex) outcomes in this trial reflect the individuals’ behaviour, and the theoretical basis is that the change in behaviour would occur due to the tested intervention. Although randomised trials provide high quality evidence, they lack the exploratory power to capture individual differences. Qualitative research is well suited to probe such areas of inquiry and provide a clearer picture of the experience of those involved in a trial (Sackett and Wennberg, 1997). Exploring ‘how’ the intervention in a complex trial works would require identifying the ‘active ingredients’ of the intervention. This will shed a light on the possible causal pathways as well as contextual, personal, attitudinal, interpersonal and relational variations. The final aim in health care research is to identify screening, diagnosis and treatment modalities that are effective in routine practice and offer individuals high quality care. Integrating qualitative research will generate hypotheses to better explain the negative or positive results of the trials (Crawford et al., 2002).
1.6 Thesis overarching aim(s)

Being the lead researcher on the SHEAR study allowed me to carry out this further research in parallel with the main trial. In my thesis, I aim to explore the process and experience of delivering and receiving alcohol screening and intervention in the context of sexual health clinics. This will a) help better explain the findings of the trial and (if any) variations in the effectiveness in specific subgroups of the study sample, b) test the relevance of the underlying rationale for alcohol screening and intervention to this context, and c) provide a platform for generating and testing further hypotheses (Lewin et al., 2009).
Chapter 2  Systematic review of the literature

To put my research in context, I will summarise the methodology and the results of a systematic review of the literature I undertook as part of this thesis. This review aims to look at available evidence on alcohol screening and intervention in the context of sexual health clinics. The aim of the review was to identify any previous research on interventions for alcohol misuse in sexual health settings to explore a) the prevalence and extent of the alcohol use problems identified, b) acceptability of screening, c) uptake and d) effectiveness of the interventions in the context of sexual health clinics, with two subcategories: total effectiveness and the reasons for or lack thereof. The stages of the review are summarised in a PRISMA diagram (Diagram 2-1).

2.1  Method

2.1.1  Search strategy

The strategy comprised search of electronic databases, hand search of the reference list of included papers, and contact with experts in the field to obtain information about their unpublished research. Electronic databases included MEDLINE (1950- November 2012) and Web of Science SM (1970- November 2012) via Web of Knowledge. Search terms varied according to the configuration of each of the databases. However, in each case terms related to sexual behaviour (e.g. sex*, sexual health), services (e.g. clinic*, genitourinary medicine, sexual health), alcohol/drug (e.g. alcohol*, drink*, substance, drug) and interventions (e.g. interven*, advice, screen*) were included. Different combinations of predefined search terms
and the Boolean operators were used to retrieve related papers. The reference lists of relevant papers were also hand searched. The following 26 combinations were searched to identify papers that contained the keywords in their title.

1. (substance) AND (sexual health)
2. (drink*) AND (sexual health)
3. (drug*) AND (sexual health)
4. (alcohol*) AND (sexual health)

5. (drug*) AND (sex*) AND (clinic*)
6. (substance) AND (sex*) AND (clinic*)
7. (drink*) AND (sex* clinic*)
8. (drink*) AND (sex* clinic)
9. (substance) AND (sex* clinic*)
10. (alcohol*) AND (sex* clinic)

11. (substance) AND (sex*) AND (screen*)
12. (drug*) AND (sex*) AND (screen*)
13. (drink*) AND (sex*) AND (screen*)
14. (alcohol*) AND (sex*) AND (screen*)

15. (drug) AND (sex*) AND (advice)
16. (drug) AND (sex*) AND (interven*)

17. (genitourinary medicine) AND (drug)
18. (genitourinary medicine) AND (substance)
19. (genitourinary medicine) AND (drink*)
20. (genitourinary medicine) AND (alcohol*)
Electronic databases were searched to identify previous research on interventions for alcohol misuse in sexual health settings from 1950 to November 2012. Any paper published in English that presented research findings on interventions for alcohol misuse in sexual health settings was included. The research methodology and intervention type was not restricted. RCTs, observational studies, pilot studies and qualitative interviews and various types of interventions (brief intervention, brief advice, motivational interviewing as well as longer sessions) were considered for inclusion in the review. Papers were excluded if they were published in a language other than English. Research papers on alcohol interventions in secondary care or primary care settings other than sexual health and/or Genitourinary Medicine (GUM) clinics (e.g. GP surgeries, emergency departments) were excluded. Studies were excluded if they only assessed the prevalence of excessive drinking and/or the relationship between sexual health and drinking patterns or if they involved screening for excessive drinking but did not include any intervention and/or advice components.
The search strategy identified 376 papers for the review. After removing duplicates (n=72) and papers which the title was not relevant (n=135), abstracts of 169 papers were assessed for possible inclusion in the review.

At this stage, papers were excluded if: alcohol screening and intervention was carried out in a setting other than general sexual health or genitourinary medicine clinics; they only assessed the prevalence of excessive drinking and/or the relationship between sexual health and drinking patterns, however, research methodology was not an exclusion criterion. Employing this strategy, 152 further papers were excluded and at final stage, 17 full papers were obtained for more detailed review. Of these, 10 met the inclusion criteria. The results of these 10 papers are summarised below. The eligible studies were thoroughly reviewed to extract the data on study characteristics (i.e. study population, methodology, and follow-up interval and potential areas of bias) as presented in Table 2-1.

Below is the detail of the 304 records considered for inclusion in this review after excluding the exact duplicates from the search results:

223 records from Web of Science® (1970- November 2012)
36 records from BIOSIS Citation IndexSM (does not receive updates): (1969-2008)
9 records from Derwent Innovations IndexSM (1963-November 2012)
27 records from MEDLINE® (1950-November 2012)
6 records from CABI (1973-November 2012)
3 records from Current Contents Connect® (1998-November 2012)
Due to limited resources it was not possible to use a second reviewer to screen and select the studies for inclusion in the systematic review. Therefore, I cannot rule out the possibility of bias in the process of study selection. However, as a member of International Network on Brief Interventions for Alcohol & Other Drugs (INEBRIA) I receive updates about any ongoing/published work on alcohol brief intervention. This would minimise the possibility of missing relevant literature.
Diagram 2-1 PRISMA Flow Diagram of systematic review as of 15 November 2012

- Records identified through database searching (n = 376)
- Records after duplicates removed (n = 304)
  - Duplicates = 72 exact duplicates
- Records screened (n = 304)
  - Records excluded (n = 135) looking at title
- Abstracts read (n = 169)
  - Records excluded (n = 152) after reading the abstract
- Full-text articles assessed for eligibility (n = 17)
  - Full-text articles excluded (n = 7)
    - Not in sexual health settings (n = 2)
    - No intervention component (n = 5)
- Studies included in qualitative synthesis (n = 10)
2.2 Results

In the next section, I will provide a brief description of each individual study included in this review (categorised into experimental and observational design studies), followed by a narrative synthesis of the results from these studies. The account will be presented according to the main aims of this literature review across the themes of a) prevalence of excessive drinking, b) acceptability of alcohol screening, c) uptake and d) effectiveness of alcohol brief intervention in the context of sexual health clinics. Table 2-1 presents a summary of the papers included in this review in temporal order.
Table 2-1 Summary of the review of the literature on alcohol interventions in sexual health clinics in temporal order

<table>
<thead>
<tr>
<th>Source/year</th>
<th>Setting</th>
<th>Numbers approached</th>
<th>Study population/sample</th>
<th>Type of Study</th>
<th>Follow-up period</th>
<th>Alcohol screening Tool</th>
<th>Concealment</th>
<th>Participants recruited by</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Crawford et al., 2004a)</td>
<td>Sexual Health Walk in Clinic London, UK</td>
<td>N=305</td>
<td>N=302</td>
<td>Cross-sectional</td>
<td>none</td>
<td>PAT</td>
<td>N/A</td>
<td>Two clinic doctors</td>
</tr>
<tr>
<td>(Appel et al., 2006)</td>
<td>STD Clinics, New York, USA</td>
<td>N=704</td>
<td>N=702</td>
<td>Cross-sectional</td>
<td>none</td>
<td>Modified CAGE-A (mCA)</td>
<td>N/A</td>
<td>Liaison worker</td>
</tr>
<tr>
<td>(Lane et al., 2008)</td>
<td>Public sexual Health clinic, Sydney, Australia</td>
<td>N=599</td>
<td>N=184</td>
<td>RCT</td>
<td>3 m</td>
<td>AUDIT &amp; derivatives</td>
<td>Yes</td>
<td>Research Nurse</td>
</tr>
<tr>
<td>(Yu et al., 2008)</td>
<td>STD Clinic, New York, USA</td>
<td>N=285</td>
<td>N=276 57 (+ve) 32 accepted intervention</td>
<td>Cross-sectional-pilot</td>
<td>none</td>
<td>Modified CAGE/ DSM-IV</td>
<td>N/A</td>
<td>Public Health Advisor Interventionist</td>
</tr>
<tr>
<td>(Patton et al., 2008)</td>
<td>STI Clinic, South London, UK</td>
<td>N=700</td>
<td>N=653 consented</td>
<td>Cross-sectional</td>
<td>none</td>
<td>PAT &amp; SDS</td>
<td>N/A</td>
<td>A single clinic doctor</td>
</tr>
<tr>
<td>(Mitchell et al., 2011)</td>
<td>GU medicine service, Northumberland, UK</td>
<td>?</td>
<td>N=256</td>
<td>Audit of case notes</td>
<td>none</td>
<td>FAST</td>
<td>N/A</td>
<td>Routine practice/not specified</td>
</tr>
<tr>
<td>(Browne et al., 2012)</td>
<td>GU Medicine clinic, London, UK</td>
<td>N=not known</td>
<td>N=540</td>
<td>Prospective pilot</td>
<td>6 weeks</td>
<td>AUDIT</td>
<td>NO</td>
<td>Screening questionnaire at registration, Intervention by Clinician(doctor, nurse, health advisor)</td>
</tr>
<tr>
<td>(Thorley et al., 2012)</td>
<td>GU Medicine clinic, Birmingham, UK</td>
<td>N=316</td>
<td>N=227</td>
<td>Cross-sectional Survey</td>
<td>none</td>
<td>AUDIT</td>
<td>N/A</td>
<td>Screening questionnaire at registration, Discussing referral options in consultation session</td>
</tr>
<tr>
<td>(Baguley, 2012)</td>
<td>City Sexual health clinic, Scotland, UK</td>
<td>N=8434</td>
<td>N=989</td>
<td>Three arm randomised trial</td>
<td>4 m/telephone</td>
<td>AUDIT</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>(Sanatinia et al., 2012)</td>
<td>Three Sexual Health Clinic London, UK</td>
<td>ongoing</td>
<td>N=760 Study ongoing at the time of review</td>
<td>RCT</td>
<td>6m/telephone</td>
<td>M-SASQ</td>
<td>Yes</td>
<td>Researcher</td>
</tr>
</tbody>
</table>
2.2.1 Experimental studies

*Nurse-provided screening and brief intervention for risky alcohol consumption by sexual health clinic patients* (Lane et al., 2008)

At the time of this review, only one completed randomised controlled trial had been published. This study examined acceptability, feasibility and effectiveness of brief intervention for excessive alcohol consumption in sexual health settings (Lane et al., 2008). The trial was carried out in a public sexual health clinic in central Sydney, Australia and the participants were recruited over a six month period. A total of 599 individuals were approached and asked by a research nurse to participate in a research study on alcohol. Initially 519 (87%) agreed to be screened, and 511 patients provided demographic data out of which 377 (74%) were male; the mean age of participants was 34 (ranging from 16 to 81). In total, 40% had AUDIT scores of eight or over (22%: 8-12, 12%: 13-19, 6%: >=20). At the end of the recruitment phase, the study had a population of 184 participants (87 in intervention and 97 in control group). Alcohol Advice was based on the “Drink-less” package and the duration was five to ten minutes. A total of 133 patients were followed up after three months. The follow-up interview was a structured telephone interview and the person conducting the interviews was blind to the allocation status. Participants in both control and intervention groups showed a reduction in the 10-item AUDIT scores; however, the difference between the two groups was not statistically significant. Mean AUDIT scores decreased from 13.7 to 11.5 in the control group (difference: 2.2) and from 14 to 10.7 (difference: 3.3) in the intervention group. Participants in the intervention group showed significant reductions in their AUDIT–C scores. In terms of recall and acceptability of intervention, 94% of patients in
the intervention group recalled the advice and 85% thought that it was acceptable. It is worth mentioning that 75% of patients believed it was acceptable to receive alcohol advice from a nurse. The survey on acceptability of screening and brief intervention to clinic staff showed that most of them thought this study had minimal impact on their clinic routine. Most clinicians also stated that screening for alcohol is a good idea and that it can be integrated into normal practice, provided there is enough time.

One of the potential biases in this study is that all those approached to participate in this trial were aware that this study was looking at drinking levels; therefore, the participants in the control arm were also exposed to prompts about the focus of the study on excessive drinking. This might have had an impact on the drinking levels reported as well as on participants’ decisions about taking/not taking part in the trial. Furthermore, the reduction in alcohol consumption observed in the control arm might have been due to this exposure having led to reflection and change in drinking patterns. In terms of demographic characteristics, a large proportion of participants were homosexual/bisexual men, this makes it difficult to generalise the findings to female and/or heterosexual population.

Despite the limitations and issues around generalisability of the findings, this study is the only completed and published randomised controlled trial up to November 2012 indicating that it is feasible and acceptable to screen individuals attending sexual health settings for their level of alcohol consumption. The high prevalence of drinking at or above risky levels among the study population highlights the importance of introducing and integrating screening measures for alcohol into routine practice of such settings. Furthermore, the authors raise their concerns about the low level of screening and identification of alcohol use disorder in other primary care settings. At follow-up, participants were asked a single question about
whether they remembered that their current or last GP asked them about their alcohol use. Data from their replies showed that 64% of participants in the intervention group and 54% in the control group had not been asked about their alcohol use. Despite the fact that the data on alcohol screening by GPs is subject to recall bias, the study makes the case for actively integrating alcohol screening in sexual health clinics as well as primary care settings.

**Texting or talking? Which works better to reduce hazardous drinking by sexual health clinic attendees? (Baguley, 2012)**

One of the references retrieved in the literature search was a poster abstract with very limited details. I, therefore, contacted the lead researcher, Dr Baguley, to obtain more information. At the time of this review there was no published paper, however, based on the additional information I received from Dr Baguley I decided to include this in my review and will summarise the findings here.

This study was a three arm randomised trial of intervention for alcohol use disorder comprising control (standard care), texting and talking intervention. The AUDIT screening tool was used to identify excessive drinking. From September 2010 to July 2012 all new episode attendees (n=8434) at one of the sexual health clinics in Scotland, UK were screened and those identified as drinking at hazardous levels (AUDIT 8-19) were asked to consider taking part in the study (n=3324). In total, 989 people (29.75%) consented and were recruited to this study (66% men); a total of 611 (61.78%) completed the follow-up interview (65% women). Participants had a mean AUDIT score of 11.36; this was 10.94 in those who were identified as hazardous drinkers but refused to take part in the study.
Those in the standard care arm were told that they were probably drinking too much and were offered a leaflet. Those randomised to the active intervention (Alcohol Brief Intervention) received a 2-5 minute motivational interview with the treating clinician. A series of personalised texts were sent at 7:00pm every Friday for 12 weeks to those in the texting arm. Participants were followed up four to six months later and data on drinking (AUDIT questionnaire) and sexual health in the preceding three months were collected by a research nurse over the phone. They were also asked "how acceptable the intervention was". A total of eight participants actively withdrew; the main reason for no follow-up was that subjects did not answer the call or return messages. In total 611 people completed the follow-up interview.

The authors conclude that alcohol brief intervention (ABI) would reduce AUDIT scores in hazardous drinkers under the age of 25, and that motivational texting would reduce the AUDIT scores in those above the age of 25. Overall, the benefit from any intervention over the standard care was only observed in male participants but not females. Sexual outcomes between the three arms were also compared; no significant difference was observed for regretted sex, sexual assault, use of emergency contraception, number of sexual contacts, or STI acquisition; however, the study was not powered to examine this. In terms of acceptability, 80% of participants thought the interventions were 'quite' or 'very' acceptable; men under the age of 25 preferred alcohol brief intervention (ABI) to texting.
Brief intervention for alcohol misuse in people attending sexual health clinics: study protocol for a randomized controlled trial (Sanatinia et al., 2012)

At the time of this literature review, the SHEAR trial protocol paper was published. However, at this stage, this study was still ongoing. I have provided further details about this study in the final section of the introduction chapter, where I explained the rationale for conducting my thesis in the context of this trial.

2.2.2 Observational studies

The prevalence of excessive alcohol consumption and the acceptability of brief advice in a sexual health clinic: cross sectional survey (Crawford et al., 2004a)

This study is a cross sectional survey which was carried out in a walk-in sexual health clinic in central London. Two clinic doctors, over a three month period, asked 305 consecutive clinic attendees to take part in this survey; of those approached, 302 (99%) people agreed to take part. A high proportion of participants were female (210 female, 92 male). In total 98 (32%) of those screened were considered to be drinking excessively according to the Paddington Alcohol Test (PAT). In this study, 39 (39.8%) of the patients drinking excessively expressed that their attendance at sexual health clinic was alcohol related. Overall, 91 (93%) of those drinking excessively accepted the written advice on alcohol, 30 (31%) also accepted the offer of an appointment with an alcohol health worker. The authors report that the median units of alcohol consumed was 13.5 in those who accepted the appointment offer compared to 10 in those who did not; no other differences were observed. Whilst nearly everyone who was approached, agreed to take part in the study- which supports the feasibility and acceptability
of screening for alcohol misuse in sexual health clinics in the UK—only one patient attended the appointment with the Alcohol Health Worker. This study confirms the high prevalence of alcohol misuse among people attending sexual health clinics reported by similar studies and provides a strong case for introduction of screening for alcohol misuse in sexual health clinics. However, the very low rate of uptake of the offer of further intervention raises questions about the acceptability of such interventions. Furthermore, this study did not collect any follow-up data which makes it difficult to make any further comments about the effectiveness of alcohol screening and intervention in the context of sexual health clinics.

**Assessing alcohol and other drug problems (AOD) among sexually transmitted disease (STD) clinic patients with a modified CAGE-A: Implications for AOD intervention services and STD prevention (Appel et al., 2006)**

Appel and colleagues in New York state Office of Alcoholism and Substance Abuse Services (OASAS) conducted a cross sectional study to assess alcohol and other drug problems among patients in Sexually Transmitted Disease (STD) clinics. The participants were recruited from seven New York STD clinics (in seven neighbourhoods) during autumn 2000 using quota sampling design. Patients in the waiting areas were initially screened for eligibility in terms of age and English proficiency; people under the age of 18 and those unable to speak or read English were excluded. If eligible, the liaison worker explained the purpose of the study and asked potential participants for verbal consent. The study was presented as a survey of health problems among STD clinic patients with a focus on Alcohol and Other Drug (AOD) abuse. A total of 704 patients were approached in seven clinics, of which 702 (99.7%) agreed to go under initial screening. Modified CAGE-A (mCA) was used as the screening tool. The original
CAGE questionnaire has four question items capturing four areas (Cutting down, Annoyance by criticism, Guilty feeling and Eye-openers) and only asks about alcohol. The CAGE-A consists of the same four question items but also asks about drugs other than alcohol. The modified CAGE covers two time periods: during the past 30 days as well as over lifetime (ever). Data on ethnicity, age, gender, prior treatment for alcohol and/or other drugs and participants’ interest in referral for addressing alcohol or drug problems were also asked as part of the survey. Sixty percent of the participants were male, 87.7% were Black and/or Hispanic and 69% were 35 years old or younger. Patients were considered positive for having an alcohol or other drugs problem if they had answered “yes” to two or more of the CAGE questions; 30.5% screened positive for AOD problem “over life time” and 16.5% for “the past 30 days”. Only less than 1% said that they wanted an AOD referral. The authors conclude that AOD abuse prevalence in their survey is higher compared to the previous estimates reported from a project in emergency and general hospital settings in New York. The different time frame (past 12 months) used in the other project is mentioned as a potential reason. The authors argue further that if they were to use exactly the same screening tool they would have found a prevalence of 16% to 30%. However, they did not mention the reasons to why they chose these particular seven clinics and if the patients’ characteristics were different in the neighbourhoods from which they recruited the participants. In both of the above mentioned studies, the ethnic minority groups composed a considerable percentage of study participants. The study does not provide any details about how diverse the general population in the area where the recruitment took place are and if/how that corresponds to the distribution of ethnicity in the general population. These factors make it hard to establish to what extent the findings can be generalised to the general population if not equally diverse.
Substance abuse intervention services in public sexually transmitted disease clinics: A pilot experience (Yu et al., 2008)

This pilot project was carried out in an inner city sexual health clinic in New York (Yu et al., 2008). They used a modified version of the CAGE questionnaire as the screening tool for substance use disorder. The questionnaire was self-completed by the patients when they checked in at the reception. A total of 285 individuals were approached for screening, out of whom 276 (97%) accepted this offer; of those who took part, 57 (21%) screened positive. The majority of participants (70%) were male, 27% were bisexual or homosexual and nearly 50% were of ethnic minority. Two sets of the original CAGE questionnaire were used as the screening tool, one asking about past 30 days and the other about past 12 months. Patients were considered positive if they had at least one positive on one of these two sets. In total, 32 (56%) of those screened positive, accepted the offer of seeing an addiction professional (interventionist). In the case analysis, the authors report that patients seen by the interventionist had various degrees of concern over their substance use depending on the type of substance used. The most prevalent drug used by the participants was alcohol followed by marijuana; 90% of the patients seen by the interventionist expressed concerns about their alcohol use. The study does not report the breakdown of the type of substances participants were using. Patients were found to be generally open about expressing their areas of concern and intentions to change their behaviour. Those seen by the interventionist were also asked to fill out a satisfaction questionnaire; nearly all (97%) stated that the staff were respectful when raising the issue with them, 34% stated they were happy that the issue was addressed, 45% said they were surprised but felt comfortable about it.
The authors acknowledge the limitations around issues such as the small sample size, recruitment from a single centre and the high proportion of homosexual and ethnic minority group participants. However, the fact that screening was included in the registration process and the very high response rate for being screened support the feasibility of integrating such screenings in the routine practice of sexual health clinics (universal screening versus targeted). Moreover, they argue that if screening were to take place before the consultation it would save the practitioners’ time, with the caveat that social desirability bias might reduce the reliability of data gathered in this way.

This study demonstrates that it is feasible and acceptable to screen patients attending sexual health clinics for substance misuse. The researchers conclude that a high number of people could potentially benefit from an initial screening in sexual health settings considering the high prevalence of substance misuse among those who attend such clinics compared to the general population.

*Drugs, alcohol and sexual health: opportunities to influence risk behaviour* (Patton et al., 2008)

This survey was carried out during a six week period in a busy STI clinic in south London, UK. A junior doctor approached consecutive patients over the course of the study. A total of 700 patients were asked to take part, out of whom 653 (93%) consented to participate. Brief Alcohol & Drug screen was used for screening; the screening tool included Paddington Alcohol Test (PAT) and Severity of Dependence Scale (SDS). Patients were considered hazardous drinkers if they indicated that they were drinking more than six (females) or eight (males)
units of alcohol on one single occasion or if they reported their attendance at the clinic was related to alcohol. A score of three or more on SDS was considered as a sign of dependence. Overall, 183 (28.02%) of participants were identified as hazardous drinkers. The prevalence of illicit drug use (cannabis) was quite low (5.3%). Those screened positive for hazardous alcohol or illicit drug use were offered a leaflet. The leaflet contained instructions on how they could obtain help regarding their problem. They were also asked if they would attend a referral appointment arranged for them. Of those identified as hazardous alcohol drinkers, 14.2% stated that they would accept an offer of help or advice for their alcohol misuse, 84.6% of these people said that they would also attend a further appointment with an alcohol specialist.

**Screening for alcohol use disorders in a genitourinary medicine setting** (Mitchell et al., 2011)

This report summarises the findings of an audit carried out in a sexual health clinic in Northumberland, UK over a one month period in 2010. The screening programme for identification of alcohol use disorder was introduced in the genitourinary medicine service in Northumberland in 2009; all those attending this service for the first time were asked to complete the Fast Alcohol Screening Tool (FAST) at the reception. Those with a score of three or above were given verbal alcohol advice and written information. Subsequently they were offered brief intervention or referral to specialist services.

The researchers audited case notes of all first attendees to the service in April 2010 (n=256). In this sample, 60.2% had FAST scores of three or more and 11 patients (4.3%) refused to complete the questionnaire; just over half of the sample were male (53.5%) with an average age of 25 years old. The high prevalence of excessive drinking is partly explained by the fact
that the sample was young (mean age of 25) and also that the study was carried out in the Northern part of the UK (Northumberland); both factors are suggested to be associated with higher rates of drinking.

According to the authors, 61% of those patients identified as having alcohol use disorder received written or verbal alcohol advice and a further 7.8% also received brief intervention. The most important point arising from this audit is that about a third (31.2%) of patients who scored three or above did not receive any alcohol intervention. This audit clearly shows that the acceptability of alcohol screening to individuals attending this sexual health clinic is high; however, a positive score for alcohol use disorder does not necessarily translate into addressing the issue by sexual health professionals. It is not also clear why only a small proportion (7.8%) identified as drinking excessively received brief intervention. The potential reasons mentioned by the authors were patient choice, lack of time and availability of trained staff.

**Screening for alcohol use disorders and alcohol related brief interventions in a genitourinary medicine clinic (Browne et al., 2012)**

Browne and colleagues report their findings of a pilot programme on routine screening and intervention for alcohol use disorders among all those attending a genitourinary medicine clinic over a three week period in 2011. The objective of the pilot study was to evaluate the feasibility of screening people attending GUM clinics for alcohol use disorder and to identify the prevalence of alcohol misuse in this group. Everyone attending the clinic was handed a questionnaire at the point of registration; a total of 540 clinic attendants completed the
screening, out of whom 95 (18%) were identified as having AUDIT scores of eight or above which indicates hazardous/harmful drinking patterns. The majority (n=73, 13.5%) were in the increasing risk group (AUDIT scores of 8-15). The authors emphasise that the commonest age group (just under a third) among those with AUDIT scores of 8 or above was 21-25; nonetheless the authors do not provide the age range or any other demographic and clinical characteristics of the total sample. It is not clear how many people received the questionnaire and what proportion of patients who were given the questionnaire completed the alcohol screening form and returned it.

The authors subsequently examined the medical records of 83 participants in the AUDIT positive sample. In this group 63% were White British, 55% male; 24% received a diagnosis of sexually transmitted infection (STI) on that visit to the clinic and 49% had a history of STI. No comparison was carried out for those who were identified as low risk drinkers in terms of rates of newly diagnosed STIs or life time diagnoses of STIs.

It is unclear which group received an intervention; the authors only mention that 53 (56%) of individuals identified as in need of receiving Brief Advice (BA) had this documented, 4 (4%) refused BA and in just under a half of the cases, there was no documentation. Issues relating to why advice was not given or it was delivered but not documented are not discussed.

Although the design is prospective, the follow-up period is only six weeks; and less than a third (n=27, 28.4%) of those who received intervention, completed the follow-up interview. The authors report the percentage reduction in mean AUDIT scores of those who received any intervention (Brief advice, extended BI or referral) separately for each drinking category, ranging from 23% to 33%. It is not clear from this paper if reported reductions were adjusted for other variables which may have confounded the results (i.e. drinking levels at baseline,
gender, age). Furthermore, there is no control group and it is hard to draw any conclusion about the true effectiveness of intervention in the absence of a control group. The intervention was delivered by the treating clinician, nurse or health advisor but it is not clear who conducted the follow-up interview. Social desirability bias should be taken into account when interpreting the findings.

In parallel with the pilot study, an anonymous survey of staff was run to examine their views. Whilst there was a consensus on the 'relevance' and 'complementarity' of alcohol screening and intervention in sexual health settings, just over a half of staff thought it had some impact on the consultation time; one member of staff felt that it increased the length of the session considerably.

**Screening for hazardous alcohol consumption in a sexual health clinic: a service evaluation**

(Thorley et al., 2012)

Thorley and colleagues report their findings of a service evaluation survey examining the feasibility of NICE guidelines recommendations on alcohol screening in sexual health clinics. The main objectives of this survey were a) to examine the feasibility and uptake of alcohol screening, b) to assess the prevalence of problem drinking in an inner city sexual health clinic, as well as c) to establish what proportion of people identified as having drinking problems would attend an appointment to discuss this with either their general practitioner or a specialist alcohol service. This survey was carried out over five consecutive days in January 2011 in an inner city sexual health clinic in Birmingham and only included those who attended with a new episode excluding patients attending for their follow-up appointment.
In total, 316 patients were approached and given the questionnaire, out of whom 227 (72%) consented to take part in the survey (54% women, 46% men). In total 70 (22%) declined and 19 (6%) did not return the survey questionnaire; the majority (83.7%) of participants were between 16 and 34 years old with just under half (46.7%) in the young age group (16-24). The survey included the 10-item AUDIT questionnaire, as well as some questions on how often people attended sexual health clinics in the preceding two years and history of sexual assault in the previous six months. Women were also asked about how many times they used emergency contraception in the past two years. This is in line with NICE guidelines which state that although all individuals attending sexual health clinics should be screened for their alcohol use, taking feasibility into account ‘at risk’ groups should take priority. The terms are not defined thoroughly but ‘at risk groups’ are considered to be those at increased risk of harm due to alcohol and include those attending regularly to these clinics, those who repeatedly attend for receiving emergency contraception and individuals subjected to assault.

Data on why people refused to take part in the survey were also collected. The majority of those who refused (n=40, 56.3%) said they did not drink. There was no relationship between age or gender and refusing to take part in the survey. Among those (n=227) who completed the survey, 77 (34%) had AUDIT scores of 8 or above with the majority (n=60, 78%) in the hazardous drinking (AUDIT scores of 8-15) category. Only two of the participants agreed to being referred and both were identified as having possible dependence, however, neither attended the appointment.

Their findings did not show any statistically significant association between AUDIT scores of eight or above and the frequency of attending the GU clinic, the use of emergency
contraception in the past year or two, nor a history of sexual assault in the preceding six months. Patients who had attended the GU clinic in the preceding year were more likely to have AUDIT scores of eight or above, but this association was not statistically significant. There was a tendency for men and younger patients to have higher AUDIT scores but the differences were not statistically significant.

The authors emphasise that their survey suggests the feasibility of routine screening for alcohol use in sexual health clinics, and that the results confirm a higher than the general population prevalence of hazardous drinking among those attending sexual health clinics which is estimated to be 26%, 38% and 16% for men and women respectively (Drummond et al., 2005).

Although over 70% of attendees consented to screening and taking part in the study, over 97% of those identified as having alcohol use disorder declined the offer of help/referral. The authors provide a list of possible explanations for poor rates of accepting help: issues of time constraints, how people might perceive their alcohol use patterns as not problematic or lack of willingness on their part to address the issue at the time are among the mentioned reasons. The authors concluded that further investigation was needed to assess why those who were offered help did not want to take it. This study did not collect any follow-up data to examine if screening and identification alone had any impact on future drinking behaviour among participants.
Quality of studies

To assess the quality and the methodological strength of the studies included in my literature review I used the Effective Public Health Practice Project Quality Assessment Tool for Quantitative Studies EPHPP (Thomas et al., 2004), (Armijo-Olivo et al., 2012). The EPHPP tool comprises six components: Selection Bias, Design, Confounders, Blinding, Data Collection Methods, Withdrawals and Drop Outs. A dictionary is available which describes these components and helps the raters to make judgements about the study quality. Each study is allocated a global rating which is based on the scores of all individual items. Studies are rated ‘strong’ if all the individual components are rated ‘strong’ or ‘moderate’; they are rated ‘moderate’ if only one component is rated ‘weak’; and are rated ‘weak’ if two or more components are rated ‘weak’.
Table 2-2 presents the global rating and the breakdown of ratings for the quality of individual studies included in the literature review; seven of the studies scored as ‘weak’ and one as ‘moderate’.

Table 2-2 EPHPP Quality Assessment Tool Ratings for the studies included in the literature review

<table>
<thead>
<tr>
<th>Study</th>
<th>Global Rating</th>
<th>Selection Bias</th>
<th>Study Design</th>
<th>Confounders</th>
<th>Blinding</th>
<th>Data Collection Methods</th>
<th>Withdrawals and Drop Outs</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Crawford et al., 2004a)</td>
<td>WEAK</td>
<td>1 S</td>
<td>3 W</td>
<td>3 W</td>
<td>1 S</td>
<td>2 M</td>
<td></td>
</tr>
<tr>
<td>(Appel et al., 2006)</td>
<td>WEAK</td>
<td>1 S</td>
<td>3 W</td>
<td>3 W</td>
<td>1 S</td>
<td>2 M</td>
<td></td>
</tr>
<tr>
<td>(Lane et al., 2008)</td>
<td>MODERATE</td>
<td>2 M</td>
<td>1 S</td>
<td>3 W</td>
<td>2 M</td>
<td>1 S</td>
<td>2 M</td>
</tr>
<tr>
<td>(Yu et al., 2008)</td>
<td>WEAK</td>
<td>1 S</td>
<td>3 W</td>
<td>3 W</td>
<td>1 S</td>
<td>2 M</td>
<td></td>
</tr>
<tr>
<td>(Patton et al., 2008)</td>
<td>WEAK</td>
<td>2 M</td>
<td>3 W</td>
<td>3 W</td>
<td>1 S</td>
<td>2 M</td>
<td></td>
</tr>
<tr>
<td>(Mitchell et al., 2011)</td>
<td>WEAK</td>
<td>2 M</td>
<td>3 W</td>
<td>3 W</td>
<td>1 S</td>
<td>2 M</td>
<td></td>
</tr>
<tr>
<td>(Browne et al., 2012)</td>
<td>WEAK</td>
<td>2 M</td>
<td>3 W</td>
<td>3 W</td>
<td>1 S</td>
<td>3 W</td>
<td></td>
</tr>
<tr>
<td>(Thorley et al., 2012)</td>
<td>WEAK</td>
<td>2 M</td>
<td>3 W</td>
<td>3 W</td>
<td>1 S</td>
<td>2 M</td>
<td></td>
</tr>
<tr>
<td>(Baguley, 2012)</td>
<td>WEAK</td>
<td>3 W</td>
<td>1 S</td>
<td>3 W</td>
<td>2 M</td>
<td>1 S</td>
<td>1 M</td>
</tr>
</tbody>
</table>

1 = Strong, 2 = Moderate, 3 = Weak

Overall rating:
1 STRONG (no WEAK ratings)
2 MODERATE (one WEAK rating)
3 WEAK (two or more WEAK ratings)
2.3 Narrative summary of the results of the literature review

This literature review generated data from two randomised trials, one pilot programme, one RCT protocol paper, and six cross-sectional studies (See table 2-1 for a summary). The duration of the studies ranged from a few days (Thorley et al., 2012) to over a year (Baguley, 2012). The studies varied in terms of patient characteristics and the methodology used. Seven of these studies focused exclusively on alcohol, whereas the other three asked about illicit drugs as well. The type of intervention used in each study was different: in some studies participants were only offered a leaflet, whereas some studies also offered some advice and asked patients if they would attend a further appointment arranged for them to receive additional intervention.

With regards to participants’ views and their feedback about screening and receiving intervention for alcohol use disorder, some of the studies report their findings on whether participants thought screening for alcohol misuse in a sexual health clinic was acceptable to them.

Two studies also included a staff survey; according to one survey on acceptability of screening and brief intervention to clinic staff, most of the staff thought that the study had minimal impact on their clinic routine. Most also stated that screening for alcohol is a good idea and that it can be integrated into normal practice, provided there is enough time (Lane et al., 2008). In the pilot study by Browne et al., an anonymous survey of staff was run in parallel to the main study to explore the views of staff. The findings indicate that although most believed
it was relevant and complimentary to their practice, over a half believed it had some impact on their routine practice and would lead to longer consultation sessions (Browne et al., 2012).

To provide a summary of the outcomes of this review I will present the details under four themes: i) Prevalence of excessive drinking in sexual health settings, ii) Feasibility and acceptability of alcohol screening and intervention in sexual health settings, iii) Uptake of alcohol intervention in sexual health settings, and iv) Effectiveness of alcohol intervention in sexual health settings.

2.3.1 Prevalence of excessive drinking in sexual health settings

The prevalence of excessive drinking reported by different studies in the review varied from 18% (Browne et al., 2012) to 60.2% (Mitchell et al., 2011). There are a number of factors which might explain this variation. Studies in this review were of different design; whilst some of these studies were audits of clinic case notes (Mitchell et al., 2011), some presented data on prevalence in those who were approached and agreed to take part in a randomised trial (Lane et al., 2008), (Baguley, 2012). Using various screening tools [AUDIT & derivatives, CAGE (original and modified version), PAT, FAST, and M-SASQ] can partly explain the different prevalence rates reported in these studies. Screening tools such as PAT and M-SASQ categorise drinking levels based on the quantity (alcohol units), whereas screening tools such as CAGE focus on more qualitative aspects and undesirable effects of excessive drinking; AUDIT and FAST screening tools cover both aspects of drinking and include questions on the quantity as well as the consequences of excessive drinking.
Furthermore, walk in clinics might attract a different cohort of patients compared to appointment only settings. It is possible that walk in clinics are attended by those patients who are symptomatic and need emergency appointments whereas those who attend the clinics for a routine check-up might choose appointment only clinics to avoid long waiting times. However, one cannot draw these conclusions with certainty as people might choose different clinics solely based on the location and geographical convenience.

Various reasons for presenting to a sexual health clinic including new episode, follow-up appointments, emergency contraception, and routine sexual health check-up might impact the reported prevalence of excessive drinking in people attending these clinics. Two of the studies in the review only included people who presented to the sexual health clinic with a new episode (Thorley et al., 2012), (Baguley, 2012). One of the studies only included first time attendees (Mitchell et al., 2011); other studies do not provide any details about the participants approached for taking part in the study.

Most of the studies in this review were carried out in a single clinic; the authors do not provide the details about whether the characteristics of patients attending these specific clinics represent that of the general population. Individual studies varied with regards to the distribution of socio-demographic factors such as age, gender, and ethnicity which all have the potential to impact the prevalence of excessive drinking and lead to the observed variations among the reports.


2.3.2 Feasibility and acceptability

In all of the studies included in this review, a sizable majority of patients who were approached, did agree to the screening and/or taking part in the study, ranging from 72% (Thorley et al., 2012) to 99.7% (Appel et al., 2006). It is worth mentioning that the design of these studies varied, whilst some screened all those attending the clinic over a specific period and only sought consent for further participation from those who screened positive (Baguley, 2012), other studies asked consecutive patients attending a clinic whether they agreed to take part and/or being screened for alcohol and/or other drug problems. The extent to which participants were informed about the nature of the study and a possible offer of intervention could influence both the type of participants who agreed to take part as well as their further decision about taking up/not taking up the offer of further help/intervention.

Not all the studies describe the reasons why people refused to take part, and whether this was after they had been screened for possible excessive drinking, or they declined taking part at the point they were approached. The impact of socio demographic and other clinical characteristics on willingness to participate needs further exploration. In the three arm trial, authors report that there was no clinically significant difference between mean AUDIT scores of those who agreed to participate (11.36) and those who refused (10.94); however, the details about sociodemographic and other clinical characteristics are not provided (Baguley, 2012).

Additionally, some of these studies also explored participants’ views and attitudes about appropriateness, feasibility and level of patient satisfaction (Lane et al., 2008), (Yu et al., 2008), (Baguley, 2012). In the only published randomised trial, 94% of the patients in the
intervention group recalled the advice and 85% thought it was acceptable. It is worth mentioning that 75% of patients believed it was acceptable to receive alcohol advice from a nurse (Lane et al., 2008). Baguley and colleagues also report that when they asked the participants, 80% of them thought the interventions were 'quite' or 'very' acceptable (Baguley, 2012). In one of the studies, those seen by the interventionist were also asked to fill out a satisfaction questionnaire; 34% stated they were happy that the issue was addressed, 45% said they were surprised but felt comfortable about it being discussed (Yu et al., 2008).

Whilst the findings from these surveys support the feasibility and acceptability of intervention for alcohol and other drugs in the context of sexual health clinics, there are a few issues which need to be taken into account. The study which presents very positive feedback is based on the data from a survey only among those who saw an interventionist. This is the study with the highest level of uptake of intervention and included people with alcohol and/or other drugs. The general limitations of this study are discussed in the previous section (Yu et al., 2008). The specific issue relating to feedback is that the views expressed by a selective group cannot be generalised to the wider context without further testing.

### 2.3.3 Uptake of alcohol intervention in sexual health settings

When reviewing this aspect, it is crucial to emphasise that the studies in this review varied in design and format of the intervention offered to the participants. This makes it difficult to make comparisons and draw firm conclusions about patients’ willingness to receive further interventions. Despite this heterogeneity, participants were consistently ambivalent about receiving further interventions. It is not also clear if the characteristics of those who accepted
such interventions and/or attended a further appointment were different from others who refused. In one study people were only asked about whether they might (hypothetically) take up such offer. Interestingly, even in this scenario where people were asked about a hypothetical scenario, only 14.2% of those identified as excessive drinkers said they would accept an offer of help/advice. One of the studies report the findings from a case note audit, one year after the initiative was introduced in the routine practice of a sexual health clinic in Northumbria to screen all the first attendees for drinking excessively. This review provides valuable information and sheds light on some of the practical issues faced in real world clinical practice. Furthermore, this is the only study which refers to the role of intervention providers and factors that might hinder successful implementation and delivery of alcohol screening and intervention in the context of sexual health clinics (Mitchell et al., 2011).

It has been argued that further appointments for alcohol intervention should be arranged for the same day as this will increase the likelihood of attending the appointment (Williams et al., 2005). Studies in this review vary in terms of the format and content of intervention and the timing of (if any) further appointments. In the only published randomised trial (Lane et al., 2008) a research nurse was responsible for recruitment, assessment and offering the brief advice, hence no additional appointment was required. Eligible patients were asked to consent to further participation after the initial screening, and those randomised to intervention received this from the research nurse at the time of recruitment. In one of the studies in this review, over half (56%) of those who screened positive for potential substance use problems saw a health professional (interventionist) to receive further help and advice (Yu et al., 2008). The authors do not provide the breakdown of the type of substance they used and whether those who accepted to receive further intervention had a different pattern
of alcohol/drug use to those who did not and if poly drug users were more/less likely to take up the offer of intervention. Over two thirds of the participants in the study were male and around a half were of ethnic minority. No further details about this specific clinic is provided as to whether the neighbourhood had a high drug and alcohol problems or the participants were selected from a subgroup of attendees. In a similar study (Appel et al., 2006) less than 1% of the participants with substance misuse said that they wanted an AOD referral although it was to be arranged for the same day. Crawford and colleagues report that in their study, 93% of the patients drinking excessively accepted the written advice and 31% accepted a further appointment. However, only one patient attended the session (Crawford et al., 2004a). In the service evaluation study by Thorley et al., over 97% of participants who screened positive for problem drinking refused to receive further help/referral (Thorley et al., 2012). Whilst one might conclude that unless the further appointment for receiving an intervention is on the same day it is unlikely that people would attend, the findings from the study by Appel and colleagues do not support this supposition (Appel et al., 2006).

One other factor which might have an impact on the willingness of people to accept further intervention is whether they make a link between attending a sexual health clinic and drinking excessively. One of the studies in this review specifically asked the participants if they thought their attendance at the clinic was related to drinking excessively; over a third (39.8%) of those identified as drinking excessively said it was (Crawford et al., 2004a). The other study took account of this issue in the screening process; people who said their attendance at the sexual health clinic was related to alcohol were considered as hazardous drinkers (Patton et al., 2008). The authors do not provide further details about if there were any differences in the demographic and clinical characteristics of those who saw the link and those who did not, or
whether making a link was associated with willingness to take up the offer of further help and advice.

2.3.4 Effectiveness of alcohol intervention in sexual health settings

The relatively high prevalence of excessive drinking reported by these studies in different countries, notions about lack of screening for drinking problems in primary care settings along with suggestions about the relationship between excessive drinking and risky sexual behaviour provide part of the rationale for alcohol screening and intervention in sexual health clinics. However, unless these efforts lead to change in behaviour and prove to be effective, it is hard to justify their routine implementation. The results of this review show that effectiveness is the least explored aspect; there is very little data on the effectiveness of opportunistic interventions for alcohol misuse in sexual health settings, and that the interventions are not specifically tailored for this setting. Only three of the studies in the review provide some findings about change in drinking behaviour of the participants subsequent to receiving some form of intervention. Two of these studies were randomised trials and one was a pilot prospective study with a follow-up period of only six weeks. The only published randomised controlled trial examined the acceptability, feasibility and effectiveness of brief intervention for excessive alcohol consumption in sexual health settings (Lane et al., 2008). Although the participants in this trial in both control and intervention arm reduced their alcohol consumption, the difference between the two groups was not statistically significant.

When assessing effectiveness, the other factor to consider is the follow-up rate. The studies in this review report various rates ranging from 72.3% (Lane et al., 2008) to 61.8% (Baguley,
2012). In the only published RCT, out of the 184 people who took part in the study 133 (72.3%) completed the follow-up assessment; 67 (69%) were in the control arm and 66 (76%) in the intervention arm of the trial. Demographic characteristics were not shown to be different between those who completed the follow-up assessments and those who were lost to follow-up. However, the authors report that patients who scored 20 or more on the AUDIT scale were less likely to complete the follow-up interview (Lane et al., 2008).

As is apparent from my literature review, existing evidence suggests that the acceptability of screening for alcohol misuse to patients attending sexual health clinics is consistently high in various studies conducted in different parts of the world (UK, US, Australia). One could argue that the high prevalence of problem drinking identified in people attending sexual health settings, high numbers of people who accepted the screening combined with low levels of enquiry about drinking levels (low identification) by their GPs (Lane et al., 2008), would make a strong case for introducing alcohol screening and intervention in sexual health settings. However, the findings from this review also clearly show that agreeing to be screened would not necessarily translate into willingness to have further appointments or referrals in order to address excessive drinking. In other words, high rates of acceptability of alcohol screening would not mean high uptake of intervention. It is not clear whether people who thought their attendance was related to drinking were more likely to agree to receive further intervention and/or were more amenable to making changes in their drinking behaviour.

None of the studies in this review had a qualitative component. It is evident that patients’ attitudes towards opportunistic screening and intervention for alcohol misuse in sexual health settings have not been thoroughly investigated before. A few of the studies report their findings of the surveys among participants and/or staff. Whilst this is valuable
information and suggests that it is feasible and acceptable to people attending sexual health clinics to be screened and offered some help/intervention for their alcohol use, a full account of their experience was not captured. It was not explored whether those, for whom there was a link between presenting to the clinic and drinking excessively, had different views about the acceptability of alcohol screening and intervention in the context of sexual health clinics. Furthermore, data collected as part of a survey do not provide details needed for designing future research to examine the (if any) effectiveness of such interventions. Exploring reasons why people decide to receive advice for their alcohol misuse will help form strategies to encourage people to attend alcohol intervention sessions. It is also worth examining who benefits most, why people change or do not change their drinking patterns after such screenings and interventions, and whether addressing alcohol misuse would have any impact on risky sexual behaviour.

There is also very little data on how staff working at sexual health clinics feel about providing alcohol screening and interventions in these clinics, and if staff attitude has an impact on the effectiveness of such efforts. Browne and colleagues in their pilot program, included a staff survey and report that half of staff stated that alcohol screening and intervention affected the consultation time (Browne et al., 2012). It has been suggested that measures such as introducing tariffs as an incentive would increase the rates of screening and intervention by sexual health clinic staff (Browne et al., 2012). Detailed information on staff attitudes towards screening and intervention is needed if effective strategies are to be developed and delivered in the future.
Chapter 3  Methods

In this chapter, I will provide details of the methods and methodology I used to collect and analyse the data in my thesis. To address my thesis overarching aims, I used mixed methods approach. I collected and analysed both qualitative and quantitative data in a convergent parallel design in order to obtain a more comprehensive understanding of the research questions. I used classic Grounded Theory (GT) as the guiding methodology for the collection and analysis of the qualitative components. I used the emergent themes from the qualitative components to form secondary questions and examined this further by collecting and analysing quantitative data. I will also propose a mid-range theory which provides a theoretical elaboration of my findings.

When data from various sources are collected, there is a need for integrating the results from each source. O’Cathain et al. in their paper on ‘triangulation’ describe why without such integration, “the knowledge yield is equivalent to that from a qualitative study and a quantitative study undertaken independently, rather than achieving a “whole greater than the sum of the parts.”” (O’Cathain et al., 2010)

This chapter comprises a brief overview of Grounded Theory methodology, the rationale for choosing this methodology, and the description of various data sources and sampling strategies I employed. I will also describe the stages of forming research questions and illustrate how the various data sources informed the theory generation. To maintain the flow of the thesis and provide a well-structured account of my work, I have categorised the data sources into two main categories: qualitative and quantitative. However, in the process of
data collection these stages were intertwined and data were not collected and analysed in
the order as they appear in this chapter.

In mixed methods research there are various approaches for ordering the collection and
analysis of data and presentation of findings from each source (O’Cathain et al., 2010). There
is also variation in how data collected from these sources and subsequent analyses are
integrated to provide a fuller picture of the phenomenon under investigation. One tradition
is to use a sequential approach where findings from one component of a study guide the next
round of data collection. Examples include the way that results of qualitative interviews are
used to design survey questionnaires; or the results of a survey are used to inform gaps in the
knowledge and/or understanding of a particular area subsequently explored by conducting
qualitative interviews (Bergman, 2008). Furthermore, Robert Walker in the chapter on Mixed
Methods Research explains why pragmatism legitimates the combining of qualitative and
quantitative methods as this would lead to solving the research problems much better than
if any of the approaches are used on their own. His account on ‘triangulation’ refers to
‘Expansion’ and ‘Complementarity’ which provide justifications for conducting mixed
methods research by emphasising the added value of such approach. Expansion means that
by combining the two methods, once could increase the “range and breadth” of an inquiry;
complementarity would facilitate drawing interpretations (Neale, 2008).

In my thesis, I used a convergent parallel design i.e. qualitative and quantitative data were
collected in parallel (Diagram 3-1). Using this approach meant that the process of the research
guided the collection and analysis of both quantitative and qualitative data. The analysis of
qualitative data was completed before the main trial outcomes were reported to avoid forcing
concepts (Glaser, 1998). However, the analysis of the quantitative component for the thesis
was delayed until after all the SHEAR trial analyses were completed and the study reports were written up. I made this decision to avoid any interference with the reporting/analysing of the main trial outcomes (O’Cathain et al., 2010). For each source of data, I will describe the sample, the methods of data collection and the analysis procedures. At the end of this chapter I will describe how I integrated the quantitative and qualitative data to explore the areas of divergence and convergence (O’Cathain et al., 2010),
**Diagram 3-1** Describes the convergent parallel design of the thesis, details of various data sources and stages of data collection and analysis

### Mixed Methods - Convergent parallel design

<table>
<thead>
<tr>
<th>Research question (Overarching aims)</th>
<th>Methodology</th>
<th>Data collection convergent parallel/exploratory design</th>
<th>Analysis</th>
<th>Outcomes</th>
<th>Convergent Merging</th>
<th>Interpretations</th>
<th>Existing theories</th>
</tr>
</thead>
</table>
| - To better understand the outcomes of SHEAR trial  
- To examine the process of screening and intervention for alcohol misuse in sexual health clinics | Classic Grounded Theory guides data collection through theoretical sensitivity, constant comparison | Qualitative data:  
Interviews  
Field observations  
Follow-up process notes | Theoretical  
Thematic coding  
Conceptualisation  
Abstraction | Core categories  
Described in the results chapter | Integration/mixing | Described in the discussion chapter | |
| | Quantitative data:  
FU data from M-SASQ negative sample  
Illicit drug use | Sample: Alcohol Health Worker, Sexual health clinic Staff, SHEAR participants | Statistical analysis  
Descriptive  
univariate/multivariate/regression models | | | * I used some of the data collected as part of the SHEAR trial in my thesis - full results from the SHEAR trial are reported elsewhere |
3.1 Methodology

3.1.1 What is Grounded theory?

Grounded theory was first introduced in 1967 by Barney G. Glaser and Anselm L. Strauss in an attempt to respond to the gap between theory and empirical research (Glaser et al., 1968). The key features of grounded theory are theoretical sampling and theoretical sensitivity and that data collection, coding and analysis occur simultaneously (Glaser, 1978). The focus on constant comparison in grounded theory enables testing emerged categories against new incidents in the dataset as well as allowing for the emergence of new categories and saturating their properties.

However, later on there was a split between Glaser and Strauss. Glaser continued to follow the original methodology - usually referred to as ‘Classic’ or ‘Glaserian’ grounded theory - with its main focus on emergence. Strauss, with the help of one of his students published a book in which he emphasises that theory generation should be formulated. In this book, they provide an elaborate account of the essential steps and certain procedures which need to be carefully followed in the process of theory generation (Strauss and Corbin, 1994).

Data in grounded theory are referred to as ‘slices of data’ and there is flexibility in the type of data that are used. Theoretical sampling can be performed on data already collected for other purposes, field notes, observations, interviews as well as quantitative data. Secondary analysis of data collected previously can also inform theory generation. The aim in this methodology is not verification and testing hypotheses, it is to generate new hypotheses and
theories to explain the phenomenon under study. Glaser in his book states: “grounded theory is the systematic generation of theory from data acquired by a rigorous research method” and that the theory is an “integrated set of hypotheses which account for much of the behaviour seen in the substantive area” (Glaser, 1998). The term, grounded theory, is sometimes used to refer to the Qualitative Data Analysis (QDA) methodology; Glaser emphasises that whilst they are both valuable, the two should not be considered interchangeable as the concern in descriptive qualitative analysis is accuracy. Glaser further elaborates on this issue in his book, Theoretical Sensitivity (Glaser, 1978) when he writes:

“The goal of grounded theory is to generate a conceptual theory that accounts for a pattern of behaviour which is relevant and problematic for those involved. The goal is not voluminous description, nor clever verification.” (p.93)

One other distinction with qualitative data analysis is that in grounded theory, the researcher’s effort is to discover the problematic areas according to those involved and conceptualise them rather than to impose a predefined set of frameworks.

3.1.2 Why did I choose Classic (Glaserian) Grounded Theory?

Grounded theory is most suitable for use in under-researched areas where the focus of research is to explore the concerns of those involved in the field rather than testing out a series of preconceived hypotheses (Glaser et al., 1968). My literature review of alcohol interventions in sexual health clinics demonstrated that the process and challenges of alcohol screening and intervention in sexual health settings have not been explored; hence, grounded theory seemed an appropriate method of inquiry. Among the various approaches to grounded theory, I chose classic grounded theory methodology due to my own
epistemological stance and the overall openness and flexibility of this methodology that allows for generating theory from various data sources. However, I am well aware that the definition of ‘truth’ is dependent on the individuals’ worldview and that as human beings we are subject to introducing bias into any stage of a research study.

Åge in his paper provides a detailed analysis of three philosophical paradigms inherent in classic grounded theory methodology. His account is particularly useful in answering some fundamental questions about how ‘scientific’ the grounded theory methodology is. Broadly speaking, scientific inquiry should result in producing knowledge which a) corresponds to ‘true facts’, b) adds to our understanding of the unknown, and c) is useful on a practical level (Age, 2011). Below I explain how the knowledge gained though a classic grounded theory methodology would meet these three criteria of correspondence, understanding and usefulness.

**Correspondence to ‘truth’**

The ultimate aim and focus of conducting scientific research is to produce findings which are ‘true’ and ‘objective’ (Popper, 1963). In the conventional positivist paradigm of research this is achieved through testing and refuting hypotheses. However, in classic grounded theory the emphasis is on ‘fitness’ of the findings to the substantive area of research. Glaser also notes that the theory should ‘work’ which has implications when considering that theories should be able to explain the phenomenon under study. The concept of core category in grounded theory carries the same qualities as relevance in scientific inquiry. There is, however, a difference between the conventional positivist paradigm and grounded theory methodology. Glaser notes that the emergent theory is ‘modifiable’ and this property is in contrast to the ‘absolute’ notion of truth in conventional hypothesis driven research.
Understanding

Furthermore, the purpose of scientific research is to provide a better understanding of the world. In the hermeneutic paradigm - with its focus on the situated nature of interpretation - this understanding is defined as interpretation and establishing a meaningful account of the researched area. The more abstract the interpretations, the more scientific the understanding would be. The extent the proponents of hermeneutic paradigm put emphasis on the dialogical aspect of interpretations vary; some accentuate the need for an explicit recognition of one’s prejudices in the process (Gadamer, 1975). The very notion of understanding and abstraction in grounded theory and avoiding preconceived frameworks is emphasised by Glaser (Glaser et al., 1968) and fits nicely with the highest (scientific) order of interpretation and understanding.

Usefulness

Lastly, the notion of usefulness in grounded theory is depicted through a) providing an in-depth and practical understanding of the substantive area, and b) conceptual elaboration and integration of the ‘problem’.

To summarise, all three aspects of a scientific methodology (correspondence, understanding and usefulness) are present in a classic grounded theory. My epistemological stance as a pragmatic scientist who willingly acknowledges the limitations associated with any attempt to understand a ‘problem’ led me to choose this methodology. However, I should emphasise that as Åge argues, correspondence to ‘truth’ in grounded theory is slightly different from what is considered as the ‘absolute truth’ within a positivist paradigm. The only claim that grounded theory makes is that it provides conceptual understanding, and therefore it is useful
for those involved in the substantive area of research (Age, 2011). Later in this chapter, I will explain how this property is the source of contention when assessing the credibility of research findings of a grounded theory methodology. I will also provide more details about my role as the lead researcher in the main trial, my stance and professional background, and I will reflect on issues that might be considered as potential sources of bias. I hope that the readers will appreciate these constraints. I do not claim that what I have found is ‘the theory’ but ‘a conceptual account’ which offers a more in-depth understanding of the process and outcomes of a complex intervention in the context of a randomised trial. Despite the limitations, the findings can be theoretically extended to and therefore are relevant to contexts other than sexual health settings (Neale et al., 2013).

In this thesis, I aim to provide a theoretical elaboration of the process and outcomes of screening and delivering interventions for excessive drinking in sexual health clinics in the context of a randomised trial as well as the challenges, barriers and facilitators to delivering effective alcohol interventions in sexual health settings.

In the following sections, I will describe in detail the methods I used from theoretical sampling, collecting data of various sources, open coding and forming substantive categories, on to delimiting data, selective coding, conceptual categories, memo writing and generating hypotheses. I will then describe how the emerging concepts guided the search for similarities and divergences in the extant literature and how I used the literature as another piece of data to be explored in order to saturate the emergent categories. I will provide the details of study sample, data collection and analysis separately for the qualitative and quantitative components of my thesis.
3.2 Study setting

I collected data in the three sexual health clinics in London where the SHEAR trial was conducted. To describe the characteristics of the three clinics in which the SHEAR trial took place, I used the data from one of the reports published by Medical Foundation for Aids and Sexual health (MedFASH) in 2008. These four reports contain the outputs of the London sexual health needs assessment and service mapping project and provide a detailed needs assessment as well as a full picture of sexual health services across London (MedFASH, 2008). These three clinics offer a range of screening and treatment as well as outreach and contraception services. Two of the clinics provide mixed access including booked appointments and walk-in sessions; one operates only as a walk-in clinic. These clinics are situated in three London boroughs and are commissioned by three primary care trusts (PCTs). They also provide out of hours services - defined as after 7:00pm or anytime at weekend - to patients. In 2007-2008, they were among the busiest genitourinary medicine (GUM) clinics in London in terms of the number of patients; one of them had over 50,000 attendances in the preceding year. Information about where patients attending the clinics reside, shows that one of these clinics has the lowest percentage of people attending their service who resided in the commissioning area. Looking closely at detailed data on attendance by primary care trust of residence showed that up to a fifth (20.26%) of the attendees in one of the clinics (clinic 2) were residing in a PCT outside London. The figures were 6.07% (clinic 3) and 19.8% (clinic 1) for the other two clinics. This means the clinic attendees include both inner London local residents as well as those who work or socialise in the area. Staff at the sexual health clinics told me that some people in the latter group choose the clinics for convenience as it is close to their work. They believed others choose these clinics because they are located outside their
normal place of residence which will provide an additional level of anonymity. All these three clinics offer the full range services encompassing STI testing and treatment, outreach and contraception services. Table 3-1 provides some details about the characteristics of these three clinics.

Table 3-1 Characteristics of the three clinics that the SHEAR trial took place

<table>
<thead>
<tr>
<th>Clinic</th>
<th>Total hours open (per week)</th>
<th>Number of hours open after 7pm or at weekends</th>
<th>% of hours open after 7pm or at weekends</th>
<th>Total number of attendance to the service (2007-2008)</th>
<th>% first attendance</th>
<th>% Aged &lt;25</th>
<th>% of attendances from Commissioning PCT</th>
<th>new episode to follow up attendees/ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinic 1</td>
<td>44.5</td>
<td>5.0</td>
<td>11%</td>
<td>19,684</td>
<td>78%</td>
<td>34%</td>
<td>40.95%</td>
<td>1:0.28</td>
</tr>
<tr>
<td>Clinic 2</td>
<td>43.5</td>
<td>1.5</td>
<td>3%</td>
<td>22,357</td>
<td>77%</td>
<td>24%</td>
<td>23.17%</td>
<td>1:0.3</td>
</tr>
<tr>
<td>Clinic 3</td>
<td>50.3</td>
<td>0.0</td>
<td>0%</td>
<td>51,528</td>
<td>57%</td>
<td>No data</td>
<td>28.82%</td>
<td>1:0.77</td>
</tr>
</tbody>
</table>

The sample for this thesis was selected from staff and patients who worked or used services provided by the three clinics in the SHEAR trial. For the qualitative components of the study, purposive samples of service users and providers were interviewed together with all four Alcohol Health Workers at the three sites who delivered the Brief Intervention as well as one Clinical Studies Officer involved in recruiting participants to the SHEAR trial. For the quantitative components of the study, data on all the SHEAR trial participants and a sub-
sample of those who were assessed for the trial but found to be ineligible were included. These data were supplemented with a survey of staff involved in delivering Brief Advice. Diagram 3-2 presents how this thesis fits within the context of the SHEAR trial.
Diagram 3-2 PhD Thesis in the context of SHEAR Trial

**SHEAR Trial**

- **Pilot phase**: Screening, every eligible participant receives alcohol intervention.
- **Trial phase**
  - **Screening**
    - **Eligible**
    - **Not eligible**
- **Randomisation**
- **Intervention**
  - Brief Advice from doctor, offer of appointment for Brief Intervention
- **Control**
  - Leaflet on healthy living
- **6 month follow-up**
  - Sexual behaviour, alcohol use (Form 90), health service use, EQ-5D

**SHEAR RESULTS**
Quantitative data available from SHEAR

---

**Thesis**

- **Semi-structured Interviews with participants of SHEAR pilot phase**
  - Refine interview topic guide, initial categories emerging
  - Acceptability, feasibility
- **6 month follow-up**
  - Comparative
  - Drug questionnaire incorporated into SHEAR 6 month follow-up interview
  - Theoretical sampling from control and intervention group (after SHEAR 6 month follow-up)
- **SHEAR Experience**
  - THEORY: Categories, Properties
  - Secondary analysis of SHEAR
  - Literature Review
  - Impact of illicit drug use on effectiveness of intervention
  - Impact of staff attitude on the effectiveness of intervention
  - Relationship: Sexual Health & drinking

---

Data Collection
- Data slices used to develop theory
In the following sections, I will describe how the process of developing particular areas of inquiry led me to select the study sample. I will explain ‘how’ and ‘why’ I chose the samples to collect data from, separately for each of the qualitative and quantitative components.

### 3.3 Qualitative components

This section presents the sampling strategy, stages of data collection and analysis for the qualitative components of the thesis. I employed purposive (theoretical) sampling in which the choice of where to collect the next set of data is determined following analysis of the data collected previously. One of the key issues in grounded theory is the distinction between theoretical and statistical (random) sampling. By definition, “theoretical sampling is performed in order to discover categories and their properties and to suggest the interrelationships into a theory” (Glaser and Strauss, 1977). One of the issues requiring careful consideration when conducting research is to identify and distinguish induction versus deduction. Whilst grounded theory in essence is an inductive approach as it is hypothesis generating rather than verifying a priori hypothesis, theory generation entails deduction procedures in that new data will be tested against emerged categories. Furthermore, theoretical sampling is in itself a deductive process that provides much richer data for inductive theory generation. Glaser recommends selecting the comparison groups in the process rather than defining them prior to the study; as the categories evolve, they inform which groups to compare and where to collect data. The researcher should determine the limit to sampling by theoretical saturation; this would be achieved when new data no longer exhibit/demonstrate new categories (Mason, 2010), (Morse, 1995), (Guest et al., 2006).
3.3.1 Stages of theoretical sampling

My initial decisions about where to collect data were based on my observations and informal conversations I had with participants during the pilot phase of the SHEAR trial. Informal comments and feedback from meetings with frontline clinicians highlighted other potential areas for exploring. To gain some understanding of ‘how’ people felt about alcohol screening and intervention in sexual health clinics, I interviewed a number of people participating in the pilot phase of the SHEAR study. All participants in the pilot phase of the SHEAR study were offered Brief Intervention and some also attended an appointment with an alcohol health worker. I was also keen to interview a sample of participants who had had an opportunity to reflect on the intervention they received. This was to examine ‘if’ and ‘how’ this had led them to make changes in their drinking. In order to probe this, I interviewed a subsample of SHEAR participants near the time of six-month trial follow-up interview.

3.3.1.1 Qualitative interviews with SHEAR trial participants

In the next section, I will describe the details of the decisions I made about which participants to interview at the pilot phase, and near the time of six-month follow-up interview. I will then provide an account of interviews with other informants, i.e. one clinical studies officer (CSO), sexual health clinic staff and alcohol health workers (AHWs) - a summary of sampling strategy is presented in Diagram 3-3.

Qualitative interviews with participants near the time of recruitment to the SHEAR study

Before randomisation took place at any of the participating clinics, a pilot phase was run to familiarise the clinic staff with the study procedures. Participants were screened and offered brief intervention in the usual way, but these participants were not asked to complete
quantitative follow-up interviews. They were informed that a researcher might contact them within a month to ask about their views of the study. During the SHEAR pilot phase all participants identified as drinking excessively received Brief Advice from the treating clinician and were also offered an appointment with the alcohol health worker for Brief Intervention. However, not everyone who was offered the appointment with an AHW took up this offer. The question that arose was: ‘who’ would accept the offer of Brief Intervention and ‘why’. To probe this, I carried out interviews with a small sample of participants who saw an AHW as well as a sample of those who did not. I also explored the acceptability and feasibility of the alcohol screening and brief intervention during this phase.

In this set of interviews, I examined the following general areas of enquiry in further detail:

- How feasible is it to ask people attending sexual health clinics about their drinking and to offer feedback?
- How acceptable is it to patients attending sexual health clinics to be screened and offered intervention for alcohol misuse?
- How did participants in the SHEAR trial experience their involvement in the study and how did they feel towards different components of the SHEAR trial (being approached to take part in a lifestyle research in a sexual health clinic, screening questions, Brief Advice from treating clinicians, offer of Brief Intervention)?
- How did they perceive the potential long term impacts and/or immediate effects of drinking excessively?
- What did they think about the relationship between excessive drinking and risky sexual behaviour?
At this stage, interviews were more of an exploratory nature and I used them to familiarise myself with the substantive area of the research. Gradually it became apparent that one of the main concerns (worries) of the participants was: ‘Who had an alcohol problem? Who was drinking too much? Who should receive the advice?’ Initial coding resulted in some categories and properties that were explored in subsequent interviews.

**Qualitative interviews following completion of the six-month follow-up assessment**

Participants in the SHEAR trial consented to being contacted six months later for a follow-up interview and the possibility of a further qualitative interview around the same time. At the time of the six-month follow-up interview, the researcher always asked the participants if they were still willing to help with this additional interview. The decision to interview a sample of participants near the time of follow-up interview was because the study was portrayed in a slightly more refined way (sexual health and lifestyle advice) to this group at the time of recruitment, i.e. the focus of the study on drinking was not obviously stated. I was keen to explore if this factor had an impact on the type of patients who had agreed to participation. On the other hand, this group had an opportunity to reflect on the intervention they received. Therefore, it was likely that they had different views about the process of screening and intervention compared to people who took part at the pilot phase of the SHEAR trial.

**Decisions about which participants to interview after completion of the follow-up**

The main objective of the SHEAR trial was to assess the effectiveness of alcohol brief intervention in the context of sexual health clinics. Bearing this in mind it seemed essential to interview participants in the intervention arm of the trial who had shown significant change in their alcohol consumption at the six-month follow-up interview to explore the
active ingredients of the intervention. However, there was a challenge in identifying to what extent individuals had reduced their drinking, as the screening questionnaire used at baseline - the Modified Single Alcohol Screening Question (M-SASQ) - does not provide an accurate account of individuals’ drinking patterns. The M-SASQ is a short single-item screening question and mainly used for identifying hazardous drinking (Canagasaby and Vinson, 2005), (Williams and Vinson, 2001). To address this challenge, I decided to interview a few participants who reported drinking low to moderate levels of alcohol at the time of six-month follow-up interview to explore whether the intervention had an impact on their drinking behaviour.

Furthermore, to explore the participants’ experience of the offer and/or receipt of the intervention it made sense to collect data from participants who attended the appointment with the alcohol health worker as well as those who did not, regardless of perceived change in their drinking behaviour. Nonetheless, in all interviews the subject of effectiveness and the ways the trial might have had an impact on any individual participant’s drinking behaviour were closely examined. As the study progressed I was conscious that I needed to interview some specific subgroups of people for whom the anecdotal evidence and/or previous research suggest that they may have higher levels of alcohol consumption. These subgroups included: male participants, university students, homosexual/bisexual as well as younger individuals (Gill, 2002), (Heather et al., 2011), (Wilsnack et al., 2000). During the interviews the issue of alcohol being ingrained in the British culture was repeatedly mentioned. I, therefore, sought to explore the views of non-British participants about their drinking culture, and what impact, if any, living in Britain had on their drinking habits.
Throughout the different stages of this thesis, I was mindful of the need for pursuing depth and breadth in qualitative research. To broaden the scope of my research, I used appropriate strategies to achieve diversity in the study sample characteristics (e.g. ethnicity, gender, age, sexual orientation and intervention/outcome status) whilst remaining true to the principles of theoretical sampling - in which the focus is mainly on emergence and avoiding any preconceptions (Glaser, 1978). This meant that in order to saturate the properties of emerged categories, I needed to interview more individuals in some subgroups. I was fortunate that the large sample size of the trial (a total number of 802 people were recruited to the SHEAR trial) and the relatively high follow-up rate (73.82%) provided me with the freedom and flexibility to implement such sampling strategy. This was achieved through hard work of the researcher (MD) who was responsible for carrying out all follow-up interviews. Upon completion of each follow-up interview, I met with the researcher and discussed the participant. I made notes of any emerging pattern before checking the allocation status of the participant and the extent of any change in alcohol consumption since their baseline interview. This made data collection more systematic as it provided a chance to reflect on every individual participant who completed the follow-up interview even if they did not agree to be contacted for further qualitative interviews.

I also asked MD to keep a diary of process notes summarising the conversations she had with every participant that she interviewed. I used these process notes as another slice of data to be coded and to look for similarities and differences. This had some further advantages as at this stage participants were not directly asked to comment on any aspect of the study, their feedback on the alcohol interventions they had received or their reflection about the effectiveness of such interventions.
Furthermore, at the time of follow-up interview, a detailed alcohol consumption history was taken from every participant. This was especially significant in the control arm of the trial as it was the first time in the course of the SHEAR trial when participants became aware that alcohol was the main focus of the trial. I was interested to know how this group might react to a detailed investigation of their alcohol use and if ‘their concerns and how they resolved them’ would differ from those of participants in the intervention arm of the trial who had become aware of the focus on alcohol much earlier in the process of the SHEAR trial.

Consequently, the emerging concern of ‘who is the right candidate for receiving alcohol intervention?’ led me to interview participants who were allocated to the control group to assess how they would respond to a hypothetical scenario of being offered intervention for excessive use of alcohol. I was keen to examine if individuals would express different views to a *hypothetical situation* compared to when they had actively been through the course of events (intervention arm of the SHEAR trial). My aim was to capture an account of ‘unprocessed reactions and responses’ to the experience of receiving advice for excessive drinking. I was particularly keen to interview some individuals in this group as they did not have the time for reflection and their narrative might shed more light on the process of alcohol screening and brief intervention in the context of sexual health clinics. As the study progressed, some of the categories faded and lost their fit, whilst some that seemed of less importance in the early stages became prominent.
Diagram 3-3 Sampling matrix for qualitative interviews

- **Service Providers**
  - Sexual health clinic Staff
  - Diverse in: Professional seniority level, Gender, Ethnicity, Age

- **Alcohol Health Workers**
  - Diverse in: Gender, Occupational background

- **Service Users**
  - Near the time of recruitment
  - Near the time of six-month Follow-up
  - Control arm of the SHEAR trial
  - Intervention arm of the SHEAR trial
  - Diverse in: Age, Gender, Ethnicity, Sexual Orientation, Nationality
3.3.1.2 Qualitative interviews with other informants

I also interviewed a number of sexual health clinic staff, alcohol health workers and a clinical studies officer (CSO) who helped with recruitment to the SHEAR trial. The details of who I interviewed and why are as follows:

Decisions about which staff to interview at the clinics where the SHEAR trial took place

Prior to recruitment to the SHEAR trial at each clinic, meetings with the clinical teams were held to present the trial and to outline the reasons why we thought this trial would benefit their patients, as well as to seek their initial views about the study. Subsequently, I also attended some of these clinics’ team meetings to address potential queries and concerns and to discuss practicalities and the logistics of the trial. The main worry raised at this stage was that running the trial would potentially disrupt the normal practice of the clinics. Some explicitly stated that they would always prioritise their patients’ presenting complaint over the SHEAR trial. Some expressed concerns about practicalities of providing alcohol interventions in sexual health clinics (including time and resource constraints) and that how it might interfere with their routine practice. Their other concern originated from uncertainty about the extent the research team would realise the sensitive nature of the issues that sexual health professionals should deal with in these clinics. They questioned whether the researchers were sensitive enough to fully understand this and to relate to their professional concerns.

As with the trial participants I initially interviewed a number of clinicians at the very early stages of recruitment and pilot phase in order to explore the concerns, attitudes and areas which needed further examination in subsequent interviews. The other reason that the initial interviews were important was to reduce bias. My previous experience with running trials
had shown me that as research studies progressed, the clinic team would feel more comfortable with the research team and a professional relationship would form. This, however, might in turn affect the nature and process of interviews carried out later including hesitance about expressing one’s honest views.

I employed a number of strategies to limit the extent that this professional bond might affect the process of inquiry. Whilst remaining aware of this fact in the subsequent interviews with staff, I challenged the credibility of such interventions and the fundamental ‘evidence-based’ rationale for alcohol screening and intervention in the context of sexual health settings. At times, I reflected on incidents that occurred in that particular clinic and referred to some comments made by the patients. This was to smooth the flow of conversation, open the scope for communicating thoughts as well as providing a confidential space for the staff to express their honest views. My aim was for the interviews to be a medium for mutual discovery rather than a forced ‘interrogation’. I also made it clear that my goal was not to reach consensus on pre-defined sets of agenda (Glaser, 1998).

I used initial interviews with clinicians delivering interventions to explore their experience of involvement in the SHEAR trial. As the study progressed, this investigation expanded to identify challenges in integrating alcohol screening and interventions in the routine practice of sexual health clinics. One of the areas of inquiry was if and how alcohol intervention should be delivered in these clinics. I was keen to understand staff views regarding the category of relevance which was one of the initial emerging themes from interviews with participants. To explore their views about this specific issue I asked them to explain what they thought about the relationship between sexual health and excessive alcohol drinking. I made attempts to interview a varied range of clinic staff in all three clinics where SHEAR recruitment took place.
These characteristics comprised gender, age, ethnicity, seniority and years of experience working in sexual health settings. In total, I conducted 11 formal interviews with the staff at the sexual health clinics where the SHEAR trial took place; three of these interviews were conducted at the late stage of the trial, one at a very early stage and the remainder were spread out throughout the course of the SHEAR trial.

**Interviews with Alcohol Health Workers (AHWs) involved in the SHEAR trial**

I interviewed all four alcohol health workers involved in the SHEAR trial. This decision was made due to their different occupational backgrounds (third sector alcohol health worker, alcohol specialist nurse, general nurse and psychiatric nurse). All of these AHWs were based at emergency departments of the major hospitals adjacent to the clinics where the SHEAR trial recruitment took place. This provided me with valuable information about their areas of concern about the delivery of alcohol interventions to this specific sample and in this specific context.

As with interviews with sexual health clinic staff it was crucial to minimise the influence of the study process on the views of AHWs. In order to gain some raw feedback, one of the interviews was carried out at an earlier stage when they had only seen a few people referred to them through the trial; the other three were completed after the recruitment at each site had been completed. The general areas of inquiry focused on the challenges faced by AHWs, their lack of familiarity with this setting, and its potential impact on the effectiveness of intervention. Furthermore, I probed their impression about receptiveness of the intervention by staff and patients, its effectiveness, facilitators and/or hinderers of the optimal delivery of
interventions in the context of sexual health clinics. Finally, I sought their views and experience of the way the SHEAR trial was conducted and if that had any effects on their normal practice outside the trial. This led to discussions about areas of similarities and differences with their usual practice based at emergency departments.

**Interview with one clinical studies officer (CSO)**

Two clinical studies officers from the North London Hub at the NIHR Mental Health Research Network provided help with the recruitment of participants to the SHEAR trial. I interviewed one of them who contributed most and recruited across two of the three study centres. This interview was conducted after her involvement with the trial had ended. This was to avoid any disruption to recruitment to the SHEAR trial. By this time much of the analysis of previous interviews was completed. Conducting this interview at a later stage in the project allowed me to seek this person’s opinion about if the findings of the qualitative data analysis made ‘sense’ and how ‘relevant’ they thought these emerging themes were to the context.

### 3.3.2 Tools used for collecting qualitative components

The main defining characteristic of grounded theory methodology is the concurrent collection, coding and analysis of data. Glaser strongly recommends against using topic guides and tape recording interviews (Glaser, 1998). His argument is that waiting for tape recorded interviews to be fully transcribed and the subsequent line by line coding are not compatible with this core concept of concurrency. More importantly, the aim in this methodology is not describing the participants’ accounts word by word, but to conceptualise, develop categories and their properties that will inform theory generation. The drawback with using topic guides is that they can limit the scope of investigation and that the researcher might feel pressured
to find a definitive answer to every single item on the topic guide. This might obstruct the flow of interviews and consequently the researcher would run the risk of missing valuable information including the main concerns of that particular participant. These very particular concerns could form a category only if the researcher were willing to probe further and not be bound to pre-defined areas of inquiry.

However, as an early career researcher and in order to fulfil the requirements of a PhD thesis and ethics application, I designed topic guides for semi-structured interviews which were subsequently refined. Topic guides were initially designed with the help and advice of experts in the field and discussed at the SHEAR Trial Management and Advisory Group meetings. These were developed with the aim of exploring the experiences of participants in the SHEAR trial, their views about the relationship between alcohol misuse and sexual behaviour, and the acceptability of alcohol screening and interventions in sexual health settings. Furthermore, the interviews were intended to examine participants’ reasons for attending/not attending the appointments with an alcohol health worker. After the pilot phase, these topic guides were refined (Appendices 2-4). In accordance with grounded theory, in which the focus is on the emerging nature of data, flexibility and avoiding heavy influence by existing theories and literature, individual interviews were cautiously guided to allow for this, while saturating the emerged categories. Topic guides were used flexibly to allow for the emergence of new categories; I tried to remain open and responsive throughout each interview to reflect the voice and experience of every individual participant.

In my thesis, I used different forms of note taking depending on the mode of data collection (face-to-face versus over the phone), the interviewee (trial participant, staff, AHW), sensitivity of data provided, as well as considering the preference of the interviewee. By definition, field
notes are classified into three major categories: mental notes, scratch notes and full notes. Mental notes are mainly used in situations where writing down notes is not appropriate and may affect the relationship between the researcher and the interviewee and/or have an impact on the type/extent of responses they provide. Scratch notes are shorthand note to be expanded at a later stage without losing any concept. Full field notes are those written contemporaneously as fully as possible, and are considered to be the closest to verbatim transcripts of digitally recorded interviews (Bryman and Bell, 2003).

I took contemporaneous notes during the interviews; I also made notes and wrote memos after any interview I carried out. Interviews with staff and Alcohol Health Workers were digitally recorded if they consented. The decision not to digitally record all interviews was due to the concerns people expressed while consenting to take part in the pilot phase of SHEAR study. In order to recruit a diverse and representative sample, participants were able to choose whether the interview would be digitally recorded. The depth and length of interviews varied (between 30 and 90 minutes). The process notes were not limited to formal arranged interviews; I took notes after any informal chats I had with participants and staff. Initial comments made by clinicians after seeing the trial patients proved to be of great value as it was their immediate, unprocessed reaction and their direct impression of the incident.

Before starting the interviews, I always explained the purpose of the interview and reassured the interviewees that their views would be reflected anonymously. Initial interviews were more of an exploratory nature and often started with a general question, for instance: ‘what was your experience with the SHEAR study’, ‘how did you find getting involved with the SHEAR study’. Subsequently, I asked questions on how they felt when the issue of alcohol was brought up with them during the consultation session. I probed issues about the
‘appropriateness’ of the screening and intervention for alcohol in the sexual health clinic setting. Depending on the situation, I made a judgment about how ‘general’ the initial questions should be framed. Later in the course of an interview, when the participant felt more comfortable and willing to share information, I smoothly shifted the direction of the interview to capture a picture of their ‘own experience’. Subsequent interviews were more focused as my objective was to examine an emerged category to a greater depth. At this later stage, I explicitly asked the participants to state their views of that concept and how much they would relate to the subject.

Other sources of qualitative data include process notes from informal chats I had during the course of trial with service users and providers, follow-up process notes and non-participant observations; sometimes I audio-recorded myself stating what I had observed and what I thought of the incident at the time. In addition to taking notes, I also recorded my thoughts immediately after interviews. Subsequently I listened to these records, which helped me inter-relate the emerged categories with my ‘at the moment’ interpretations of the situation.

All formal interviews with participants were carried out over the phone. Interviews with three AHWs were conducted in a meeting room on the premises of Imperial College London; the interview with the remaining AHW was carried out on the premises of the emergency department where they were working. All but one interview with sexual health clinic staff were carried out in their office on the premises of the clinics where they were working. Only the interview with one senior sexual health consultant was carried out in a café adjacent to the hospital they were working. Three of the interviews with AHWs and five of the interviews with sexual health clinic staff were digitally recorded.
3.3.3 Analysis procedures: qualitative components

In this section, I will describe the stages of the approach I took to the analysis of qualitative data. In line with the stages of coding in classic grounded theory described by Glaser, I will provide the details of the coding procedures in the following section.

3.3.3.1 Coding procedures

All coding was performed manually. As Glaser recommends, using automated software for coding restricts the scope of analysis; therefore, it is not deemed suitable for use in classic grounded theory in which the ultimate aim is to conceptualise (Glaser, 1998). However, a number of strategies were employed to help sort the text format data (interviews, field notes, process notes, memos). I used mind-mapping software (FreeMind 0.9.0) and flow chart builder software to organise my thoughts and look for patterns in the data set. I frequently used a white board to write down concepts and draw flow charts. Notepad and Microsoft Word track change features were helpful in keeping an electronic version of the stages of analysis.

3.3.3.2 Open coding

I started off by open (line by line) coding of the notes I had taken during interviews and my informal chats with patients and staff at sexual health clinics as well as field observations. Glaser refers to this stage as "running the data open". At this stage of coding, I probed the data by asking questions such as: ‘what is going on in the data?’, ‘What are the main concerns of the individuals I am researching?’, ‘How are they trying to resolve their problems /concerns?’ and ‘Why is this happening?’.
3.3.3.3 Constant comparison (iterative process)

Initially, I coded every incident in the data comprising a paragraph or the response to a specific question, or a participant’s account of their experience with screening and brief intervention. Coding meant writing down the category which best defined that incident. I used various strategies for keeping track of emerged categories and the related incidents in the data set. I used post-it notes as well as the ‘track changes’ function in the Microsoft Office Word 2010 to write comments in the margins. Each category was numbered and the related subcategories were also numbered using a multilevel list builder.

In the next stage I looked for the other incidents in the same data or previously coded data in the same category. This strategy was performed mainly to look for similarities and differences in order to find theoretical properties of that category. This constant comparison was employed to further explore the theoretical properties of emerging categories. This included dimensions, conditions in which a behaviour or experience were pronounced or diminished, major consequences as well as the relation to other categories. Some of the codings were in ‘vivo’ in that they were abstracts from participants’ own words when describing their views or a situation; whereas the others that were construed by me were the conceptual elaboration of a process, behaviour, or situation.

3.3.3.4 Substantive coding/Selective coding

In keeping with stages of coding in classic grounded theory, at the substantive coding stage, I looked for the themes emerging specifically relevant to the main concern of the participants. I will provide a full account of the themes and their interrelations in the results chapter; however, to present this process in a more clear and transparent way, I will briefly mention some of the emerging categories.
Quite early on in the pilot phase of the SHEAR trial it became apparent that most people who were offered the opportunity to meet an alcohol health worker were not keen on attending an appointment. It should also be borne in mind that as this was the pilot phase of the trial, all participants were aware that the SHEAR study was designed to focus on drinking patterns of people attending sexual health clinics, whereas in the subsequent definitive trial phase, the SHEAR trial was presented as a study on ‘lifestyle and sexual health’. Unless they were allocated to brief intervention, the control group largely remained masked to the notion that alcohol was the central focus of this research. I was interested in exploring why participants at the pilot phase who were aware of the purpose of the study and had signed up to be screened, were subsequently hesitant about receiving further intervention. When I asked participants how they felt about the offer of receiving Brief Intervention, the main emergent concern was conveyed through statements such as:” Who has an alcohol problem? Who drinks too much? Who should receive the advice? Why are they telling me this? “. I coded this as a substantive category with slightly different labels: ‘degree of relevance’ / ‘scaling relevance’ / ‘measuring relevance’ / ‘relevance extent’. This category explains that individuals faced with the offer of help and advice regarding their alcohol use patterns would instantly start evaluating the situation to determine the ‘relevance’ of the incident to their personal situation. This evaluation would result in the adoption of various approaches/positions with regards to the offer. In the later interviews, I probed this further by asking questions about what participants thought about the ‘relevance’ of the excessive drinking ‘label’ to them and whether this had an impact on their decisions about receiving further intervention from an AHW. I explored this in those in the intervention arm who refused the offer of receiving help as well as those who attended the appointment with an AHW. Additionally, I tested this
concept of ‘scaling relevance’ in people in the control arm of the trial. To achieve this, I presented these participants with the scenario and asked them: a) what they would do if they were offered an appointment with an AHW, and b) why they thought some people might take up/not take up the offer of receiving further intervention.

In the next phase, I was interested in exploring the interrelations between the substantive categories to propose the core categories and describe their properties. Glaser suggests using “six C’s” as a framework for finding patterns in the dataset and linking the categories; these include: causes, contexts, contingencies, consequences, covariance and conditions. In the results chapter I will elaborate on how using this framework helped me to move the analysis to a more conceptual level, find patterns in the dataset and link the categories.

### 3.3.3.5 Theoretical codes

At this stage, I used an abstract model for the coding procedures. The theoretical codes as Glaser describes are: “abstract models allowing the researcher to talk about substantive categories and properties while thinking theoretically” (Glaser, 2005). At this stage my aim was to move away from a descriptive account to a more in depth analysis of the data which also included finding patterns. Glaser refers to the patterns as: “behaviours patients engage in; they are strategies rather than labels, and so a person can use more than one pattern” (Glaser, 2001).

### 3.3.3.6 Memo writing - theoretical memos

By definition, theoretical memos are described as “the theorizing write-up of ideas about codes and their relationship as they strike the analyst whilst coding” (Glaser, 1978). In my
work, in parallel to open coding I also started to write memos which were initially an attempt to conceptualise the emerged categories and to elaborate on them. This specifically helped when relating categories from one interview or one incident to another, and for the purpose of subsequent comparisons in the large data set. As I was progressing in the stages of analysis, memos also became more in-depth and developed a more theoretical form.

3.4 Quantitative components

This component of my thesis consists of the quantitative data collected either in parallel to or as part of the SHEAR trial. I will firstly describe the reasons why different sets of data were collected and link these to emerging findings from the qualitative components of the thesis provided in the previous section. This component of my thesis is exploratory in nature, and the process was guided by the queries that emerged early on during the pilot phase of the trial and/or after the main trial commenced. Subsequently, I will describe the measures used for collecting quantitative data as well as details of the analysis procedures.

In addition to the secondary analysis of the SHEAR trial data, I collected three sets of data specifically for my thesis. They comprise: six-month follow-up data from those participants identified as ineligible for randomisation to the SHEAR trial (M-SASQ negative) as shown in the Diagram 2-4, information about illicit drug use among SHEAR trial participants who completed the six-month follow-up interview, and a short survey of sexual health clinic staff about their attitude towards the alcohol screening and intervention in this setting.

I ordered the collection and analysis of the quantitative components of the thesis in three broad themes: 'Screening and Identification', ‘Uptake’ of the intervention, and ‘Impact’ of
the intervention in subgroups of patients. I supplemented this with a survey of staff regarding the major themes of a) their views about the drinking threshold eligibility criteria in the SHEAR trial, b) relationship between excessive drinking and risky sexual behaviour and, c) impact and effectiveness of alcohol interventions on drinking and/or sexual behaviour. The items on the survey correspond to the three broad themes of quantitative data analyses in my thesis.
Diagram 3-4 Flow Diagram of the thesis sample selection in the context of SHEAR trial

A breakdown of the numbers at each stage will be provided in the results chapter.

- **Approached for screening**
- **Excluded**
  - Declined to participate
  - Insufficient English
- **Screened using M-SASQ**
- **MSAS-Q positive**
  - Randomised to SHEAR Trial
  - Attempted to complete six-month follow up
  - Drop out
    - Lost to follow-up
    - Withdrawn
  - Completed six-month follow-up
- **MSAS-Q negative**
  - Non-eligible for SHEAR Trial
  - Not pursued
  - Attempted to complete six-month follow up
  - Drop out
    - Lost to follow-up
    - Withdrawn
  - Completed six-month follow-up
3.4.1 Rationale for collecting each set of quantitative data

In this section, I will describe the rationale for collecting each set of data and selecting the sample used for each of the three broad research themes comprising: i) screening and identification, ii) uptake of intervention, and iii) effectiveness.

3.4.1.1 Screening and Identification

Under the theme of screening and identification, a number of areas were examined, each representing a subtheme that captures the rationale for and applicability of introducing alcohol screening and intervention in the context of sexual health clinics. In this part of my thesis, I a) explored the prevalence of excessive drinking in my study sample and examined the usefulness and validity of using a single item question to screen for excessive drinking in this context, b) described and compared the prevalence of reported risky sexual behaviour in those identified as excessive/not excessive drinkers, and c) examined if there was a relationship between excessive drinking and risky sexual behaviour in my study sample. I explored the latter to address the question on whether a focus on the relationship between excessive drinking and risky sexual behaviour is useful in identifying the target group. Below I will describe each of these subcategories in detail.

Prevalence of excessive drinking, usefulness and validity of M-SASQ

During early interviews and informal chats with the clinicians who delivered Brief Advice to participants, concerns were raised that the threshold for excessive drinking in the SHEAR trial might be ‘too low’. Their argument was that such a low threshold meant that even most health professionals were eligible for entry to the SHEAR trial. In addition, early interviews with participants demonstrated further criticism about this screening tool. Some questioned
the extent this single item would capture the real pattern of individuals’ drinking, and how this would be a true reflection of risks associated with ‘excessive drinking’.

I, therefore, decided to conduct a series of exploratory analyses to compare the data on drinking levels obtained at baseline with those collected at the time of follow-up interview. This set of analyses was exploratory and performed to examine the concurrent validity and predictive values of the self-completed Modified Single Alcohol Screening Questionnaire (M-SASQ) in comparison with longer alcohol screening questionnaires. At the time of six-month follow-up, people were asked about their drinking patterns in much more detail using Form 90 (Tonigan et al., 1997). This provided the opportunity to compare the proportion of people identified as drinking excessively when using short and lengthy questionnaires. Due to the exploratory nature of the analyses, it deemed plausible to run the tests of validity for self-completed M-SASQ in a flexible fashion. Later in this chapter, I will explain the rationale behind the decisions that I made about which group of participants to include in any given set of analysis.

**Risky sexual behaviour**

Evidence from the existing literature suggests high levels of alcohol misuse among people attending sexual health clinics and increased prevalence of risky sexual behaviour among individuals who drink excessively (Cook and Clark, 2005). During the preliminary interviews and informal chats that I had with the sexual health clinic staff one of the emerging themes was the focus on and ‘expectations’ about the higher prevalence of risky sexual behaviour in the SHEAR study participants. They expressed their views about how and if ‘making a link’ would increase the chance of participants opting to see an Alcohol Health Worker. This potential ‘causal pathway’ gained further support in the interviews I conducted with both
staff and participants at the pilot phase of the trial. The emergent theme of ‘scaling relevance’ played a pivotal role in making the decision about collecting additional data on sexual behaviour from M-SASQ negative group six months after they were recruited to the SHEAR trial. I was keen to explore a) if risky sexual behaviour was more prevalent among those identified as excessive drinkers (M-SASQ positive) compared to the M-SASQ negative group, and b) if addressing the issue of drinking excessively should only be limited to those who engaged in risky sexual behaviour and/or their presentation to the sexual health clinic was related to excessive drinking. The latter was investigated under the theme of ‘uptake of the intervention’ where I examined if there was any relationship between whether the participants thought their attendance at the sexual health clinic was related to drinking excessively, and accepting the offer to receive further help.

To present a clear account, I will describe the details of exploratory analyses which I conducted to address these research queries. In each set, I will briefly explain why I conducted this specific analysis and how that relates to the overall aims of my thesis.

Comparing sexual behaviour of excessive and non-excessive drinkers

At the time of the SHEAR trial baseline assessments, those who consented to take part in the trial were asked to complete a computer-assisted questionnaire. It consisted of five questions on lifestyle (exercise, smoking, drinking, eating fruit, vegetables and red meat) followed by a set of questions on sexual behaviour. Drinking level was assessed using the single item M-SASQ screening question; if participants reported drinking more than six (if female) or eight (if male) units of alcohol at least once a month, they were considered eligible (M-SASQ positive) for inclusion in the SHEAR trial. The questionnaire was designed so that participants identified ineligible (M-SASQ negative) were not asked further questions.
about their sexual behaviour. The researcher then thanked the participants and provided them with a leaflet on healthy living similar to the one offered to the participants in the control arm of the trial. The follow-up questionnaire was more thorough and contained questions on drinking patterns using the from 90 (Tonigan et al., 1997) as well as sexual behaviour. As no data on sexual behaviour of ‘ineligible’ (M-SASQ negative) participants were collected at baseline, I decided to collect follow-up data from a consecutive sample of participants who were identified ineligible for randomisation to the SHEAR trial (M-SASQ negative) but had consented to be contacted six months after the initial screening. This enabled me to run further analyses to examine the relationship between excessive drinking and risky sexual behaviour. Follow-up interviews were carried out with this sample using the same questionnaire as for the main trial participants (M-SASQ positive).

Efforts were made to follow up all people who were recruited to the SHEAR trial (M-SASQ positive) at six months. These efforts included contacting participants a few times, and offering various time options (including evenings and weekends). However, due to limited resources and that the interviews should have been completed in the six-month time frame, a decision was made to make a maximum of two attempts to collect follow-up data from a consecutive sample of M-SASQ negative participants to reach the sample size required for comparative analyses. Follow-up data from the M-SASQ negative participants were collected across all the three centres from which SHEAR study participants were recruited.

I performed the following sets of analyses to compare the prevalence of risky sexual behaviour according to participants’ drinking pattern both at baseline (M-SASQ status) as well as at the time of follow-up (AUDIT-C status).
Firstly, I compared the occurrence of risky sexual behaviour between participants identified as hazardous and non-hazardous drinkers based on their AUDIT-C scores at the time of follow-up interview. The sexual behaviour variables examined among participants who completed the follow-up interview were selected for a combination of reasons: existing literature has repeatedly focused on unprotected sex (especially with a non-primary partner) and concurrent sexual partnership (Adimora et al., 2011), additionally, the feedback I received from the SHEAR trial management group as well as the patient advisory group was that specific questions on the link between the incidents of unprotected sex and drinking alcohol and/or feeling drunk should be examined. All sexual behaviour variables covered the three months’ time period preceding the follow-up interview, as the drinking pattern of participants was also examined over the same time period (using form 90). The choice of sexual behaviour variables gained further support as some of these themes were highlighted by staff and participants. Incidence of ‘regretted sex’ was, in particular, repeated across interviews. Some participants thought the association between excessive drinking and sexual health would be the most important aspect to consider when providing alcohol screening and intervention in this context.

Secondly, I compared the reported risky sexual behaviour among participants in the three months prior to follow-up interview according to their M-SASQ status at baseline. I examined the same sexual behaviour variables among participants who completed the follow-up interview. This decision was based on the premise that some participants might have changed their drinking and/or sexual behaviour after attending the clinic and/or taking part in the trial.
Subsequently I carried out a series of binary logistic analyses to examine the association between hazardous drinking and whether participants had engaged in risky sexual behaviours. In this set of analyses I used the data on hazardous drinking and risky sexual behaviour reported by participants at the time of six-month follow-up. The samples used in the above analyses, comprise all SHEAR participants who completed the six-month follow-up interview, regardless of their status in relation to the main trial.

3.4.1.2 ‘Uptake’ of the intervention

The results from previous research and primary findings from qualitative interviews during the pilot phase of the SHEAR trial both indicated low uptake of Brief Intervention. I therefore decided to explore factors associated with the uptake of alcohol Brief Intervention in the context of sexual health clinics. I selected the following variables based on the existing literature (Littlejohn, 2006), (Aalto and Sillanaukee, 2000), (Senft et al., 1997) and feedback from the SHEAR trial management group:

- Centre the participants were recruited from
- Gender of the participants
- Age of participants at the time of baseline assessment
- Self-assigned ethnicity
- Reason for presenting to the clinic (reporting/not reporting symptoms)
- Sexual orientation of the participants
- If they were smoker or not (At baseline, participants were asked questions on five aspects of lifestyle: exercise, smoking, drinking, eating red meat, and eating
vegetables. I chose smoking status as a variable as it is indicative of attitudes towards use of substance)

- Whether or not they had used any illicit drugs in the six months prior to the follow-up interview covering the time of recruitment to the SHEAR trial
- Whether or not they had used any illicit drugs other than cannabis in the six months prior to the follow-up interview covering the time of recruitment to the SHEAR trial

In the next stage, I performed a comparative analysis of sexual behaviour and drinking characteristics of those who received/did not receive Brief Intervention from an AHW. In this set I also examined whether making a link between drinking excessively and attending a sexual health clinic would increase the likelihood of seeing an AHW. This information had been collected from participants in the intervention arm of the SHEAR trial. One of the four core items on the proforma used for offering the one-minute Brief Advice in the SHEAR trial was to probe if participants thought their attendance was related to drinking excessive alcohol (Appendix 5). This originates from the “teachable moment” supposition (Williams et al., 2005) which is often used as a strong rationale for the introduction of alcohol screening and intervention in primary care settings.

The full list of characteristics that I examined in this set of analysis is as follows:

Drinking patterns at baseline according to the Modified Single Alcohol Screening Question (M-SASQ): how often they drank more than six/eight units of alcohol in one session (monthly versus weekly/daily)

- Whether or not they thought that there was a relationship between their attendance at the sexual health clinic and their use of alcohol
• Whether or not participants reported having had more than one sexual partner in the six months prior to taking part in the trial at the time of baseline assessment

• Whether or not participants reported having had unprotected sex in the six months prior to taking part in the trial at the time of baseline assessment

• Whether or not participants reported having had regretted sex in the six months prior to taking part in the trial at the time of baseline assessment

• Whether or not they reported to have had sex they did not consent to in the six months prior to taking part in the trial at the time of baseline assessment

• The length of time they knew their last partner before they had sex with them reported at the time of baseline assessment (just met them/knew them more than a day)

• Whether or not they reported they had used condom the first time they had sex with their last partner at the time of baseline assessment

Both sets of analyses were post hoc, exploratory and limited to the intervention arm of the SHEAR trial. As people were asked about their use of illicit drugs only at the time of follow-up interview; I tested the impact of illicit drug use only among participants who completed the follow-up interview.

3.4.1.3 ‘Impact’ of the intervention in subgroups: who benefits the most?

Lastly, I examined if any of the covariates had an impact on the effectiveness of alcohol intervention. These covariates include use of illicit drugs, frequency of hazardous drinking at baseline (monthly vs. weekly/daily), gender and presenting sexual health complaint at
baseline. The choice of these variables was guided by the feedback I received in the course of the trial, informal chats I had with clinic staff, comments made by the trial advisory and management group (some of whom were experts in the field of alcohol brief interventions), the emergent themes from interviews with service users and/or providers, as well as factors emphasised in existing research. In this regard, Kaner and colleagues highlight the paucity of evidence on the effectiveness of alcohol screening and intervention in primary care settings among females and ethnic minorities (Kaner et al., 2009b).

Before the start of recruitment to the SHEAR trial at each clinic, brief training sessions were held for sexual health clinicians potentially involved in offering the Brief Advice. During these sessions with professionals in sexual health clinics, and in previous discussions I had with the experts in the field of sexual health, the issue of illicit drug use was raised. They referred to links between alcohol misuse, illicit drug use and sexual health. Many questioned whether a study focusing entirely on alcohol misuse and sexual health would be complete. Some made it clear that when addressing alcohol misuse in this setting, illicit drug use should also be examined. I, therefore, decided to include a measure that enabled me to capture a comprehensive picture of the illicit drug use in the study population. Collecting this data also provided the opportunity to investigate if such use would have any impact on the total effectiveness of alcohol brief interventions in the context of sexual health clinics.

Data from all SHEAR trial participants who completed the trial six-month follow-up interview were used to examine the impact of covariates on the effectiveness of alcohol brief intervention.
3.4.1.4 Staff attitude survey

The sample for the staff survey comprised all front-line clinicians who delivered five or more Brief Advice throughout the course of the trial. The aim was to explore their beliefs about five domains: i) the relationship between alcohol misuse and sexual health, ii) their commitment to delivering Brief Advice, iii) the impact of Brief Advice on people’s drinking levels, iv) the impact of Brief Advice on people’s sexual health, and finally, v) how they felt about the threshold for excessive drinking used in the study i.e. six (if female) or eight (if male) alcohol units on a single drinking session.

I asked staff to fill out a brief questionnaire towards the very end of recruitment at each clinic where the trial recruitment took place. This precaution was necessary to avoid any interference with the process of recruitment in the SHEAR trial. I judged that the exploratory nature of the survey had the potential to affect their practice and that they might draw a conclusion about how they were expected to deliver the intervention. Examples include the question on ‘how hard the clinicians had tried to deliver the Brief Advice’; exposure to this question could potentially have an impact on their attitude about involvement in the research study, and/or their willingness to address the issue. It could either lead to them ignoring the study for the fear of performance failure or adopting a ‘forced enthusiastic’ approach.

3.4.2 Study measures for quantitative components

In this section, I present the details of all measures I used in the quantitative component of my thesis. To maintain a coherent narrative, I have ordered these according to the broad quantitative data themes: alcohol use patterns, illicit drug use, sexual behaviour, and staff attitudes.
3.4.2.1 Measures used for the assessment of alcohol use patterns

I used three measures to assess drinking patterns: the Modified Single Alcohol Screening Question (M-SASQ), the Form 90, and Alcohol Use Disorders Identification Test-Consumption (AUDIT-C). In the following paragraphs, I will describe each of these measures in detail.

The Modified Single Alcohol Screening Question (M-SASQ)

The M-SASQ was developed by the Screening and Intervention Programme for Sensible drinking (SIPS) research programme funded by the Department of Health in 2006 as part of the national Alcohol Harm Reduction Strategy for England (http://www.sips.iop.kcl.ac.uk/). This research programme consisted of three cluster randomised trials in three different settings: Primary Health Care, Emergency Departments, and Probation Services. The aim was to identify the best screening tools and methods of intervention, and to assess effectiveness and cost effectiveness of such screening and interventions in various settings.

The M-SASQ was developed from the original single Alcohol Screening Question (SASQ) (Williams and Vinson, 2001), (Canagasaby and Vinson, 2005). The original SASQ asks: “when was the last time you had more than X drinks in one day?”, where X is four for women and five for men, and any time in the past three months is considered a positive screen (one drink = 14 grams ethanol – USA definition). In the SIPS programmes they modified this question to reflect the UK’s standard drink (one drink = eight grams ethanol) and validated the tool during a pilot phase. M-SASQ asks: “how often do you have six/eight or more units/drinks on one occasion” (six for women and eight for men). The replies range from never to daily/almost daily. If participants report drinking at this level monthly or more they are considered positive for potential excessive drinking (www.alcohollearningcentre.org.uk). The findings from SIPS
programmes suggest that the modified version of the screening tool has higher sensitivity and specificity than the original SASQ (Sensitivity 91.8; Specificity 70.8; AUC 0.929) in comparison with the gold standard Alcohol Use Disorders Identification Test (AUDIT) and is identical to the first item of the Fast Alcohol Screening Test (FAST). This is further supported by evidence that the FAST screening tool can identify more than 50% of hazardous and harmful drinkers (Hodgson et al., 2002).

In the SHEAR trial, the M-SASQ was used as the screening tool to assess eligibility of those consenting to take part in the study. If participants reported to be drinking six/eight or more alcohol units on one occasion (six for women and eight for men) at least once a month they were considered M-SASQ positive (i.e. excessive drinker) and eligible for entry to the SHEAR trial.

**Form 90**

Form 90 is a validated assessment tool used for identifying day to day alcohol consumption in the 90 days prior to the time the interviews take place. In a multisite randomised trial of alcohol treatment (project MATCH), the authors provide a detailed account of their examination of the reliability of Form 90. This comprehensive evaluation consisted of two test-retest studies on participants recruited from various settings including inpatient, outpatient and university settings. They found good to excellent reliability for all key alcohol measures on the form (Tonigan et al., 1997).

At the time of six-month follow-up, Form 90 was used to gather detailed information about the SHEAR trial participants’ drinking behaviour in the three months preceding the interview.
Alcohol Use Disorders Identification Test-Consumption (AUDIT-C)

To further examine patterns of alcohol consumption in the study sample, I used the Alcohol Use Disorders Identification Test-Consumption (AUDIT-C) (Bush et al., 1998). The AUDIT-C is one of the short versions of the full AUDIT questionnaire consisting of the first three questions which are focused on the frequency of consumption, number of drinks on a typical drinking day, and frequency of consuming six or more drinks in a single occasion (Bush et al., 1998). Each item has five possible response options with the scores from zero to four. The total score ranges from zero to 12 with higher scores reflecting more hazardous alcohol consumption.

The AUDIT-C was initially introduced to screen for problem drinking among veterans and the authors suggested to use the score of three or above for women and four or above for men as the appropriate cut off points (Bush et al., 1998). However, a later study recommends using higher cut off points (five or above) to increase the sensitivity of identifying hazardous drinking (Rumpf et al., 2002), I used a cut-off point of five to identify hazardous drinking (Rumpf et al., 2002), (www.alcohollearningcentre.org.uk).

I calculated AUDIT-C scores for all participants who completed the follow-up interview based on the scores on each item of the three item AUDIT-C questionnaire derived and computed from the Form 90; scores of five or above were considered as hazardous drinking.

3.4.2.2 Measure used for the assessment of illicit drug use

A range of different measures have been developed for assessing use of illicit drugs. The Agency for Healthcare Research and Quality (AHRQ) in Maryland, USA published a comprehensive report in 2008. They carried out a systematic review of the published literature on illicit drug screening tools used in primary care settings from 1996 until 2006.
Subsequently they excluded those screening tools used only for detecting alcohol and rated the remainder (Lanier and Ko, 2008). The following nine screening instruments were considered to be useful for detecting illicit drug use in primary care settings:

- Alcohol, Smoking and Substance Involvement Screening Test (ASSIST);
- Cut down, Annoyed, Guilty, Eye-opener – Adapted to Include Drugs (CAGE-AID);
- Car, Relax, Alone, Forget, Friends, Trouble (CRAFFT);
- Drug Use Disorders Identification Test (DUDIT);
- Relax, Alone, Forget, Friends, Trouble (RAFFT);
- Reduce, Annoyed, Guilty, Start (RAGS);
- Rapid Drug Problems Screen (RDPS),
- Simple Screening Instrument for Substance Abuse (SSI-SA).

In this systematic review of screening tools used in primary care settings, three of these screening tools (ASSIST, CAGE-AID, and DAST-20) were validated. The report concluded that ASSIST was useful in detecting illicit drug use in primary care settings with fair evidence of accuracy and good evidence of reliability.

I decided to incorporate the ASSIST V.3.0 questionnaire on illicit drug use (Henry-Edwards et al., 2010) into the SHEAR trial follow-up assessment to examine SHEAR trial participants’ use of illicit drug in the six months preceding the follow-up interview. This time frame included the time when participants were initially screened at baseline. All follow-up interviews were carried out over the phone by a researcher masked to the allocation status of the participants. Researchers were encouraged to prompt the participants to provide an accurate account of their illicit drug use. They were also reminded about the sensitivity of investigating illicit drug use, and were trained to reassure participants about confidentiality.
### 3.4.2.3 Assessment of sexual behaviour

At the time of the SHEAR trial follow-up, participants were asked questions about their sexual behaviour in the preceding three months including number of sexual partners, incidents of unprotected sex, regretted sex, and using illicit drugs and/or alcohol in the incidence of unprotected sex. In my thesis I used some of these data collected on risky sexual behaviour in the SHEAR trial; the choice of data was informed by the measures used in the existing literature as well as detailed input from the trial co-applicants, the patient advisory group and the trial management group in the SHEAR study. This comprised a group of experts from various professional backgrounds including clinicians, alcohol health workers, health economists, and statisticians.

Extant literature has repeatedly focused on aspects of sexual behaviour which potentially pose risk to individuals through transmission of sexually transmitted infection and unwanted pregnancy. Risky sexual behaviours mainly comprise unprotected sex and/or having concurrent sexual partnerships; use of alcohol and/or drugs have been correlated with engaging in risky sexual behaviour such as sexual concurrency (Adimora et al., 2011), (Scott-Sheldon et al., 2010), (Senn et al., 2009).

I selected the following seven variables from data collected in the SHEAR study:

- Whether or not participants reported having had unprotected sex in the three months prior to the follow-up interview
- Number of people they had sex with in the three months prior to the follow-up interview
• Whether or not participants reported having had more than one sexual partner in the three months prior to the follow-up interview

• Whether or not participants reported having had unprotected sex in the three months prior to the follow-up interview if they had more than one sexual partner

• Whether or not participants reported having had regretted sex in the three months prior to the follow-up interview

• Whether or not participants reported having drunk any alcohol before unprotected sex in the three months prior to the follow-up interview

• Whether or not participants reported having been drunk before unprotected sex in the three months prior to the follow-up interview

3.4.2.4 Staff attitude survey

I collected data on attitudes of staff working in sexual health clinics towards alcohol screening and intervention using a brief questionnaire (Appendix 6). I developed this questionnaire a year after the start of the SHEAR trial when initial semi-structured interviews with clinicians and participants had been completed. An early draft was discussed and pre-piloted at one of the SHEAR trial management group meetings which resulted in some minor modifications. When asking the members of staff to take part in the survey, I reassured them that their replies would be anonymised before analysis and provided full instructions for completing the questionnaire. I asked staff to put a cross for each statement on the scale that they thought best represented their level of agreement with the statement; to make it clear I marked a sample question. I further explained that I would use a ruler to measure where their replies
(cross) were situated on the line, this would reflect the level of their agreement with each of the questionnaire statements and that the scores will be obtained accordingly. The response line was 150 mm in length and the point of 75mm (neutral response) was considered as the cut off point for endorsing/not endorsing any given statement.

3.4.3 Analysis procedures: quantitative components

Sample size

Data from the first 50 people in the SHEAR study who were identified ineligible (M-SASQ negative) indicated that 56% had had one or more episodes of unprotected sex in the three months prior to the follow-up interview. Using a 5% level of statistical significance, I calculated that I would need data on approximately 590 people (415 who drink excessively and 175 who do not) to have 90% power to detect a higher proportion (70%) of people who drink excessively who have had unprotected sex. This estimation was based on findings from a study carried out in a sexual health clinic in Southampton, UK. In this study 76% of their sample of the sexual health clinic attendees said that they had unprotected sex as a result of drinking (Scott-Sheldon et al., 2010). In total, I collected follow-up data from 177 SHEAR participants identified as ineligible (M-SASQ negative) at baseline. These were compared with the data being collected as part of SHEAR from 592 participants randomised at baseline (M-SASQ positive). For the secondary analyses of the SHEAR trial outcomes, no formal sample size calculation was carried out.
Statistical analyses

In this section, I provide details of the procedures I used in conducting quantitative data analyses. I will describe this under three main headings which correspond to the three broad themes of screening and identification, uptake of intervention and effectiveness. I used the Statistical Package for Social Sciences (SPSS) version 20 and 21 (IBM, 2011, IBM, 2012) for the quantitative analyses. I used simple descriptive statistics to describe the demographic and clinical characteristics of my study sample. I calculated means, Standard Deviations (SD) and percentages for continuous and categorical variables respectively. I used Chi squared test and T-test in comparative analyses for categorical and continuous variables respectively. I also reported difference in proportions/means, 95% Confidence Intervals and p-values.

3.4.3.1 Screening and identification

I used descriptive statistics to describe the study sample including the proportion that consented to being screened, and demographic characteristics (age, gender) of those who did/did not consent to the initial screening. I then compared the demographic characteristics (age, gender, and ethnicity) between the M-SASQ positive (recruited and randomised to the SHEAR trial) and M-SASQ negative (non-eligible for randomisation to the SHEAR trial) groups in those who consented to screening. In the next stage, I compared the demographic characteristics (age, gender) in those who consented to the initial screening based on their completion of six-month follow-up interview. This analysis was run in the M-SASQ positive and M-SASQ negative groups separately.

Below I will describe the details of the analyses I conducted under the broad category of screening and identification.
Demographic and clinical characteristics of excessive/non excessive drinkers

In this stage, I calculated the AUDIT-C scores for all participants who completed the follow-up interview (regardless of their status in the SHEAR trial). I derived and computed the AUDIT-C values from data on the Form 90 that participants had provided at the time of six-month follow-up interview. I considered scores of five or above as hazardous drinking and categorised participants into AUDIT-C positive and negative groups (Rumpf et al., 2002). I compared demographic (age, gender, ethnicity, sexual orientation) and clinical (M-SASQ status at baseline, any illicit drug use, illicit drug use other than cannabis) characteristics between the AUDIT-C positive and negative groups.

Concurrent validity and predictive values of M-SASQ

These analyses were performed in three stages: in the first stage, in order to assess the concurrent validity of M-SASQ in reference to AUDIT-C as gold standard, I used only the data collected at the six-month follow-up. Both M-SASQ and AUDIT-C status were calculated and derived from a more detailed Form 90 questionnaire. My main objective in this analysis was to assess the validity of a single item questionnaire if it were to be rolled out in routine clinical practice and to examine the extent that it would correspond to a more detailed and slightly time consuming AUDIT-C questionnaire; which is nonetheless regarded as a relatively short assessment tool.

In the second stage, predictive values of M-SASQ at baseline were calculated for the total sample that completed the follow-up interview regardless of their allocation status in the SHEAR trial. In this stage, M-SASQ status at baseline was compared firstly with their M-SASQ status at the time of follow-up, and secondly with AUDIT-C status at the time of follow-up as
reference. M-SASQ status and AUDIT-C status at follow-up were derived and calculated from the Form 90 questionnaire.

In the final stage, the predictive values of M-SASQ at baseline were calculated only among those participants who completed the follow-up interview excluding the individuals in the intervention arm of the SHEAR trial. The rationale was that intervention might have had an impact on individuals’ drinking behaviour; therefore, the comparison should be limited to those who had minimal input [i.e. control arm of the trial and those identified as non-eligible for randomisation to the SHEAR trial (M-SASQ negative)]. Both groups had received a one-page summary on healthy living choices. As for the previous stage, the predictive values were calculated with reference to M-SASQ status and AUDIT-C status at follow-up, both derived from the Form 90 questionnaire.

**Drinking behaviour of participants in the three months prior to the follow-up interview**

I compared the drinking behaviour - in those who completed the follow-up interview - between the two groups identified as M-SASQ positive and negative at the time of initial screening. I tested the following drinking behaviour variables: a) if participants reported drinking above recommended weekly units (14 UK alcohol units for females, and 21 for males); b) if they reported drinking excessively (more than six UK alcohol units if female, or eight if male) at least once a month; c) the average alcohol units consumed in a week, d) the average units of alcohol drank on drinking days in the preceding three months, and e) their AUDIT-C status at the time of follow-up.
Sexual behaviour of participants in the three months prior to the follow-up interview

Firstly, in this set of analysis I used descriptive statistics to provide a descriptive account of sexual behaviour of the SHEAR trial participants in the three months preceding the six-month follow-up interview. The sexual behaviour variables tested are as follows:

- Average number of sexual partners in the three months prior to the follow-up interview
- If they had at least one episode of unprotected sex in the three months preceding the interview
- If they had drunk any alcohol/been drunk before unprotected sex in the three months prior to the follow-up interview

In the next stage, I compared the occurrence of risky sexual behaviours between participants identified as hazardous and non-hazardous drinkers based on their AUDIT-C scores at the time of follow-up interview. I also compared the reported risky sexual behaviour according to their M-SASQ status at baseline.

Relationship between hazardous drinking and risky sexual behaviour

I conducted a series of binary logistic regression analyses to examine the association between whether participants had engaged in risky sexual behaviours and hazardous drinking. Odds Ratios (OR) were adjusted for demographic and clinical characteristics (age, gender, sexual orientation, any drug use). I used the enter method for entering the predictor variables into the model.
3.4.3.2 Uptake of the Brief Intervention

The purpose of this set of analyses was to investigate what factors might have an impact on individuals’ willingness to receive further advice about their drinking. I considered both telephone intervention and face-to-face sessions as receiving input (Brief Intervention) from an alcohol health worker in all subsequent analyses.

Socio-demographic and clinical characteristics

In the first stage, I used descriptive statistics to calculate the proportion of participants who did or did not receive the Brief Intervention. I then carried out appropriate univariate analyses ($\chi^2$ or t-test) to investigate if there were any significant differences between these proportions according to participants’ socio-demographic and clinical characteristics. The variables that I tested include:

- Centre the participants were recruited from
- Gender of the participants
- Age of participants at the time of baseline assessment
- Self-assigned ethnicity
- Reason for presenting to the clinic (reporting/ not reporting symptoms)
- Sexual orientation of the participants
- If they were smoker or not (smoking was chosen as a variable as it is indicative of attitudes towards use of substance)
- Whether or not they had used any illicit drugs in the six months prior to the follow-up interview which covers the time of recruitment to the trial
• Whether or not they had used any illicit drugs other than cannabis in the six months prior to the follow-up interview which covers the time of recruitment to the trial.

**Sexual behaviour and drinking characteristics (reported at baseline)**

I performed this set of analyses to compare sexual behaviour and drinking characteristics of participants who received further intervention and those who did not. The characteristics that I examined are described in detail in the previous section; one of the variables I tested was ‘if participants thought there was a link between presenting to the sexual health clinic and drinking excessively’. This question item was considered relevant as the Brief Advice package used in the SHEAR trial was devised based on a previous trial of interventions for excessive alcohol use in the context of emergency departments. The authors in this study concluded that patients who saw a link between their alcohol use and their health were more likely to take up the offer of Brief Intervention (Patton et al., 2005). The clinicians involved in the SHEAR trial were asked to complete a proforma when delivering Brief Advice. In my analyses, I used the data obtained from these proformas on whether participants believed there was a link between their alcohol use and their attendance at the clinic.

I performed binary logistic regression analyses to test if the associations (found in univariate analyses) would remain significant when adjusted for other covariates. This included adjustments for demographic (age, ethnicity, gender, sexual orientation), and clinical (frequency of hazardous drinking, having more than one sexual partner and reporting unprotected sex) characteristics.
3.4.3.3 Effectiveness of Brief Intervention - subgroup analyses

I performed a series of subgroup analyses to investigate if there were any subgroups of participants for whom the intervention was more effective in reducing their alcohol consumption. For this set of analyses, I considered the *mean number of alcohol units consumed on a drinking day (calculated from the Form 90)* as the main outcome measure. I made this decision after receiving feedback from the SHEAR trial advisory group and management group as well as the themes emerged from qualitative interviews. The following variables were selected for this set of analyses, because of their clinical relevance and/or the emergent themes from qualitative analysis; trial statistician and experts in the SHEAR trial management team were also consulted:

- Gender of the participants
- Age group of the participants (19-24 or >24)- in the context of sexual health clinics the age bracket of 16-24 is considered as young age and therefore I was interested to compare the effectiveness of intervention in participants over the age of 24 and in those under 24
- Ethnicity of the participants (White or Non-White)
- Sexual orientation of the participants: heterosexual/homo(bi)sexual
- The frequency of drinking more than six (if female) or eight (if male) alcohol units in one drinking session reported by the participants at baseline (monthly or weekly/daily)
- Reason for presentation to the sexual health clinic reported by the participants at baseline: presenting with symptoms/not with symptoms
• If participants reported using any illicit drugs in the six months preceding the follow-up interview

**Difference in outcomes and significance of interaction terms for each subgroup analysis**

In this stage, I examined the moderating effect of subgroups on drinking outcome by adding an interaction term. Three of the most clinically relevant variables which were found to have an impact were included in this analysis—gender, frequency of hazardous drinking reported at baseline, and illicit drugs use (any use as well as use at a level requiring/not requiring intervention). This decision was made after data were presented to the trial management group; the SHEAR trial statistician was also consulted.

I will report p-values; however, considering that the trial was not powered to test for these additional analyses and the exploratory nature of this set of analyses, the results should be interpreted with caution. In this regard, non-significant p-values would not determine an absolute absence of interaction, whilst borderline significant p-values would not necessarily confirm the presence of such interactions.
3.5 Merging, interpretations and extant literature review

In line with Bazeley’s recommendations about analysis, to move from describing the data to a more coherent narrative I followed three steps to describe, compare, and relate the emerging concepts and themes. In this process, I particularly found the analogy of “moving from garden path analysis to a coherent model” very useful (Bazeley, 2009). Subsequently, in the discussion chapter, I will integrate the findings from these various sources to present areas of convergence, divergence and silence. I will then provide a detailed interpretation of the findings and the links with the extant literature. The literature review that I conducted at the early stage and presented in my introduction chapter highlighted some of the gaps in existing literature that needed to be explored in my thesis. Emerging concepts from the qualitative interviews guided a more specific and focused literature review with regards to the theoretical categories and their properties. Whilst this further literature review was driven by the emerging concepts, it helped draw conclusions, shape the interpretations, and merge the findings. The role of literature review at this stage is of great importance as it would broaden the research scope, enhance the researcher’s theoretical sensitivity and facilitate exploring divergences and convergences with the extant literature. In the discussion chapter, I will provide a full account of how the findings from my research fit within the wider context and whether and to what extent they correspond to, mirror or contradict the existing knowledge. This will provide a more reflective and richer picture of current practice, which I will use to highlight areas of uncertainty and make recommendations for future research.
3.6 Rigor in grounded theory

The inductive nature of grounded theory has raised concerns about ensuring quality and ‘rigor’ in the process of data collection and analysis. The opponents’ argument is based on the issues of subjectivity, induction and lack of clear tested hypotheses. There are a few points which need careful consideration before making any further comments about the issue of rigor. The most important factor to consider is whether validity, reliability and repeatability which originate from a positivist approach are suitable measures to assess rigor in grounded theory. The strategy to ensure validity in conventional hypothesis driven research is by measuring statistical significance of correlation between variables. Furthermore, attention to statistical correctness of the sample size calculation, setting ‘a priori’ well-defined hypotheses and testing for measures of validity and reliability of the findings are paramount. However, there are no such ‘rigorous’ mathematical calculations to prove validity in inductive qualitative research. The equivalent in a deductive-inductive research is to ensure credibility in the process, reporting and interpretation stages of the inquiry. Constant comparison is one strategy to validate interpretations in the process of analysis (Strauss and Corbin, 1998). To ensure credibility it is emphasised that the researcher should constantly ask themselves why they arrived at a given conclusion and how newly-emerged themes would relate to the previously construed categories. Inflexible preconceived frameworks have, therefore, no space in such an approach. To ensure this and to adhere to the principles of classic grounded theory methodology, it is recommended that the researcher should revisit the data critically, reflectively and with uncertainty as well as being reflective at each and every step of data collection and analysis. I should emphasise the point that the generalisability principles which apply to the hypothesis driven research is not what a Glaserian grounded theory approach is
seeking to fulfil. Not only the world view governing this research method is different but also it does not set out to achieve the aim of generalising the findings to a wider context; qualitative methods seek theoretical rather than empirical generalisation.

To avoid shallow reporting, I was conscious to remain open to nuances in the data and kept track of ‘the unexpected’ as the analysis progressed. To provide some examples in the results chapter I will refer to occasions when I was faced with such ‘unexpectedness’ in the process of data collection and in particular data analysis.

Description is also part of the analysis and it will give the reader the opportunity to relate to the ‘source’ data. However, this description should be far from reporting the accounts of participant by constantly making references to the quotes. Glaser recommends that judging the credibility of classic grounded theory research findings should be performed by assessing its ‘fit’ and ‘workability’ (Glaser, 1998). Practical strategies such as constant comparison and reflexivity are used to achieve this. Strauss highlights the need for developing a structured and well defined framework to guide data collection and analysis. He argues that by doing this the researchers should be able to demonstrate quality and defend their work. However, Glaser argues against using strict frameworks as he believes this approach limits the scope of research.

In my work as the research progressed, the absolute notion of reality seemed more abstract, and I was conscious of my own interpretations. I am well aware that the definition of truth is dependent on the individuals’ world view and that as human beings we are subject to introducing bias into any stage of a research study. I will therefore provide more details about my role as the lead researcher in the main trial, my stance and professional background in the following section. I will also reflect on issues that might be considered as potential sources of
bias and hope that the readers will appreciate these constraints. I would not claim that what I have found is ‘the theory’ but a ‘conceptual account’ which offers a more in-depth understanding of the process and outcomes of a complex intervention in the context of a randomised trial which seeks to evaluate the effectiveness of a complex behavioural change intervention (Gasson, 2004).

3.7 Reflective account

In this section, I would like to acknowledge the potential bias I might have introduced when collecting, analysing and interpreting the data as well as how conducting my thesis alongside the SHEAR trial might have had an impact on the course of this study.

Firstly, my position as the lead researcher working on this trial meant that I had the opportunity to form the professional bonds necessary for the smooth running of the trial. This in turn allowed me to have the freedom and flexibility to employ the appropriate strategies for collecting rich and in-depth data from those receiving and offering the alcohol brief intervention for my thesis.

Secondly, my professional background as a qualified medical doctor meant that I was able to relate to ‘professional concerns’ such as feeling overwhelmed, lack of sufficient time and anxiety about disruption to therapeutic relationships. This also meant that it was fairly easy for me to convince the sexual health clinics’ staff that I was conscious of the sensitivity of some issues discussed in this clinical setting.
However, this might have also resulted in a ‘fleeting’ increase in willingness and enthusiasm for helping with research fuelled by my perseverance and ‘over enthusiasm’. This could have momentarily reduced the uncertainty often experienced when delivering behavioural change interventions. The higher than expected recruitment and follow-up rate in the SHEAR trial was partly related to my ‘personal agenda’ in that I needed to have access to sufficient data for my thesis. Whilst I was conscious of maintaining boundaries and avoiding inflicting unnecessary burden on trial participants, clinic staff and Alcohol Health Workers involved in the trial, I cannot rule out that my ‘double’ role has impacted the course of the trial and/or my thesis.

### 3.8 Ethical considerations

Ethics Committee approval for recruiting and interviewing all study participants was obtained prior to the start of this work. Ethics committee approval was also obtained for collection of additional information from the trial participants on use of illicit drugs as well as data from staff and Alcohol Health Workers involved in the SHEAR study. Approval was obtained from West London Research Ethics Committee 3 (10/H0706/29) and the Research and Development departments of Chelsea and Westminster Hospital NHS Foundation Trust and Imperial College Healthcare NHS Trust. Anyone approached for potential participation was provided with a copy of an information sheet including my contact details. Only those who provided written informed consent were included. All those people who completed the six-month follow-up interview were offered £15 in recognition of any inconvenience caused by taking part in the study.
Chapter 4  Results I- Qualitative components

In the next two chapters (4, 5), I will describe the findings from the qualitative and quantitative components separately. As part of the reporting of results from qualitative data analysis, I will also provide a theoretical account and propose a mid-range theory. In the discussion chapter, I will integrate and triangulate the findings from these two main components to present areas of convergence, divergence and silence. This will provide a more reflective and richer picture of current practice, which I will use to highlight areas of uncertainty, and make recommendations for future research.

In the followings section, I will describe the findings from the analysis of the qualitative components in my thesis. This comprises the findings from interviews with the recipients of alcohol intervention, as well as the providers of Brief Advice (BA) and Brief Intervention (BI).

4.1 Recipients of alcohol intervention

I will firstly present the demographic and clinical characteristics of those I interviewed; subsequently I will describe the key findings from the interviews.

In total, 802 people (53.87% female, n= 432) were randomised to the SHEAR trial out of whom 592 (53.4% female, n = 316) completed the six-month follow-up interview. I carried out qualitative interviews with 38 trial participants (25 female and 13 male) near the time they completed the trial follow-up interview, six months after the initial date of recruitment to the trial. Of those, 26 (68.42%) were in the intervention and 12 (31.58%) in the control group. I also interviewed 13 people who received further input from an AHW, either face-to-face or over the phone. In addition, I interviewed 13 people (8 male, 5 female) who took part in the
pilot phase of the trial near the time (within a month) of their participation; four of these people had also seen an AHW. The details of demographic and clinical characteristics of participants I interviewed are presented in Tables 4-1 to 4-4. This is presented separately for those I interviewed at the pilot phase (P1 to P13) and the trial participants I interviewed near the time they had completed the SHEAR trial six-month follow-up interview (T1 to T38).

**Table 4-1- Demographic characteristics of the participants interviewed at the pilot phase**

<table>
<thead>
<tr>
<th>ID</th>
<th>Age</th>
<th>Ethnicity</th>
<th>Gender</th>
<th>Sexual orientation</th>
<th>Arm of Trial/intervention received</th>
<th>BA delivered by:</th>
<th>BI delivered By:</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>27</td>
<td>White British</td>
<td>M</td>
<td>1</td>
<td>BI/did not attend</td>
<td>Not recorded</td>
<td></td>
</tr>
<tr>
<td>P2</td>
<td>25</td>
<td>White Australian</td>
<td>M</td>
<td>1</td>
<td>BI/did not attend</td>
<td>5012</td>
<td></td>
</tr>
<tr>
<td>P3</td>
<td>33</td>
<td>White British</td>
<td>M</td>
<td>1</td>
<td>BI/did not</td>
<td>5019</td>
<td></td>
</tr>
<tr>
<td>P4</td>
<td>27</td>
<td>White British</td>
<td>M</td>
<td>1</td>
<td>BI/saw the nurse</td>
<td>5005</td>
<td>AHW-2</td>
</tr>
<tr>
<td>P5</td>
<td>22</td>
<td>Black/ Black British-Caribbean origin</td>
<td>F</td>
<td>1</td>
<td>BI/did not attend</td>
<td>5019</td>
<td></td>
</tr>
<tr>
<td>P6</td>
<td>25</td>
<td>White British</td>
<td>M</td>
<td>1</td>
<td>BI/did not attend</td>
<td>Not recorded</td>
<td></td>
</tr>
<tr>
<td>P7</td>
<td>23</td>
<td>White British/ Born in Australia</td>
<td>F</td>
<td>1</td>
<td>BI/did not attend</td>
<td>5038</td>
<td></td>
</tr>
<tr>
<td>P8</td>
<td>22</td>
<td>Black British</td>
<td>F</td>
<td>1</td>
<td>BI/did not attend</td>
<td>5019</td>
<td></td>
</tr>
<tr>
<td>P9</td>
<td>27</td>
<td>Black British</td>
<td>F</td>
<td>1</td>
<td>BI/did not attend</td>
<td>5016</td>
<td></td>
</tr>
<tr>
<td>P10</td>
<td>27</td>
<td>Other White: French</td>
<td>M</td>
<td>1</td>
<td>BI/saw nurse on the same day</td>
<td>5012</td>
<td>AHW-1</td>
</tr>
<tr>
<td>P11</td>
<td>29</td>
<td>White British</td>
<td>M</td>
<td>1</td>
<td>BI/did not attend</td>
<td>5003</td>
<td></td>
</tr>
<tr>
<td>P12</td>
<td>32</td>
<td>White British</td>
<td>M</td>
<td>1</td>
<td>BI/saw the nurse</td>
<td>5016</td>
<td>AHW-2</td>
</tr>
<tr>
<td>P13</td>
<td>24</td>
<td>British/mixed race</td>
<td>M</td>
<td>1</td>
<td>BI/saw the nurse</td>
<td>5015</td>
<td>AHW-1</td>
</tr>
</tbody>
</table>
Table 4-2-Demographic characteristics of the participants interviewed near the time of the SHEAR trial six-month follow-up

<table>
<thead>
<tr>
<th>ID</th>
<th>Age</th>
<th>Ethnicity</th>
<th>Gender</th>
<th>Sexual orientation</th>
<th>Arm of Trial/ Intervention</th>
<th>BA delivered by</th>
<th>BI delivered By</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>24</td>
<td>White British</td>
<td>M</td>
<td>1</td>
<td>BI/attended</td>
<td>5019</td>
<td>AHW-1</td>
</tr>
<tr>
<td>T2</td>
<td>22</td>
<td>White British</td>
<td>M</td>
<td>1</td>
<td>BI/attended</td>
<td>5015</td>
<td></td>
</tr>
<tr>
<td>T3</td>
<td>29</td>
<td>Mixed White Asian/Turkish</td>
<td>F</td>
<td>1</td>
<td>Control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T4</td>
<td>25</td>
<td>White Irish</td>
<td>F</td>
<td>1</td>
<td>BI/attended</td>
<td>5016</td>
<td>AHW-1</td>
</tr>
<tr>
<td>T5</td>
<td>21</td>
<td>Any other mixed Background</td>
<td>M</td>
<td>2</td>
<td>Control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T6</td>
<td>22</td>
<td>White British</td>
<td>F</td>
<td>1</td>
<td>Control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T7</td>
<td>21</td>
<td>Other White: Polish</td>
<td>F</td>
<td>1</td>
<td>BI/not attended</td>
<td>5030</td>
<td></td>
</tr>
<tr>
<td>T8</td>
<td>20</td>
<td>White British</td>
<td>F</td>
<td>1</td>
<td>Control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T9</td>
<td>20</td>
<td>White British</td>
<td>F</td>
<td>1</td>
<td>BI/attended</td>
<td>5025</td>
<td>AHW-1</td>
</tr>
<tr>
<td>T10</td>
<td>25</td>
<td>Any other White/American</td>
<td>F</td>
<td>1</td>
<td>Control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T11</td>
<td>24</td>
<td>Other: Latino, Mexican</td>
<td>F</td>
<td>1</td>
<td>BI/attended following week</td>
<td>5008</td>
<td>AHW-1</td>
</tr>
<tr>
<td>T12</td>
<td>27</td>
<td>White Irish</td>
<td>F</td>
<td>1</td>
<td>BI/not attended</td>
<td>5002</td>
<td></td>
</tr>
<tr>
<td>T13</td>
<td>30</td>
<td>White British</td>
<td>F</td>
<td>1</td>
<td>Control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T14</td>
<td>27</td>
<td>Any other White/Australian</td>
<td>F</td>
<td>1</td>
<td>Control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T15</td>
<td>33</td>
<td>White Irish</td>
<td>M</td>
<td>2</td>
<td>BI/called AHW-1/leaflet sent</td>
<td>5013</td>
<td>AHW-1</td>
</tr>
<tr>
<td>T16</td>
<td>29</td>
<td>White British</td>
<td>M</td>
<td>3</td>
<td>BI/not attended</td>
<td>5002</td>
<td></td>
</tr>
<tr>
<td>T17</td>
<td>24</td>
<td>White British</td>
<td>F</td>
<td>1</td>
<td>BI/not attended</td>
<td>5001</td>
<td></td>
</tr>
<tr>
<td>T18</td>
<td>27</td>
<td>White British</td>
<td>M</td>
<td>1</td>
<td>BI/not attended</td>
<td>5029</td>
<td></td>
</tr>
<tr>
<td>T19</td>
<td>29</td>
<td>White British</td>
<td>M</td>
<td>1</td>
<td>BI/not attended</td>
<td>5024</td>
<td></td>
</tr>
<tr>
<td>T20</td>
<td>23</td>
<td>White Australian/British</td>
<td>M</td>
<td>2</td>
<td>BI/not attended</td>
<td>5003</td>
<td></td>
</tr>
<tr>
<td>T21</td>
<td>31</td>
<td>White British</td>
<td>M</td>
<td>2</td>
<td>BI/not attended</td>
<td>5002</td>
<td></td>
</tr>
<tr>
<td>T22</td>
<td>20</td>
<td>White British/Irish</td>
<td>F</td>
<td>1</td>
<td>BI/Telephone</td>
<td>5017</td>
<td>AHW-1</td>
</tr>
<tr>
<td>T23</td>
<td>33</td>
<td>White British</td>
<td>M</td>
<td>1</td>
<td>BI/Telephone</td>
<td>5008</td>
<td>AHW-1</td>
</tr>
<tr>
<td>T24</td>
<td>28</td>
<td>White British</td>
<td>F</td>
<td>1</td>
<td>BI/attended</td>
<td>5012</td>
<td>AHW-2</td>
</tr>
<tr>
<td>T25</td>
<td>21</td>
<td>White Australian</td>
<td>F</td>
<td>1</td>
<td>BI/Telephone</td>
<td>5006</td>
<td>AHW-1</td>
</tr>
<tr>
<td>T26</td>
<td>26</td>
<td>Any other White Background/Netherlands</td>
<td>F</td>
<td>1</td>
<td>Control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T27</td>
<td>36</td>
<td>Any other White/New Zealand</td>
<td>M</td>
<td>1</td>
<td>BI/Telephone</td>
<td>5002</td>
<td>AHW-2</td>
</tr>
<tr>
<td>T28</td>
<td>27</td>
<td>Black/Black British-Caribbean/African origin</td>
<td>M</td>
<td>1</td>
<td>BI/Telephone</td>
<td>5001</td>
<td>AHW-2</td>
</tr>
<tr>
<td>T29</td>
<td>38</td>
<td>Black/Black British-Caribbean origin</td>
<td>F</td>
<td>1</td>
<td>BI/Telephone</td>
<td>5007</td>
<td>AHW-1</td>
</tr>
<tr>
<td>T30</td>
<td>24</td>
<td>Black/Black British-African origin</td>
<td>F</td>
<td>1</td>
<td>BI/Telephone</td>
<td>5020</td>
<td>AHW-2</td>
</tr>
<tr>
<td>T31</td>
<td>26</td>
<td>White British</td>
<td>F</td>
<td>1</td>
<td>BI/not attended</td>
<td>5001</td>
<td></td>
</tr>
</tbody>
</table>
** Sexual orientation 1=Heterosexual, 2=homosexual

### Table 4-3- Clinical characteristics of the participants interviewed at the pilot phase

<table>
<thead>
<tr>
<th>Study ID***</th>
<th>Alcohol 6/8+ units (BL*)</th>
<th>No. partners (BL)</th>
<th>No. unprotected partners (BL)</th>
<th>Regretted sex (BL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Weekly</td>
<td>More than one partner (8)</td>
<td>3</td>
<td>No</td>
</tr>
<tr>
<td>P</td>
<td>Monthly</td>
<td>More than one partner (4)</td>
<td>4</td>
<td>No</td>
</tr>
<tr>
<td>P</td>
<td>Weekly</td>
<td>More than one partner (3)</td>
<td>3</td>
<td>Yes</td>
</tr>
<tr>
<td>P</td>
<td>Weekly</td>
<td>More than one partner (2)</td>
<td>2</td>
<td>Yes</td>
</tr>
<tr>
<td>P</td>
<td>Weekly</td>
<td>More than one partner (3)</td>
<td>2</td>
<td>Yes</td>
</tr>
<tr>
<td>P</td>
<td>Monthly</td>
<td>One partner</td>
<td>0</td>
<td>No</td>
</tr>
<tr>
<td>P</td>
<td>Weekly</td>
<td>More than one partner (2)</td>
<td>2</td>
<td>Yes</td>
</tr>
<tr>
<td>P</td>
<td>Weekly</td>
<td>More than one partner (3)</td>
<td>2</td>
<td>Yes</td>
</tr>
<tr>
<td>P</td>
<td>Weekly</td>
<td>More than one partner (2)</td>
<td>2</td>
<td>No</td>
</tr>
<tr>
<td>P</td>
<td>Monthly</td>
<td>More than one partner (6)</td>
<td>2</td>
<td>No</td>
</tr>
<tr>
<td>P</td>
<td>Weekly</td>
<td>More than one partner</td>
<td>5</td>
<td>No</td>
</tr>
<tr>
<td>P</td>
<td>Weekly</td>
<td>One partner</td>
<td>0</td>
<td>No</td>
</tr>
<tr>
<td>P</td>
<td>Weekly</td>
<td>More than one partner (3)</td>
<td>3</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Table 4-4 Clinical characteristics of the participants interviewed near the time of the SHEAR trial six-month follow-up

<table>
<thead>
<tr>
<th>Study ID***</th>
<th>Alcohol 6/8+ units (BL*)</th>
<th>No. partners (BL)</th>
<th>No. unprotected partners (BL)</th>
<th>Regretted sex (BL)</th>
<th>Mean weekly alcohol units (FU*)</th>
<th>Mean units per drinking day (FU)</th>
<th>Alcohol 6/8+ units (FU)</th>
<th>No. partners (FU)</th>
<th>No. unprotected partners (FU)</th>
<th>Regretted sex (FU)</th>
<th>Level of Cannabis use (FU)</th>
<th>Level of other drug use (FU)</th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
<td>Monthly</td>
<td>1</td>
<td>0</td>
<td>No</td>
<td>2.21</td>
<td>9.47</td>
<td>Less than monthly</td>
<td>0</td>
<td>0</td>
<td>N/A</td>
<td>No Drug Use</td>
<td>No Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Weekly</td>
<td>1</td>
<td>1</td>
<td>No</td>
<td>50.7</td>
<td>23.3</td>
<td>Weekly</td>
<td>1</td>
<td>1</td>
<td>No</td>
<td>No Drug Use</td>
<td>No Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Weekly</td>
<td>1</td>
<td>10</td>
<td>Yes</td>
<td>7.09</td>
<td>7.02</td>
<td>Less than monthly</td>
<td>0</td>
<td>0</td>
<td>N/A</td>
<td>No Drug Use</td>
<td>No Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Weekly</td>
<td>1</td>
<td>0</td>
<td>No</td>
<td>11.6</td>
<td>13.5</td>
<td>Monthly</td>
<td>1</td>
<td>1</td>
<td>No</td>
<td>No Drug Use</td>
<td>No Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Monthly</td>
<td>&gt;1</td>
<td>0</td>
<td>Yes</td>
<td>9.49</td>
<td>9.38</td>
<td>Monthly</td>
<td>2</td>
<td>0</td>
<td>Yes</td>
<td>Intervention Rec.</td>
<td>No Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Monthly</td>
<td>&gt;1</td>
<td>2</td>
<td>Yes</td>
<td>1.82</td>
<td>3.91</td>
<td>Never</td>
<td>1</td>
<td>1</td>
<td>No</td>
<td>Low Drug Use</td>
<td>No Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Weekly</td>
<td>&gt;1</td>
<td>2</td>
<td>No</td>
<td>3.11</td>
<td>9.99</td>
<td>Monthly</td>
<td>1</td>
<td>1</td>
<td>No</td>
<td>No Drug Use</td>
<td>No Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Weekly</td>
<td>1</td>
<td>1</td>
<td>No</td>
<td>70.6</td>
<td>22.7</td>
<td>Weekly</td>
<td>2</td>
<td>0</td>
<td>No</td>
<td>Intervention Rec.</td>
<td>Needing Intervention</td>
</tr>
<tr>
<td>T</td>
<td>Weekly</td>
<td>&gt;1</td>
<td>3</td>
<td>No</td>
<td>36.2</td>
<td>11.6</td>
<td>Weekly</td>
<td>1</td>
<td>0</td>
<td>No</td>
<td>No Drug Use</td>
<td>No Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Weekly</td>
<td>&gt;1</td>
<td>2</td>
<td>No</td>
<td>17.9</td>
<td>8.51</td>
<td>Weekly</td>
<td>1</td>
<td>1</td>
<td>No</td>
<td>No Drug Use</td>
<td>No Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Weekly</td>
<td>&gt;1</td>
<td>1</td>
<td>Yes</td>
<td>69.5</td>
<td>21.3</td>
<td>Weekly</td>
<td>2</td>
<td>1</td>
<td>Yes</td>
<td>Low Drug Use</td>
<td>Needing Intervention</td>
</tr>
<tr>
<td>T</td>
<td>Monthly</td>
<td>1</td>
<td>0</td>
<td>No</td>
<td>4.04</td>
<td>4.73</td>
<td>Less than monthly</td>
<td>0</td>
<td>0</td>
<td>N/A</td>
<td>Intervention Rec.</td>
<td>No Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Weekly</td>
<td>1</td>
<td>1</td>
<td>No</td>
<td>53.1</td>
<td>11.6</td>
<td>Monthly</td>
<td>1</td>
<td>0</td>
<td>No</td>
<td>No Drug Use</td>
<td>No Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Weekly</td>
<td>&gt;1</td>
<td>3</td>
<td>No</td>
<td>37.2</td>
<td>12.3</td>
<td>Weekly</td>
<td>3</td>
<td>1</td>
<td>No</td>
<td>No Drug Use</td>
<td>No Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Weekly</td>
<td>&gt;1</td>
<td>2</td>
<td>Yes</td>
<td>14.2</td>
<td>13.1</td>
<td>Weekly</td>
<td>4</td>
<td>1</td>
<td>Yes</td>
<td>No Drug Use</td>
<td>No Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Monthly</td>
<td>&gt;1</td>
<td>4</td>
<td>Yes</td>
<td>1.42</td>
<td>6.07</td>
<td>Less than monthly</td>
<td>1</td>
<td>1</td>
<td>No</td>
<td>No Drug Use</td>
<td>No Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Weekly</td>
<td>&gt;1</td>
<td>3</td>
<td>Yes</td>
<td>35.1</td>
<td>10.3</td>
<td>Monthly</td>
<td>2</td>
<td>1</td>
<td>Yes</td>
<td>Low Drug Use</td>
<td>Low Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Monthly</td>
<td>&gt;1</td>
<td>1</td>
<td>No</td>
<td>5.66</td>
<td>6.62</td>
<td>Monthly</td>
<td>0</td>
<td>0</td>
<td>N/A</td>
<td>No Drug Use</td>
<td>No Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Weekly</td>
<td>&gt;1</td>
<td>2</td>
<td>Yes</td>
<td>48</td>
<td>9.35</td>
<td>Weekly</td>
<td>1</td>
<td>0</td>
<td>No</td>
<td>Intervention Rec.</td>
<td>No Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Weekly</td>
<td>&gt;1</td>
<td>2</td>
<td>Yes</td>
<td>14.5</td>
<td>7.17</td>
<td>Monthly</td>
<td>1</td>
<td>1</td>
<td>No</td>
<td>No Drug Use</td>
<td>Low Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Weekly</td>
<td>&gt;1</td>
<td>2</td>
<td>No</td>
<td>52.7</td>
<td>17.4</td>
<td>Weekly</td>
<td>2</td>
<td>1</td>
<td>No</td>
<td>No Drug Use</td>
<td>Low Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Weekly</td>
<td>1</td>
<td>1</td>
<td>No</td>
<td>23.3</td>
<td>9.37</td>
<td>Monthly</td>
<td>2</td>
<td>0</td>
<td>No</td>
<td>Low Drug Use</td>
<td>No Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Weekly</td>
<td>&gt;1</td>
<td>0</td>
<td>No</td>
<td>27.1</td>
<td>11.2</td>
<td>Weekly</td>
<td>3</td>
<td>0</td>
<td>Yes</td>
<td>Low Drug Use</td>
<td>Needing Intervention</td>
</tr>
<tr>
<td>T</td>
<td>Monthly</td>
<td>&gt;1</td>
<td>2</td>
<td>Yes</td>
<td>58.5</td>
<td>11.8</td>
<td>Weekly</td>
<td>25</td>
<td>0</td>
<td>Yes</td>
<td>Intervention Rec.</td>
<td>Needing Intervention</td>
</tr>
<tr>
<td>T</td>
<td>Monthly</td>
<td>1</td>
<td>1</td>
<td>No</td>
<td>4.64</td>
<td>11.9</td>
<td>Monthly</td>
<td>1</td>
<td>1</td>
<td>No</td>
<td>No Drug Use</td>
<td>No Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Monthly</td>
<td>1</td>
<td>1</td>
<td>Yes</td>
<td>4.9</td>
<td>7.87</td>
<td>Weekly</td>
<td>0</td>
<td>0</td>
<td>N/A</td>
<td>No Drug Use</td>
<td>No Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Weekly</td>
<td>&gt;1</td>
<td>4</td>
<td>No</td>
<td>30.7</td>
<td>24.7</td>
<td>Monthly</td>
<td>3</td>
<td>1</td>
<td>No</td>
<td>No Drug Use</td>
<td>No Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Weekly</td>
<td>&gt;1</td>
<td>1</td>
<td>No</td>
<td>36.9</td>
<td>10.1</td>
<td>Weekly</td>
<td>1</td>
<td>1</td>
<td>No</td>
<td>No Drug Use</td>
<td>No Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Monthly</td>
<td>&gt;1</td>
<td>0</td>
<td>Yes</td>
<td>5.14</td>
<td>6.01</td>
<td>Monthly</td>
<td>1</td>
<td>0</td>
<td>No</td>
<td>No Drug Use</td>
<td>No Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Daily</td>
<td>&gt;1</td>
<td>2</td>
<td>No</td>
<td>31</td>
<td>6.03</td>
<td>Monthly</td>
<td>2</td>
<td>0</td>
<td>Yes</td>
<td>Intervention Rec.</td>
<td>No Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Monthly</td>
<td>&gt;1</td>
<td>1</td>
<td>No</td>
<td>1.55</td>
<td>4.97</td>
<td>Less than monthly</td>
<td>2</td>
<td>0</td>
<td>No</td>
<td>Low Drug Use</td>
<td>No Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Monthly</td>
<td>1</td>
<td>1</td>
<td>No</td>
<td>0</td>
<td>0</td>
<td>Never</td>
<td>0</td>
<td>0</td>
<td>N/A</td>
<td>No Drug Use</td>
<td>No Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Weekly</td>
<td>&gt;1</td>
<td>1</td>
<td>Yes</td>
<td>29.9</td>
<td>4.7</td>
<td>Weekly</td>
<td>20</td>
<td>0</td>
<td>Yes</td>
<td>No Drug Use</td>
<td>No Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Weekly</td>
<td>&gt;1</td>
<td>3</td>
<td>Yes</td>
<td>10.8</td>
<td>5.55</td>
<td>Monthly</td>
<td>0</td>
<td>0</td>
<td>N/A</td>
<td>Low Drug Use</td>
<td>Needing Intervention</td>
</tr>
<tr>
<td>T</td>
<td>Weekly</td>
<td>&gt;1</td>
<td>0</td>
<td>No</td>
<td>31.1</td>
<td>6.15</td>
<td>Weekly</td>
<td>1</td>
<td>0</td>
<td>No</td>
<td>No Drug Use</td>
<td>Needing Intervention</td>
</tr>
<tr>
<td>T</td>
<td>Weekly</td>
<td>&gt;1</td>
<td>2</td>
<td>Yes</td>
<td>67.5</td>
<td>25.5</td>
<td>Weekly</td>
<td>2</td>
<td>2</td>
<td>Yes</td>
<td>Intervention Rec.</td>
<td>Needing Intervention</td>
</tr>
<tr>
<td>T</td>
<td>Weekly</td>
<td>1</td>
<td>1</td>
<td>No</td>
<td>12.3</td>
<td>6.33</td>
<td>Less than monthly</td>
<td>1</td>
<td>1</td>
<td>No</td>
<td>No Drug Use</td>
<td>No Drug Use</td>
</tr>
<tr>
<td>T</td>
<td>Monthly</td>
<td>1</td>
<td>1</td>
<td>No</td>
<td>4.19</td>
<td>5.38</td>
<td>Monthly</td>
<td>2</td>
<td>0</td>
<td>No</td>
<td>No Drug Use</td>
<td>No Drug Use</td>
</tr>
</tbody>
</table>

*BL: baseline
**FU: follow-up
***Study IDs are removed for anonymity

### 4.2 Key findings from the interviews with recipients of alcohol intervention: ‘Trial experience’

In this section I will provide an account of the SHEAR trial participants’ ‘journey’ through the process of screening and intervention. The Brief Advice package comprised three main components: “defining” participant’s alcohol consumption as a problem (suggesting that the individual is drinking at harmful/hazardous levels), exploring the link between their attendance at the sexual health clinic and their use of alcohol, and lastly the offer of a leaflet
and receiving further intervention from an Alcohol Health Worker. This intervention package was considered as a ‘trigger’ in response to which individuals would express different reactions and adopt various strategies. I categorised their response to the trigger into three stages: a) instant reactions, b) adopted strategy, and c) on second thoughts. The first phase starts when the individual is faced with their alcohol consumption being “labelled excessive” by a health professional which I refer to as ‘instant reactions’. Shortly after this instant reaction phase, is the stage when the individual would decide what strategy to adopt with regards to the offer of seeing an alcohol health worker (adopted strategy). At this stage, people might also reach a conclusion about the new definition (excessive drinker) suggested by the sexual health clinician. Whilst most people held onto their initial views about their overall experience of alcohol screening and intervention, some had further thoughts about this and reflected on their experience in a slightly different way after they had some time to process their experience (on second thoughts). In the following sections I will provide more details about each of these stages. I have summarised the emergent themes in these three stages in the Diagram 4-1.
Diagram 4-1 The emergent themes and subthemes from interviews with recipients of alcohol intervention

**Instant reactions**
- Ranges from **instantly rejecting** to **fully embracing**
- Dismissing, wrestling, conforming

**Adopted Strategy**
- **Attitudes towards the definition**
- **What defines them outside the realm of health settings?**
- **Gratification seeking**
- **Social identity**
- **Familiarity**
- **Autonomy**

**On second thoughts**
- **Patronising**
- **Ignoring our special relationship with alcohol**
- **Not ‘that harsh’ after all but doubts about the impact**

**Ranges from instantly rejecting to fully embracing**
- **Positive/compliant**
- **Ambivalent**
- **Negative/rejecting**

**Instant reactions**
- **On second thoughts**
  - **Accepting the offer**
  - **Handling on their own**
  - **Rejecting the ‘help’**

**Adopted Strategy**
- **Autonomy**
- **Familiarity**
- **Social identity**

**Not ‘that harsh’ after all but doubts about the impact**
4.2.1 Instant reactions

This stage represents the experience of individuals when faced with the definition of ‘excessive drinking’ suggested by a health professional. This phase is crucial to the subsequent interactions between the health professional and the ‘excessive drinker’ and is both influenced by and has an impact on the extent the individual can ‘identify with/relate to’ the definition and/or the link between their attendance at the clinic and their use of alcohol. The majority of people I interviewed believed that sexual health clinics are a suitable place to screen for excessive drinking for a number of reasons; they either had past experience of an unwanted/regretted sexual event under the influence of alcohol or were aware of this happening to someone close to them. For this particular reason people said that it was generally to be ‘expected’ that the service would screen and offer advice to people attending sexual health clinics with regards to their level of alcohol use.

“...It was a research and I do not know what you are looking for, but the questions were fine...it is probably good for some people... they make some decisions under alcohol or drugs [...] It is related to poor sexual health”

T-15, Male, 33, Irish- did not attend

However, when it was suggested that they themselves were drinking excessively and were the ‘target audience’ for receiving alcohol intervention, it triggered a number of other responses. Initially, people would start a process which I refer to as “scaling relevance” to assess the validity and credibility of the proposed definition (excessive drinker). I summarised these instant reactions into three major categories of: dismissing, wrestling, and conforming;
each of the categories consist of a range of subcategories. Below I will explain these categories and the related subcategories in detail.

4.2.1.1 Dismissing - “I am not an alcoholic”
Those who dismissed or rejected the definition mostly shared a common belief. They came to an early conclusion that health professionals considered them to have some sort of alcohol problems [alcoholic, in need of Alcoholics Anonymous (AA) type intervention] or that staff believed their alcohol use triggered promiscuity.

4.2.1.2 Wrestling - Expected screening but not accepting the label
In the wrestling group the reactions ranged from challenging/questioning the definition, to rationalising and justifying their drinking behaviour. Some justified their drinking as “normal”, “social”, and “occasional” but not excessive. The common theme among the challenging subcategory was that they “must have answered the question wrong”. The recurrent phrase stated by those participants who tried to justify or rationalise their excessive drinking was that “they did not drink anything more than their friends/colleagues”; some even said that their drinking was ‘minimal’ compared to others. The common theme among the wrestling and dismissing group is that the diagnosis (excessive drinker) bears a number of ‘weighty implications’ for the individual.

4.2.1.3 Conforming - Receptive though distinct
A number of participants who either saw the Alcohol Health Workers or spoke to them over the phone acknowledged that such interventions have the potential to make a positive change in people’s drinking behaviour. However, many of these people made a distinction between them and ‘other people’. Some implied that the reason for their receptiveness is
their ‘prior knowledge’. This knowledge was acquired via either their profession or past personal experiences. In the recruitment phase of the trial, on occasions, I was surprised by some patients who enthusiastically attended the appointment with the AHW. Having interviewed them six months later, I realised they did not believe they needed the intervention more than other people; in fact they were in professions with similar roles (e.g. social worker, psychologist, psychiatric nurse, medical or nursing student). They told me that they attended the appointment to gain a first-hand experience about how alcohol problems were tackled in this setting.

Some referred to their personal characteristics such as a sense of ‘commitment’ to complete the stages of the research study they signed up for or their general ‘curiosity’ to know more when the opportunity arose. Others stated that they were generally health oriented and/or health anxious (‘hypochondriac’), therefore, they were keen to gain more health related knowledge. A generally much younger group of participants said that they always struggled to understand the definition of alcohol units and healthy limits and they saw this as a great opportunity to gain the correct information.

However, there were a few occasions when participants mentioned that they had already realised their drinking might be an issue and the fact that this was picked up in the sexual health clinic made them think twice about it. The common feature among all these statements was that people who were given advice about their alcohol consumption preferred to ‘take control’ of the situation whilst acknowledging the ‘good job’ health professionals carried out.
4.2.2 Adopted strategy

At the next stage, people would adopt a strategy to deal with the trigger and resolve the problem. This adopted strategy is a function of their at the moment perception of the ‘nature of this definition’ and ‘other defining variables’ that would impact their decisions in the real world outside any health settings. The interplay of these two components would determine what strategy the individual would use to deal with the offer of an alcohol intervention. In the following section I will describe these two factors in detail and explain how their interplay would lead people to adopt various strategies.

4.2.2.1 Nature of the ‘definition’

As stated in the section on instant reactions, individuals exposed to the definition of excessive drinking would have various perceptions about the nature of this notion. I have coded the ‘nature of the definition’ into seven themes that range from positive/compliant to negative/rejecting attitudes. However, these categories are not mutually exclusive and some participants expressed a combination of them. These seven themes are as follows:

**Obvious/identifiable**

As mentioned previously there were a group for whom the notion of excessive drinking and its harmful consequences made perfect sense. They were attending the clinic for that exact reason (the sexual health consequences of excessive drinking). It was justified, fair and reasonable and they could easily “identify” with the definition.
Provoking curiosity

A group of participants who considered themselves to have a very positive and open view and believed that they “cannot be easily offended” were intrigued by the offer. This group of participants were mainly excessive but not harmful drinkers. A second group as I mentioned in the instant reaction stage became curious just because they also dealt with alcohol problems in their profession.

“...At first, when I was offered the appointment with the nurse I did not expect it to be part of the study, I was a bit surprised and I said to myself: Why me? I’m not an alcoholic... I do not have any alcohol problem...But then I said OK whatever let’s go and see him, I went to see him out of curiosity. I quite liked the session it was not just a leaflet it was related to me [...] that’s part of my character... I go for new things...”

T-1, Male, 24, White British- saw the AHW

Unexpected/confusing

For some participants the advice offered by the clinician was quite “shocking” and a few clearly stated that they wondered why they had been offered an appointment with an Alcohol Health Worker.
Irritating/embarrassing

Some people described feeling ‘embarrassed’ about their drinking behaviour when this was raised with them, mainly because they perceived it as “stigmatising”. This could either be due to feeling judged by health professionals or fear of being marked out as having an alcohol related sexual health problem.

“…if somebody decides to go a clinic they are quite embarrassed anyway and they want to get out of the clinic. They do not want to answer questions on their personal habits, they are there to do one thing and not have advice on their lifestyle…”

T-19, Male, 29, White Australian/British- did not attend the appointment with the AHW
Irrelevant/detached from reality

Some considered the definition (excessive drinking) as ‘irrelevant’ to them just because they genuinely believed they were not drinking too much or that this was very much ‘detached from reality’ and only applicable “in theory”.

Uncomfortable/unsettling/intimidating

For some people, mainly those who had already noticed their drinking behaviour might be a ‘concern’ but had chosen to ‘ignore the nagging thought’, the definition was quite unsettling. The combination of this feeling with the beliefs about “social drinking identity” would usually result in denial. Such people preferred not to seek any help or discuss alcohol in further detail with the health professional and/or Alcohol Health Worker.

Revoking autonomy/threatening identity/paternalistic/unsolicited

A recurrent theme among some older participants was that offering advice about the level of alcohol consumption challenged their autonomy and was paternalistic. Interestingly, some of the participants in this group were the same people who thought asking about alcohol consumption was fairly justified in sexual health settings. However, the suggestion that they themselves were drinking excessively was not fully accepted by them. They thought that the offer of seeing an alcohol health worker was unsolicited as they had not asked for any advice and their sole interest was to sort out their sexual health problem or to get a full sexual health check-up.

4.2.2.2 Other defining variables

The strategy that people adopted when they were offered alcohol intervention was also influenced by those variables which would define their position regarding alcohol outside a
health setting. Four distinct factors that influence the individuals’ decision making process outside a health setting comprise: i) autonomy, ii) familiarity, iii) social identity, and iv) gratification seeking. In the following section I will describe each of the themes in detail.

**Autonomy: Self-composed scales**

Some of the participants I interviewed referred to knowing their limits and their drinking being under control. They mentioned that individual factors such as gender should be taken into consideration in developing national guidelines. These participants believed that current recommendations by the Department of Health are based on a ‘one size fits all’ mentality; without taking other contributing factors into account. They were adamant that they knew they did not have any alcohol issues. Some substantiated and validated their argument by saying that they “never drank alcohol in the morning”, or “it was just the weekend” and they “never drank during the week”, or that “it was not every day”. The common theme was the emphasis on autonomy in making lifestyle choices and that individuals preferred to devise their “self-made limits” for drinking.

**Familiarity: ease and comfort/accessibility/availability**

When I asked people about what they thought about the effectiveness of alcohol brief interventions many told me that alcohol is a convenient, available, and fairly cheap way to socialise, and helps people relax and get pleasure from their social life. One participant specifically mentioned that if people were to have a social gathering, a ‘pub’ would be the place of choice not a ‘cafe’. They also emphasised that people do not want to count alcohol units in social gatherings as it would “drain the whole joy and fun out of the social experience”.

159
Social identity: inclusion/integration/conformity

Reference to “social identity” was a recurrent theme in interviews with participants. Many pointed out that “expectations” in society are the driving force behind their decisions. Some elaborated this by expressing how important it is to engage in what is perceived to be the “norm” by the majority. A few participants openly said that they thought that if they were to change their drinking pattern, “the invites would stop”; some said they did not want to be “aloof”, to be the “party pooper” or the “weirdo” among their circle of friends and/or colleagues.

“You have to go to a party at least every two months so that people don’t forget you...Because if you don’t go, the invite stops and when the invite stops London becomes a very, very lonely place...”

T-34, Female, 33, White British- Control arm of the trial

Gratification seeking

The desire for fulfilling experiences and seeking pleasure was an emergent theme many younger participants felt strongly about. Those who chose to drink excessively for pleasure were not willing to consider changes in their drinking behaviour despite any potential health hazards. This meant that any suggestion for receiving help was fully rejected by such participants.
The interplay between how the participants perceived the label of excessive drinker and these defining factors led them to adopt one of the following three strategies: accepting the offer, handling the issue on one’s own, and rejecting ‘help’. I will describe these strategies in detail and provide some examples of each of them.

4.2.2.3 Accepting the offer

People who considered to receive Brief Intervention (BI) from the Alcohol Health Workers (either face-to-face session or over the phone) had different motives. I have, therefore, grouped them into four major typologies: i) the embracer, ii) the experimenter, iii) the worrier, and iv) the compliant (the amenable/committed).

The embracer: In agreement with the label and intervention - ‘well spotted’

Participants in this group mainly agreed with the definition (excessive drinking) and already held the view that their drinking was of concern. Among them, some people had a family member or close friend with alcohol related problems and some were already experiencing some negative consequences of heavy drinking themselves. However, their drinking problem was not necessarily complicated by engaging in risky sexual behaviour. Some participants in
this group also referred to the high level of professionalism in implementing the trial and that
the offer of help and advice was not “forced”.

“Basically with me it made me actually question myself … even though I had realised
that I was drinking too much they actually gave me the … to go “sh*t” You actually are
drinking far too much … There you are … 25-30 units over an evening…”

T-23, Male, 33, White British - Received BI from an AHW over the phone

“The way it was presented was probably the best… It was not forced in your face… I did
not find it confrontational in any way, It was sort of just suggestion; it was more of an
option… If I was told I needed to do it I probably wouldn’t”

T-27, Male, 36, Other White/New Zealand - Received BI from an AHW over the phone

The experimenter: the curious - “How would you go on about it?”

The common theme among this group was that they had - at some point prior to attending
the sexual health clinic - been triggered by the definition, hence the notion of recommended
alcohol units and excessive drinking was not a surprise to them. Most of the participants in
this group were not harmful drinkers, and ‘just’ met the criteria for inclusion in the trial
(meaning that they drank only just above the six or eight units a couple of times weekly or
monthly). These participants did not challenge the ‘label of excessive drinker’, nor did they try
to convince the health professionals that they “had answered the alcohol question wrong”.
Some explicitly said that they attended the session with an AHW only because they were
curious to see what approach was used to tackle alcohol problems in the context of sexual health settings.

**The worrier: the health anxious**

This group of participants were, by their own account, generally health anxious. They were willing to take any opportunity that arose to gain more knowledge about improving their health status. Participants in this group were not offended or shocked by the offer of receiving further intervention from an AHW. On the contrary, they expressed their gratitude to the study team for providing very helpful information that either reassured them they were drinking within safe limits or helped them understand what aspect of their drinking habit required improvement.

**The compliant: the amenable or ‘committed’**

Individuals in this group commented that they were keen to complete all the stages of the study they had signed up to. They took on a professional attitude towards the definition; many of them managed to do this by distinguishing between being identified as drinking excessively and any sense of being personally judged. However, it is worth mentioning that adopting this attitude and managing to complete the stages of the trial did not necessarily translate into an active realisation and/or willingness to reflect on drinking pattern or make further changes.

**4.2.2.4 Handling the issue on one’s own**

In this category, participants were willing to consider and reflect on the suggestion that they drank excessively, but stated that they did not need extra help or advice from an Alcohol
Health Worker. They made it clear that raising the issue was sufficient. Some participants in this group also mentioned that the trial was handled in a respectful and professional manner.

4.2.2.5 Rejecting ‘help’

If the participants’ conclusion was that the definition was “irrelevant” or somehow “misguided” and/or that the offer of seeing an alcohol health worker was not something they had asked for, they rejected the offer of receiving any further advice or help. Some even refused to take the leaflet. Interestingly, some of the participants in the control arm of the trial also held the same view when asked about the hypothetical offer of seeing an AHW.

---

I personally would not see the nurse as I know my limits. I know at some occasions I am may be drinking too much but I know my own drinking limits and I am careful not to go further to dependence... So for me, dependence is out of discussion

[...]Yes maybe if the reason for presentation is at all related to drinking they will be willing to see the nurse or if it has happened in the past to them...For me the regretted sex has not at all been related to alcohol or drugs

T-5, Male, 21, any other mixed background - Control arm of the trial

---

4.2.3 On second thoughts

Interviewing people at a later stage, near the time they completed the trial six-month follow-up interview, provided some more insight into how individuals perceived the process of receiving alcohol interventions when they had time to reflect. Feedback from people in the
control arm of the trial, who were not offered the full intervention package at baseline, helped shed light on how people might react to a hypothetical scenario of the offer of alcohol intervention. Regardless of the adopted strategy, the trigger (definition of excessive drinking) would result in a series of subsequent reactions in people which I have coded as ‘on second thoughts’. In the interviews with people who had time to reflect on the process, most of them held more lenient views about the definition of excessive drinking. This may be explained partly by any initial shock they experienced having subsided. Many of those interviewed at this later stage stated that the study was handled very professionally by the study team and that they thought, on reflection, they did not feel to be “under scrutiny” after all. However, most of those who attended a session with an alcohol health worker - either because of their curiosity or personal interest in supporting a research project - stated that although the session was interesting and informative it did not have enough ‘substance’. They mentioned that they had assumed more scientific details would be discussed, but the information they had received was rather light-hearted and trivial.

To give an overview of how participants described their experience of screening and intervention for alcohol misuse six months later and/or their reactions to a hypothetical scenario of receiving alcohol brief intervention, I have summarised the emergent themes into three major categories: a) patronising, b) not being that harsh after all, doubts about the impact, and c) “ignoring our special relationship with alcohol”; each of these main categories comprises a number of subcategories which I will detail in the following section.

4.2.3.1 Patronising

This theme captures the views and experiences of those participants who, even after reflection, thought the process of screening and intervention was patronising either
because it was “nanny state lecturing” or because it tried to dictate how much ‘fun’ people were allowed to have. Below, I will describe these two subcategories in more detail.

‘Nanny state lecturing’: “I don’t want to be saved from myself”

A minority of participants held their critical views about being offered advice even after six months from the initial recruitment to the SHEAR trial. They thought that alcohol was not the problem for which they had presented to the clinic. Whilst admitting that they sometimes would drink ‘a lot’ they believed this was not a ‘problem’. Surprisingly, this remark was made not only by those who had rejected the offer of appointment with an AHW, but also a minority of those who had spoken with an AHW.

Putting cap on fun

Most of the young participants I interviewed held the view that drinking is associated with “having a good time” and heavy drinking sessions (“big nights”) are the highlights of their social life. They believed such advice and categorising individuals as harmful/hazardous drinkers is ineffective. They argued that introducing limits on drinking in the form of maximum safe units was an attempt to “quantify” and, therefore, limit the pleasure associated with drinking. Some even stated that if they were not going to get drunk, there was “no point going out and drinking”. Immediate reactions and the afterthoughts among this group remained unchanged as they thought they purposefully drank over the limits to experience ‘fun’.

4.2.3.2 Not being that harsh after all, doubts about the impact

This theme presents the views of those participants who had come to a conclusion that the whole process of alcohol screening and intervention was not that harsh and did not attack their individual choice. However, many of them expressed their doubts about the
effectiveness of such efforts. Under this theme, there are five subthemes which together capture views of the participants who remained sceptical.

**Mixed message on alcohol -” This is probably what science says”**

Many of the participants referred to mixed messages about alcohol and that some research findings support the potential health benefits associated with drinking. Some of the participants made comparisons between interventions for alcohol and campaigns against smoking. They stated that whilst no evidence would support the idea of smoking occasionally or in small quantities, drinking alcohol in moderation had been previously associated with better health outcomes in some studies. They questioned how they could rely on such mixed messages to give up the instant pleasure and gratification from drinking in favour of preventing “potential health hazards” which might or might not occur in the foreseeable future. Other participants also stated that although they did not fully agree with the definition of excessive drinking and were not going to change their drinking patterns, they realised that the advice was based on scientific and medical advice.

‘The suggestion of drinking more than 20 units a week means I have an alcohol problem was a bit strange, but probably this is the “medical advice”.

T-19, Male, 29, White British-Did not attend the appointment with the AHW
Rather light-hearted and lacking “substance”

In discussing the content of Brief Interventions and issues around impact, some participants suggested that these efforts would be more effective if people were provided with some “hard-hitting” and “vivid” evidence, and that the information should be presented in a way that individuals could relate to. Examples include a focus on calorific content of alcoholic beverages and how this might interfere with people’s health and/or fitness regime, as well as describing the exact impact on different system organs especially the liver and brain.

“I think the things that work with the health messages are the more scientific ones where you can actually show what it’s doing specifically... so you show them the liver or you show what effects it’s having on the brain... I think these are the sorts of things that are hard hitting rather than a lecture. [...]I think you actually need to show the effects otherwise people just think oh it’s.... you know ...it’s just the usual…”

T-35, Female, 38, White British, BI/did not attend the appointment with the AHW

Alcohol may have some health implications

Regardless of the strategy that people adopted towards the alcohol Brief Advice and the offer of an extended session with an Alcohol Health Worker, the majority considered alcohol as having potential detrimental health consequences. However, as mentioned earlier, they believed that the health implications were rather hypothetical and, therefore, it was hard to take them into account when making decisions about their drinking behaviour. Some even
admitted that they often wondered about the health of their liver considering their high levels of drinking. These fleeting thoughts did not mean they were willing to make any changes to their drinking patterns at this point, but they did wonder about the potential consequences of heavy drinking.

“I mean I would like to get a check on my liver and I do remember when I talked to the doctor I said: oh am I able to get any test just to check you know how I am internally? And he said no not on the NHS. At the moment, I haven’t got private health, so I just thought I would leave it But I would like to see … because we do drink a lot, especially when I am working full time because you have to drink, at this level in my career we’re always out with clients so we’re always out … so you’re out three, four times a week work wise and three times with your friends and that’s your week”

T-35, Female, 38, White British, BI/did not attend the appointment with the AHW

It is ‘too late’ for change, though

When asked what they thought about improving the effectiveness of such interventions, many of the participants focused on educating individuals at a much younger age so that people could develop a better understating of alcohol and form a more healthy relationship with drinking. Those who had attended/were attending university emphasised that heavy drinking was a fixed feature of university/campus life and that many would continue to retain this habit into their adult life. They believed that it was unlikely that people would make any changes in their drinking habits at this stage in their life by only emphasising on health
consequences and that it might be “a little bit too late” for many to reshape their relationship with alcohol.

**It was informative ‘on some level’**

Almost universally those who had attended the appointment with an alcohol health worker acknowledged that the session was informative in some ways or at least “reassuring”. Regardless of their views about effectiveness and whether or not they had applied the advice, many thought it would provide people with accurate and sound information about alcohol units. Many stated that although they had previously heard about alcohol units they never fully grasped the idea or what it actually meant in real terms.

**4.2.3.3 “Ignoring individual’s relationship with alcohol”**

The third theme describes feedback from those participants who thought that, despite the importance of alcohol interventions and their potential benefits, some key aspects were overlooked. One of the recurrent objections to introducing limits on alcohol units was that it would not consider reasons why people drink large quantities of alcohol. More specifically, some participants believed that most efforts to address drinking would fail because they did not take into account the “nation’s special relationship with alcohol” which is the determining factor in social arrangements and is often associated with celebratory events.

This main theme is featured in three subthemes which have some overlaps. Two of these subthemes explain the reasons why people might choose to drink excessively. I will describe these three subthemes in more detail in the following section.
‘Drinking to get drunk’: “Stamp of pride”

The focus of this subcategory is on what participants stated was a tendency among people in the UK to “get drunk when drinking”. Whilst some British participants thought that this was a unique characteristic to people in Britain and could not be abandoned overnight, participants from outside the UK attributed this to the “stiff upper lip” characteristic of the nation and “self-restrained” expression of emotions which needed an outlet. These participants further emphasised that drinking patterns were not the same in their home country, and that being exposed to the heavy drinking culture they had (to some extent) conformed to the “new norm”. Although many acknowledged that they drank excessively, they criticised the way their British counterparts would normalise drinking heavily and engaging in out of character behaviours. Some reflected on their own journey from a few years back and why they developed this habit; most stated that this was an attempt to “fit in” and attain the “British social identity”. Many participants - when prompted further - explained how they experienced conflicting emotions about the popularity of ‘drinking to get drunk’ and their genuine desire or lack thereof to adhere to this practice.

“…Of course, I think every student will probably get drunk once in a while ...I’ve got the feeling that here you go out to get completely pissed... Whilst there [in Holland], you go out to have a nice time and you drink as well, but it’s not really cool to tell stories about how completely wasted you were or whatever...[...] that is really cool here...different view point and different idea of what a night is really nice...”

T-26, Female, 26, any other White Background (Netherlands) - Control group
‘Losing control’ or ‘unwinding’: The ‘real goal’ of drinking

When asked about reasons for heavy drinking, many participants said they believed that drinking is used as a “coping” or “escape” mechanism and binge drinking is either a way of “unwinding” after long hours at work on weekdays, or a chance to “chill out” over the weekend. Some went further to describe how one might strategically use alcohol to justify “losing control” and engaging in some behaviours - including risky sexual behaviour - that would otherwise seem “out of character”.

“Here’s like you drink to get drunk, this is what our parents did... we are known for it... It’s almost a stamp of pride for the UK...”

T-36, Male, 23, mixed White/Asian- Saw the AHW on the same day

“In England people are more reserved, so they do drink so that they will have this excuse to act like gipsies, and go out and have sex...”

T-10, Female, 25, any other White Background/American, Control Group
Conforming to social norms

Participants I interviewed (almost) universally emphasised the significant role that society plays in forming habits, that alcohol is deeply ingrained in the building blocks of society and that many of their social interactions involve drinking, and “occasional heavy drinking sessions”. They believed that ignoring such strong social ties would hinder the process of alcohol screening and intervention, and would, therefore, minimise the effectiveness of any intervention aimed at ‘social’ heavy drinking.

“...It doesn’t make sense when you think about it like that, I think what it is as well is that when you have a little bit of depression or you are not feeling happy, so stressed... it’s kind of some people use it as a coping mechanism, so they go out and they drink... And they are sort of relaxed and it’s almost like... I don’t know how to describe this... it’s almost like they are sort of doing it to themselves as a way to cope, and when they feel bad the next day it’s kind of punishing themselves in a way......[....] for drinking, I don’t know how to describe it...

“I don’t know why people keep doing it again and again... maybe it has something to do with depression and the fact that when you do drink you feel happier but it’s obviously false happiness because over all you’re probably not happy Your general health... you know it’s not doing anything good to your general health...”

TP-32, Female, 30, Indian, Control Group - cut alcohol due to the elevated liver enzymes on a random blood test
4.3 Trial experience as the deliverer of Brief Advice (sexual health clinic staff)

In total, I carried out formal interviews with 11 sexual health clinicians involved in the SHEAR trial, six of whom were female clinicians. This comprised interviews with four consultants including one lead consultant clinician, three Trust Grade Doctors, two GP trainees in GUM rotation, one Specialty Registrar and one associate specialist. In this section I will describe the findings from formal interviews and informal conversations with the sexual health clinic staff that were involved in the SHEAR trial and provided the Brief Advice to participants in the intervention arm of the trial. This Brief Advice comprised four components: i) stating that the participants were drinking at a level that could be harmful to their health, ii) asking if the participants thought there was a relationship between their attendance at the clinic and drinking excessively, iii) providing a leaflet on safe drinking limits and information about alcohol units, and iv) offering an appointment with an Alcohol Health Worker.

I have summarised the emergent themes into four main categories which together cover a) views about the identification of excessive drinker and the appropriate eligibility criteria for receiving intervention (is the patient’s drinking a “real” problem?), b) hesitations about whether addressing drinking problems should be within the remit and responsibility of sexual health clinicians (even if it is a problem, is it our role to fix it?), c) the extent that efforts should be made to address drinking problems (assuming it is our role how far should we go to fix it?), and d) uncertainty about the effectiveness of such attempts (even if we go the “extra mile” to
fix it will it be fixed?). These four themes include several subthemes which I will elaborate on in the following section.

4.3.1 Is the patient’s drinking a “real” problem?

Under this category two major subthemes were identified: i) empathising, condemning or demonising, and ii) abandoning alcohol advice in favour of holding a non-judgemental position.

4.3.1.1 Empathising, condemning or demonising

This subtheme captures the mixed feelings and oscillating attitudes staff had about whether the drinking pattern of participants necessitated an intervention as well as statements about how discussions about excessive drinking made some staff feel uncomfortable. These feelings were connected to doubts some had about how valid national drinking guidelines were, and/or the ‘alienness’ of the concept of “excessive drinking”.

Many clinicians stated that they genuinely empathised with some of the participants as they felt these people were in fact conforming to social norms and their drinking behaviour was not that different to their own. They viewed the thresholds we used as ‘too low’ and, in the context of their own use of alcohol, identified with their patients’ concerns that normal social drinking was improperly being defined as a problem. Some other (mostly more senior or older) staff who generally drank below these levels or not at all, stated that they had no idea why people would engage in such behaviour. These staff either criticised this drinking behaviour or chose not to get involved altogether to avoid the uncomfortable emotions and/or potentially awkward conversations with their patients. The latter group felt rather
distanced as they had never engaged in such drinking behaviour due to factors including religious beliefs, cultural norms, and/or age.

In both scenarios, clinicians experienced difficulties with giving advice on drinking levels and said that it made them feel uncomfortable. In the first instance, the idea of discussing alcohol seemed abstract, out of context and/or hypocritical; and would, therefore, result in reluctance to pursue the matter further with participants. The second scenario would either lead to holding a strong opinion about what should or should not be considered healthy or adopting a more lenient attitude and even avoiding the issue altogether. However, staff implemented various methods to deal with their uncertainty. The most frequently used strategies were to attribute the ‘label’ of excessive drinking to the research process, or to state that what they had to say was based solely on the participant’s own replies to the research questions. This uncertainty had a direct impact on when clinicians chose to deliver the Brief Advice. Some preferred to deliver the Brief Advice at the very beginning of consultation, whereas others tried to postpone this further down the line to make sure it would not affect their interaction with their patients. This influenced the participants’ willingness to see an Alcohol Health Worker.

It is not uncommon for patients attending sexual health clinics to spend a few hours in the clinic after the initial visit by the clinician. Subsequently, they are seen for a second time to discuss their lab test results. During recruitment to the SHEAR trial, there were times when an alcohol health worker was available and the Brief Intervention session could have been easily fitted into the clinic process. However, such opportunities were usually missed, because some clinicians felt uncomfortable delivering the Brief Advice during the initial consultation.
In contrast, some clinicians mentioned that they wanted to ‘get the research bit done’ so that they could address their patient’s presenting complaint.

“The danger is that they may get quite defensive so it is good to slide it towards the end of the session, after you have made rapport… but I was always scared I will forget about that, so I asked them first. I tried not to make a big deal out of it. I said to them you have seen someone outside; there are a couple of more questions. And then the leaflet, you may want to read it through in between your tests and screening while you are waiting.’[...]Not many of them made a link; they said they were here for a sexual health check-up...” 5017 - Specialty registrar

4.3.1.2 Abandoning alcohol advice in favour of holding a non-judgemental position

Interviews and informal conversations with sexual health clinic staff revealed that many felt that unless alcohol was responsible for the patients’ presenting symptoms, feedback to the patients that they were drinking excessively might sound ‘judgemental’. Some even questioned the appropriateness of such remarks. I discussed the issue of “silent assumptions” in detail in the previous section and described how some participants believed that health professionals had made up their mind regarding patients’ sexual behaviour and alcohol triggered promiscuity prior to the consultation session. This assumption was frequently supported by comments some sexual health clinic staff made during the course of the trial. They were under the impression that one of the eligibility criteria for recruitment to the SHEAR trial was a history of alcohol related sexual health problems. This emphasis on making a connection was partly because - according to them - it justified the intervention and that the treating clinician could use this as a plausible platform to initiate delivering Brief Advice.
“...and I guess, you know... maybe we are judging a little bit because I’m sure there are a lot of people that are perfectly happy with just getting completely wasted on the weekend and don’t really care about the repercussions and so on...[...] Isn’t that judgmental if we say it is not OK to get drunk?” 5029 - Lead consultant

“It could be useful this intervention, it depends how much they see a link in it and the other thing is...are they taking alcohol to have sex ...” 5017 - Specialty registrar

“...very few of them wanted this appointment either because they did not think it is as serious so they need an appointment with alcohol nurse for it or because they say that’s not what I came here for, I did not come to get advice for alcohol, they do not see the connection...”5005 - Associate specialist

4.3.2 Even if it is a problem is it our role to fix it?

This theme captures the worries and concerns raised by clinic staff on whether addressing alcohol related issues should be in their remit. Three subthemes were identified under this theme - “Prioritising the priorities”, Participants should be identified by an “external resource”, It is not really a “one minute” intervention - which together provide the reasoning behind and the origin of these concerns. They revolve around areas such as time pressure, professional confidence, as well as knowledge and expertise in alcohol related problems.
4.3.2.1 “Prioritising the priorities”

One common issue raised by health professionals was what I have coded as ‘endless list of priorities’. Among those clinicians who believed that alcohol might have an impact on some patients’ sexual behaviour and, therefore, needed to be addressed, there was a resistance to whether it was their role to address alcohol related problems. Some made it clear that addressing patients’ drinking would equal “adding an extra layer” to their already overburdened schedule. One clinician explicitly objected to the idea and stated: “How many more extra bits am I supposed to do?”. Even those who held favourable views about screening and interventions for excessive drinking in sexual health clinics believed that it would significantly impact the length of the consultation session.

“….If I see a straight man with no symptoms in the clinic I can probably see him in four minutes from the start to the finish and do quite detailed history, do quite a lot of health promotion. Talk about contraception and so on…If you ask about alcohol you’re probably going to extend the consultation...” 5029 - lead consultant

4.3.2.2 Participants should be identified by an ‘external resource’

As the trial progressed, the initial anxiety about how the participants would react to alcohol intervention subsided. In some instances, sexual health clinic staff openly said that they were expecting more negative reactions from patients, and that observing “patients were perfectly relaxed with it” made them more confident in delivering the Brief Advice. They attributed this to the involvement of several parties in the process and that initial identification was made by a researcher who was an ‘external resource’. However, witnessing the smooth running of the trial raised a wave of new concerns. One recurrent theme was that if alcohol screening
and intervention were to be ‘rolled into’ routine sexual health practice, additional resources would be essential. They emphasised that in the context of the trial they were confident that screening and identification was dealt with prior to the consultation session, and also if they encountered any problems they could discuss it with the study team. Many health professionals felt their expertise was not sufficient to address alcohol problems thoroughly. Some even said that at times they had wondered how the Alcohol Health Workers would initiate such conversations. Furthermore, a concern repeatedly raised by clinicians was their lack of experience and knowledge to deal with a potential “serious alcohol problem”, and in cases where they would come across a patient for whom an urgent measure should be taken. “Dealing with the aftermath” was identified as a factor which hindered a successful delivery of Brief Advice by sexual health clinicians.

...I don’t know, I don’t think it is fair to bring it in as an extra layer without resources, and the time- 7001 - consultant

...If you ask about alcohol you’re probably going to extend the consultation... but the beauty of where we work is that we have Health Advisors so it shouldn’t necessarily be seen just the doctor’s role. We work at a multidisciplinary team it shouldn’t just be the clinician that deals with the aftermath of “You’re drinking this amount” 5029 - lead consultant

4.3.2.3 It is not really a “one minute” intervention

Throughout the course of the trial and in subsequent individual interviews with clinicians some stated that their experience with the study had shown that the Brief Advice would take more than one minute if they identified an alcohol related problem. This resulted in further
anxiety on two levels; firstly, because they were not sure if they had relevant skills and expertise to tackle the subject appropriately. Secondly, the issue of time and the pressure they felt to end the consultation session was in contrast with the professional urge to deal with the emerged problem. Some thought the only solution was to always have an alcohol specialist available to whom they could refer the patient on the same day. More importantly they thought that a structured referral system should be in place for this purpose. This way they felt the patients would not be lost in the process and the issue would be dealt with in a more professional and efficient manner.

4.3.3 Assuming it is our role, how far should we go to fix it?

Before recruiting patients to the SHEAR trial a pilot phase was run at each clinic with the aim of establishing a working relationship with staff and ensuring the smooth implementation of the trial. Additionally, a few training sessions were held for those staff potentially involved in delivering Brief Advice over the course of the trial. In the initial training sessions I emphasised that the study was designed to have minimum impact on the clinic workload and that clinicians were expected to deliver a Brief Advice comprising four specific components to participants identified by the research team. Eligibility was defined as drinking more than six/eight units of alcohol on one session at least monthly, for males and females respectively. However, to my surprise, clinicians expressed different views about how best they should deliver the Brief Advice. Some believed that a “brief touch” on the issue was better tolerated by their patients and that by adopting this strategy they made sure that their relationship with their patients would not be disrupted. In contrast, some of the more senior clinicians who were in positions of greater authority were keen to perform a full set of screening and
intervention to reach a “shared conclusion”. Some went as far as taking nearly a full alcohol history to confirm the outcomes of the trial screening process. However, this strategy resulted in lengthier consultation sessions that their colleagues did not fully appreciate.

4.3.4 Even if we go the “extra mile” to fix it, will it be fixed?

The SHEAR trial was well received by all the three clinics and staff were fully on board with delivering what they were asked by the study team; 99% of the participants in the intervention arm of the trial received the Brief Advice from clinicians. However, in the formal interviews as well as informal conversations that I had with the staff they repeatedly challenged the concept of the effectiveness of such interventions. I have categorised these arguments in three themes, relating to the professional dilemmas about justifying an intervention for a problem they felt they could not ‘sort out’, cynicism about the real impact of behavioural interventions, and the “multifaceted nature” of excessive drinking.

4.3.4.1 Professional dilemma

This theme captures the belief about whether providing alcohol intervention is justified and effective, considering that sexual health clinicians are not experts on the matter and would not be able to sort out the patients’ drinking problems in the same way they could with their sexual health problems. Clinicians referred to the ‘arbitrary’ threshold for excessive drinking. Compared to the importance of poor sexual health, many felt that excessive drinking was less harmful.

4.3.4.2 Realistic not cynical

Part of the uncertainty expressed by staff about the effectiveness of providing alcohol interventions in sexual health settings had its roots in their clinical experience. Some stated
that despite their efforts to educate people about ‘safe sex’ many people would still engage in risky sexual behaviour. They questioned whether such a ‘brief’ intervention for occasional excessive drinking, a matter potentially less harmful compared to the consequences of ‘unprotected sex’, might be effective. They thought they were not cynical but rather realistic about the impact of such interventions because they had witnessed that people repeatedly would take sexual risks, despite being told about the consequences.

“....we do the telling but they return with symptoms again and again [...] Maybe the fact that we see people who take risks let’s say take the risk of pregnancy and they come to the clinic again makes us cynical or realistic about it... About the effectiveness or impact ...it is not that we do not do the talk, we do but it does not seem to work [...] So let’s be realistic, it may work for some people, let’s say if they were raped or gotten drunk and had sex [...] they can make this connection”, 5005 - Associate specialist

### 4.3.4.3 Problem drinking is “multifaceted”

Some clinicians were critical of the brevity of interventions as they believed drinking should be dealt with as a sign and not a symptom that would, therefore, require further assessments. Underlying psychological issues were mentioned as the contributing factor or as the actual reason behind excessive drinking. These clinicians argued that unless those primary issues were addressed any efforts would be futile and would not provide long lasting impact. This view was shared by some participants who believed drinking is an escape mechanism to cope with the emotional pain many individuals might be experiencing.
4.4 Findings from interviews with the providers of Brief Intervention (AHWs)

In this section I will describe the emergent themes from interviews with the four Alcohol Health Workers involved in the SHEAR trial. I have categorised the findings from the formal interviews as well as informal contacts I had with the AHWs during the course of the trial into three major themes. These three categories comprise i) Novelty, ii) Tailor making, and iii) Endorsement and Integration which together capture the Alcohol Health Workers’ experience with the process of the trial and the delivery of the intervention as well as their views about the effectiveness of such interventions. The themes also draw upon AHW’s comments on and recommendations for improving the design and delivery of alcohol brief interventions as well as developing future trials and integration of alcohol screening and intervention into sexual health clinical practice. I will describe these major categories in detail in the following sections.

4.4.1 Novelty

Alcohol Health Workers stated that their experience of working in the context of the SHEAR trial was rather different from their routine line of work. They described differences in clients’ characteristics, the specific setting of sexual health clinic, the referral route and the mode of intervention used in the SHEAR trial. This was interesting particularly because the SHEAR trial focused on problem drinking and all four Alcohol Health Workers were senior health professionals who had extensive experience of working with people who had alcohol problems. In the following section I will detail the various aspects of this ‘novelty’ experienced by the Alcohol Health Workers. The three main subcategories under the theme of novelty
comprise i) refreshing experience, ii) a luxurious setting, and iii) developing skills (learning curve).

4.4.1.1 Refreshing experience

The refreshing experience theme captures those clinical and demographic characteristics of the SHEAR trial participants which Alcohol Health Workers thought were distinctive. Alcohol Health Workers who delivered the Brief Intervention thought that the study population were not similar to those they usually dealt with on a daily basis. They stated that whilst there is a huge emphasis on targeting individuals who drink at hazardous/harmful levels, they would end up seeing a group of patients who were already experiencing some levels of psychological and/or physical harm or were alcohol dependent. They also mentioned that the SHEAR trial participants they came into contact with were generally "much younger, more enthusiastic and less complex" and that they did not experience the "crises" they usually encountered in emergency settings.

They further explained that apart from a few participants who had some underlying psychiatric issues, most participants had mentioned reasons that they did not ‘expect’. These reasons included interest in the process of research, concerns about calorie content of alcoholic beverages, and incompatibility of drinking with their new exercise regime.

Furthermore, they stated that a very significant difference was that the SHEAR trial participants were not mainly suffering from any immediate harm; many were heavy ‘social’ drinkers and shared a belief that “it won’t happen to me”. Alcohol Health Workers thought their role was significantly important and that they were in a unique position to discuss the potential consequences of heavy drinking in an open and honest manner with such
individuals. One of the AHWs explained that they felt responsible to get the message across because they had witnessed the other end of spectrum where people experienced severe alcohol induced harm.

One alcohol health worker mentioned that they saw a considerable number of female participants in their thirties who were drinking at hazardous levels and that most of them did not see this pattern as problematic. Statements such as drinking a bottle of wine with dinner only on a few evenings a week, drinking to relax after a long day with kids and drinking only the best quality wine were among the justifications used for drinking over the limits among this group.

Lastly to their surprise, some participants who attended the appointment or spoke to them over the phone only did so because they had concerns about the drinking behaviour of a family member, partner, or friend. They were keen to obtain some knowledge and to find out about potential routes for seeking help.

4.4.1.2 The luxurious setting

Alcohol health workers who delivered the intervention were based at the emergency departments in hospitals adjacent to the sexual health clinics. They universally made the point that having a room in which they could hold the consultation session with patients was a “luxury” that was usually not available in accidents and emergency departments. They believed this provided a high level of confidentiality and helped with the smooth delivery of intervention. However, they also pointed out that their presence in sexual health clinics was not always welcomed by clinic staff mainly due to “room issues” (i.e. lack of sufficient number of rooms). One AHW held the view that over the phone sessions were more comfortable for
them mainly because they never felt at ease in the consultation rooms wherein they were surrounded by explicit leaflets and posters and everything “very sexual health”. Furthermore, they believed they were never fully accepted as part of the team and that at times this had been anxiety provoking.

4.4.1.3 Developing skills (learning curve)

The three main areas where AHWs believed they had developed new skills in were engaging participants over the phone (“cold calling”), conversations with participants “with not a much obvious starting point”, and establishing referral links.

As described before, in the early interviews I conducted with participants at the pilot phase, some mentioned that time commitment was an issue for them and that they did not mind talking to someone over the phone. These comments and the fact that telephone input is common practice in sexual health clinics led AHWs to offer the option of telephone intervention to participants to increase the chances of people opting for receiving the Brief Intervention.

Despite the initial reluctance, AHWs stated that they developed a new set of skills through this process. One AHW openly said that engaging a person over the phone was a challenge and that “it did not come naturally”. They said that they had always prided themselves in engaging patients in face-to-face sessions and that with telephone intervention they did not have that initial means of communication; therefore, it was much harder to engage someone over the phone whom they had never met.
“...of course we speak with people on the telephone, but trying to engage somebody who might not have that much concern and trying to do that over the telephone, that’s another challenge again, at first I felt a bit skill-less...

..Again with practice I found that I was getting better at that; It kind of surprised me...Calling somebody over the phone and they were willing to discuss quite personal, intimate stuff...AHW-1

One AHW mentioned that by implementing this strategy they had also changed the practice in their own line of work in the general hospitals where they received referrals from medical wards, and accident and emergency departments. They told me that prior to this one of the main barriers was the lack of willingness from patients and that clinicians found it hard to refer patients to the AHW as they thought that it was unlikely their patients would return for an appointment with the AHW. The experience AHWs gained through the SHEAR trial resulted in the introduction of a new system for referrals from clinicians. They started to offer a telephone intervention and took down the contact details of the patients willing to be contacted for a telephone intervention.

Except for one of the AHWs who believed telephone intervention was much easier and better tolerated by participants, all other three believed it was quite demanding and anxiety provoking at the start of implementation. AHWs also shared the views of clinicians about the difficulty of ‘starting the conversation’. They told me that it was often challenging to find a plausible platform for delivering alcohol intervention to people who clearly were not experiencing any problems. The issue became even harder with participants for whom there was no clear link between their attendance at sexual health clinic and excessive use of alcohol. However, AHWs mentioned that they implemented different strategies and that with some
participants they just discussed the general health implications of drinking over the limits. They believed this needed some exploration “to find something to work with”.

Lastly, AHWs believed that their involvement with the SHEAR trial provided them with the opportunity to establish links with sexual health clinics and to set up referral pathways, to acquire some useful knowledge about sexual health, and how to best address alcohol problems in this context.

4.4.2 Tailor making

This theme relates to AHWs’ views about improving the delivery and effectiveness of alcohol interventions in sexual health settings and includes suggestions about screening as well as intervention in the following subcategories: a) screening the unsuspected, b) laying out the problem not owning the situation - sharing and caring not “clinical robotic mode”, c) proposing realistic and easily available alternatives for fun, and d) probing the underlying issues. Items b, c and d are further discussed under the broader theme of modifying the intervention.

4.4.2.1 Screening the unsuspected

AHWs believed that a brief universal screening would be of clinical value and was preferred to a targeted screening in this setting to increase the chances of identifying individuals with potential drinking problems. They noted many of these problems go unrecognised during a routine consultation session because many individuals attending sexual health clinics do not present with those obvious signs used in emergency settings to identify problem drinking. They reflected that most of the participants they saw or spoke to over the phone had a decent
physical appearance, held a job and were of relatively higher socioeconomic status. Their drinking problems only came to light because the SHEAR trial used a universal screening strategy.

4.4.2.2 Modifying the intervention

AHWs also believed that if alcohol interventions were to work among this target group some modifications in their content or mode of delivery needed to be devised. Below are some themes which emerged from their views about the areas where these adaptations should be made.

In the section on the findings from interviews with SHEAR trial participants I described the criticisms expressed by some participants, for instance, that alcohol interventions might be deemed as *paternalistic* by people attending sexual health clinics. It was interesting when AHWs also touched on the issue and emphasised that it is vital to be conscious of such unpleasant feelings that alcohol interventions might conjure. Their proposed solution was to preserve the individuals’ sense of autonomy by “laying out the problem” in full but avoid dictating the solution and “owning the situation”.

AHWs also talked about how some health professionals might convey a rather “robotic mode” when delivering health messages and mentioned this could act as a barrier to effective patient engagement and the success of intervention. They believed whilst it is essential to keep a professional boundary, delivering health messages should be accompanied by a caring stance.

Another theme was the need to take account of the notion that people in this setting are generally healthy and that drinking above the limits is perceived as a commonly practiced social behaviour. AHWs argued that the interventions would have minimal if any impact
unless realistic and practical alternatives for having fun were to be offered when discussing drinking limits with this cohort. However, they also mentioned that this needs a shift in how society as whole defines fun and facilitates engagement in those other fun activities.

Alcohol Health Workers made it clear that in many instances heavy drinking is multifaceted and needs to be probed further; mental health issues were mentioned as a major contributing and/or underlying factor. They thought that on some occasions starting a conversation about alcohol is like opening a ‘Pandora’s Box’ and that health professionals should be made aware and equipped to deal with such scenarios. Considering the busy nature of many health settings including sexual health clinics and time constraints, this means that health care practitioners delivering Brief Advice need to be given sufficient time to deliver them.

### 4.4.3 Endorsement and integration

Alcohol health workers had a clear vision about how alcohol interventions should be implemented to maximise effectiveness if it were to be rolled out into clinical practice. They believed that the emphasis should be put on integration, coherence and continuity in health services, and thought that continuity would provide individuals with a service similar to a “full MOT”. This approach would not only remove the stigma associated with sexual health settings but would also ensure that unconventional health service users such as the young healthy people attending sexual health clinics are screened and offered advice about their drinking.

However, they mentioned that this goal would not be achieved unless it received support from senior personnel in the wider health system spanning across health policy makers, health trusts, and individual clinical teams. They believed that cascaded endorsements over a sustained period of years would be needed if changes in the attitudes of individual health
professional were to be achieved. This would eventually improve patient care and might result in a change in service delivery in the long run.

“I think we should include AHWs in sexual health clinics, have that facility...

Once you get them to come into a one stop place then they are quite happy to see a few people but if you’re going to send people from A to B, from B to C they’re not going to follow through...but if it’s a one stop place, and it’s a place that they’re familiar with, they have been to before, they’re quite happy to engage...You start splitting it, people don’t have time, they don’t know the service, they tend not to go

AHW-3

4.5 Summary of the findings from qualitative data

To summarise the findings from the qualitative components I will present them based on the interviewees’ position in relation to the trial (receiving or providing alcohol interventions), as well as describing the emerged themes across the three broad categories (identifying excessive drinkers, uptake of intervention, and effectiveness).

4.5.1 Intervention recipients

To summarise the findings from the interviews with the trial participants, I will present them in three groups as fully described in the results chapter: a) instant reactions, b) adopted strategies, and c) on second thoughts (Diagram 4-1).
4.5.1.1 Instant reactions

Although most trial participants thought it was acceptable to screen people attending sexual health clinics for excessive drinking, they had different views about the appropriateness and relevance of receiving advice about their own drinking levels. Their most immediate reactions ranged from dismissing to fully embracing the feedback they received. Those who dismissed the label of excessive drinker believed their drinking should not be considered a ‘problem’ as they were not ‘alcoholics’. Reasons such as curiosity and being health conscious were frequently mentioned by those willing to receive further advice about their drinking. Very few of the participants who were open to the idea of discussing the matter further believed their drinking was a problem.

4.5.1.2 Adopted strategy

People would respond differently to the feedback they receive about their drinking levels and the offer of intervention. Their strategy is a function of two factors: a) what the definition of excessive drinking proposed by the health professional means to them, and b) what factors influence their decision making process outside the realm of health settings.

According to the emerging themes from interviews with the SHEAR trial participants, I categorised ‘the nature of this new definition’ into seven main themes. They range from positive/compliant to ambivalent and negative/rejecting attitudes towards the definition of excessive drinking. However, these categories were not mutually exclusive and some participants expressed a combination of them. The seven themes are as follows:

1) obvious/identifiable, 2) provoking curiosity, 3) unexpected/confusing, 4) irritating/embarrassing, 5) irrelevant/detached from reality, 6) uncomfortable/unsettling/intimidating, 7) revoking autonomy/threatening identity/paternalistic/unsolicited.
Four distinct factors that influence the individuals' decision making process outside a health setting comprise: i) autonomy, ii) familiarity, iii) social identity, and iv) gratification seeking.

The interplay between how the participants perceived the label of excessive drinker and these defining factors led to adopting one of the following strategies: accepting the offer, handling the issue on one’s own or rejecting ‘help’.

4.5.1.3 On second thoughts

Interviews with people either in the intervention arm of the trial who had some time to reflect on their experience or in the control arm provided an additional perspective. The overarching theme suggests that most people believed the study was handled with high professional standards and that they did not feel under a great deal of scrutiny. However, depending on the position they had adopted regarding the definition of excessive drinking and/or offer of further intervention and their trial allocation status (intervention or control arm) they expressed a range of reactions. I categorised the participants' views about their experience with the SHEAR trial, after reflection, into three major themes: i) patronising, ii) not being that harsh after all but doubts about the impact, and iii) ignoring our special relationship with alcohol.

Overall, the offer of intervention for excessive drinking in this setting was considered as ignoring the role that drinking over the limits plays as a source of pleasure. Some participants stated that they believed that reminding people that they should be drinking less was "nanny state lecturing". The effectiveness of this brief and "disjointed" advice was questioned as many believed their sexual behaviour was not dictated by their drinking. Furthermore, there was a clear distinction between when people spoke about their own drinking behaviour and effectiveness of such interventions compared to considering this hypothetically and whether
it may help other people with their drinking issues. A common theme was that people were more likely to have a favourable opinion about alcohol screening and intervention for other people than they did for themselves.

4.5.2 Intervention providers - Sexual health clinicians

Findings from interviews and informal conversations with sexual health clinic staff can be categorised into four broad themes described below: a) Ambiguity about the threshold for identifying ‘cases’, b) Concerns over roles and responsibilities, c) Lack of confidence/expertise in delivering the intervention, and d) Uncertainty about the effectiveness of alcohol brief interventions.

4.5.2.1 Ambiguity about the threshold for identifying ‘cases’

Sexual health clinic staff found the process of establishing the definition of excessive drinking to be challenging. A closer look demonstrated that the nature of this challenge differed according to their individual drinking habits and attitudes. Those professionals who either drank very little or not at all held a strong view about the ‘wrongness’ and health consequences of drinking above the threshold, although some in this group stated that they felt rather distanced from the issue. In contrast, some professionals explicitly said that their own drinking habits were “excessive” according to these guidelines and questioned the usefulness of such ‘low’ thresholds. Both groups mentioned the discomfort they felt during the consultation session and wondered if the idea of “excessive drinking” was perceived as judgmental by their patients especially in situations where there was no apparent link between drinking and sexual risk taking. This was mirrored in the findings from the short survey on attitudes of sexual health clinic staff. Just under half (n = 12, 48%) of the clinicians
believed that the threshold used in the SHEAR trial for identifying excessive drinking was too low.

4.5.2.2 Concerns over roles and responsibilities
Health professionals expressed concerns about how alcohol screening and intervention added to their endless list of priorities and questioned whether it was their responsibility to address the patients' drinking. They specifically mentioned that on some occasions starting a conversation about drinking would lead to an extended consultation session. Some felt that this would be an additional burden if the process of alcohol screening and intervention were to become part of routine practice.

4.5.2.3 Lack of confidence/expertise in delivery of intervention
In most cases, clinicians did not feel fully confident about delivering Brief Advice. However, depending on their level of seniority they made adaptations to fit this into the consultation session. Two general areas where they made modifications were: a) the timing of delivering the intervention (at the beginning/towards the end of the consultation session), and b) the extent to which they delivered the intervention (brief touch/shared conclusion). With regards to the timing they chose to deliver the Brief Advice, most clinicians said that they preferred to address the presenting complaint before any reference to the patient's drinking. This made it easier for them to establish rapport before starting a conversation about excessive drinking. Some also mentioned that this could potentially ease the process of delivering Brief Advice in circumstances when the patients would make a link between their drinking and sexual risk taking. However, a few clinicians said that they always tried to start the consultation with the Brief Advice as they wanted to make sure they would not forget to deliver it. Additionally, they said this way they linked the conversation to the research screening process.
Despite the research team asking clinicians to deliver the Brief Advice in a consistent format, it became clear that many diverged from this during the study and modified the intervention they actually delivered. There were two main types of variations; whilst most clinicians preferred to briefly touch on the issue to avoid any confrontation and/or further discussions, two of the more senior sexual health clinicians adopted a more thorough strategy. They explained how they arrived at a ‘shared conclusion’ with their patients and established the notion of excessive drinking before giving any advice.

It is worth highlighting that although clinicians chose different timing and strategies for delivering the advice a common theme emerged from the interviews. They shared an underlying anxiety about finding ‘the right time’ and ‘plausible platform’ to initiate the conversation about excessive drinking with their patients. Some believed part of this anxiety was due to their lack of expertise and that the training provided by the research team had not equipped them for difficult scenarios. This led to conflicting views; on the one hand they could see the rationale for having a very brief conversation with the patients and offering them the option of seeing an AHW for a more thorough intervention. This point was highlighted by the research team that alcohol brief interventions are designed to suit the busy nature of a primary care setting. However, on the other hand, the idea of an abrupt departure from the conversation seemed rather robotic and did not suit many clinicians.

4.5.2.4 Uncertainty about the effectiveness of alcohol brief interventions

Clinicians shared a level of uncertainty about the effectiveness of delivering alcohol intervention to individuals attending sexual health clinics. One professional explicitly stated why they thought these interventions were futile; their experience with giving advice about safe sexual practice and using effective contraception methods had proved ineffective. They
questioned how giving advice about excessive drinking would result in desirable outcomes. Moreover, they thought that in most cases, their patients’ drinking patterns were not as harmful as some of their unsafe sexual behaviours.

4.5.3 Intervention providers - Alcohol Health Workers

Three major themes emerged from interviews with the Alcohol Health Workers: a) novelty, b) tailor making, and c) endorsement/integration.

4.5.3.1 Novelty

The novelty experienced by Alcohol Health Workers covered three areas: i) the clinical and demographic characteristics of those who received Brief Intervention, ii) reasons expressed by participants for choosing to receive further intervention from an Alcohol Health Worker, and iii) developing additional skills for providing Brief Intervention.

In terms of patient characteristics, AHWs mentioned that the patients they saw in the context of the SHEAR trial were younger, less ‘severe’, less complicated, and not experiencing immediate (if any) harms compared to those in their routine line of work. The considerable number of female participants in their thirties who were drinking at hazardous levels was also highlighted. They made a clear distinction with the emergency setting in that, in comparison, the situation in sexual health setting was not “much of a crisis”.

b) Alcohol Health Workers also mentioned that they did not expect to hear what a few participants expressed as the reasons why they had chosen to receive further intervention. “Being interested in research, concerns over the calorific content of alcoholic beverages,
seeking information about how to access services for a family member whom they worried about their drinking” were among the reasons expressed.

c) Providing clinical input over the phone is a routine practice in sexual health clinics. However, such method is not the norm when providing alcohol brief interventions. Alcohol Health Workers mentioned that implementing this mode of intervention led them to experiment with it in their own practice and that they found this to be of value. AHWs explicitly talked about their initial hesitance about the usefulness of this approach and stated that in the beginning, they did not feel very confident about it. They said how their view had changed during the course of the trial and that by the end of it they felt very confident about providing alcohol brief interventions over the phone.

4.5.3.2 Tailor making

Alcohol Health Workers believed that alcohol interventions should be tailored to suit the sexual health setting and that the 'tailor making' should cover both the screening and intervention processes. They emphasised that due to the nature of this setting, universal screening for excessive drinking (as used in the SHEAR trial) should be employed if it were to be rolled out in routine practice. This was based on their experience of seeing patients in the context of the SHEAR trial who they thought had no obvious 'expected' alarming signs. They believed many of these people with excessive drinking patterns would go unrecognised during a routine consultation session due to their unremarkable physical appearance, holding a job and/or higher socioeconomic status of the patients in this setting.

With regards to the intervention format, Alcohol Health Workers thought that the generally held belief about the relationship between excessive drinking and risky sexual behaviour is a
potential source of stigma. This could lead to individuals being reluctant to discuss their drinking with health professionals. To address this issue they suggested that intervention providers should be more cautious when delivering an intervention in this setting and that the content of the intervention should mainly focus on laying out the problem and explaining scientific details rather than how to change behaviour. Alcohol Health Workers also highlighted that clinicians should avoid “robotic mode” when discussing drinking issues and take into account underlying psychological issues which might lead to excessive drinking.

4.5.3.3 Integration and endorsement

AHWs commented that addressing the issue of drinking above guidelines is largely ignored in general medical settings and that alcohol interventions are usually offered as standalone items without integration into the wider health system. They believed that cascaded endorsements over a sustained period were needed if changes in attitudes of individual health professionals were to be achieved. They felt that this endorsement should occur at various levels encompassing individual practices to wider NHS trusts and at a policy level.
4.6 A theoretical elaboration of findings from qualitative data analysis

In this section I will provide a theoretical account of the processes and outcomes of alcohol screening and brief intervention in the context of sexual health clinics with a view to adding depth and breadth to the SHEAR trial findings. The product is a mid-range theory applicable to some other contexts, where novel behavioural interventions are to be introduced into health services and where multiple parties are involved. Later in the discussion chapter, I will suggest a typology for the recipients and providers of such interventions. This will hopefully illuminate some of the inconsistencies in the literature; inform the design of alcohol interventions, and provide some hints to why interventions might be more successful in some individuals and certain settings than in others.

As mentioned before, through the course of the SHEAR trial and interviews with participants I tried to maintain as objective a position as possible to avoid pre-empting concepts. I started off interviews with open questions and used prompting only if it felt necessary to keep the interviews on track. However, on occasions I had to intervene to avoid the derailment of the interview process. I shall emphasise that the views expressed here mirror only those of the individuals I interviewed and my interpretations at the time of writing. I should also remind myself and the reader that these are subject to change and adaptation when/if new knowledge is gathered. The interpretations are in the eyes of beholder and the theory set out is one of a number of possible explanations and descriptions of the account. Furthermore, as Glaser recommends (Glaser, 1978), to derive such theoretical/conceptual categories I developed theoretical sensitivity through further reading and exploring the wider context of
the substantive area of research initially embarked upon. In the discussion chapter, I will make clear references to these exiting theories.

In the section on the results of the qualitative interviews, I described the experience of various parties involved in the trial in the form of a thematic description of their accounts. Most of the themes I referred to were substantive categories that emerged from interviews that I conducted. In order to conceptualise the findings I applied the most widely used theoretical codes (six C’s: causes, context, contingencies, consequences, covariance’s, conditions) to the emergent themes as a framework. Taking this research to a more theoretical level I would propose the core category of ‘perpetual appraisal’ which emerged as the main concern of the participants in the process and fits well within the system of interrelated conceptual emergent categories. In the following paragraphs I will describe how the emergent categories (scaling relevance, perpetual appraisal, miscoded assumptions/presumptions, uncomfortable emotions, prior expectations, instant gratification, and instantaneousness) link together and I will provide further details about the stages of conceptualisation.

Delivering a health message follows the same steps seen in many other human interactions. It includes (but is not limited to) establishing a (professional) relationship, forming a mutual language for communication as well as finding sufficient grounds for that ‘particular’ conversation. All parties involved set out to scale the relevance of the matter to them, to the other party and to the context they are situated in. The evaluation on the receiver end [of alcohol screening and intervention] initially provides the basis for ‘scaling relevance’ of the offered intervention. This is where prior expectations, knowledge and motives for the behaviour feed into the appraisal system. These are the same reasons why people engage in the targeted behaviour (excessive drinking in the case of SHEAR trial) in the first place. Seeking
gratification, fitting in, intimacy and sense of belonging are amongst the reasons (Causes) which all come under the umbrella of *seeking immediacy* and *instantaneousness* in social, personal, physical or emotional interactions (Context). Provided the conclusion (Consequence) on the receiver’s part is that the trigger (definition of excessive drinker) is relevant, the next round of appraisal would determine the extent to which the individual would conform to possible resolutions suggested by the health professional. This is the point when *miscoded assumptions* (Covariances) play a major role and feed into the final decision made and the strategy adopted by the individual.

If the prior knowledge, perception and/or understanding are congruent with the provided definition the chances that the intervention is dismissed are lower. The more incongruent the two, the higher are the chances that the discussion leads to complete dismissal by the individual (Contingency). This occurs mainly because processing of the ‘definition’ in the appraisal system would lead to feelings of uncertainty, insecurity and, therefore, threatening the integrity of the individual. On the contrary, if for any reason, the definition is perceived/appraised as ‘relevant’ the next round of appraisal framework would determine the extent to which the individual would be willing to consider modifications in the target behaviour (Condition).
The relationship between the major emergent categories and the core category in my thesis is best illustrated by a stacked Venn diagram (Diagram 4-2) to capture the overlapping nature of the introduced concepts yet presenting the distinctive roles each might exhibit. On the most superficial level, lie the ‘adopted strategies’ by the individuals, who are offered an intervention for their ‘unhealthy’ behaviour. The nature of this ‘adoption’ is determined by the interplay of the individuals’ ‘prior expectations’ about what they should and would be receiving in that particular health setting, and what ‘defines’ them as an individual in their constructed world outside the realm of health services. ‘Miscoded assumptions’ feed into both defining variables and prior expectations and contribute the most to the misprocessing of any given scenario including the receipt of alcohol brief intervention. However, the core to
all these processes is an on-going assessment (constant evaluation) by each individual which I will refer to as ‘perpetual appraisal’. Constant evaluation is very much shared by the provider of the intervention, as health professionals spend much of their time trying to make (sound) clinical judgements.

The process of ‘perpetual appraisal’ serves to maintain the equilibrium that each individual would have achieved outside the realm of health settings. The main role of this state of equipoise is to safeguard the identity, self-worth and/or personal territory of the individual. A combination of perceived social presence and personal choice governs and defines the boundaries and structure of this state. Any trigger including the introduction of safe drinking limits and offer of help for managing excessive drinking by a health professional would unsettle the state of equipoise. In an attempt to revert to a state of equilibrium, individuals would scale the relevance of the proposed label to them. It is worth mentioning that ‘perpetual appraisal’ neither restarts nor resets; it would un-pause when triggered; meaning that individuals would use their previous experiences and conclusions to make sense of an unexpected event (Diagram 4-3).
Diagram 4-3 An illustration of how the process of ‘perpetual appraisal’ may give rise to conflicting emotions

To put this abstract concept into context, I provide an account of the thoughts that may go through the minds of individuals when subjected to the alcohol brief interventions. Below are some of the comments made by the SHEAR trial participants when asked about what their experience with the SHEAR trial was, and how they felt with regards to alcohol screening and intervention:

- **What point is the health professional actually trying to make?**

- **What are they possibly inferring?**

- **Do they mean I am an alcoholic/have an alcohol problem?**

- **Do they mean I cannot control my drinking?**
Do they mean I get drunk and have unprotected sex?

Why are they trying to take control of my personal life choices?

Why are they lecturing me?

Is there any chance they are right after all?

Concepts such as individual reality, popularity, sense of autonomy, social identity/image, capacity for pleasure and perceived self-worth were emergent themes, capturing the parameters that would define individuals outside the health settings. The definition of excessive drinking offered in the context of the trial was perceived on a spectrum including categories such as ‘quite’ true, uncomfortable, harsh, unsatisfactory, unsettling, nanny state, paternalistic, judgmental, superimposed, unsolicited, intimidating, ‘very’ true, threatening integrity and revoking autonomy.

What needs close attention is that the unsolicited definition of excessive drinking allocated by the health professional was deemed the exact solution to the floating concerns on the intervention receiver’s part. These concerns were around the concepts of acceptability, meeting societal expectations, conformity, social identity, as well as personal integrity.

Whilst a desirable change in behaviour is not and should not be conceived as changing the person or their individuality, changing behaviour inevitably requires modifying the individual’s relation with, their understanding of, and their experience of the targeted behaviour. Many interventions, at best (if at all) result in an increase in the knowledge, but only deep understanding allows for a potential change in a qualitative sense. How the individual relates to the ‘facts’ and how they construct their own reality will ultimately determine the extent to which they may apply the acquired information to real life scenarios.
Transition from one mode of strategy adoption is hardly achieved unless the appraisal system is targeted. It is important to note that providing knowledge and the offer of further help by a health professional would not necessarily warrant such transition as the core appraisal system remains untouched. Shifting the state of the patients’ evaluation, therefore, requires that health providers actively acknowledge the individuals’ potential defining variables whilst remaining conscious of their own preconceived assumptions that they might bring into the consultation session. Having said this, I am mindful that a formal inquiry into possible explanations or assumptions should neither be recommended nor is feasible in a setting where services are audited by the number of patients visited in each clinic session and patient waiting times.
Chapter 5  Results II- quantitative components

In this chapter, I will describe the results from the analysis of quantitative components of my thesis. As explained in the methods chapter I ordered the collection and analysis of the quantitative components of this thesis in three broad themes: 1) 'Screening and Identification', 2) 'Uptake' of the intervention, and 3) ‘Impact’ of the intervention in subgroups of patients. I supplemented this with a survey of staff regarding their views about a) the drinking threshold for eligibility to take part in the SHEAR trial, b) the relationship between excessive drinking and risky sexual behaviour and, c) the impact and effectiveness of alcohol interventions on drinking and/or sexual behaviour. I will present the quantitative results in the described order, followed by a summary of findings from the staff survey.

5.1  Screening and identification

In this section, I will initially provide details about the study sample by describing the characteristics of those who were approached to take part in the SHEAR trial and those who agreed to take part. I will describe the demographic characteristics of people identified as eligible/non-eligible and whether they completed the six-month follow-up interview. Subsequently, I will describe and compare the demographic characteristics of people who completed the follow-up interview based on their drinking status at the time of six-month follow-up interview. The Flow Diagram 5-1 presents these different stages and the number of participants at each stage.
The other main component of this section focuses on the concurrent validity and predictive values of the single item screening questionnaire used in the SHEAR trial (M-SASQ). Identification of the right candidate for alcohol brief intervention in the context of sexual health clinics raised the issue of targeting only those individuals who drink excessively and also engage in risky sexual behaviour or those excessive drinkers who thought their attendance was alcohol-related. To further probe these issues, I examined the prevalence of risky sexual behaviour in my study sample and compared sexual behaviour among excessive and non-excessive drinkers. The rationale and the details of each set of analyses are fully described in the methods chapter.
Diagram 5-1 Stages of sample recruitment

Approached for screening (n = 1640)

Excluded (n = 469)
- Declined to participate (n = 447)
- Insufficient English (n = 22)

Screened (n = 1171)

MSAS-Q positive (n = 802)
Randomised to SHEAR Trial

Attempted to complete six-month follow up (n = 802)

Drop out (n = 210)
- Lost to follow-up (n = 169)
- Withdrawn (n = 61)

Completed 6 month follow-up (n = 592)
73.81%

MSAS-Q negative (n = 369)
Non-eligible for SHEAR Trial

Attempted to complete six-month follow up (n = 285)

Drop out (n = 108)
- Lost to follow-up (n = 88)
- Withdrawn (n = 20)

Completed 6 month follow-up (n = 177)
62.10%
5.1.1 Descriptive analyses of the study sample characteristics

Overall 1640 people were approached in three sexual health clinics for the initial screening, of whom 1171 (71.40%) consented to be screened for the SHEAR study (Flow Diagram 5-1). The demographic characteristics (age, gender) of those who did/did not consent to the initial screening are presented in Table 5-1.

Table 5-1 Comparison of demographic characteristics (age, gender) of those screened/not screened at baseline

<table>
<thead>
<tr>
<th></th>
<th>Screened N = 1171</th>
<th>Not screened N = 469</th>
<th>Total N = 1640</th>
<th>Difference in proportions/means (95% CI)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>511 (43.6%)</td>
<td>228 (48.6%)</td>
<td>739 (45.1%)</td>
<td>4.98 (-0.35 to 10.3)</td>
<td>0.067</td>
</tr>
<tr>
<td>Female</td>
<td>660 (56.4%)</td>
<td>241 (51.4%)</td>
<td>901 (54.9%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age *</td>
<td>27.95 (6.54)</td>
<td>29.69 (8.00)</td>
<td>28.44 (7.03)</td>
<td>1.74 (0.99 to 2.49)</td>
<td>0.001</td>
</tr>
<tr>
<td>Mean(SD)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*N=1638 as two patients did not provide their age

Among those who were screened, 802 (68.49%) were identified as drinking excessively (M-SASQ positive) and were recruited to the SHEAR trial; 369 (31.51%) were identified as non-eligible for inclusion in the SHEAR trial based on their drinking level (M-SASQ negative). The MSAS-Q positive participants had a mean age of 27.25 (SD = 5.80) and 370 (46.13%) were male. The participants in the M-SASQ negative group had a mean age of 29.46 (SD = 7.69) and 141 (38.2%) were male. A comparison of demographic characteristics (age, gender, and ethnicity) of people in the M-SASQ positive and negative groups is shown in Table 5-2. The M-SASQ positive group were more likely to be of White ethnicity, male and younger (mean age
difference: 2.20, [95% CI 1.41 to 3.00]) compared to the M-SASQ negative group; the difference was statistically significant.

Table 5-2 Comparison of demographic characteristics of those who consented to screening according to their M-SASQ status

<table>
<thead>
<tr>
<th></th>
<th>M-SASQ Negative</th>
<th>M-SASQ Positive</th>
<th>Total</th>
<th>Difference in proportions/means, (95% CI)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender (N = 1171)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>141 (38.2%)</td>
<td>370 (46.1%)</td>
<td>511 (43.6%)</td>
<td>7.92 (1.82 to 13.85)</td>
<td>p = 0.011</td>
</tr>
<tr>
<td>Female</td>
<td>228 (61.8%)</td>
<td>432 (53.9%)</td>
<td>660 (56.4%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnicity (N = 1156)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>211 (59.1%)</td>
<td>618 (77.3%)</td>
<td>829 (71.7%)</td>
<td>18.24 (12.42 to 24.11)</td>
<td>p &lt; 0.001</td>
</tr>
<tr>
<td>Black/ Mixed</td>
<td>84 (23.5%)</td>
<td>104 (13.0%)</td>
<td>188 (16.3%)</td>
<td>10.51 (5.70 to 15.66)</td>
<td>p &lt; 0.001</td>
</tr>
<tr>
<td>Asian/ Mixed</td>
<td>20 (5.6%)</td>
<td>29 (3.6%)</td>
<td>49 (4.2%)</td>
<td>1.97 (-0.51 to 5.06)</td>
<td>p = 0.062</td>
</tr>
<tr>
<td>Other</td>
<td>42 (11.8%)</td>
<td>48 (6.0%)</td>
<td>90 (7.8%)</td>
<td>5.76 (2.27 to 9.78)</td>
<td>p = 0.0004</td>
</tr>
<tr>
<td>Age (N = 1171)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>29.46 (7.69)</td>
<td>27.25 (5.80)</td>
<td>27.95 (6.54)</td>
<td>2.20 (1.41 to 3.00)</td>
<td>p &lt; 0.001</td>
</tr>
</tbody>
</table>

All 1171 people who took part in the initial screening consented to be contacted six months later for a follow-up interview. Attempts were made to contact all people who were recruited to the SHEAR trial (M-SASQ positive) to complete the interview at six months. The researchers
made efforts to collect these data by contacting participants a few times, providing various time options and telephoning them in the evenings and weekends.

In order to examine the clinical and demographic characteristics of those identified as M-SASQ negative and compare with those of M-SASQ positive participants, I attempted to collect follow-up data from a consecutive sample of the M-SASQ negative group. However, due to finite resources, a maximum of two attempts were made for collecting follow-up data from this sample.

Efforts were made to follow-up all of those in the M-SASQ positive group (802) and a consecutive sample of 285 people in the M-SASQ negative group. In total, 769 (65.7%) participants completed the follow-up six months after they were first took part in the SHEAR trial. Demographic characteristics of all those who consented to the initial screening based on their completion of six-month follow-up interview is presented in Table 5-3.

**Table 5-3 Demographic characteristics of all consented participants according to their completion of six-month follow-up interview**

<table>
<thead>
<tr>
<th></th>
<th>Completed six-month follow-up</th>
<th>Did not complete six-month follow-up</th>
<th>Total</th>
<th>Difference in proportions/means (95% CI)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>337 (43.8%)</td>
<td>174 (43.3%)</td>
<td>511</td>
<td>0.54 (-5.45 to 6.46)</td>
<td>P = 0.860</td>
</tr>
<tr>
<td>Female</td>
<td>432 (56.2%)</td>
<td>228 (56.7%)</td>
<td>660</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
<td>-0.31 (-1.10 to 0.48)</td>
<td>p = 0.444</td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>28.05 (6.51)</td>
<td>27.74 (6.59)</td>
<td>27.95</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Among 769 participants who completed the follow-up six months later; 592 were in the M-SASQ positive (randomised) group and 177 were individuals identified as M-SASQ negative (non-eligible) at the time of initial screening and recruitment to the SHEAR trial. Demographic characteristics of participants in the M-SASQ positive (randomised) and M-SASQ negative (non-eligible) groups are presented in Tables 5-4 and 5-5 respectively. Comparisons are made between those who did and did not complete the six-month follow-up interview in each group separately.

**Table 5-4 Demographic characteristics of M-SASQ positive (randomised) group according to the completion of six-month follow-up interview**

<table>
<thead>
<tr>
<th></th>
<th>Followed up</th>
<th>Not followed up</th>
<th>Total</th>
<th>Difference in proportions/means, (95% CI)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (SD )</td>
<td>27.57 (5.98)</td>
<td>26.34 (5.21)</td>
<td>27.25 (5.81)</td>
<td>-1.23 (-2.14 to -0.32)</td>
<td>0.008</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>276 (46.6%)</td>
<td>94 (44.8%)</td>
<td>370 (46.1%)</td>
<td>1.86 (-5.99 to 9.57)</td>
<td>0.3213</td>
</tr>
<tr>
<td>Female</td>
<td>316 (53.4%)</td>
<td>116 (55.2%)</td>
<td>432 (53.9%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 5-5 Demographic characteristics of M-SASQ Negative (non-eligible) group according to the completion of six-month follow-up interview

<table>
<thead>
<tr>
<th></th>
<th>Followed up N = 177</th>
<th>Not followed Up N = 192</th>
<th>Total N = 369</th>
<th>Difference in proportions/means (95% CI) p value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean(SD)</td>
<td>29.65 (7.86)</td>
<td>29.28 (7.54)</td>
<td>29.46 (7.69)</td>
<td>-0.37 (-1.95 to 1.20) p = 0.642</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>61 (34.5%)</td>
<td>80 (41.7%)</td>
<td>141 (38.2%)</td>
<td>7.2 (-2.71 to 16.88) p = 0.155</td>
</tr>
<tr>
<td>Female</td>
<td>116 (65.5%)</td>
<td>112 (58.3%)</td>
<td>228 (61.8%)</td>
<td></td>
</tr>
</tbody>
</table>

5.1.2 Demographic and clinical characteristics of excessive and non-excessive drinkers

To compare the demographic and clinical characteristics of excessive drinkers with those of non-excessive drinkers, I used the data on people who completed the follow-up interview and made comparisons between the two groups based on their drinking status at the time of follow-up using AUDIT-C derived from the Form 90. AUDIT-C scores were calculated for all participants who completed the follow-up interview based on the scores on each item of the three item AUDIT-C questionnaire. Scores of five or above were considered as hazardous drinking. In total, 570 (74.12%, [95% CI 71.02 to 77.22]) of 769 participants were identified as hazardous drinkers (AUDIT-C positive) at the time of follow-up interview. Table 5-6 presents the demographic (age, gender, ethnicity, sexual orientation) and clinical (illicit drug use, M-SASQ status at baseline) characteristics of AUDIT-C positive and negative group. The AUDIT-C positive group were more likely to be male, of White ethnicity and slightly younger (mean difference = 1.86) compared to those in the AUDIT-C negative group. The difference was statistically significant for all the above characteristics. Furthermore, people identified as
hazardous drinkers (AUDIT-C positive) were more likely to report they had used illicit drugs in the six months preceding the follow-up interview (P < 0.001).

Table 5-6 Demographic and clinical characteristics of all participants who completed the follow-up interview according to their AUDIT-C score status

<table>
<thead>
<tr>
<th></th>
<th>AUDIT Negative N = 199 (25.9%)</th>
<th>AUDIT Positive N = 570 (74.1%)</th>
<th>Total N = 769</th>
<th>Difference in proportions/means, (95% CI) p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender (N = 769)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>62 (31.2%)</td>
<td>276 (48.4%)</td>
<td>338 (44%)</td>
<td>17.27 (9.39 to 24.55) p &lt; 0.001</td>
</tr>
<tr>
<td>Female</td>
<td>137 (68.8%)</td>
<td>294 (51.6%)</td>
<td>431 (56%)</td>
<td></td>
</tr>
<tr>
<td>Ethnicity (N = 755)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>115 (59.9%)</td>
<td>435 (77.3%)</td>
<td>550 (72.8%)</td>
<td>17.37 (9.77 to 25.15) p &lt; 0.001</td>
</tr>
<tr>
<td>Black/Mixed</td>
<td>43 (22.4%)</td>
<td>73 (13%)</td>
<td>116 (15.4%)</td>
<td>9.43 (3.31 to 16.31) p = 0.0009</td>
</tr>
<tr>
<td>Asian/Mixed</td>
<td>10 (5.2%)</td>
<td>22 (3.9%)</td>
<td>32 (4.2%)</td>
<td>1.30 (-1.75 to 5.62) p = 0.2198</td>
</tr>
<tr>
<td>Other</td>
<td>24 (12.5%)</td>
<td>33 (5.9%)</td>
<td>57 (7.5%)</td>
<td>6.64 (2.09 to 12.31) p = 0.0013</td>
</tr>
<tr>
<td>Age (N = 769)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>29.43 (7.73)</td>
<td>27.57 (5.97)</td>
<td>28.05 (6.51)</td>
<td>1.86 (0.81 to 2.90) p = 0.001</td>
</tr>
<tr>
<td>Sexual Orientation (N = 764)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterosexual</td>
<td>170 (87.6%)</td>
<td>495 (86.8%)</td>
<td>665 (87.0%)</td>
<td>0.79 (-5.16 to 5.73) p = 0.689</td>
</tr>
<tr>
<td>Homo/Bisexual</td>
<td>24 (12.3%)</td>
<td>75 (13.1%)</td>
<td>99 (13%)</td>
<td></td>
</tr>
<tr>
<td>Drinking 6+/8+ units in one session at baseline (N = 768)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never/less than once a month</td>
<td>117 (58.8%)</td>
<td>60 (10.5%)</td>
<td>177 (23%)</td>
<td>48.25 (40.77 to 55.24) p &lt; 0.001</td>
</tr>
<tr>
<td>Monthly/Weekly/Daily</td>
<td>82 (41.2%)</td>
<td>509 (89.5%)</td>
<td>591 (77%)</td>
<td></td>
</tr>
<tr>
<td>Any illicit drug use reported at FU (N = 769)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Yes</td>
<td>34 (17.1%)</td>
<td>205 (36.0%)</td>
<td>239 (31.1%)</td>
<td>18.9 (11.89 to 24.98)</td>
</tr>
<tr>
<td>No</td>
<td>165 (82.9%)</td>
<td>365 (64.0%)</td>
<td>530 (68.9%)</td>
<td>p &lt; 0.001</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Any illicit drug use other than Cannabis reported at FU (N = 769)</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>8 (4.0%)</td>
<td>138 (24.2%)</td>
<td>146 (19%)</td>
<td>20.2 (15.2 to 24.37)</td>
</tr>
<tr>
<td>No</td>
<td>191 (96.0%)</td>
<td>432 (75.8%)</td>
<td>623 (81.0%)</td>
<td>p &lt; 0.001</td>
</tr>
</tbody>
</table>

### 5.1.3 Concurrent validity and predictive values of M-SASQ

This set of analyses was exploratory and performed to examine the concurrent validity and predictive values of the self-completed Modified Single Alcohol Screening Questionnaire (M-SASQ) in identifying excessive drinking in the context of sexual health clinics. The analyses were performed in three stages as described in detail in the methods chapter; the results are summarised in Table 5-7.

In the first stage, in order to assess the concurrent validity of M-SASQ in reference to AUDIT-C as Gold standard, I used only the data collected at the time of follow-up interview. Both M-SASQ and AUDIT-C status were calculated and derived from the Form 90 questionnaire. The objective was to assess the validity of a single item screening question and to examine the extent of agreement with the AUDIT-C questionnaire.

In total, 570 participants were identified as drinking excessively at follow-up using AUDIT-C scores derived from the Form 90 questionnaire. Using M-SASQ criteria derived from the Form 90 questionnaire, a total of 496 screened positive for excessive drinking. At the time of follow-up, 199 participants were identified as non-excessive drinkers using AUDIT-C scores derived
from the Form 90 questionnaire. Using M-SASQ criteria derived from the Form 90 questionnaire, a total of 197 screened negative for excessive drinking. There was a high level of agreement between the two screening tools; 87.01% (95% CI 84.01 to 89.53) and 98.99% (95% CI 96.02 to 99.82) for positive and negative values respectively.

In the second stage, predictive values of M-SASQ at baseline were calculated using the total sample that completed the follow-up interview regardless of their allocation arm in the SHEAR trial. In this stage, M-SASQ status at baseline was compared firstly with their M-SASQ status at the time of follow-up and secondly with AUDIT-C status at the time of follow-up as reference.

In total, 498 participants were identified as drinking excessively at follow-up using M-SASQ criteria derived from the Form 90 questionnaire. At baseline, 467 of these participants had screened positive for excessive drinking using the self-completed M-SASQ. At the time of follow-up, 271 participants were identified as non-excessive drinkers using M-SASQ criteria derived from the Form 90 questionnaire. At baseline, 146 of these participants had screened negative for excessive drinking using the self-completed M-SASQ. The positive and negative predictive values of self-completed M-SASQ using M-SASQ status at follow-up, derived from the Form 90 questionnaire, as reference were 93.77% (95% CI 91.31 to 95.58) and 53.87% (95% CI 47.92 to 59.71) respectively.

Subsequently the M-SASQ status at baseline was compared with AUDIT-C status at follow-up derived from the Form 90 questionnaire. In total, 570 participants were identified as drinking excessively at follow-up using AUDIT-C scores derived from the Form 90 questionnaire. At baseline 510 of these participants had screened positive for excessive drinking using the self-
completed M-SASQ. At the time of follow-up, 199 participants were identified as non-excessive drinkers using AUDIT-C scores derived from the Form 90 questionnaire. At baseline, 117 of them had screened negative for excessive drinking using the self-completed M-SASQ. The positive and negative predictive values of self-completed M-SASQ using AUDIT-C status at follow-up as reference were 89.47% (95% CI 86.68 to 91.73) and 58.79% (95% CI 51.85 to 65.40) respectively.

In the final stage of this set of analyses, the predictive values of M-SASQ at baseline were calculated only among those participants who completed the follow-up interview excluding the individuals in the intervention arm of the SHEAR trial (sensitivity analysis). The rationale was that intervention might have had an impact on individuals’ drinking behaviour and a true comparison should be limited to those who had minimal input (i.e. control arm of the trial and those identified as non-eligible for randomisation to the SHEAR trial). Both groups had received a one-page summary on healthy living choices.

Excluding people in the intervention arm of the SHEAR trial, 277 participants were identified as drinking excessively at follow-up using M-SASQ criteria derived from the Form 90 questionnaire. At baseline, 246 of them had screened positive for excessive drinking using the self-completed M-SASQ. At the time of follow-up, 201 participants were identified as non-excessive drinkers using M-SASQ criteria derived from the Form 90 questionnaire. At baseline, 146 of these participants had screened negative for excessive drinking using the self-completed M-SASQ. Excluding people in the intervention arm of the SHEAR trial, the positive and negative predictive values of self-completed M-SASQ using M-SASQ status at follow-up, derived from the Form 90 questionnaire, as reference were 88.80% (95% CI 84.55 to 92.00) and 72.64% (95% CI 66.1 to 78.34) respectively.
As for the previous stage, the predictive values were also calculated with reference to AUDIT-C status at follow-up, derived from the Form 90 questionnaire. Excluding people in the intervention arm of the SHEAR trial, 324 participants were identified as drinking excessively at follow-up using AUDIT-C scores derived from the Form 90 questionnaire. At baseline, 264 of them had screened positive for excessive drinking using the self-completed M-SASQ. Applying the same exclusion strategy, 154 participants were identified as non-excessive drinkers at follow-up using AUDIT-C scores derived from the Form 90 questionnaire. At baseline, 117 of them had screened negative for excessive drinking using the self-completed M-SASQ. The positive and negative predictive values of self-completed M-SASQ using AUDIT-C status at follow-up, derived from the Form 90 questionnaire, as reference were 81.48% (95% CI 76.89 to 85.33) and 75.97% (95% CI 68.64 to 82.03) respectively.

To summarise, there was a high agreement between AUDIT-C and M-SASQ alcohol screening tools for both positive and negative results (concurrent validity). Table 5 -7 provides a summary of the positive and negative values of M-SASQ obtained at baseline compared to M-SASQ and AUDIT-C at the time of follow-up as well as the results from the sensitivity analyses - excluding those in the intervention arm of the SHEAR trial.
### Table 5-7 Predictive values of M-SASQ alcohol screening tool

<table>
<thead>
<tr>
<th>Screening tool</th>
<th>Gold standard</th>
<th>Positive Predictive Validity (95% CI)</th>
<th>Negative Predictive Validity 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td><em><em>Baseline M-SASQ</em> (n=769)</em>*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M-SASQ at FU**</td>
<td>93.77% (91.31 to 95.58)</td>
<td>53.87% (47.92 to 59.71)</td>
<td></td>
</tr>
<tr>
<td>AUDIT-C at FU**</td>
<td>89.47% (86.68 to 91.73)</td>
<td>58.79% (51.85 to 65.40)</td>
<td></td>
</tr>
<tr>
<td>**Baseline M-SASQ (n=478) *****</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M-SASQ at FU</td>
<td>88.80% (84.55 to 92.00)</td>
<td>72.64% (66.1 to 78.34)</td>
<td></td>
</tr>
<tr>
<td>AUDIT-C at FU</td>
<td>81.48% (76.89 to 85.33)</td>
<td>75.97% (68.64 to 82.03)</td>
<td></td>
</tr>
</tbody>
</table>

* self-completed M-SASQ at baseline

** Both M-SASQ and AUDIT-C scores were calculated and derived from the Form 90 questionnaire used at the time of FU

*** Excluding participants in the intervention arm of the trial
5.1.4 Drinking behaviour of participants in the three months prior to the follow-up interview

Subsequent to the analyses on concurrent validity and predictive values of the M-SASQ screening tool, I ran some further descriptive analyses to describe various aspects of drinking behaviour in people who completed the six-month follow-up interview in the three months preceding this time point. I will present the results as a comparison between the two groups identified as M-SASQ positive and negative at the time of initial screening. The drinking behaviour outcomes that I present here comprise: AUDIT-C status, whether they drank above recommended weekly units, as well as mean weekly alcohol units consumption and the average alcohol units consumed on drinking days.

Those identified as hazardous drinkers at baseline were more likely to be AUDIT-C positive, drink above recommended weekly units as well as to report binge drinking at the time of six-month follow-up compared to the M-SASQ negative group; the difference was statistically significant ($p < 0.001$). MSAS-Q positive group reported to be drinking a weekly average of 14.26 more alcohol units compared to the MSAS-Q negative group ([95% CI 11.81 to 16.71], $p < 0.001$). The difference in the average alcohol units consumed on drinking days between the two groups was 5.75, ([95% CI 4.88 to 6.63], $p < 0.001$). The results of this set of analyses are presented in Table 5-8.
Table 5-8 Drinking behaviour of participants at six-month follow-up according to their M-SASQ status at baseline

<table>
<thead>
<tr>
<th></th>
<th>M-SASQ Negative N=177</th>
<th>M-SASQ Positive N=592</th>
<th>Total N=769</th>
<th>Difference in proportions/means (95% CI) P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AUDIT-C status at Follow-Up</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative</td>
<td>117 (66.1%)</td>
<td>82 (13.9%)</td>
<td>199 (25.9%)</td>
<td>52.25 (44.4 to 59.29) p &lt; 0.001</td>
</tr>
<tr>
<td>Positive</td>
<td>60 (33.9%)</td>
<td>510 (86.1%)</td>
<td>570 (74.1%)</td>
<td></td>
</tr>
<tr>
<td><strong>Drinking above recommended weekly units</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>162 (91.5%)</td>
<td>332 (56.1%)</td>
<td>494 (64.2%)</td>
<td>35.44 (29.05 to 40.63) p &lt; 0.001</td>
</tr>
<tr>
<td>Yes</td>
<td>15 (8.5%)</td>
<td>260 (43.9%)</td>
<td>275 (35.8%)</td>
<td></td>
</tr>
<tr>
<td><strong>Drinking excessively/ more than 6/8 units monthly or more at Follow-Up</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>146 (82.5%)</td>
<td>125 (21.1%)</td>
<td>271 (32.5%)</td>
<td>61.37 (54.20 to 67.16) p &lt; 0.001</td>
</tr>
<tr>
<td>Yes</td>
<td>31 (17.5%)</td>
<td>467 (78.9%)</td>
<td>498 (64.8%)</td>
<td></td>
</tr>
<tr>
<td><strong>Mean weekly alcohol units at Follow-Up (N=768)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>4.92 (7.01)</td>
<td>19.19 (16.10)</td>
<td>15.92 (15.72)</td>
<td>14.26 (11.81 to 16.71) p &lt; 0.001</td>
</tr>
<tr>
<td>95% CI</td>
<td>(3.88 to 5.97)</td>
<td>(17.89 to 20.49)</td>
<td>(14.80 to 17.03)</td>
<td></td>
</tr>
<tr>
<td>Median (IQR)</td>
<td>1.97 (6.03)</td>
<td>15.07 (19.65)</td>
<td>11.70 (19.01)</td>
<td></td>
</tr>
<tr>
<td><strong>Mean alcohol units on drinking days at Follow-Up (N=768)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>4.08 (3.83)</td>
<td>9.84 (5.54)</td>
<td>8.52</td>
<td>5.75 (4.88 to 6.63) p &lt; 0.001</td>
</tr>
<tr>
<td>95% CI</td>
<td>(3.51 to 4.65)</td>
<td>(9.39 to 10.28)</td>
<td>(8.11 to 8.92)</td>
<td></td>
</tr>
<tr>
<td>Median (IQR)</td>
<td>3.24 (4.80)</td>
<td>8.81 (5.83)</td>
<td>7.58 (5.73)</td>
<td></td>
</tr>
</tbody>
</table>
5.1.5 Risky sexual behaviour and drinking excessively: prevalence and correlation

In this section, I will present the prevalence of risky sexual behaviour in my study sample and compare the sexual behaviour of excessive and non-excessive drinkers. Over half (56%) of those who completed the six-month follow-up interview in the main trial reported that they had at least one episode of unprotected sex in the three months preceding the interview. Just over a quarter (27.44%) reported they had more than one sexual partner in the three months prior to the follow-up interview; 14.4% reported having unprotected sex whilst having more than one sexual partner in this period. Less than one in ten (8.59%) said they had a sexual contact that they subsequently regretted, 35.5% reported they had drunk alcohol before having unprotected sex, only 16.1% said they felt they were drunk. People who were drinking at hazardous levels were more likely to report they had more than one sexual partner, unprotected sex after drinking alcohol as well as unprotected sex whilst feeling drunk in the three months preceding their follow-up interview. In the following paragraphs I will describe the results in detail.

5.1.5.1 Sexual behaviour of participants in the three months prior to the follow-up interview

Among participants (n = 769) who completed the six-month follow-up interview, 428 (56%, [95% CI 52 to 59]) reported having had at least one episode of unprotected sex in the three months preceding the interview. There was a trend towards females (58%, [95% CI 53 to 63]) to be more likely to report having had unprotected sex compared to male participants (53%,
[95% CI 47 to 58]) but the difference was not statistically significant: $X^2 (1) = 2.190, n = 769, p = 0.139.$

Participants reported a mean of 1.65 (SD = 2.40, [95% CI 1.48 to 1.82]) sexual partners in the three months prior to the follow-up interview. The median number was 1.00 (IQR = 1). In total, 211 (27.44%, [95% CI 24.28 to 30.60]) participants reported having had more than one sexual partner in the three months prior to the follow-up interview; 111 (14.4%, [95% CI 11.9 to 16.92]) participants reported having had unprotected sex in the three months prior to the follow-up interview whilst having more than one sexual partner in this period. Furthermore, 66 (8.59%, [95% CI 6.61 to 10.58]) participants reported they regretted having sex on one or more occasions in the three months prior to the follow-up interview.

When participants were asked if they had drunk any alcohol before unprotected sex in the three months prior to the follow-up interview, 273 (35.5%, [95% CI 32 to 39]) reported they had done so. However, only 124 (16.1%, [95% CI 14 to19]) reported having been drunk before unprotected sex in the three months prior to the follow-up interview.

5.1.5.2 Comparing risky sexual behaviours in participants based on their AUDIT-C status at follow-up

In the next stage, I compared the occurrence of reported risky sexual behaviours between participants identified as hazardous and non-hazardous drinkers based on their AUDIT-C scores at the time of follow-up interview. Those in the AUDIT-C positive group were more likely to report that they had engaged in risky sexual behaviour in the three months preceding the follow-up interview. Table 5-9 demonstrates the details of this set of analyses.
Table 5-9 - Comparison of risky sexual behaviour in the three months preceding the follow-up interview according to AUDIT-C status

<table>
<thead>
<tr>
<th></th>
<th>AUDIT-C Negative</th>
<th>AUDIT-C Positive</th>
<th>Total</th>
<th>Difference in proportion/means (95% CI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Had unprotected sex</td>
<td>N = 199 (25.9%)</td>
<td>N = 570 (74.1%)</td>
<td>N = 769</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>94 (47.24%)</td>
<td>334 (58.6%)</td>
<td>428 (55.7%)</td>
<td>11.36 (3.32 to 19.25)</td>
<td>p = 0.005</td>
</tr>
<tr>
<td>No</td>
<td>105 (52.76%)</td>
<td>236 (41.4%)</td>
<td>341 (44.3%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of sexual partners</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>1.15 (1.67)</td>
<td>1.83 (2.59)</td>
<td>1.65 (2.4)</td>
<td>-0.682 (-1.068 to -0.297)</td>
<td>p = 0.001</td>
</tr>
<tr>
<td>95% CI</td>
<td>0.91 to 1.38</td>
<td>1.62 to 2.04</td>
<td>1.48 to 1.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median (IQR)</td>
<td>1.00 (0)</td>
<td>1.00 (1)</td>
<td>1.00 (1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>More than one sexual partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>26 (13.1%)</td>
<td>185 (32.5%)</td>
<td>211 (27.4%)</td>
<td>19.39 (12.84 to 25.01)</td>
<td>p &lt; 0.001</td>
</tr>
<tr>
<td>No</td>
<td>173 (86.9%)</td>
<td>385 (67.5%)</td>
<td>558 (72.6%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unprotected sex when had more than one partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>15 (7.5%)</td>
<td>96 (16.8%)</td>
<td>111 (14.4%)</td>
<td>9.3 (3.96 to 13.7)</td>
<td>p = 0.001</td>
</tr>
<tr>
<td>No</td>
<td>184 (92.5%)</td>
<td>474 (83.2%)</td>
<td>658 (85.6%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occurrence of regretted sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>10 (5%)</td>
<td>56 (9.8%)</td>
<td>66 (8.6%)</td>
<td>4.8 (0.26 to 8.34)</td>
<td>p = 0.039</td>
</tr>
<tr>
<td>No</td>
<td>189 (95%)</td>
<td>514 (90.2%)</td>
<td>702 (91.4%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Had unprotected sex after drinking alcohol</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>26 (13%)</td>
<td>247 (43%)</td>
<td>273 (35.5%)</td>
<td>30.27 (23.55 to 35.99)</td>
<td>p &lt; 0.001</td>
</tr>
<tr>
<td>No</td>
<td>173 (87%)</td>
<td>323 (57%)</td>
<td>469 (64.5%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whether drunk before having unprotected sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>6 (3.0%)</td>
<td>118 (20.7%)</td>
<td>124 (16.1%)</td>
<td>17.69 (13.06 to 21.56)</td>
<td>p &lt; 0.001</td>
</tr>
<tr>
<td>No</td>
<td>193 (97.0%)</td>
<td>452 (79.3%)</td>
<td>645 (83.9%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.1.5.3 Comparing risky sexual behaviours in participants based on their M-SASQ status at baseline

Reported risky sexual behaviour among participants in the three months prior to follow-up interview was also compared according to their M-SASQ status at baseline. The same sexual
behaviour variables were examined among participants who completed the follow-up interview. The results are detailed in Table 5-10.

**Table 5-10 Comparison of risky sexual behaviours among participants in the three months prior to follow-up interview according to their M-SASQ status at baseline**

<table>
<thead>
<tr>
<th></th>
<th>M-SASQ Negative N=177</th>
<th>M-SASQ Positive N=592</th>
<th>Total N=769</th>
<th>Difference in proportions/means (95% CI) p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Had unprotected sex</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>96 (54.2%)</td>
<td>332 (56.1%)</td>
<td>428 (55.7%)</td>
<td>1.84 (-6.38 to 10.19) p = 0.665</td>
</tr>
<tr>
<td>No</td>
<td>81 (45.8%)</td>
<td>260 (43.9%)</td>
<td>341 (44.3%)</td>
<td></td>
</tr>
<tr>
<td><strong>Number of sexual partners</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean (SD)</td>
<td>1.28 (1.66)</td>
<td>1.76 (2.57)</td>
<td>1.65 (2.4)</td>
<td>0.48 (0.08 to 0.88) p = 0.02</td>
</tr>
<tr>
<td>95% CI</td>
<td>1.04 to 1.53</td>
<td>1.55 to 1.97</td>
<td>1.48 to 1.82</td>
<td></td>
</tr>
<tr>
<td>Median (IQR)</td>
<td>1.00 (0)</td>
<td>1.00 (1)</td>
<td>1.00 (1)</td>
<td></td>
</tr>
<tr>
<td><strong>Had more than one sexual partner</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>33 (18.6%)</td>
<td>178 (30.1%)</td>
<td>211 (27.4%)</td>
<td>11.42 (4.12 to 17.75) p = 0.003</td>
</tr>
<tr>
<td>No</td>
<td>144 (81.4%)</td>
<td>414 (69.9%)</td>
<td>558 (72.6%)</td>
<td></td>
</tr>
<tr>
<td><strong>Unprotected sex when had more than one partner</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>19 (10.7%)</td>
<td>92 (15.5%)</td>
<td>111 (14.4%)</td>
<td>4.81 (-1.25 to 9.7) p = 0.110</td>
</tr>
<tr>
<td>No</td>
<td>158 (89.3%)</td>
<td>500 (84.5%)</td>
<td>658 (85.6%)</td>
<td></td>
</tr>
<tr>
<td><strong>Occurrence of regretted sex n=768</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>10 (5.7%)</td>
<td>56 (9.5%)</td>
<td>66 (8.6%)</td>
<td>3.78 (-1.15 to 7.45) p = 0.116</td>
</tr>
<tr>
<td>No</td>
<td>166 (94.3%)</td>
<td>536 (90.5%)</td>
<td>702 (91.4%)</td>
<td></td>
</tr>
<tr>
<td><strong>Had unprotected sex after drinking alcohol</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>29 (16.4%)</td>
<td>244 (41.2%)</td>
<td>273 (35.5%)</td>
<td>24.83 (17.55 to 31.03) p &lt; 0.001</td>
</tr>
<tr>
<td>No</td>
<td>148 (83.6%)</td>
<td>348 (58.8%)</td>
<td>469 (64.5%)</td>
<td></td>
</tr>
<tr>
<td><strong>Whether was drunk before having unprotected sex</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>11 (6.2%)</td>
<td>113 (19.1%)</td>
<td>124 (16.1%)</td>
<td>12.87 (7.43 to 17.19) p &lt; 0.001</td>
</tr>
<tr>
<td>No</td>
<td>166 (93.8%)</td>
<td>479 (80.9%)</td>
<td>645 (83.9%)</td>
<td></td>
</tr>
</tbody>
</table>
5.1.5.4 Relationship between hazardous drinking and risky sexual behaviour

A series of binary logistic analyses were carried out to examine the association between whether participants had engaged in risky sexual behaviour and hazardous drinking. Regression analyses showed that participants in the AUDIT-C positive group were more likely to report they had engaged in risky sexual behaviour in the three months prior to the follow-up interview. This association remained significant when adjusted for demographic (age, gender) and clinical characteristics (sexual orientation, any illicit drug use). Details of the analyses, raw Odds Ratios (OR) and fully adjusted ORs are presented in Table 5-11.
Table 5-11 Comparison of sexual behaviour in the three months preceding the follow-up interview according to AUDIT-C status (OR adjusted for demographic and clinical characteristics)

<table>
<thead>
<tr>
<th></th>
<th>AUDIT-C Negative N = 199</th>
<th>AUDIT-C Positive N = 570</th>
<th>Raw OR 95% CI (p-value)</th>
<th>Adjusted OR** 95% CI (p-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Had unprotected sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>94 (47.2%)</td>
<td>334 (58.6%)</td>
<td>1.58 (1.14 to 2.19) P = 0.006</td>
<td>1.43 (1.02 to 2.02) p = 0.039</td>
</tr>
<tr>
<td>No</td>
<td>105 (52.8%)</td>
<td>236 (41.4%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>More than one sexual partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>26 (13.1%)</td>
<td>185 (32.5%)</td>
<td>3.2 (2.04 to 5.00) p &lt; 0.001</td>
<td>2.58 (1.60 to 4.15) p &lt; 0.001</td>
</tr>
<tr>
<td>No</td>
<td>173 (86.9%)</td>
<td>385 (67.5%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unprotected sex when had more than one partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>15 (7.5%)</td>
<td>96 (16.8%)</td>
<td>2.48 (1.41 to 4.4) p = 0.002</td>
<td>1.79 (0.99 to 3.22) p = 0.053</td>
</tr>
<tr>
<td>No</td>
<td>184 (92.5%)</td>
<td>474 (83.2%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occurrence of regretted sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>10 (5%)</td>
<td>56 (9.8%)</td>
<td>2.05 (1.02 to 4.01) p = 0.043</td>
<td>1.58 (0.77 to 3.25) p = 0.218</td>
</tr>
<tr>
<td>No</td>
<td>189 (95%)</td>
<td>514 (90.2%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Had unprotected sex after drinking alcohol</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>26 (13%)</td>
<td>247 (43%)</td>
<td>5.09 (3.26 to 7.94) p &lt; 0.001</td>
<td>4.42 (2.81 to 6.95) p &lt; 0.001</td>
</tr>
<tr>
<td>No</td>
<td>173 (87%)</td>
<td>323 (57%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whether was drunk before having unprotected sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>6 (3%)</td>
<td>118 (20.7%)</td>
<td>8.40 (3.64 to 19.40) p &lt; 0.001</td>
<td>6.96 (2.99 to 16.20) p &lt; 0.001</td>
</tr>
<tr>
<td>No</td>
<td>193 (97%)</td>
<td>452 (79.3%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

OR** adjusted for age, gender, sexual orientation, any illicit drug use
5.2 Uptake of the Brief Intervention

In this section, I will describe the results from a series of analyses examining factors that might impact the uptake of Brief Intervention in the context of sexual health clinics.

In total, 802 participants were recruited to the SHEAR trial and 402 were randomised to the intervention arm. All but five (1.2%) of this group received Brief Advice from the treating clinician. Of those participants (n = 397) who were offered the appointment with an AHW, 81 (20.4%, [95% CI 16.73% to 24.64%]) received a further intervention from an AHW. This intervention was either a face-to-face session (n = 33) or a consultation over the phone (n = 48). The data collected on the five people who did not receive Brief Advice showed that in one instance, the clinician felt it was not appropriate at the time due to their ongoing medical conditions. In three instances, the clinicians forgot to deliver the Brief Advice; in one case the consultation session was terminated early because the patient acted in a rude manner towards the clinician who saw them. I included all 402 participants (the intervention arm of the SHEAR trial) in the uptake of Brief Intervention analyses.

The purpose of this set of analyses was to investigate what factors might have an impact on individuals’ willingness to receive further advice about their drinking. For this reason, I decided to combine both telephone intervention and face-to-face sessions as receiving input (Brief Intervention) from an alcohol health worker in all the subsequent analyses.

5.2.1 Socio-demographic and clinical characteristics

In the first stage I used descriptive statistics to calculate the proportion of participants who did or did not receive the Brief Intervention. I used univariate tests (χ² or t-test) to investigate if there were any significant differences between the groups. There were no statistically
significant relationships between the tested variables and uptake of BI except for the reason for presentation to the clinic at baseline (Table 5-12). There was a relationship between reason for presentation and the uptake of further BI by participants; those who had presented with no symptoms were more likely to receive further intervention (BI) from an AHW. $X^2 (1) = 6.557, n = 396, p = 0.010$
Table 5-12 Socio-demographic and clinical characteristics of the SHEAR participants in the intervention arm of the trial (N=402) based on their uptake of further intervention from an AHW

<table>
<thead>
<tr>
<th></th>
<th>Did not receive intervention N = 321</th>
<th>Received intervention N = 81</th>
<th>Total N = 402</th>
<th>Difference in %/ mean (95% CI) p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>147 (45.8%)</td>
<td>40 (49.4%)</td>
<td>187 (46.5%)</td>
<td>3.59 (-8.35 to 15.53) p = 0.563</td>
</tr>
<tr>
<td>Female</td>
<td>174 (54.2%)</td>
<td>41 (50.6%)</td>
<td>215 (53.5%)</td>
<td></td>
</tr>
<tr>
<td>Ethnicity (N=401)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>250 (78.1%)</td>
<td>59 (72.8%)</td>
<td>309 (77.1%)</td>
<td>5.29 (-4.49 to 16.64) p = 0.312</td>
</tr>
<tr>
<td>Non-White</td>
<td>70 (21.9%)</td>
<td>22 (27.2%)</td>
<td>92 (22.9%)</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean(SD)</td>
<td>27.25 (5.94)</td>
<td>27.25 (5.37)</td>
<td>27.25 (5.82)</td>
<td>0.002 (-1.423 to 1.428) p = 0.997</td>
</tr>
<tr>
<td>95% CI</td>
<td>26.60 to 27.90</td>
<td>26.06 to 28.43</td>
<td>26.68 to 27.82</td>
<td></td>
</tr>
<tr>
<td>Median (IQR)</td>
<td>26.00 (7)</td>
<td>27.00 (8)</td>
<td>26.00 (7)</td>
<td></td>
</tr>
<tr>
<td>Centre</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital Site 1</td>
<td>203 (63.2%)</td>
<td>45 (55.6%)</td>
<td>248 (61.7%)</td>
<td>7.68 (-3.97 to 19.65) p = 0.204</td>
</tr>
<tr>
<td>Hospital Site 2</td>
<td>77 (24.0%)</td>
<td>26 (32.1%)</td>
<td>103 (25.6%)</td>
<td>8.11 (-2.3 to 19.73) p = 0.135</td>
</tr>
<tr>
<td>Hospital Site 3</td>
<td>41 (12.8%)</td>
<td>10 (12.3%)</td>
<td>51 (12.7%)</td>
<td>0.43 (-9.05 to 7.28) p = 0.918</td>
</tr>
<tr>
<td>Sexual Orientation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterosexual</td>
<td>256 (79.8%)</td>
<td>69 (85.2%)</td>
<td>325 (80.8%)</td>
<td>5.43 (-4.72 to 13.18) p = 0.267</td>
</tr>
<tr>
<td>Homo/bi-sexual</td>
<td>65 (20.2%)</td>
<td>12 (14.8%)</td>
<td>77 (19.2%)</td>
<td></td>
</tr>
<tr>
<td>Reason for presentation (Symptomatic) N = 396</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No symptoms</td>
<td>152 (48.3%)</td>
<td>52 (64.2%)</td>
<td>204 (51.5%)</td>
<td>15.94 (3.76 to 26.97) p = 0.010*</td>
</tr>
<tr>
<td>Symptoms</td>
<td>163 (51.7%)</td>
<td>29 (35.8%)</td>
<td>192 (48.5%)</td>
<td></td>
</tr>
<tr>
<td>Smoker</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>130 (40.5%)</td>
<td>36 (44.4%)</td>
<td>166 (41.3%)</td>
<td>3.95 (-7.73 to 15.97) p = 0.519</td>
</tr>
<tr>
<td>Yes</td>
<td>191 (59.5%)</td>
<td>45 (55.6%)</td>
<td>236 (58.7%)</td>
<td></td>
</tr>
<tr>
<td>Any illicit Drug use reported at FU (N=291)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>140 (62.8%)</td>
<td>43 (63.2%)</td>
<td>183 (62.9%)</td>
<td>0.46 (-12.89 to 12.78) p = 0.946</td>
</tr>
<tr>
<td>Yes</td>
<td>83 (37.2%)</td>
<td>25 (36.8%)</td>
<td>108 (37.1%)</td>
<td></td>
</tr>
<tr>
<td>Any illicit Drug use other than Cannabis reported at FU(N=291)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>167 (74.9%)</td>
<td>55 (80.9%)</td>
<td>222 (76.3%)</td>
<td>5.99 (-6.09 to 15.72) p = 0.309</td>
</tr>
<tr>
<td>Yes</td>
<td>56 (25.1%)</td>
<td>13 (19.1%)</td>
<td>69 (23.7%)</td>
<td></td>
</tr>
</tbody>
</table>
5.2.2 Sexual behaviour and drinking characteristics

Table 5-13 details the set of analyses that I performed to compare sexual behaviour and drinking characteristics of participants who received further intervention and those who did not.

The clinicians involved in the SHEAR trial were asked to complete a proforma when delivering Brief Advice. The data were obtained from these proformas on whether participants believed there was a link between their alcohol use and their attendance at the clinic. Among 370 participants in the active arm of the trial who were asked this question, 70 (18.92%, [95% CI 15.26% to 23.37%]) reported there was. The belief that their presentation to the clinic was linked to drinking had no impact on whether people chose to receive further intervention from an AHW.
Table 5.13 Comparative analysis of sexual behaviour and drinking characteristics of those who received/did not receive Brief Intervention from an AHW

<table>
<thead>
<tr>
<th></th>
<th>Did not receive intervention N = 321</th>
<th>Received intervention N = 81</th>
<th>Total N = 402</th>
<th>Difference in % (95% CI) p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Drinking 6+/8+ units in one session</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monthly</td>
<td>123 (38.3%)</td>
<td>30 (37.0%)</td>
<td>153 (38.1%)</td>
<td>1.28 (-10.76 to 12.4) p = 0.832</td>
</tr>
<tr>
<td>Weekly/Daily</td>
<td>198 (61.7%)</td>
<td>51 (63.0%)</td>
<td>249 (61.9%)</td>
<td></td>
</tr>
<tr>
<td><strong>Believed attendance could be due to alcohol (N = 370)</strong></td>
<td>N=293</td>
<td>N=77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>237 (80.9%)</td>
<td>58 (75.3%)</td>
<td>295 (79.7%)</td>
<td>5.56 (-4.05 to 17.00) p = 0.280</td>
</tr>
<tr>
<td>Yes</td>
<td>56 (19.1%)</td>
<td>19 (24.7%)</td>
<td>75 (20.3%)</td>
<td></td>
</tr>
<tr>
<td><strong>Number of sexual partners</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One</td>
<td>135 (42.1%)</td>
<td>29 (35.8%)</td>
<td>164 (40.8%)</td>
<td>6.25 (-5.82 to 17.28) p = 0.306</td>
</tr>
<tr>
<td>More than one</td>
<td>186 (57.9%)</td>
<td>52 (64.2%)</td>
<td>238 (59.2%)</td>
<td></td>
</tr>
<tr>
<td><strong>Had unprotected sex (anal/vaginal)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>57 (17.8%)</td>
<td>21 (25.9%)</td>
<td>78 (19.4%)</td>
<td>8.17 (-1.3 to 19.31) p = 0.097</td>
</tr>
<tr>
<td>Yes</td>
<td>264 (82.2%)</td>
<td>60 (74.1%)</td>
<td>324 (80.6%)</td>
<td></td>
</tr>
<tr>
<td><strong>Regretted sex</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>219 (68.2%)</td>
<td>50 (61.7%)</td>
<td>269 (66.6%)</td>
<td>6.5 (-4.66 to 18.42) p = 0.267</td>
</tr>
<tr>
<td>Yes</td>
<td>102 (31.8%)</td>
<td>31 (38.3%)</td>
<td>133 (33.1%)</td>
<td></td>
</tr>
<tr>
<td><strong>Sex did not consent</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>312 (97.2%)</td>
<td>78 (96.3%)</td>
<td>390 (97.0%)</td>
<td>0.9 (-2.55 to 7.66) p = 0.671</td>
</tr>
<tr>
<td>Yes</td>
<td>9 (2.8%)</td>
<td>3 (3.7%)</td>
<td>12 (3.0%)</td>
<td></td>
</tr>
<tr>
<td><strong>How long had known last partner before first had sex with</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Just met them</td>
<td>31 (9.7%)</td>
<td>7 (8.6%)</td>
<td>38 (9.5%)</td>
<td>1.02 (-7.58 to 6.77) p = 0.780</td>
</tr>
<tr>
<td>A day to one year</td>
<td>290 (90.3%)</td>
<td>74 (91.4%)</td>
<td>364 (90.5%)</td>
<td></td>
</tr>
<tr>
<td><strong>Used condom first time had sex</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>127 (39.6%)</td>
<td>23 (28.4%)</td>
<td>150 (37.3%)</td>
<td>11.17 (-0.66 to 21.4) p = 0.063</td>
</tr>
<tr>
<td>Yes</td>
<td>194 (60.4%)</td>
<td>58 (71.6%)</td>
<td>252 (62.7%)</td>
<td></td>
</tr>
</tbody>
</table>
Among all the demographic and clinical variables tested, reason for presenting to the sexual health clinics was the only variable significantly related to receiving further intervention from an alcohol health worker (raw OR = 0.520, p = 0.011). No significant relationship was found between other variables and whether or not participants had received further intervention from an Alcohol Health Worker. Therefore, binary logistic regression analyses were performed to test if this association would remain significant when adjusted for other covariates. As presented in Table 5-14, two separate regression analyses were performed. One analysis adjusted for age, ethnicity, gender, and sexual orientation. The other analysis adjusted for unprotected sex, having more than one sexual partner, frequency of hazardous drinking and sexual orientation. In both analyses, the association remained significant in that those who had presented with no symptoms were more likely to have had received further intervention from an Alcohol Health Worker.

Table 5-14 Binary logistic regression on the association between reason for presenting to the sexual health clinics and receiving further intervention (BI) from an AHW by SHEAR trial participants

<table>
<thead>
<tr>
<th>Reason for presentation N = 396</th>
<th>Did not receive intervention N = 315</th>
<th>Received intervention N = 81</th>
<th>Raw OR (95% CI) p-value</th>
<th>OR* (95% CI) p-value</th>
<th>OR** (95% CI) p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Symptomatic</td>
<td>152 (48.3%)</td>
<td>52 (64.2%)</td>
<td>0.520 (0.314 to 0.862) p = 0.011</td>
<td>0.515 (0.309 to 0.857) p = 0.011</td>
<td>0.523 (0.314 to 0.872) p = 0.013</td>
</tr>
<tr>
<td>Symptomatic</td>
<td>163 (51.7%)</td>
<td>29 (35.8%)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

OR* adjusted for age, ethnicity, gender, sexual orientation

OR** adjusted for unprotected sex, having more than one sexual partner, frequency of hazardous drinking and sexual orientation
To summarise, those presenting with no symptoms who attended the clinics for a sexual health check-up were more likely to have received further intervention from an AHW either face-to-face or over the phone. No other clinical and/or demographic variables were found to have any impact on receiving further intervention. Frequency of excessive drinking (weekly/daily versus monthly) did not show to have an impact on receiving further intervention. When people in the intervention arm of the trial (n = 370) were asked if they saw a link between their attendance at the clinic and their drinking, under a fifth (18.92%) said they thought there was; such information was not collected from those in the control arm of the trial. ‘Making this link’ did not seem to have an impact on people’s willingness to take up the offer of receiving further intervention from an AHW.

5.3 Subgroup analyses on the effectiveness of Brief Intervention

A series of subgroup analyses were performed to investigate if there were any subgroups of participants for whom the intervention was more effective in reducing their alcohol consumption. For this set of analyses, the mean number of alcohol units consumed on a drinking day was considered as the main outcome (Table 5-15).

Younger age (19-24), male gender, illicit drug use, higher frequency of drinking at hazardous levels (weekly or daily), presenting with symptoms and heterosexual orientation were associated with statistically significant reductions in alcohol units consumed on drinking days (details are presented in Table 5-15). However, when the results were adjusted for age,
gender and hazardous use of alcohol at baseline, the interaction terms were not statistically significant. There was a non-statistically significant trend for the intervention to be more effective in reducing alcohol consumption in those using illicit drugs at a level that required an intervention ($p = 0.097$) - Table 5-16 and Figure 5-1.

Table 5-15 Subgroup analyses of the impact of Brief Intervention in reducing average alcohol units consumed on drinking days

<table>
<thead>
<tr>
<th></th>
<th>Control arm</th>
<th>Intervention arm</th>
<th>Mean difference</th>
<th>95% CI</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N = 301</td>
<td>N = 291</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean alcohol units per drinking day (SD)</td>
<td>10.40 (5.75)</td>
<td>9.25 (5.27)</td>
<td>1.14</td>
<td>(0.25 to 2.03)</td>
<td>p = 0.012</td>
</tr>
<tr>
<td>Mean alcohol units per drinking day in subgroups (SD)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>illicit drug use</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Drug use</td>
<td>N = 196</td>
<td>9.50 (4.94)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drug use</td>
<td>N = 105</td>
<td>12.08 (6.73)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drug use</td>
<td>N = 183</td>
<td>8.86 (5.12)</td>
<td>0.63 (0.38 to 1.65)</td>
<td>p = 0.222</td>
<td></td>
</tr>
<tr>
<td>Drug use</td>
<td>N = 108</td>
<td>9.92 (5.50)</td>
<td>2.17 (0.51 to 3.82)</td>
<td>p = 0.011</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>N = 139</td>
<td>12.35 (6.28)</td>
<td>1.91 (0.48 to 3.34)</td>
<td>p = 0.009</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>N = 162</td>
<td>8.72 (4.67)</td>
<td>0.52 (0.50 to 1.55)</td>
<td>p = 0.314</td>
<td></td>
</tr>
<tr>
<td>How often drinking 6+/8+ units at baseline (N = 591)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monthly</td>
<td>N = 114</td>
<td>9.02 (4.51)</td>
<td>0.73 (0.45 to 1.91)</td>
<td>p = 0.225</td>
<td></td>
</tr>
<tr>
<td>Weekly/Daily</td>
<td>N = 186</td>
<td>11.21 (6.27)</td>
<td>1.34 (0.11 to 2.57)</td>
<td>p = 0.033</td>
<td></td>
</tr>
<tr>
<td>Ethnicity (N = 589)</td>
<td>N = 233</td>
<td>N = 220</td>
<td>N = 0.95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>---------</td>
<td>---------</td>
<td>-----------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>10.44 (5.86)</td>
<td>9.48 (5.23)</td>
<td>(-0.07 to 1.98)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-White</td>
<td>10.41 (5.44)</td>
<td>8.58 (5.39)</td>
<td>1.82 (-0.01 to 3.66)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>N = 109</th>
<th>N = 103</th>
<th>N = 2.47</th>
</tr>
</thead>
<tbody>
<tr>
<td>19-24</td>
<td>11.33 (6.36)</td>
<td>8.86 (5.24)</td>
<td>(0.89 to 4.05)</td>
</tr>
<tr>
<td>&gt; 24</td>
<td>9.87 (5.33)</td>
<td>9.47 (5.28)</td>
<td>0.40 (-0.67 to 1.47)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reason for presentation (N = 582)</th>
<th>N = 152</th>
<th>N = 132</th>
<th>N = 1.32</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptoms</td>
<td>10.43 (5.78)</td>
<td>9.12 (5.04)</td>
<td>(0.043 to 2.60)</td>
</tr>
<tr>
<td>No Symptoms</td>
<td>10.55 (5.78)</td>
<td>9.32 (5.46)</td>
<td>1.23 (-0.05 to 2.51)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sexual Orientation (N = 591)</th>
<th>N = 269</th>
<th>N = 231</th>
<th>N = 1.66</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heterosexual</td>
<td>10.52 (5.89)</td>
<td>8.87 (4.91)</td>
<td>0.70 to 2.62</td>
</tr>
<tr>
<td>Homo(bi)sexual</td>
<td>9.12 (4.25)</td>
<td>10.75 (6.28)</td>
<td>-1.63 (-4.12 to 0.87)</td>
</tr>
</tbody>
</table>
Table 5-16 Difference in outcomes and significance of interaction terms for each subgroup analysis

<table>
<thead>
<tr>
<th>Subgroup</th>
<th>n</th>
<th>Adjusted mean difference (95% CI)</th>
<th>p-value interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>276</td>
<td>-1.671 (-3.060 to -0.281)</td>
<td>0.226</td>
</tr>
<tr>
<td>Female</td>
<td>316</td>
<td>-0.647 (-1.659 to 0.364)</td>
<td></td>
</tr>
<tr>
<td><strong>How often drinking 6+/8+ units at baseline</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monthly</td>
<td>228</td>
<td>-0.731 (-1.880 to 0.417)</td>
<td>0.522</td>
</tr>
<tr>
<td>Weekly/Daily</td>
<td>363</td>
<td>-1.296 (-2.454 to -0.138)</td>
<td></td>
</tr>
<tr>
<td><strong>Drug use status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>379</td>
<td>-0.742 (-1.715 to 0.232)</td>
<td>0.097</td>
</tr>
<tr>
<td>Drug use, no intervention</td>
<td>108</td>
<td>-1.548 (-3.466 to 0.370)</td>
<td></td>
</tr>
<tr>
<td>Drug use, intervention needed</td>
<td>105</td>
<td>-2.755 (-5.300 to -0.211)</td>
<td></td>
</tr>
<tr>
<td><strong>Any drug use</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>379</td>
<td>-0.742 (-1.715 to 0.232)</td>
<td>0.194</td>
</tr>
<tr>
<td>Yes</td>
<td>213</td>
<td>-1.881 (-3.440 to -0.322)</td>
<td></td>
</tr>
</tbody>
</table>
Figure 5-1 Difference in outcomes in each subgroup

Difference in units of alcohol consumed per drinking days

Overall
Gender
   Male
   Female
How often >6/8 units in one occ.
   Monthly
   Weekly/Daily
Any drug use last 6 month
   No
   Yes, no intervention
   Yes, requiring intervention
Any drug use last 6 month
   No
   Yes

Favour Interv   Favour Control

Mean difference 95% CI
No effect Overall effect
5.4 Summary results from staff survey

In this last section of the quantitative results, I will provide the results from the staff survey regarding their views about various aspects of the SHEAR trial. The response rate was 100% from those who I approached. In total, 25 clinicians filled out the questionnaire. Whilst most clinicians endorsed the view that alcohol use and sexual health were linked and needed to be tackled, attitudes were more mixed regarding other aspects of alcohol intervention in sexual health settings. The number and proportion of people who endorsed each question item is presented in Table 5-17.

Table 5-17 Results from staff survey

<table>
<thead>
<tr>
<th>Survey question item</th>
<th>Number (%) endorsed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) I think that excessive alcohol consumption is a major risk factor for unsafe sex that should be tackled.</td>
<td>23 (92%)</td>
</tr>
<tr>
<td>2) When seeing people who drink too much alcohol I have tried hard to encourage them to reduce their drinking.</td>
<td>22 (88%)</td>
</tr>
<tr>
<td>3) I believe that the brief alcohol intervention we deliver will have an impact on the amount that people drink.</td>
<td>22 (88%)</td>
</tr>
<tr>
<td>4) I think that the brief alcohol intervention we deliver will have an effect on sexual health.</td>
<td>22 (88%)</td>
</tr>
<tr>
<td>5) To set the threshold for excessive drinking at ‘more than 6/8 units of alcohol on any one occasion’ is too low.</td>
<td>12 (48%)</td>
</tr>
</tbody>
</table>
5.5 Summary of the findings from quantitative data

5.5.1 Identification of ‘excessive’ drinkers and their sexual behaviour

A sizable proportion (68.49%) of those who agreed to take part in the SHEAR trial, were identified as drinking excessively according to a single item questionnaire (M-SASQ) used for screening in the SHEAR trial. Those identified as excessive drinkers were more likely to be of White ethnicity, male and younger. Looking at drinking patterns of people categorised by their drinking status at baseline, those identified as excessive drinkers at baseline were more likely to report episodes of excessive drinking (frequency) as well as higher levels of drinking (quantity) across various measures at the time of six-month follow-up. Average weekly and per drinking day alcohol consumption reported by MSASQ-positive group at the time of follow-up were 19.19 (SD = 16.10) and 9.84 (SD = 5.54) units respectively.

There was a high agreement between AUDIT-C and M-SASQ alcohol screening tools; 87.01% (95% CI 84.01 to 89.53) and 98.99% (95% CI 96.02 to 99.82) for positive and negative screening results, respectively (concurrent validity). The positive and negative predictive values of self-completed M-SASQ using M-SASQ status at follow-up, derived from the Form 90 questionnaire, as reference were 93.77% (95% CI 91.31 to 95.58) and 53.87% (95% CI 47.92 to 59.71) respectively. The positive and negative predictive values of self-completed M-SASQ using AUDIT-C status at follow-up, derived from the Form 90 questionnaire, as reference were 89.47% (95% CI 86.68 to 91.73) and 58.79% (95% CI 51.85 to 65.40) respectively.
In a series of sensitivity analyses (excluding those in the intervention arm of the SHEAR trial), the positive and negative predictive values of self-completed M-SASQ were calculated. Using M-SASQ status at follow up, derived from Form 90 questionnaire, as reference the positive and negative predictive values were 88.80% (95% CI 84.55 to 92.00) and 72.64% (95% CI 66.1 to 78.34) respectively. The positive and negative predictive values of self-completed M-SASQ using AUDIT-C status at follow up, derived from Form 90 questionnaire, as reference were 81.48% (95% CI 76.89 to 85.33) and 75.97% (95% CI 68.64 to 82.03) respectively.

With regards to the prevalence of risky sexual behaviour, over half (56%) of those who completed the six-month follow-up interview in the main trial reported having at least one episode of unprotected sex in the three months preceding the interview. Although not statistically significant, females were more likely to report this compared to male participants. Just over a quarter (27.44%) reported they had more than one sexual partner in the three months prior to the follow-up interview; 14.4% reported having unprotected sex whilst having more than one sexual partner in this period. Less than one in ten (8.59%) said they had a sexual contact that they subsequently regretted, 35.5% reported they had drunk alcohol before having unprotected sex, only 16.1% said they felt they were drunk.

To explore the relationship between excessive drinking and risky sexual behaviour, I performed two sets of analyses based on drinking status at baseline and at the time of follow-up. People who were drinking at hazardous levels at the time of follow-up were more likely to report unprotected sex, regretted sex, having more than one sexual partner, unprotected sex whilst having more than one sexual partner, drinking before unprotected sex and being drunk before this incident. However, regretted sex and having unprotected sex whilst having more than one sexual partner, did not reach clinical significance after adjustment for age,
gender, sexual orientation and use of illicit drugs. When participants were grouped according to their drinking pattern reported at baseline, those identified as drinking at hazardous levels were more likely to have had more than one sexual partner, unprotected sex after drinking alcohol, as well as unprotected sex whilst feeling drunk in the three months preceding their follow-up interview. Three of the risky sexual behaviours were consistently reported more frequently among excessive drinkers regardless of the criteria and time used for grouping participants into excessive and non-excessive drinkers.

5.5.2 Uptake of intervention

Nearly all those (n = 397, 99%) in the intervention arm of the SHEAR trial (n = 402) received Brief Advice from the treating clinical staff; only a fifth (n = 81) of those offered Brief Intervention, received it. In the exploratory analysis of the impact of clinical and demographic factors on willingness to receive further intervention, reason for presentation to the clinic was the only variable found to have an impact. Those presenting with no symptoms who attended the clinics for a sexual health check-up were more likely to receive further intervention from an AHW. This association remained significant after adjusting for sexual orientation, unprotected sex, having more than one sexual partner and frequency of hazardous drinking reported at the time of recruitment. There was no association between frequency of excessive drinking (weekly/daily versus monthly) and receiving further intervention. When people in the intervention arm of the trial (n = 370) were asked if they saw a link between their attendance at the clinic and their drinking, under a fifth (18.92%) said they thought there was; such information was not collected from those in the control arm of the trial. ‘Making this link’ did not have an impact on people’s willingness to take up the offer of receiving further intervention from an AHW.
5.5.3 **Effectiveness**

To investigate if there were some groups of individuals for whom the intervention might be more effective, I conducted a series of subgroup analyses. Demographic variables (age, gender, and ethnicity) and clinical characteristics (sexual orientation, reason for presentation to sexual health clinic, frequency of excessive drinking, and use of illicit drugs) were tested.

Younger age (19-24), illicit drug use, male gender, higher frequency of hazardous drinking (weekly/daily), presenting with symptoms and heterosexual orientation were associated with statistically significant reductions in alcohol units consumed on drinking days. However, when the results were adjusted, the interaction terms were not statistically significant. There was a possible trend for the intervention to be more effective in reducing alcohol consumption in those using illicit drugs at a level that required an intervention ($p = 0.097$).

5.5.4 **Staff attitude survey**

A total of 25 clinicians filled out a short questionnaire about their attitude towards the alcohol screening and intervention in sexual health settings. Whilst most people endorsed the belief about the role of alcohol in sexual health and that it needs to be tackled, attitudes were more mixed regarding the other aspects of alcohol intervention in sexual health settings. Nearly half of the clinicians believed that the threshold for excessive drinking used in the SHEAR trial (more than six/eight units of alcohol in a drinking session) was too low.
Chapter 6  Discussion

I carried out my research study in parallel with the SHEAR trial. The SHEAR trial was a seemingly straightforward assessor blind randomised controlled trial examining the clinical and cost-effectiveness of brief intervention for excessive alcohol use among people who attend sexual health clinics. My overarching aims were a) to better understand the outcomes of the SHEAR trial, and b) to explore the process of delivering and receiving alcohol brief interventions in the context of sexual health clinics. This required an examination of the challenges and factors which may promote or hinder successful delivery of alcohol brief interventions in this setting. To achieve this, I chose a mixed methods design; I collected and analysed both quantitative and qualitative data. The data were collected in parallel; I also performed secondary analyses of the quantitative data already collected as part of the main SHEAR trial. I used classic grounded theory as the guiding methodology for the collection and analysis of qualitative data. As the analysis progressed and with further readings (Lewin et al., 2009), (Hammersley, 2008), I decided to choose a somewhat different path for reporting my findings compared to the one that I initially planned. I reported the findings in a convergent parallel design; to remain true to the fundamentals of a classic grounded theory I have proposed a mid-range theory.

In this chapter, I will a) merge the findings from the two sources to elaborate on areas of divergence and convergence (O’Cathain et al., 2010), b) outline the strengths and limitations of my work, c) provide detailed interpretation of the findings, and d) link the findings with those of the extant literature. Finally, I describe the implications of these findings for current clinical practice, and provide recommendations for future research in this area.
Throughout my research and specifically when writing this chapter, I attempted to remain reflective, aware and self-critical. To keep a coherent narrative, I refer to the same three broad themes used in the results chapter to describe each sub-section of my discussion chapter: i) screening and identification, ii) uptake of alcohol brief intervention, and iii) effectiveness of alcohol brief intervention in sexual health clinics.

6.1 Merging

In this section, I will merge the findings from the quantitative and qualitative data components of my thesis and discuss areas of convergence/divergence as well as areas of ‘silence’ where themes arose from only one set of data but not the other.

I used classic grounded theory as the guiding methodology for collecting and analysing qualitative data and chose a convergent parallel design for reporting the findings. The qualitative and quantitative data were collected in parallel; the process of the research and findings from the concurrent analysis of the qualitative data guided the collection and analysis of quantitative data. The full analysis of qualitative data was completed before the main trial outcomes were analysed to avoid forcing concepts (Glaser, 1998). However, the analysis of the quantitative component for the thesis was delayed until after all the SHEAR trial analyses were completed and study reports were written up. This decision was to avoid any interference with the reporting/analysing of the main trial outcomes (O’Cathain et al., 2010). The findings from the main SHEAR trial showed that people in the intervention arm reported drinking less in the three months preceding the follow-up interview that was on the border of statistical significance. The adjusted mean difference in weekly alcohol consumption was -
2.33 units (95% CI -4.69 to 0.03, p = 0.053). Looking at alcohol consumption on drinking days this mean difference was -1.13 (95% CI -1.96 to -0.29, p = 0.009).

The overarching aim of my thesis was to elaborate on the findings of the SHEAR trial by exploring the process and challenges of providing alcohol interventions in sexual health clinics. To achieve this, I will link the findings from two sets of data, and provide explanations for areas of convergence and divergence. To maintain the flow of the narrative, I will present the integration of findings in three sections: 1- screening and identification, 2- uptake of intervention, and 3- effectiveness of intervention.

6.1.1 Screening and identification

Under the theme of screening and identification, I will discuss four areas to highlight the similarities and differences between findings from qualitative and quantitative data as well as areas where one set of data would not provide any further explanations. This will comprise: a) acceptability, and b) feasibility of screening, c) issues about using M-SASQ as a single item screening tool including validity and views about the threshold used in the SHEAR trial for identification of excessive drinking, as well as d) relevance and appropriateness of targeted screening (focus on risky sexual behaviour) in the context of sexual health settings.

6.1.1.1 Acceptability of screening

Over two thirds (71.4%) of patients who were approached, agreed to take part in the SHEAR trial and completed the screening questionnaire. Those who agreed to take part were slightly younger (mean age difference = 1.74) and more likely to be female; however, the gender difference did not reach statistical significance and the age difference was not of any clinical significance. Those participants who took part in the trial showed a fair level of compliance in
terms of completing the six-month follow-up interview (74%). Compliance did not seem to be related to their trial allocation status, age or gender. This finding does not support the findings from previous research which suggest older male samples are more amenable to alcohol interventions (Kaner et al., 2009b).

Interviews with those who took part in the trial, sexual health clinic staff and AHWs, mirrored this finding. All three parties stated that screening for excessive drinking in the context of sexual health clinics was acceptable. However, this did not mean that the trial participants agreed with the results of their screening. Interviews with participants shed light on why despite disagreement with the results of screening they chose to complete the follow-up interview. Some participants explicitly said that they completed the follow-up interview because they had initially agreed to do so. Some mentioned that they did realise the importance of completing the assessments as they had previous experience of working in research.

### 6.1.1.2 Feasibility of screening

This aspect was not examined in real practice as the initial approach and taking consent for screening was carried out by the research team. Subsequent interviews with sexual health clinic staff provided some insight into this specific issue. One recurrent theme was a shared anxiety about if/when such alcohol screening and intervention would be rolled out in routine practice. This anxiety was expressed in various forms ranging from explicit statements about the *futility* of such efforts and that addressing people’s drinking was not within their *remit* to more subtle expressions including *uncertainty about effectiveness*, *time constraints* and *lack*
of expertise to deal with patient’s drinking problems once identified. It is not clear what proportion of patients would be screened if clinicians were in charge of carrying out the initial screening procedure. It is also hard to identify whether this ambivalence was fuelled by lack of confidence in dealing with a potential alcohol problem, a result of scepticism about the effectiveness of the intervention, or a combination of the two.

6.1.1.3 Validity, usefulness and acceptability of the M-SASQ screening tool

The results from quantitative data suggest that M-SASQ is an appropriate screening tool, predicts future drinking behaviour, and is well suited to be used in the context of sexual health clinics. Using the single item question, 68.49% of people screened in the SHEAR trial were identified as M-SASQ positive. This confirms the findings from previous research suggesting higher levels of excessive drinking in those attending sexual health clinics compared to the general population. Whilst this finding was supported by AHWS, most of the trial participants rejected this view as they believed they drank at lower levels compared to people they knew and that the threshold used in the trial failed to take account of role of alcohol in having fun.

Despite the high positive predictive value of the screening tool for identifying excessive drinking used in this trial, findings from the qualitative interviews showed that the identification process was the main area under scrutiny. This scrutiny had its roots in perceived assumptions about excessive drinking, definition of risk and problem drinking as well as sub-conscious justification for one’s own drinking behaviour. This was mirrored in the findings from the short survey on attitudes of sexual health clinic staff; about half (n=12, 48%) of the clinicians believed that the threshold used in the SHEAR trial for identifying excessive drinking was too low.
One other important issue to consider is that the screening tool used at baseline was not intended to identify the severity of excessive drinking and encompassed a variety of drinking patterns. Looking at details of drinking patterns at the time of follow-up, people reported drinking a weekly average of 19.9 units (SD = 16.10); the average consumption was 9.84 (SD = 5.54) units on drinking days. Although the drinking levels among this sample are high, the average weekly alcohol consumption is below the maximum drinking allowance per week for men (21 units); the mean alcohol units consumed on a drinking day is only marginally higher than the maximum recommended daily alcohol units for men (eight units). Furthermore, other studies conducted among people attending sexual health clinics have reported higher levels of alcohol consumption compared to drinking levels of people in the SHEAR trial (Standerwick et al., 2007).

6.1.1.4 Targeted screening: risky sexual behaviour

In view of the evidence on the higher prevalence of risky sexual behaviour among those attending sexual health clinics, and the correlation between excessive drinking and risky sexual behaviour (Cooper, 2006), (Weinhardt and Carey, 2000), (Cooke et al., 2010) it might seem plausible to consider introducing targeted alcohol screening and intervention in sexual health clinics. The obvious choice would be to provide alcohol interventions to target individuals attending sexual health clinics who are at higher risks including frequent attendees or those with a history of engaging in high risk sexual activities such as concurrent sexual partnership and unprotected sex. Concurrent sexual partnership is a potential risk factor for increased rate of STIs if accompanied by inconsistency in condom use. It has been suggested that concurrent sexual partnerships are more common among those attending sexual health clinics ranging from 26% to 56% (Senn et al., 2009).
Among the SHEAR trial participants who completed the six-month follow-up interview, over half reported they had unprotected sex in the three months preceding the interview; 14.4% reported at least one incident of unprotected sex whilst they had more than one sexual partner in that period. No data on concurrency or consecutiveness of these sexual partnerships were collected. This should be interpreted cautiously as there is no data on the context in which they engaged in risky sexual behaviour, i.e. if it was with a primary or non-primary partner, and if the sexual contact was concurrent or consecutive.

Additionally, the qualitative data did not support the concept of targeted intervention; people thought that this would be interpreted as stigmatising those attending sexual health clinics and would result in reluctance to receive further interventions. Many of those who were interviewed made it clear that making decisions about having unprotected sex was not influenced by their drinking patterns. Staff had different views; some supported the targeted approach as their assumption was that the eligibility criteria for recruitment to the SHEAR trial was a history of alcohol related sexual health problems. They supported the emphasis on making a connection between risky sexual behaviour and excessive drinking; partly because it justified the intervention and that the treating clinician saw this as a plausible platform to initiate delivering alcohol advice. Some clinicians thought that unless alcohol was the reason for attending the sexual health clinic, any enquiry about drinking excessively might sound ‘judgemental’.

6.1.2 Uptake of intervention

Quantitative data could not fully explain why some participants chose to take up the offer of further intervention whilst others did not. People attending the clinic for a sexual health
check-up were more likely to choose to receive further intervention from an AHW either face-to-face or over the phone, compared to those presenting with symptoms. No other clinical and/or demographic variables were found to have any impact on receiving further intervention. However, reasons stated by those participants receiving further intervention shed some light on this matter and would support the findings from quantitative data. The majority of people who chose to receive further advice about their drinking did not do so because they thought their drinking was a real problem. Being very health conscious, curiosity and working in the health related subjects were frequently mentioned by those who received further intervention. Alcohol Health Workers touched on this subject by referring to their experience with the SHEAR trial as “refreshing”. They mentioned that people who they saw in the course of the trial were different to those in the A&E settings in that they were “less complex” and “not in crisis”. Part of this ‘novelty’ can be explained by the fact that Alcohol Health Workers only had contact with a selective subgroup of participants in the intervention arm of the trial who chose to accept the offer of receiving further intervention from an Alcohol Health Worker. Their experience with the SHEAR trial led them to recommend that ‘asymptomatic screening’ should be implemented in the context of sexual health clinics.

Sexual health clinicians held a more cynical view; they were struck by the relatively low numbers of people who reported that drinking excessively was the main reason they had engaged in risky sexual behaviour. Some clinicians explicitly said that when probing the participants’ drinking patterns they had felt that many people were not drinking any more than them. Furthermore, the SHEAR trial was designed with the assumption about the ease of providing alcohol Brief Advice by sexual health clinicians. This was based on the supposition that talking about alcohol should be relatively easy in a setting where the most private
matters are explicitly discussed. On reflection, I would argue that clinicians are trained and expected to ‘sort out’ the patient’s problems by making a sound clinical judgment or at least having the skills to make a list of differential diagnoses. Facing a situation where they are asked to deliver an intervention (Brief Advice) because of their role as the *treating clinician* based on a judgment made by outsiders (researchers) is by nature anxiety provoking. They are neither the ‘expert’ on the matter nor willing to be as they may believe it is arbitrary, less important and/or less harmful than what they deal with in their area of *expertise*. Worse is yet to come when a patient challenges their judgement (*excessive drinking*) which they may already believe is arbitrary. I would argue that this uncertainty about effectiveness and/or lack of confidence in delivering the Brief Advice might have had an impact on the willingness of participants to take up the offer of receiving further intervention from an AHW.

The brief intervention package used in the SHEAR trial was adopted from the model tested in accident and emergency settings where a focus on ‘*teachable moment*’ is highlighted. I examined the applicability of this theme in a further quantitative analysis to explore whether the belief that the *attendance was linked to drinking* had any impact on individuals’ *willingness to receive intervention*. In the SHEAR study, under a fifth (18.92%) of participants said they thought there was a link. ‘Making this link’ did not seem to have an impact on their decision about seeing an AHW.

Subsequently, I compared the proportion of people in the SHEAR trial who *made a link between attendance and excessive drinking* with the findings from similar studies (with and without an intervention component) in the context of sexual health clinics. Participants in the SHEAR trial were less likely to report that their attendance was linked to drinking excessively. In a cross sectional survey, a consecutive sample of 520 people attending a genitourinary (GU)
medicine clinic in the south of England were asked if their sexual encounter which led them to attend the clinic was a result of being drunk. Fifteen percent said ‘yes’ to this question and 17% said that they thought it was ‘partially’ related. They were also specifically asked if they had unprotected sex as a result of drinking, to which 76% said yes (Standerwick et al., 2007).

In a pilot cross sectional study of the acceptability of providing Brief Advice in an inner London sexual health clinic, 39.8% of individuals identified as consuming excessive alcohol stated that their attendance at the clinic was alcohol related (Crawford et al., 2004a). In the study conducted by Patton and colleagues in a sexual health clinic, 34 out of 183 (18.6%) hazardous drinkers thought that their attendance was related to their substance use (Patton et al., 2008), which is more in line with the findings from the SHEAR study. There is a possibility that the low number of people who believed their attendance was linked to excessive drinking in the SHEAR trial resulted in the low uptake of Brief Intervention.

Results from a randomised trial of brief intervention for alcohol-misusing patients in an emergency department show a higher gap. In this trial, 162 (71.7%) of the control group and 141 (65.9%) of the intervention group believed that their initial emergency department attendance was related to drinking (Crawford et al., 2004b). Different context, the focus on problematic drinking in the emergency department trial (including patients presenting with any of the nine conditions most often associated with alcohol misuse) and having a higher threshold for excessive drinking (weekly rather than monthly binge drinking) may explain the different results compared to the SHEAR trial (Crawford et al., 2004b).
6.1.3 Effectiveness

The main paper published on the SHEAR trial concludes: "Introduction of universal screening and brief intervention for excessive alcohol use among people who attend sexual health clinics does not result in clinically important reductions in alcohol consumption or provide a cost-effective use of resources".

In the further subgroup analyses, younger age (19-24), illicit drug use, male gender, higher frequency of hazardous drinking (weekly/daily), presenting with symptoms and heterosexual orientation were associated with statistically significant reductions in alcohol units consumed on drinking days. However, when the results were adjusted, the interaction terms were not statistically significant. There was a possible trend for the intervention to be more effective in reducing alcohol consumption in those using illicit drugs at a level that required an intervention (p = 0.097). This finding, although interesting, should be interpreted with caution as the hypothesis was not taken into account at the initial stages of trial design and sample size/power calculations. The belief that the attendance was linked to drinking did not have any impact on the effectiveness of the intervention in those who received this further Brief Intervention (subgroup analysis of the effectiveness).

Careful examination of the qualitative data on the effectiveness theme mirrors the main finding of the SHEAR trial and provides some possible explanations for why alcohol brief intervention with the format tested in the SHEAR trial is unlikely to result in reducing alcohol consumption. Drawing upon the findings from qualitative data I will examine the theme of effectiveness from three different angles.
Firstly, only a small proportion of people who were offered an appointment with an AHW accepted this. Data from the interviews suggest that they were not necessarily the high risk taking group. On the contrary, some individuals who opted to see an AHW did so because they were "health anxious". Once the issue was brought up, they wanted to seek reassurance from a health professional that their drinking - which they thought was not excessive – would not have detrimental effects on their health. This also fits with the findings from quantitative analysis – which I explained in the section on the uptake of intervention- suggesting that people who attended the clinic for a sexual health check-up and with no symptoms were more likely to accept the offer of Brief Intervention.

Secondly, examining the levels of drinking in people who took part in the SHEAR trial shows that as a sample, people in the SHEAR trial were ‘moderately’ excessive drinkers. Some participants were opposed to the intervention rationale, their argument was that "people attending a sexual health clinic are health conscious enough to take responsibility for their own health and go for check-ups even if they had engaged in some risky behaviour". One could argue that if people occasionally drink at ‘marginally’ high levels, the intervention would not lead them to make considerable changes in their drinking behaviour.

Thirdly, interviews with staff highlighted a number of factors which may hinder effectiveness of alcohol interventions in sexual health setting: a) the busyness of this setting, b) the stigmas attached to ‘alcohol and risky sex’, and c) scepticism about the effectiveness of the intervention, which the results of the SHEAR trial would suggest are well founded and/or feeling incompetent in dealing with drinking problems on the health professionals’ part. The brief nature of the intervention left very little room for clarifying these assumptions or for the clinicians to gain the confidence for a successful delivery of the intervention. In theory, most
participants and clinicians supported the idea of screening for excessive drinking in sexual health clinics based on the rationale of 'causal link' between sexual risk taking and drinking alcohol to excess. However, in practice, reluctance and hesitation were among the most frequent emergent themes voiced by both those who use and provide sexual health services.

6.2 Strengths and limitations

To the best of my knowledge, this is the first comprehensive examination of the process and challenges of providing and receiving alcohol screening and intervention in sexual health settings. This thesis was carried out in parallel with the SHEAR study, a large scale randomised trial to which a total of 802 people were recruited and nearly three quarters of participants completed the follow-up interview (follow-up rate = 73.82%). This meant that I had a good deal of freedom and flexibility to conduct a purposeful sampling strategy for the qualitative interviews. I was able to interview a diverse range of patients and staff in order to develop a clearer understanding of the factors which may facilitate or hinder an effective intervention. Detailed data about the experience of receiving and delivering brief interventions were obtained. I used classic grounded theory methodology which is based on research objectivity and the search for the truth in the data; the overall openness and flexibility of this methodology allows for using data from various sources. I collected additional quantitative data from the trial participants and also performed secondary analyses on the data collected for the main trial. Although most of the analysis was post-hoc and formal sample size calculations were not conducted, the large sample size in the study reduced the likelihood of false negative findings.
However, this study also has a number of limitations. Most importantly, this thesis was limited by the constraints of the SHEAR study to ensure the successful implementation of this randomised trial. I was aware of the limitations and the challenges this might impose and will explain this in detail in the next few paragraphs.

Participants in the SHEAR trial were recruited from three sexual health clinics in central London. In two of the clinics that the participants were recruited from, nearly a fifth of attendees (19.80% and 20.26% respectively) resided in primary care trusts outside London (MedFASH, 2008). Whilst the large sample size and recruiting participants from services with a mobile clientele might have reduced the selection bias, caution should be made with regards to the generalisability of the findings. Some evidence suggests that those residing in other parts of England have different patterns of drinking, thus limiting the generalisability of the study findings.

Whilst attempts were made to interview a diverse sample, it is possible that higher levels of alcohol consumption seen in other parts of the UK would influence the views of staff and patients, uptake of interventions and their effectiveness. The process and effectiveness of alcohol brief interventions in the sexual health clinics in those areas should be examined in order to generate more widely applicable conclusions.

To limit the exposure of people in the control arm of the SHEAR trial to prompts about alcohol, detailed information about people's drinking patterns were not collected at the time of recruitment to the SHEAR trial. All quantitative data at the time of follow-up were collected over the phone by researchers masked to the trial allocation status. Researchers were trained and encouraged to prompt the participants to provide an accurate account of their alcohol and illicit drug use and sexual behaviour in the three months preceding the follow-up
interview. Researchers were reminded about the sensitive nature of some questions and that participants might not be readily willing to share this information. This was to minimise the bias resulting from the feelings of fear/shame some people might have about revealing their use of alcohol, illicit drugs or risky sexual behaviour to a researcher. However, one could not rule out the possibility of social desirability bias as this method in comparison with an anonymous self-completion interview bears a greater risk of introducing bias.

I should also acknowledge the limitation of the data used to assess the concurrent validity and predictive values of the M-SASQ alcohol screening questionnaire as these were derived from the Form 90 and were asked as part of a wider interview. I am also aware of the limitation of this part of analyses due to a) ad hoc nature and b) performing multiple comparisons. In relation to the data collected on illicit drug use, the need to avoid disrupting recruitment into the SHEAR study meant that it was not possible to collect these data at baseline. All data on illicit drug use were collected at the time of six-month follow-up interview. A number of factors such as taking part in the SHEAR study, receiving health messages (healthy living leaflet or alcohol intervention) and attending a sexual health clinic all have the potential to have stimulated the process of self-reflection in participants. This may have resulted in subsequent behavioural changes in the areas that have not been investigated at baseline.

Despite the large sample size in the SHEAR trial, I am aware of the potential limitations in that the characteristics, views and accounts of those who were lost to follow-up, declined to complete the follow-up interview or were not willing to be contacted for the additional qualitative interview might have been different to those who provided data.
My research aim was to explore, elaborate and provide conceptual explanations on the SHEAR trial outcomes with a specific focus on two broad areas of the effectiveness, and process of receiving and delivering alcohol brief interventions in sexual health settings. Qualitative data were collected over the phone that might have led to some nonverbal cues being missed.

The iterative, in depth and flexible nature of the grounded theory methodology meant that I made every attempt to remain conscious, aware, and reflective and to avoid ‘forced discovery’ throughout the interviews. Whilst these attempts would limit bias resulting from subjectivity, role of the researcher and selective sampling, the accounts, narrative and interpretation is based on only the interviews conducted with service users who consented to take part in the SHEAR trial and service providers who were working in the premises of the sexual health clinics that the SHEAR trial took place. I cannot rule out the possibility that the views and attitudes of those who refused to participate, those working in/attending other sexual health clinics and/or in other parts of the country might have differed.

When conducting interviews with members of staff, at times I reflected on incidents which had occurred in that particular clinic and referred to some comments made by the patients. This was to smooth the flow of conversation, open the scope for communicating thoughts as well as providing a confidential space for the staff to express their honest views. My aim was for the interviews to be a medium for mutual discovery rather than a forced interrogation technique. I also made it clear that my goal was not to reach consensus on pre-defined set of agenda.

During the initial pilot phase of the SHEAR trial, participants raised concerns about consenting to the subsequent interviews being digitally recorded. They said that they would feel
uncomfortable talking about some very private matters whilst being recorded. In order to recruit a diverse sample and to minimise the selection bias, I decided to take contemporaneous notes during the interviews as well as to write subsequent notes and memos. This practice ensured that I did not miss part of the data which seemed irrelevant at the time but proved to be worth exploring at a later stage of analysis. One may question that how accurate this would reflect participants’ own words and that researcher’s views may consciously or sub-consciously filter the raw data. I argue that, the focus in classic grounded theory is not repeating participants’ exact words; Glaser recommends against recording interviews and puts emphasis on conceptualisation rather than a thematic analysis of the raw data (Glaser, 1998). Other researchers have also argued that tape recording might have an effect on the quality of the data provided by participants as it may affect how ‘safe’ they feel to express their ideas and share their experience” (Artinian, 2009). In my research, not tape recording all the interviews at the early stages was a great help. Later on, I realised the point Glaser has made about how transcribing the full interviews and word by word analysis might restrict the scope and depth of research inquiry.

Furthermore, critics of grounded theory have raised concerns about some of its inherent characteristics as this methodology gives little consideration to the role of the researcher in constructing and interpreting the data and that there are no step by step instructions on how to identify categories (Olesen et al., 2010).

I also acknowledge that my position as the lead researcher on the SHEAR trial provided me with an excellent opportunity to form professional bonds with the sexual health clinic staff and Alcohol Health Workers as well as full access and freedom to use data and conduct interviews. However, this very opportunity and having two parallel sets of agenda - recruiting
to time/target to the trial, and collecting/analysing data for my PhD research - might have had an impact on the process of the trial.

Lastly, new drinking guidelines have been published since I carried out this thesis. Changes to the guidelines include (but not limited to) the introduction of 14 units of alcohol per week as safe limit for both men and women. I cannot rule out the possibility that these new guidelines might have influenced the SHEAR trial design and/or impacted the views of those delivering and receiving alcohol screening and intervention in the context of this trial.

6.3 Interpretations and extant literature

In this section, I will look at the extant literature - with a focus on the emergent themes from interviews and findings from quantitative components - and describe how the findings from my research fit within, compliment, or challenge current knowledge in the field. To maintain a coherent narrative, I decided to examine the current literature categorically based on two of the broad aspects explored in the results section: 1) screening for and identification of excessive drinking, and 2) the effectiveness of brief interventions in the context of sexual health clinics. As discussed in length in the introduction chapter and literature review, there is paucity of evidence on the process of delivering and receiving alcohol brief intervention in the context of sexual health settings. I will therefore look at available evidence in the broader context of health care; specific attention will be given to examining the evidence on factors supporting or hindering a successful delivery of alcohol intervention, and teasing out the views of intervention providers as well as those in receipt of such interventions. I will only
consider and include the relevant literature looking at brief interventions aimed at hazardous/harmful drinking. Intervention for those with alcohol dependence is not the focus of this thesis and, therefore, would not be examined here.

6.3.1 Screening, identification, delivery

I will firstly reflect on the process of screening and identification in the SHEAR trial including the choice of screening tool in this trial. Subsequently, I will focus on the delivery of alcohol intervention and draw upon the extant literature where factors supporting and hindering a successful delivery of alcohol interventions have been explored.

Screening and identification

The first stage in the provision of alcohol brief interventions in a health setting is to identify those whose drinking might be excessive and making decisions about whether a universal or targeted approach would suit any given setting. Whilst various alcohol screening tools are used for this purpose, there is no one standardised measure that is considered most suitable and recommended for use across various health care settings. This makes it difficult to make comparisons and draw conclusions from current evidence. When screening people for excessive drinking, the information is collected retrospectively and relies solely on self-report. The period covered varies including the preceding year (AUDIT), three months (Form 90) (Tonigan et al., 1997), four weeks and one week (AUDIT-C) (Bush et al., 1998). Many of these screening tools require people to only report the number of alcohol units or standard drinks they had consumed on a typical drinking occasion and/or per week. Some longer questionnaires such as the AUDIT (Saunders et al., 1993) also take perceived problems associated with drinking into account. To address the question of whether short alcohol
screening tools are reliable, Coulton and colleagues conducted an exploratory study in the criminal justice sector (as part of the SIPS research programme). They argue that both shorter screening tools (FAST and M-SASQ) compared to the AUDIT as the gold standard have acceptable screening properties with area under the curves of 0.97 and 0.92, respectively (Coulton et al., 2012). Choice of screening tool also depends on the nature of the setting, available time/resource and how important it is to keep the control arm unexposed to the intervention.

The screening tool used in the SHEAR trial was a single item question (M-SASQ). The threshold for excessive drinking was defined as consuming more than six/eight UK alcohol units on one occasion at least once a month (Canagasaby and Vinson, 2005). Using the lower threshold (once a month as opposed to once a week) would increase the chance of identifying excessive drinkers as people tend to underestimate their drinking (Boniface et al., 2014). The brevity of the question fitted well with the short time available for screening in sexual health clinics, this also ensured that the control arm were not exposed to the intervention. As Crawford et al. highlight in their paper, previously researchers have overlooked the impact of exposing people in the control arm of the alcohol intervention trials to detailed questions about alcohol (Hungerford and Pollock, 2004). Lengthier screening tools have the potential to contaminate the control arm by activating a process of self-reflection leading to moderation of the behaviour (excessive drinking in this case) under study (Crawford et al., 2014). However, using one single item question in the SHEAR trial also meant that there were no data available on the severity of drinking problems among participants in this trial, which limits the scope of comparison with current relevant literature. Based on the data gathered at the time of the SHEAR trial follow-up using Form 90, average weekly and per drinking day alcohol
consumption were 19.19 (SD = 16.10) and 9.84 (SD = 5.54) units, respectively. Although these figures are high compared to the recommended safe drinking levels, when compared to the findings from previous studies in the sexual health clinics, the sample in the SHEAR study may be considered as only ‘moderately’ excessive drinkers. Standerwick and colleagues in their survey of attendees to one of the sexual health clinics in Southampton reported much higher levels of drinking; median of 13 units on a usual night and 26 units on a ‘heavy’ night. They compared drinking levels in their study sample with that of a cohort from General Household Survey (GHS) who reported consuming a median of six units on a usual drinking night (Standerwick et al., 2007). One possible explanation might be that in their study young people under the age of 19 were also included. Some evidence suggests that heavy drinking and subsequent consequences such as risky sexual behaviour are more common among young people, and it has been argued that efforts should be focused on addressing excessive drinking specifically in this age group (Diestelkamp et al., 2016). Another possible explanation is that in the SHEAR trial people with higher levels of drinking and/or risky sexual behaviour might have refused to take part in the study. It should also be noted that levels of alcohol misuse are reported to be lower in London in comparison to other parts of the UK according to the results from the 2011 General Lifestyle Survey (ONS, 2013). Furthermore, looking at data from the randomised trial of alcohol brief intervention conducted in an emergency department in London, both groups in the control and experimental arms reported much higher levels of drinking at six and 12 months follow-up. Mean weekly alcohol consumption was 59.7 (SD = 72.6) and 83.1 (SD = 109.0) at six months, and 57.2 (SD = 68.4) and 70.8 (SD = 88.8) at 12 months in the experimental and control groups respectively (Crawford et al., 2004b).
Delivery of intervention

As described in the results section, the findings from the short survey of the sexual health clinic staff involved in the SHEAR trial indicate that the majority endorsed the usefulness and appropriateness of screening and brief intervention for excessive drinking among people who attend sexual health clinics. However, during interviews staff discussed a range of concerns which echoes those stated by Thorley and colleagues in that providing alcohol intervention in the context of sexual health clinics require "resources, re-organisation, and staff training and competency assessment" (Thorley et al., 2012).

In addition to organisational factors which might hinder successful delivery of alcohol interventions, there are some suggestions that attitudes and demographic characteristics of the intervention providers and their drinking habits might influence their dealing with alcohol problems in their patients both at screening and intervention stages. Bakhshi and While in their comprehensive systematic review, examined two main strands of this subject: a) the extent that health professionals across various health settings address drinking problems when seeing patients, and b) if there are any associations between health professionals' own drinking patterns and/or attitudes, and their professional practices with regards to promoting safe drinking (Bakhshi and While, 2013). The review shows whilst there is some evidence of alcohol specific health promotion activities in clinical practice, it is not widely and consistently practiced or recorded. Furthermore, the findings from this review support the belief that the gender of the patients and health professionals, as well as the intervention providers’ own drinking pattern have an impact on whether any alcohol intervention is delivered. One of the studies included in this systematic review is a survey in which researchers used vignettes to explore the attitudes and practices of primary care practitioners in Sweden. Geirsson and
colleagues found that male excessive drinkers were less likely to be referred for further treatments (Geirsson et al., 2009). Female patients drinking excessively were more likely to be advised to stop drinking alcohol altogether compared to males with similar drinking patterns. The sample size was not large enough to allow interaction between the gender of the patients and that of health professionals to be examined. Interestingly, the threshold at which primary care practitioners would advise their patients to reduce their drinking was related to their own drinking behaviour; those with AUDIT-C scores of three or above offered advice at higher thresholds. This study did not show any relationship between the type of advice given and the health professional’s own drinking pattern. In another study, Crothers and Dorrian demonstrated that nurses’ drinking habits have an impact on their attitudes when dealing with alcohol problems. Nurses who reported drinking more than once a week were more likely to feel “discomfort or embarrassment”, and hesitation when discussing drinking problems of their patients (Crothers and Dorrian, 2011).

Findings from a survey of 3193 primary healthcare physicians across Finland, shed further light on these issues (Aalto and Seppa, 2007). The main aim in this survey was to identify at what drinking levels clinicians thought they would offer alcohol advice. Additionally, the researchers looked at different factors that might have an impact on this such as age, gender, professionals’ own drinking levels, years of experience as a clinician, if they used brief intervention in their practice, and their stance towards addressing alcohol problems. The authors report their findings from separate analyses based on weekly or daily/per session drinking patterns and gender of the patients. The response rate was 61%. The main finding was that clinicians would offer advice at lower than the national recommendation thresholds for weekly alcohol consumption; this was not the case for per session drinking levels. With
regards to the professional characteristics, female clinicians reported offering advice at a lower threshold compared to their male colleagues for both weekly and per session drinking. Age of the professionals did not seem to have an impact on the threshold they would give advice for weekly drinking, but younger clinicians would offer advice at higher thresholds for drinking per session. Drinking excessively (AUDIT scores of eight or above), using brief intervention and a patient based approach (compared to basing advice only on the guidelines) were associated with higher drinking thresholds for giving advice about drinking.

Issues relating to age and gender have been also discussed in the literature on the feasibility and effectiveness of alcohol brief interventions (Kaner et al., 2009b). In the SHEAR trial, the mean age of those who agreed to be screened was 27.25 (SD = 5.80), and over half (56.4%) were female. Individuals who scored positive on the screening question were more likely to be of White ethnicity, male and younger; however, over half (53.9%) of the recruited sample were female. This provided an excellent opportunity to examine the impact that gender and/or age might have on the acceptability and feasibility of alcohol screening and brief intervention in the context of sexual health settings. Those who agreed to be screened in the SHEAR trial were slightly younger (mean age difference= 1.74, 95% CI 0.99 to 2.49, p < 0.001). Gender did not have any impact on making the decision to take part in the trial. Among those who agreed to the screening, people who were identified as excessive drinkers (M-SASQ positive) were more likely to be of White ethnicity, male and younger (mean age difference = 2.20, 95% CI 1.41 to 3.00) compared to the M-SASQ negative group; the difference was statistically significant. There were no statistically significant relationships between the demographic/clinical variables and uptake of Brief Intervention, except for reason for presentation to the clinic at baseline. The impact age and gender might have had on the
clinicians’ decision to screen and/or offer intervention was not tested in the SHEAR trial; the procedural format of the trial left little room for clinical staff to exercise this autonomy. However, during interviews some staff mentioned that they chose a somewhat different approach to provide the Brief Advice in terms of timing of the delivery. The original model of brief intervention in emergency departments recommends that patients’ presenting complainant needs to be attended first (Williams et al., 2005) to ensure empathy. Although during the training sessions staff were reminded of this, some staff mentioned how they felt the urge to ‘get the brief advice out of the way’ as soon as possible and, therefore, they delivered this at the beginning of the consultation session. Whether the timing of the delivery of the Brief Advice had an impact on the SHEAR trial participants’ willingness to take up the offer of Brief Intervention is not clear as such information was not recorded on the proformas. This issue only came to light in the interviews with staff when they talked about the challenges they faced when delivering Brief Advice in the context of SHEAR trial.

6.3.2 Effectiveness

As described in the previous sections, the SHEAR trial did not show that offering alcohol brief intervention to people attending sexual health clinics resulted in reductions in alcohol consumption (Crawford et al., 2014), (Crawford et al., 2015). Prior to this, only one randomised trial of alcohol brief intervention was conducted in this setting (Lane et al., 2008). I will describe the major differences between this study and the SHEAR trial, and will reflect on why in this study authors conclude that alcohol brief intervention is effective in people attending sexual health clinics. These differences include but not limited to the way the study was presented to people attending the clinic, the demographic and clinical characteristics of participants, and the follow-up period.
In this single centre trial people were asked directly to participate in a study on alcohol which meant all those who agreed to take part including the control arm were prompted about the focus of study on drinking. Of those who agreed to screening, 40% were identified as hazardous drinkers according to the AUDIT questionnaire (scores of 8 or above). A large proportion (74%) of the participants were male, and their mean age was 34. There is no data on whether the participants were frequent attendees or they presented to the clinic only for a check-up, and if their presentation was related to drinking excessively. Alcohol intervention was delivered by a research nurse at the time of collecting data; it meant that patients did not have a choice about whether or not to receive the brief intervention.

Whilst at the time of follow-up participants in both groups reported drinking less, the difference between the two groups was not significant. The follow-up period was only three months, which is not long enough for assessing the longer term effectiveness. This observed reduction might as well be due to regression to the mean. The other plausible explanation is that because both groups were prompted about the focus of the study, this had triggered a process of self-reflection and led them to change their drinking behaviour. The limitations in the study design and analysis procedures do not allow for making firm conclusion about the effectiveness of alcohol brief interventions in sexual health clinics. I will, therefore, draw upon the extant literature on the effectiveness of alcohol brief intervention in the wider context of health care.

In a more recent systematic review, the authors examined the results of randomised controlled clinical trials of any form of intervention for people attending outpatient settings who were identified as having alcohol and/or drug problems. They conclude that although these interventions might be beneficial to patients attending maxillofacial clinics, the same
does not apply to people who are being treated in other general medical outpatient settings (Watson et al., 2013). In a systematic review of brief interventions in primary care settings, authors point out that traditionally brief interventions were designed as secondary preventive work, and that shifting attention in more recent trials to target people who might not be ‘at risk’ may explain the more modest results of these trials in comparison with the earlier ones (Kaner et al., 2009b). In their pooled analysis of data from 22 studies, participants drank on average 39 units of alcohol with variations between 11 to 57 units per week. The team noted that over time there has been a reduction in the amount considered ‘excessive drinking’ in the trials. The SHEAR trial is in keeping with this trend and along with other research studies, selected a sample that were drinking at excessive rather than harmful levels.

In the largest meta-analysis of the evidence for effectiveness of alcohol brief intervention in primary care settings, the researchers highlight the lack of evidence and need for thorough examination of effectiveness of alcohol brief intervention among females and ethnic minorities (Kaner et al., 2009b). In the 22 trials included in this meta-analysis, 67% of participants were male and the mean age of participants was 43 years. In the SHEAR trial over half (53.9%) of the recruited sample were female. This provided an excellent opportunity to examine the impact that gender might have on the successful delivery, acceptability and effectiveness of alcohol intervention. Furthermore, participants in the SHEAR trial were much younger with a mean age of 27.95 (SD = 6.54). In the only other randomised trial of brief intervention for alcohol in sexual health clinics the authors do not report the details about gender and age of those randomised (Lane et al., 2008). However, based on the demographic data provided for individuals who agreed to the initial screening, about three quarters were male with a mean age of 34 (SD = 10.7). In the SHEAR trial the mean age of those agreed to
screening was 27.25 (SD = 5.80) and over half (56.4%) were female. Age and gender did not appear to have an impact on the uptake or effectiveness of the intervention in the SHEAR trial. Three major trials of alcohol brief intervention in primary care settings have been published since this review. The findings from these trials suggest that brief intervention for alcohol when tested in ‘real world’ with minimal input from research team has no effect on reducing harm from use of alcohol (Kaner et al., 2013).

The rationale for introducing and integrating screening and brief intervention in routine practice is based on the ‘assumption’ that it is relatively easy and quick to deliver and requires providing minimal training for the health professionals. This intrinsic characteristic is helpful in making the argument that alcohol screening and brief intervention trials by and large should be considered as ‘effectiveness’ trials (Saitz, 2014). Alcohol brief interventions according to their current definition meet all the criteria on the effectiveness scale as they are brief, flexible and delivered in general clinical settings by non-specialist clinicians. However, the results from the qualitative interviews I conducted with the staff at sexual health clinics - which I have described in detail - did not mirror this ‘assumption’. Despite the existing emphasis on ‘prevention’ in sexual health clinics and the relatively high level of expertise among clinicians to deliver preventive health messages, most of them questioned the belief that providing Brief Advice is ‘simple’. Whether or not a formal lengthy training would warrant the required confidence and generate ‘expertise’ to address alcohol problems in patients attending sexual health clinics needs a close exploration which is outside the remit and scope of this thesis.

The recommendation in most brief interventions is that the health professionals should follow a rather ‘mechanical’ approach as the focus is on ‘brevity’ and relative ‘ease’ of delivery.
However, if the origins of brief intervention and how it has been developed are taken into consideration, a rather different aspect would come into sight. Alcohol Brief Interventions are believed to have a robust theoretical underpinning which in most cases is informed by the Motivational Interviewing (MI). Rollnick and Miller suggest that the essential component for achieving desired outcomes in interventions using MI is the collaborative rather than authoritarian approach, and that a great deal of emphasis should be put on the client’s autonomy (Rollnick and Miller, 1995). Although alcohol brief interventions are derived from and based on MI method, their ‘opportunistic’ characteristic may result in their having little or no impact. MI method is patient-centred and requires time to deliver the intervention. I would argue that in scenarios in which (due to lack of sufficient time) the recipient is left with brief ‘feedback’ and advice, the practice might be viewed by the recipient as paternalistic and experienced as denying their autonomy (Rollnick et al., 2009).

This issue becomes even more important in a setting like a sexual health clinic where the consultation session might be the first and/or last time the patient and health professional would have any contact. Time pressure resulting from clinicians being asked to see large numbers of patients per clinic session leaves very little room for negotiation and reflection, and in turn may have undesirable outcomes by arousing ‘resistance’. When examining alcohol screening and intervention in sexual health clinics, there are additional complexities including perceived (or true) stigma which need to be taken into account. Throughout the course of the SHEAR trial and from subsequent interviews it emerged that in many instances the identification of heavy drinking (labelling) was the hardest task in the process of offering advice. As described in the previous section, both the provider and the recipient of interventions shared the feelings of ambiguity and hesitance about the nature of the
‘problem’ identified by the screening tool used in the SHEAR trial. This uncertainty is mirrored in the findings from quantitative data in that only a small proportion (a fifth) of those who were offered seeing an alcohol health worker did so. This is lower in comparison with the proportion of participants (29.3%) who saw an AHW in a randomised trial of alcohol intervention conducted in an inner London accident and emergency department (Crawford et al., 2004b). The results from this randomised trial showed that intervention was effective in reducing people’s drinking. However, there are major differences in the design, patient characteristics and selection process in comparison with the SHEAR trial. Both groups in the control and experimental arm reported much higher levels of drinking at six and 12 months follow-up compared to drinking levels reported by the SHEAR trial participants. Mean weekly alcohol consumption was 59.7 (SD = 72.6) and 83.1 (SD = 109.0) at six months and 57.2 (SD = 68.4) and 70.8 (SD = 88.8) at 12 months in the experimental and control groups respectively.

In the A&E study the authors report that up to “one in three attendees had consumed alcohol immediately before presenting to the emergency department”. Staff were asked to screen all those who they ‘felt’ might be excessive drinkers as well as anyone presenting with one of the nine criteria potentially related to excessive drinking. Most importantly, one of the criteria this study set out to consider for entering onto the trial was ‘willingness to accept intervention’. They further narrowed down their sample by contacting the participants within a week of attending at A&E to ascertain if they were still willing to be contacted; the study team excluded those who -at this stage- decided against further participation.

Although, not all of those allocated to the intervention accepted the offer to see an AHW, the inclusion criteria meant that a selective group entered the trial that might not be
representative of all those who attend A&E settings. This limits the generalisability of the findings. Furthermore, the immediacy of the ‘unpleasant event’ resulting from drinking excessively might have played a role in people deciding to see an AHW and changing their drinking behaviour after they received the intervention.

Looking closely at the argument put forward by Williams and colleagues raises some interesting issues about the underlying assumptions behind the design of alcohol brief intervention in the context of emergency departments. I shall quote the section below from the discussion part of their paper and describe why I believe this has implications in general sexual health clinics and may provide some insight into the null findings of the SHEAR trial.

“Attendance at the ED is unexpected and is usually due to an unpleasant event. The patient’s agenda – their presenting complaint – must be attended to first, in order to gain confidence and empathy. The PAT is then applied in a non-judgemental appropriate manner enabling selective focused screening for alcohol misuse. The appreciation of the link between this unpleasantness and attendance creates the ‘teachable moment’ for opportunistic intervention: the acceptance by the patient of the offer of an appointment with the AHW. The patient has to appreciate first that they have a problem – as witnessed by their attendance at the ED. Secondly; the patient has to wish to alter their own drinking habits – facilitated by their wish to avoid re-attendance at the ED. After the patient has left the ED, the unpleasant memory of the initiating unpleasant attendance at the ED will fade”.

As is apparent from this account, there is considerable emphasis on the ‘unexpectedness’ of attending A&E and on the ‘unpleasantness’ of the event leading to attendance. Furthermore,
an appreciation of the *link* between their *attendance* and the *unpleasantness* by the patients accompanied by a strong wish to *avoid re-attendance* is deemed essential to a successful intervention (Williams et al., 2005). To examine this further, I focused on exploring if the notion of the ‘teachable moment’ is applicable to the context of sexual health clinics. In the first stage, I looked at the proportion reporting unprotected sex whilst under the influence of alcohol and the proportion of those who regretted the event. Following this, I tested if any of the clinical and/or demographic factors would have an impact on whether people would decide to take up the offer of Brief Intervention. As described in detail, none of these factors seemed to influence an individual’s decision to take up the offer of further alcohol intervention except for the reason for presenting to the sexual health clinic. Further qualitative interviews with intervention providers and trial participants, provided some further insight which would partly explain the null findings of the SHEAR trial. To link this with the theoretical account described in the results chapter I would propose a typology for the receiver and provider of alcohol brief intervention which comprises three main categories: dismissing, wrestling and conforming.
Figure 6-1 depicts the order in which these typologies are placed and the potential for moving across these various states within any individual’s appraisal system. This proposed typology is applicable to any stage of the interaction between the provider and the recipient of the alcohol intervention. To put this into context I shall refer to the instant reaction phase when the individual is faced with the new definition (excessive drinking), the second phase when they would adopt certain strategies to deal with this trigger (label of excessive drinking), as well as their final stance after a period of reflection. Furthermore, health professionals follow the same pattern in that, whilst some would conform from the start, others continue to challenge and wrestle with the idea and some would dismiss the concept and therefore refuse to engage in the process of delivering alcohol advice. Taking this into consideration provides some explanations for why interventions work in some settings but not the others, and also why some individuals are more amenable to changing their drinking behaviour following a brief intervention.
Previous research has examined the impact of the readiness to change on the effectiveness of behavioural change interventions. The most widely applied model to explain the stages of behaviour change where motivational interviewing techniques are used for drinking is the Trans-Theoretical Model (TTM) of change (Prochaska and DiClemente, 1983). TTM is one of the stage models and proposes five stages of pre-contemplation, contemplation, preparation, action, maintenance, and relapse. Furthermore, ‘readiness to change’ has been widely discussed and partly explains why some people are more receptive to behavioural change interventions (Rollnick et al., 1992). Whilst both these models are very useful in explaining the behaviour and reactions of the recipients of interventions, they fail to take into account that intervention providers also share the same constructs. Furthermore, if the behaviour change is considered to be on a spectrum rather than a dichotomy; randomised trials such as the SHEAR study fail to capture whether intervention efforts shift the individuals’ position on the process of change spectrum, as the outcome measures only focus on aggregate data not individual accounts.

Existing theories such as cognitive dissonance theory (Festinger, 1976), self-affirmation theory (Steele, 1988), and motivational interviewing (Miller, 1983), (Miller and Rollnick, 2002), (Miller and Rose, 2009) hint how health messages might be perceived as a threat to individuals’ integrity and disturb their stable identity. It is, therefore, proposed that validating some other aspects of the identity might facilitate the delivery of behaviour change interventions and/or increase their effectiveness.

Whilst most published literature focuses on the recipients’ position towards these interventions, there is a paucity of research examining providers’ attitudes and its impact on effectiveness of interventions. McCormick and colleagues in a single centre alcohol
intervention study identified intervention providers’ discomfort and avoiding discussions about drinking excessively, as barriers to successful implementation of alcohol screening and intervention in primary care settings (McCormick et al., 2006).

The proposed theory of perpetual appraisal and the typology described above mirror the existing theories and confirm the assumptions used in designing health behaviour interventions. However, it also takes a step further and emphasises that close attention to the possibility of these theories also being applicable to the intervention providers, might offer some explanations to why intentions do not translate into change in behaviour. My findings suggest that health professionals also share the anxiety and discomfort caused by threats to their personal and professional ‘identity’ when delivering alcohol interventions. The feeling of discomfort is partly related to their own drinking patterns, it could also be triggered by the patients’ reactions towards the intervention. If health professionals drink at higher than safe limits, or are abstainers due to religious beliefs/age, the ‘alcohol message’ poses some risks to their perceived personal identity. Additionally, if after delivering the intervention the recipients of interventions question the validity of such remarks, a non-alcohol specialist professional might appraise this as a threat to their professional integrity leading to feelings of inadequacy in ‘sorting out’ patients’ problems.
6.4 Recommendations

The results from the SHEAR trial suggest that universal screening and providing alcohol brief intervention by sexual health clinic staff does not lead to clinically important reductions in alcohol consumption in people attending sexual health clinics. However, findings from secondary analyses, and interviews with the staff, AHWs, and trial participants shed light on the areas in clinical practice where need improvements as well as potential fields where future research should be focused. In this section, I will outline recommendations for practice followed by suggestions for future research.

6.4.1 Implications for clinical practice

6.4.1.1 Demystifying ‘plausible platform’ and ‘sorting out mentality’ concepts

The common belief is that the presence of some form of drinking consequences facilitates delivery of an alcohol intervention in practice. In the absence of such consequences, some health professionals find it very difficult to initially engage the individual. However, the focus on establishing such links in the context of sexual health clinics does not necessarily lead to desirable outcomes and might, in fact, be a potential barrier to a successful delivery of alcohol screening and intervention in this setting for a number of reasons. On one hand, there is a significant emphasis on adopting a non-judgmental attitude by professionals in this setting, which may not be the case in other settings like GP surgeries or emergency departments. Therefore, any emphasis on making a link between heavy drinking and risky sexual behaviour could result in reluctance in sexual health clinicians to issue a ‘verdict’ on people’s lifestyle. On the other hand, asking about a link between attendance and excessive drinking might give rise to a belief held by some patients that attending a sexual health clinic is stigmatising and
arouses resistance to the intervention. Moving forward, the belief that effective alcohol intervention requires a ‘plausible platform’ should be demystified. This will facilitate a smooth delivery of alcohol interventions in sexual health settings.

Furthermore, the majority of the presenting complaints in sexual health clinics can be successfully managed by taking a full sexual history, gathering the tissue sample/blood test, confirmation by lab tests followed by prescribing the right medication at the point of attendance. More complex issues are dealt with in specialist clinics (e.g. HIV clinic, sexual dysfunction) where a range of psychosocial support is also available. Introducing alcohol screening and intervention into the routine practice of sexual health clinics contrasts this well-established ‘sorting out’ pathway, as it needs engagement on a deeper level. Attempts should be made to prepare staff and remind them that discussing alcohol related issues would not necessarily resolve the problem at the point of contact. This preparedness for tolerating the uncertainty about effectiveness of intervention is key to a successful delivery of intervention in this setting.

6.4.1.2 Integrating the healthy lifestyle promotion into the routine practice of sexual health clinics

Recent efforts by public health campaigns put great emphasis on individual responsibility with the view that preventive measures should take priority over treating the consequences of unhealthy lifestyles. NICE guidelines recommend that NHS professionals should carry out alcohol screening when promoting sexual health as part of the efforts to reduce alcohol related harm (NICE, 2010). To achieve this, more needs to be done to educate sexual health
staff about the negative impacts of excessive drinking and that sexual health clinics should be considered as one point of contact in a wider public health domain for health promotion. It is worth to include a module on alcohol screening and intervention in the curriculum of the Sexual and Reproductive Healthcare (SRH) specialty training programme. This should cover the latest recommendations and guidelines about safe drinking limits as well as information about the referral routes once a potential problem is identified. Part of this education should highlight “uncomfortable emotions” that may arise when discussing patients’ drinking. Staff should be encouraged to reflect on why they might be reluctant to discuss their patients’ drinking habits and that they should expect to be challenged by their patients when discussing safe drinking limits. Based on the findings from this thesis, the reluctance stems from lack of confidence, uncertainty about effectiveness, fear of negative reactions from patients and/or threat to their professional integrity. Furthermore, considering the significant role that health advisors play in providing advice on sexual health matters, the training should be also extended to this group.

This training should cover some of the misperceptions and/or preconceptions around the correlation between drinking and risky sexual behaviour and that communicating any health message about excessive drinking might lead to reinforcing the assumption that attending a sexual health clinic is stigmatising. Sexual health trainees/staff should be informed about how to liaise with Alcohol Specialist Services in situations when a patient would share their concerns about their drinking levels and that this had led them to engage in risky sexual behaviour and/or when they see cases of recurrent attendance. Interviews with sexual health clinic staff involved in the SHEAR trial demonstrated that staff were unaware of Alcohol Health Workers working in the emergency departments based at the same hospital. Whilst it is not
feasible and economically viable to have a full time AHW based at sexual health clinics, the
delivery of alcohol screening and intervention should be supervised and supported by alcohol
specialists. In the course of the SHEAR trial, AHWs grew interest in this area and expressed
their enthusiasm and willingness to support the training and further supervision of sexual
health staff in delivering alcohol brief interventions. This would ensure that sexual health
clinic staff feel confident when discussing people’s drinking. Furthermore, in situations when
a more serious drinking problem is identified it can be picked up and addressed more quickly.

6.4.1.3 Providing written resources about safe drinking limits in sexual health clinics

People attending sexual health clinics usually spend a few hours in the waiting rooms. This
provides a good opportunity to communicate messages about healthy lifestyle with
no/minimum impact on the practice. All sexual health clinics should have some written
resources about safe drinking limits available. The written material should explain the
definition of alcohol units with up to date information about how many units different
alcoholic beverages contain. The content should be displayed in a user friendly and neutral
manner and include some scientific facts about calorific content of alcoholic drinks and
nutritional values. This should be presented as part of a healthy lifestyle advice package but
not from a sexual health angle only.

When conducting interviews with the SHEAR trial participants, many stated that they only
attended clinics to check their sexual health and were not experiencing any symptoms. To
emphasise how ‘healthy’ they were they referred to the fact that they did not remember the
last time they had seen their general practitioner. This adds to the importance of discussing
healthy drinking with these *unconventional* users of health services. To discard the issue of
excessive drinking in this setting would be a missed opportunity for dissemination of an
important public health message to an audience many of whom are young, relatively healthy and free from physical health problems. Whilst universal screening and offering alcohol brief intervention in their current format is not a clinical and/or cost effective use of sexual health service resources, providing written materials could be endorsed by sexual health settings.

Written materials should also contain information about local services and signposting for access to available resources. Among people who accepted the offer of seeing an alcohol health worker some mentioned that they were curious to gain more knowledge about healthy drinking; some also mentioned that they had concerns for a member of family or friend and were interested to know about the services available.

6.4.1.4 Shifting the focus and/or format of the alcohol brief intervention packages

Based on the findings from my thesis, I would recommend that alcohol brief intervention packages offered in the context of sexual health clinics should be tailored to suit this context. The modifications should ensure that the ‘alcohol talk’ is extended to those who are not experiencing any immediate harm. Taking this into account, the ‘alcohol talk’ should be reframed to focus on calorific content, compatibility with the fitness and exercise regime, skin health as well as the impacts on mood and general sense of wellbeing. This will serve two purposes: firstly it would ensure that discussing alcohol and drinking limits would not slip into the “exhausted message” pitfall, secondly it will broaden the scope of alcohol intervention by extending the concept of change talk to a wide spectrum of drinkers. This practice could potentially reduce the stigma attached to receiving help with regards to drinking behaviour as it does not put emphasis on experiencing harm and making links between presenting to health services and drinking excessively. Non-judgmental content has been previously
mentioned as the most positive aspect in drug treatment programmes using computer assisted interventions (Neale et al., 2013).

From a theoretical perspective, I would suggest that some strategies need to be considered when devising alcohol brief intervention packages. Most importantly, health professionals should be trained to adopt an ‘empowering’ role in which they help the individuals rescale the relevance of the topic to them. This requires a ‘touch’ on potential hidden causes for excessive drinking which comprise sources of individual concern, reasons and explanations for drinking excessively, not usually in the immediate periphery at the point of intervention.

Furthermore, professionals should be reminded that the introduction of any new definition (i.e. label of excessive drinking) can instantly activate and un-pause the process of perpetual appraisal in the receiver of the intervention in an attempt to regain the state of equipoise. Individuals adopt various strategies to deal with this uncertainty and might react in ways that lead to health professionals feeling inadequate and uncertain about how best to manage their reactions. This uncertainty on the part of clinicians can trigger the process of perpetual appraisal to reach the professional equilibrium and deal with feelings of uncertainty and professional inadequacy.

Health professionals should be encouraged to integrate a mindful approach in their practice, and realise that brief interventions by nature are not therapeutic. Such interventions can only work if considered part of an incremental process which is multifaceted and would not always result in desirable outcomes at the point of contact. This stance not only helps the intervention providers deal with their professional dilemmas, but also ensures that those receiving the intervention are offered a more tailored and holistic brief alcohol advice.
6.4.2 Implications for future research

There are three main areas where future research is warranted to explore if/how alcohol interventions should be introduced into the routine practice of sexual health clinics.

First, pilot work should examine the feasibility and effectiveness of tailored intervention for people who express concerns over their drinking habits when presenting to sexual health clinics. As I described in the qualitative results chapter, many SHEAR trial participants who questioned the effectiveness of alcohol brief intervention, referred to the “unsolicited” nature of such efforts. The pilot work should be designed so that asking people about their drinking to be included in every consultation session as part of a brief review of general health. This would ensure that efforts are made to prompt patients to disclose information whilst respecting their free will and avoiding a state of paternalism. This is crucially important as a sizable proportion of people attending sexual health clinics are not the typical health service users in that they would not see many other health professionals. This would be a missed opportunity if discussions around healthy lifestyle were to be left out of the sexual health visits altogether. Part of this pilot work should be allocated to train professionals that demonising risky behaviour would not result in modifying the targeted risky behaviour; conversely showing respect for autonomy and spelling out explicitly that the aim of the intervention is to provide scientific facts would be better received by patients. This aspect is particularly important in a setting like sexual health clinics where discussing level of drinking is not the norm and any discussions around lifestyle might be deemed judgemental. The results from this pilot work can be used to design a cluster (due to the potential contamination) randomised trial to assess the clinical and cost effectiveness of screening and intervention specifically tailored to suit the sexual health setting. Collecting
some qualitative data alongside this pilot work would help shape a more refined and
tailored screening and intervention package. Without such evidence one cannot make a
conclusive statement about if and how to introduce alcohol and screening and intervention
into the routine practice of sexual health settings.

Future research should also aim to explore the impact of illicit drug use on the effectiveness
of alcohol interventions in the context of sexual health clinics. This issue was raised by some
clinicians who believed not taking illicit drug use into account would make alcohol
interventions irrelevant. Whilst the SHEAR trial findings on the possible impact of illicit drug
use on the effectiveness of alcohol intervention was interesting, it was not statistically
significant. These results have to be interpreted with caution in consideration of the multiple
comparisons and low power of the interaction test.

Second, in view of technological advances and that many of young people are much more
comfortable with and responsive to contents delivered electronically, the next step should be
to design research which incorporates advanced online and interactive intervention
applications. It has been suggested that distance learning and technology should be used for
educating professionals who deliver drug and alcohol interventions (Franey and Tober, 1999).
This should be considered when designing new alcohol intervention packages which would
serve a few purposes. The use of technology not only provides the flexibility as to where and
when individuals would receive the interventions, but also offers a level of anonymity,
confidentiality and ‘sense of autonomy’ not achieved otherwise. Guided discovery methods
and personalised feedback should be the focus when designing such applications. This would
provide the time and space for the individuals to absorb and process the information in their
own time and minimise the likelihood of arousing resistance compared to a face-to-face and
‘abrupt’ delivery of alcohol intervention. I propose that this should be tested through a pilot feasibility work. In the following paragraph, I will describe some of the methodological and logistic details of this pilot work.

In this pilot study, all those attending a sexual health clinic are prompted to complete an online self-evaluation of their drinking behaviour. This is followed by instant feedback summary and the option to register for taking part in a pilot research on improving health and wellbeing. If they opt in, the next stages should be self-explanatory and include filling out electronic questionnaires followed by receiving brief feedback from the professionals. Participants should be offered several options if they decide to receive further input including face-to-face, anonymous over the phone, or online conversation with a professional. To protect confidentiality, all individuals are allocated a unique reference number and user ID which they can use to access their records. Those who decide to take part in the research are asked to provide a phone number or email address for further communication. Participants are followed up for 12 months with three rounds of assessments at three, six, and 12 months and are offered up to three half an hour top-up sessions with an alcohol specialist on the phone or online which they can use at any time point over the 12 months. Following each assessment, the participants should receive a full progress report including an easy to understand illustration (e.g. graphs). This would give them the opportunity to monitor their progress and to make decisions about when/if they might need a session to receive a personalised input from an alcohol specialist. All participants are also directed to a website which they can access using their unique ID. This website should contain the most up to date information and findings from the most recent research in the field, and would direct people to other helpful resources about healthy living. In parallel, participants are asked to take part
in a survey about their experience of the research with an option to leave open text feedback. Collecting this process data would be useful for examining the acceptability/uptake of such interventions and to further improve the content and format.

Third, more upstream research is needed to explore the role of public health campaigns which are up to date, and relate to the general population with the view to target people at an earlier age and giving due attention to the cultural norms and embeddedness of drinking in the fabric of society. Szmigin et al. in their paper describe why using terms such as “calculated hedonism” might better capture the binge drinking behaviour and that many people interviewed in their study perceived drinking as a “source of pleasure” (Szmigin et al., 2008). Positive views about alcohol have been mentioned as one of the most significant factors leading to non-attendance at ‘Narcotics Anonymous’. This could be explained by the fact that those individuals who hold the positive attitudes about alcohol might find it hard to engage in a programme that encourages abstinence (Christo and Franey, 1995).

In a recent systematic review on the effectiveness of alcohol related mass media campaigns, the authors report that due to the methodological heterogeneity, they could not reach the conclusion that such efforts were effective. They highlight the need to design new studies to evaluate the effectiveness as well as cost-effectiveness of media campaigns (Yadav and Kobayashi, 2015). Future campaigns should adopt a more realistic approach that takes into account social contexts and individual preferences. These novel campaigns should be designed to demonstrate that health authorities are in touch with the concept that drinking is often a source of pleasure, bonding and social inclusion (de Visser et al., 2013) and that they advocate a guilt/shame free culture when disseminating healthy lifestyle messages. This was also highlighted by the SHEAR trial participants when they spoke about how drinking habits
form very early on in life and that any attempt should focus on educating young people about safe drinking. Pilot schemes should be designed to evaluate the effectiveness of such preventive measures where people are followed up at various time points for a number of years. This should be accompanied by qualitative research to tease out the active ingredients of such efforts in order to make modifications and amendments to the content of these public health messages on drinking. Findings from the pilot work should inform the design and implementation of large scale campaigns. If found effective this would have the potential to change policy and shift the focus towards allocating more funds for upstream preventive measures to tackle drinking problems across various health and social settings. In this regard, it is crucial to explore the reasons behind reductions in alcohol misuse in recent years. The financial crash in 2009 might partly explain this change as in between 2010 and 2013, household spending on food and drinking, and alcohol in England fell by 3.2%, and 5.7% respectively; household spending on alcohol bought at drinking venues saw a sharper decrease of 13.4%. It is also encouraging to know that in 2013, the prevalence of drinking alcohol at least once in the age group of 7 to 11 was the lowest (39%) since surveys began in 1988 (hscic, 2015). If financial recessions prove to have played a major role in people reducing their alcohol consumption, an increase in alcohol price might be a good strategy to facilitate sensible drinking.
6.5 Conclusion

I conclude by outlining the areas where my research makes important contributions to the extant literature on alcohol brief intervention in health settings.

To my knowledge this is the first comprehensive examination of the factors supporting or hindering successful delivery of alcohol intervention in the context of sexual health clinics in parallel with a large scale randomised trial.

My findings suggest that barriers to successful delivery of alcohol interventions in sexual health settings comprise individual, organisational, contextual, and structural factors. Individual barriers include preconceived assumptions held by both professionals and service users originating from cultural biases, attitudes towards and patterns of drinking. Organisational factors involve issues in endorsement of preventive measures across health settings. Contextual factors revolve around the notion that how the context of sexual health setting might lead to resistance to accepting the offer of alcohol brief intervention by the recipient. This also covers the sense of unease that some health professionals might feel when providing the intervention. Both are due to historical assumptions about linking excessive drinking to promiscuity. Structural barriers hint to why interventions adapted from those used in emergency departments do not fit the requirements of sexual health settings. With their emphasis on the notion of a ‘teachable moment’, this approach to delivering alcohol Brief Advice is not congruent with the experiences of people who provide and receive treatment in sexual health clinics. Whilst sexual health professionals anticipate a ‘link’ between attending sexual health clinics and excessive drinking, and would prefer to use this as a plausible platform for providing interventions, recipients of alcohol intervention make their own judgement about the nature of the new definition (‘excessive drinking’ proposed by
health professionals). Their conclusion about the ‘label of excessive drinker’ has a great impact on their subsequent willingness to receive intervention and/or change the target behaviour.

I propose the mid-range theory of ‘perpetual appraisal’ which is salient in many professional and personal interactions and has an impact on the uptake of the alcohol intervention and its effectiveness in the context of sexual health clinics. Whilst the theory of ‘perpetual appraisal’ confirms the existing theories in the field, this proposed theory moves a step forward in that it suggests that these assumptions are also applicable to the providers of intervention. When exploring factors that hinder successful delivery of alcohol brief intervention, the impact of ‘professional anxiety’ is quite often overlooked. The perceived threat to professional identity would have detrimental impacts on willingness to provide such interventions; it also leaves little room for testing why intentions do not always translate into change in behaviour.

Future research is warranted to examine the use of technology and alcohol intervention packages tailored to suit the complexities of sexual health clinics. Most importantly, careful design of upstream research drawing upon the available evidence would ensure that alcohol message is widely disseminated, and that sexual health clinics are considered as one of the many settings to provide people with up to date information about ‘safe’ drinking limits.
**Research question (Overarching aims)**

- To better understand the outcomes of SHEAR trial
- To examine the process of screening and intervention for alcohol misuse in sexual health clinics

**Methodology**

**Classic Grounded Theory**
Guided data collection/analysis through theoretical sensitivity and constant comparison

**Data collection**
Convergent parallel/exploratory design

**Qualitative data:**
- Interviews
- Field observations
- Follow up process notes

**Quantitative data:**
- SHEAR data
  - FU data from M-SASQ negative sample
  - Illicit drug use
- Literature review

**Sample:**
- Alcohol Health Worker, Sexual health clinic Staff, SHEAR trial
- SHEAR randomised/non eligible participants

**Analysis**

**Theoretical**
- Thematic coding
- Conceptualisation
- Abstraction

**Statistical analysis**
- Descriptive
- Univariate/multivariate/regression models

**Outcomes**

**Perpetual appraisal**
- Miscoded assumptions
- Relevance

**Screening and identification**
- Uptake of intervention
- Impact in subgroups

**Integration**

**Teachable moment not applicable to sexual health setting**

**Need for targeted interventions**

**Existing theories**

- Trans-Theoretical Model (TTM) of change
  - Readiness to change
  - Cognitive dissonance theory
  - Self-affirmation theory

**Diagram 6-1** presents the convergent parallel design of the thesis, details of various data sources and stages of data collection, analysis and findings.
References:


Gill, J. S. 2002. Reported levels of alcohol consumption and binge drinking within the UK undergraduate student population over the last 25 years. *Alcohol and Alcoholism*, 37, 109-120.


GOV 2003. Interim analytical report for the national alcohol harm reduction strategy. *Alcohol Harm Reduction project*. Prime Minister’s Strategy Unit.


Morse, J. M. 1995. The Significance of Saturation. Qualitative Health Research, 5, 147-149.


RCGP 1995. *Alcohol and the heart in perspective: Sensible limits reaffirmed*, Royal College of Physicians, Royal College of Psychiatrists, Royal College of General Practitioners.


Appendix 1- SHEAR trial flow diagram

People attending sexual health clinics provided with information and assessed for eligibility using the Modified-Single Alcohol Screening Question (M-SASQ)

Excluded:
- Aged under 19 or insufficient English
- Not misusing alcohol according to M-SASQ
- Unwilling to provide written informed consent to participate

Complete collection of baseline data on sexual behaviour and health-related quality of life

Randomised by researcher who informs treating clinician who delivers brief intervention

Allocated brief intervention (including offer of appointment with Alcohol Health Worker)

Allocated control treatment (Leaflet on health and lifestyle)

Lost to follow-up at six months

Lost to follow-up at six months

Data collected and analysed on alcohol consumption, sexual health, quality of life and service utilisation

Data collected and analysed on alcohol consumption, sexual health, quality of life and service utilisation
Appendix 2 TOPIC GUIDE for semi-structured interviews with SHEAR participants near the time of follow-up

Date of interview…………………… STUDY ID…………………………

Was offered Brief Intervention Yes ☐ No ☐
Attended Brief Intervention Yes ☐ No ☐

Telephone alcohol intervention Yes ☐ No ☐

Introduction:
Hello, my name is Rahil from Imperial College. I would like to take this opportunity to say that we very much appreciate your help with our study and also completing the follow-up interview with my colleague.

I am going to ask you some further questions regarding your experience with the study and if you have any further comments.

1. Preamble - background information about the study

2. Screening:
First of all I would like to ask you about your experience with our study.
How did you find it?
Prompt:
Attending a sexual health clinic and then someone asking you to take part in a research study on lifestyle?
Was there anything in particular that you liked or disliked about the whole process or the questions?
Prompt: anything inappropriate, offensive, too personal?

3. Brief advice
(If were in BI group)
After completing the questionnaire with the researcher did you receive any feedback on alcohol from the doctor seeing you for your appointment?

How did you feel about the advice you were given at the time?

Prompt: any positive or negative thoughts, feelings?

Did it seem reasonable/appropriate or inappropriate to be asked such questions?

Was it useful? If yes, how?

Had you heard of the recommended alcohol limits before?

Do you think there are problems or difficulties that could result from offering this advice?

Was there anything you particularly liked or disliked about this Brief Advice?

4. Delivery of Brief Intervention

Did they offer you to see an Alcohol Nurse?

Did you attend the appointment with the Alcohol Nurse?

If YES

May I ask why you decided to attend the appointment?

How did you find the session with the nurse? Was it useful?

What, if anything, was MOST helpful about the appointment you had with the alcohol nurse?

What, if anything, was LEAST helpful about the appointment you had with the alcohol nurse?

Was there anything that could have been done to make the appointment more helpful to you?

What could we do to improve the sessions?

What could we do to increase the chance that people take the offer of appointment with an alcohol nurse?

If NO

What were the reasons you did not attend?

Could we have done anything to have made it easier for you to attend the appointment?

Telephone interventions

Were you offered to be contacted by the Alcohol Nurse?

5. Alcohol use and sexual health
Do you think that use of alcohol can affect people's sexual health?
If so, how?
Do you think there is any relationship between people's sexual health and drinking alcohol?
If so, how?
What other factors have an effect on people's sexual health?
Do you think that if people reduced the amount of alcohol they consumed this would have an impact on their sexual health?

Probe further if there is history of regretted sex

6. Impact of intervention (if any)

What, if any, effect did this information and advice you were given about alcohol have on you?
(If the advice had some effect - how did it bring about this effect?)
If none, do you think the way that the advice was offered could be improved to make it more acceptable or helpful for people attending the clinic?
Have you recently made any changes to your drinking pattern?
PROMPT: Has the amount you drink changed (increased or decreased)?

IF YES
How has it changed?
If use of alcohol has decreased….
Has reducing your drinking had any effect on your sexual health?
PROMPT: When you have had sex, who you have had sex with or whether you have used a condom during sex.

IF NO
Have you tried to change the amount you drink? If so, why do you think it has been hard to make changes?

7. Final comments
Thank you for taking the time to help us with this study. Before we finish, are there any final comments you would like to make about the service you received at the clinic or more generally about alcohol and sexual health.

Are there any questions that you would like to ask?
8. Anything else?

Is there anything else about this project you that you would like to comment on?

THANK YOU FOR YOUR TIME
Appendix 3 - TOPIC GUIDE: for semi-structured interviews with Alcohol Health Worker/ Alcohol Nurse Specialist

1) Preamble - background information about the study

2) Alcohol use and sexual health
   - In your experience, do you think there is a relationship between alcohol use and sexual health? If so, what?
   - Do you think there are any people for whom the link may be stronger? If so, who?
   - PROMPT: Do you think the link is different among younger/older, men/women, heterosexual/gay patients? If so, how?

3) Screening
   - What do you think of screening people for their alcohol consumption in the sexual health clinic? Is it an appropriate place to screen?
   - Here is the SINGLE question we ask people to screen for alcohol use, what are your thoughts about it?
   - PROMPT: how do you feel about the cut off point of six units for a woman and eight units for a man once a month or more?

4) Delivery of the intervention
   - How did you feel when delivering BI to this group of patients?
   - Was there anything you particularly liked or disliked about delivering the intervention to this particular group?
   - Do you think there are problems or difficulties that could result from offering this advice?
   - There is also a leaflet we offer them; do you think the content or the presentation of the leaflet could be improved? If yes, how?
- What do you think of offering the patients a telephone interview with the AHW/Alcohol Nurse Specialist?

- Could anything be done to make it more likely that someone would attend the appointment with the AHW/Alcohol Nurse Specialist?

- How was the uptake of Brief Intervention in this group compared to the other groups you have worked with?

- What were the areas that you faced the most challenges?

5) Impact of intervention (if any)

- Do you think that this intervention will be effective/helpful? If so, how?

- What could be done to make the intervention more acceptable or helpful for people attending the clinic?

6) Patients’ feedback?

- How did they react when you raised the issues around their consumption?

- How useful did they find it you think?

- What are the differences and similarities between this group and the other groups you have already worked with?

- Are there any groups in this particular setting you think will be more willing to attend an appointment to discuss their alcohol misuse?

7) Anything else?

- Is there anything else about the SHEAR study process that you would like to comment on? Or that could be improved to make it easier for you as an AHW/Alcohol Nurse Specialist to deliver the intervention?

THANK YOU FOR YOUR TIME
Appendix 4  TOPIC GUIDE for semi-structured interviews with Clinic Staff

1) Preamble - background information about the study

2) Alcohol use and sexual health
   - In your experience, do you think there is a relationship between alcohol use and sexual health? If so, what?
   - Do you think there are any people for whom the link may be stronger? If so, who?
   - PROMPT: Do you think the link is different among younger/older, men/women, heterosexual/gay patients? If so, how?

3) Screening
   - What do you think of screening people for their alcohol consumption in the sexual health clinic? Is it an appropriate place to screen?
   - Here is the SINGLE question we ask people to screen for alcohol use, what are your thoughts about it?
   - PROMPT: how do you feel about the cut off point of six units for a woman and eight units for a man once a month or more?

4) Delivery of the intervention
   - How did you feel when offering people information about excessive use of alcohol?
   - Was there anything you particularly liked or disliked about delivering this intervention?
   - Do you think there are problems or difficulties that could result from offering this advice?
   - There is also a leaflet you offer them; do you think the content or the presentation of the leaflet could be improved? If yes, how?
   - What do you think of offering the patients an appointment with the Alcohol Nurse Specialist / AHW?
   - Could anything be done to make it more likely that someone would attend the appointment with the Alcohol Nurse Specialist/ AHW?
5) Impact of intervention (if any)
   - Do you think that this intervention will be effective/ helpful? If so, how?
   
   - PROMPT: If the intervention helped reduce people’s use of alcohol, do you think this could have an effect on their sexual health?

   - What could be done to make the intervention more acceptable or helpful for people attending the clinic?

6) Patients’ feedback?
   - How did the patients respond when you raised this issue with?

   - How did they react when you offered them an appointment with Alcohol Nurse Specialist/ AHW?

7) Anything else?
   - Is there anything else about the SHEAR study process that you would like to comment on? Or that could be improved to make it easier for you?

THANK YOU FOR YOUR TIME
Appendix 5- TREATMENT FIDELITY (BRIEF ADVICE - PROFORMA A)

SHEAR
Sexual health and lifestyle advice

________________________________________________ has been allocated to brief advice for alcohol misuse.

Please provide the patient with the four components of brief advice listed below and tick the box to indicate that each component was delivered.

**BRIEF ADVICE ONLY TAKES A MINUTE!**

Please tick if delivered

1. Brief feedback on level of alcohol use and its potential to affect health
   ‘From the information that you gave our researcher it seems that your use of alcohol could be harmful to your health’
   (Eight units per drinking session for a man, six for a woman)

2. Making a link
   ‘Do you feel your attendance here could be related to your use of alcohol?’

3. Given a copy of the information leaflet: “Think about drink”
   ‘I would like to give you a leaflet which has information about alcohol and health’

4. Offered an appointment with the Alcohol Nurse Specialist and provide appointment card
   ‘I would like to arrange for you to meet our Alcohol Nurse Specialist, they would be able to see you at <please see time and date on the card> in this clinic’

PLEASE PRINT YOUR NAME HERE

THANK YOU FOR YOUR HELP WITH THE STUDY
Appendix 6 sexual health clinic staff attitude brief questionnaire

Thank you for your great help with SHEAR study so far.

Please place a mark on the scale below each statement to indicate your response. For instance if, in response to the statement ‘To provide an effective service, sexual health clinics need to be open at weekends’ you agree strongly please mark the scale with a cross as shown below.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

1) I think that excessive alcohol consumption is a major risk factor for unsafe sex that should be tackled.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

2) When seeing people who drink too much alcohol I have tried hard to encourage them to reduce their drinking.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

3) I believe that the brief alcohol intervention we deliver will have an impact on the amount that people drink.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

4) I think that the brief alcohol intervention we deliver will have an effect on sexual health.
<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

5) To set the threshold for excessive drinking at ‘more than 6/8 units of alcohol on any one occasion’ is too low.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>