Prevalence and treatment of health anxiety in
genitourinary medicine

Dr Helen Seivewright

Imperial College London, Department of Psychological
Medicine

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Dedicated to Walter
Abstract

The concepts of hypochondriasis and health anxiety are described in historical and modern contexts and justification given for the preferred usage of health anxiety, with the condition better classified with the anxiety disorders. The prevalence of hypochondriasis is reviewed and it is noted that most of the data are in primary care with only one paper from genitourinary medicine. The treatments for health anxiety and hypochondriasis are reviewed and noted, until recently, to be relatively limited in efficacy. A prevalence study of health anxiety in genitourinary medicine in two centres found that 8-11% of attenders had significant health anxiety recorded by the Health Anxiety Inventory; that symptoms persisted over a 9 month period, and were associated with higher numbers of medical consultations. This was followed by a randomised controlled trial in a genitourinary medicine clinic in which an adapted form of cognitive behaviour therapy was given by me as a medical practitioner, and compared with a single explanatory interview in a control group. Assessments of clinical symptoms, social functioning and costs were made at baseline, 3, 6 and 12 months after randomisation. In 49 patients allocated, greater improvement was seen for the primary outcome of Health Anxiety Inventory (HAI) scores in patients treated with CBT (n=23) than in the control group (n=26) (P=0.001). Similar but less marked differences were found for the secondary outcomes of generalised anxiety, depression and social function, and there were fewer health service consultations. These differences were maintained in the six months after treatment was completed. The treatment costs were only partly offset by the savings in clinic appointments and for every unit reduction in HAI score there was an incremental cost of £33. It is concluded that the treatment, given in this manner, has the potential to be generalised.
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Statement: This thesis would not have been complete without the help of the people listed below. However, the main work described, including the prevalence study and controlled trial, were carried out mainly by me. For the prevalence study this work included the planning of the administration of questionnaires, the collection of data, the organisation of the two sites for the study, the collection of most of the data on hospital appointments and all the data on diagnostic status of the patients. In the randomised controlled trial I identified most of the patients suitable for the trial, administered the assessments throughout and provided the therapy. I received help with the statistical analyses, and with the collection and analysis of the economic data.

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Chapter 1

Introduction & background

Concepts of Health Anxiety

Worrying about health is a normal protective function. For example in someone with a history of angina, the natural concern at times of more frequent attacks may prompt a medical consultation which could avert an impending myocardial infarction. Health anxiety becomes maladaptive when it is out of proportion to the medical risk. This could represent either a low level of anxiety when the risk is high, (eg indulging in frequent episodes of unprotected sex with many partners, with little or no consideration of the risk of acquiring a sexually transmitted infection), or, as is the subject of this thesis, experiencing excessive worry over a medical problem when in fact the risk of developing that problem is normal or very low.

There is also a spectrum of severity from mild concerns to severe preoccupation. The problem may also be transient; we have all experienced health anxiety from time to time which has subsequently resolved, but for some it may become chronic and debilitating and cause severe suffering.

In such patients, preoccupation with health, arising from cognitions based on the misinterpretations of bodily sensations and changes, generates a range of distressing emotions. Catastrophic thoughts and distressing images contribute to this distress, and maladaptive defensive behaviours are adopted, such as avoidance, and excessive safety seeking activities.
**Historical development of the concept**

The essential features of hypochondriasis have remained very much the same over the last 500 years. It has variously, but fairly consistently, been linked with neuroses and with depression and melancholia. Some descriptions however also suggest persistent personality features, as well as recognising delusional forms of the problem in some psychotic patients.

The word hypochondriasis derives from hypochondrium ("below the cartilage"), an anatomical description for the abdominal area below the ribs, first used by Hippocrates in the fourth century BC. With the growth of classification in mental disorders the notion of hypochondriasis as a primary disorder within the somatoform disorders has taken root. Subsequently there have been suggestions that it should be regarded as a primary disorder within the spectrum of anxiety disorders, and there is conflicting opinion as to whether it can hold its own as at least a subtype of personality disorder.

**Early notions**

Hypochondriacal melancholy is the ancient notion stemming from the early descriptions of Hippocrates. This condition was described by Felix Platter (1614) in his text book as “a melancholic filthy vapour troubling the spirits and affecting the head [that] breeds that species of melancholy which they call hypochondriacal” a vapour that Platter believed arose from “melancholy blood” in the hypochondriacal region (Platter, 1614).

Sydenham (1697) wrote ‘of the disease called in women the hysterical, in men the hypochondriacal, passion’ in which ‘when the mind is disturbed by some grievous accident, the animal spirits run into
disorderly motions’, and physical changes or complaints ensued. Highmore (1651) was the first to
distinguish hysteria from hypochondria, with hypochondria being associated with a physical disorder
especially of the gastrointestinal organs, often associated with numerous other physical complaints,
whilst hysteria and the vapours (which originally denoted emanations from the uterus) seem to have
been more frequently associated with fits.

Biological theories for the aetiology of hypochondriasis developed further by the end of the
eighteenth century, with the view developing that nervous activity was the cause of many of the
symptoms, with the aetiology in the brain rather than the visceral organs. It was in fact around this
time that the word ‘neurosis’ was first introduced into psychiatric nomenclature. In 1765 Robert
Whytt wrote that “in almost every disease the nerves are more or less hurt; and, in consequence of
this, various sensations, motions and changes, are produced in the body”. Those with
hypochondriasis were affected by indigestion, belching and flatulence as the term suggests but they
were also described as suffering from “low spirits, disagreeable thoughts and disturbed sleep”.

William Cullen (1803) made a major step forward in promoting hypochondriasis as a disease in its
own right. He described the symptoms as ‘a languour, listlessness, or want of resolution and activity
with respect to all undertakings….Such persons are particularly attentive to the state of their own
health, to every the smallest change of feeling in their bodies; and from any unusual feeling, perhaps
of the slightest kind, they apprehend great danger, and even death itself. In respect to all these
feelings and apprehensions, there is commonly the most obstinate belief’ (pp.249-250). This
description suggests links with depression, obsessional and anxiety disorders, as well that of a
personality component, all of these remaining important considerations in classification today. This
was a marked advance from the description of Platter’s vapours which seemed much more closely
related to depression.
In the nineteenth century the syndromes of hysteria and hypochondriasis were extensively studied, and Dubois (1833) and Landouzy (1846) made specific distinctions between them. In particular, they stipulated an important gender difference: hysteria was only diagnosable in women, and hypochondria only in men. Landouzy even went so far as to identify universal abnormalities in the anatomical dissection of the uteri of women with hysteria to confirm the condition must be confined to women. (In retrospect it is interesting that hypochondriasis in modern form is more or less of equal prevalence in men and women (see Chapter 2). Later nineteenth and early twentieth century discussion of the topic mainly centred around the more severe component of the condition, with identification of hypochondriacal delusions in schizophrenia and dementia.

Kraepelin (1905) felt hypochondriasis was ‘deeply rooted in general personality’ (pp 271-272). This was after observation of a case of a young man’s development of the fear that he had ‘heart apoplexy’ which was going to be imminently fatal, despite assurances form his doctor that there was nothing wrong. He describes the problem persisting for at least seven years with the patient seeking repeated consultations with a series of different physicians. Bleuler (1924) also felt it represented a personality trait, whereas Gillespie (1928) regarded it as an independent disease.

*Concepts of Health Anxiety since the 20th Century*

In the twentieth century hypochondriasis has mainly been regarded as an abnormality of a patient’s mental state. Brown (1936), in an exhaustive review, thought that there were common features that might be sufficient to warrant its description as a primary disorder but concluded there were three different types of hypochondriasis; psychoneurotic (or merergasic) (linked to anxiety and hysteria), schizophrenic (or parergasic) (linked to delusions), and depressive hypochondriasis with a primary link to depression.
In a standard textbook, Henderson and Batchelor (1962) presented the general view at that time that hypochondriasis occurred in many forms of mental illness including depression, schizophrenia (where the fears of illness were delusional and could assume grotesque forms) and hysteria, but, they acknowledged that sometimes ‘a hypochondriacal conviction and preoccupation is found in which it is impossible to demonstrate that it is part of one of the larger syndromes’ (p.104).

Kenyon (1964) thought hypochondriasis was predominantly secondary to depression. In his study based on a retrospective study of casenotes he identified both primary and secondary hypochondriasis and concluded from his analysis that hypochondriasis ‘does not form a nosological entity, but is rather part of another syndrome, most commonly an affective one’ (p.476). Later (Kenyon, 1965) he modified his views somewhat and conceded that hypochondriasis could be one of 12 different conditions; a primary state, a personality disorder, with anxious-obsessional, immature-hysterical, and sensitive-schizoid being the most prominent, a phobic-anxiety state, neurasthenia, obsessional neurosis, hysteria, depression, paranoid psychosis and an organic state.

Kreitman et al. (1965) also described the association with depression and how hypochondriacal symptoms improved at the same time as did depression, whilst also noting the refractory nature of symptoms in patients with persisting somatic complaints in the absence of severe depression.

Bianchi (1971) postulated hypochondriasis was a disease phobia on the basis of a study of in-patients of a general hospital psychiatric unit, where other terms were also frequently used such as ‘disease phobia’, ‘disease conviction’, ‘somatic preoccupation’ and ‘psychogenic pain’. The ‘illness phobics’ were found to show important differences in terms of current mental state, various personality variables, life history characteristics and on responses to experimental procedures. Otto et al (1998) considered hypochondriasis as secondary to anxiety, whereas Kellner et al (1986), Kellner (1987) and Barsky and Klerman (1983) all thought it was secondary to other forms of somatoform disorder.
Henne (1955) was probably the first to make a clear distinction between simple hypochondria and delusional hypochondria. The delusional form in his view reflected an association with melancholia (severe depression) or psychoses or states of dementia. He divided primary hypochondria into four major types. Firstly *ardanism*, which included patients who were taciturn, with a tendency to ruminate, and were meticulous about their treatment in a self-centered, quiet, egotistical way. Secondly he described the *hysteric*, ostentatiously labile in mood and demanding interest and attention from others. The third group was the *psychoasthenic* one in whom there was a more obsessional type of fear, and the fourth was *transitional intermittent delusional hypochondria* linking in with ardanism and delusional states. These terms are not in use now but the patients described are readily identifiable and link in with more current concepts highlighting the clinical overlap between hypochondriasis and anxiety states such as panic disorder and obsessive compulsive disorder.

Pilowsky (1967) using questionnaire and factor analytic techniques established three major elements in the pattern of hypochondriasis. Firstly a preoccupation with bodily symptoms, secondly the fear of these symptoms, and thirdly a conviction that disease is present despite of the lack of objective evidence and, usually, despite the completion of all appropriate examinations and investigations. The presence of these criteria in the absence of other conditions was felt to represent a distinct syndrome. Moreover there seemed a clear distinction between hypochondriasis and hysteria; hypochondriacal patients did not usually develop the classical motor symptoms of conversion hysteria included in Briquet’s syndrome, and whereas the presence of somatic symptoms in hysterical patients can provide some gain or satisfaction, those in people who are hypochondriacal cause heightened concern. Anthony (1982) also made an important distinction between hypochondriasis and hysteria in that ‘indifference is never displayed by the hypochondriac whose complaints have a characteristic nagging quality about them even in the child, (p. 156).’
Kendell (1982) explored the relationship between the concepts of hysteria and hypochondriasis in terms of illness behaviour which he describes in terms of a Venn diagram. He postulates that most illness behaviour is generated by recognised disease (including well defined psychiatric syndromes such as schizophrenia); but substantial parts of the whole are generated either by fear of disease, or by the ‘positive reinforcement’ provided by the advantages of the invalid role. All three populations overlap with one another, both singly and in combination, and the recognised disease population is surrounded by a penumbra of unrecognised but genuine disease (consisting partly of individuals with accepted but as yet undiagnosed diseases, like occult neoplasms, and partly of sub-populations with as yet unrecognised syndromes. The management of individual patients depends on which of the 11 populations formed by the intersections of these four circles they belong to, rather than on which of a few mutually exclusive diagnostic categories they come from. In very broad terms, illness behaviour motivated by the fear of disease corresponds to hypochondriasis and illness behaviour motivated by the advantages of the invalid role to hysteria (with the caveat that fear also plays an important part in some hysterical phenomena, especially in mass hysteria).

There is also the difficulty of making the distinction between hypochondriasis and somatoform disorder. Some authors consider the former to constitute the fear of developing a disease whilst others require that the diagnosis demands the belief that one is actually suffering from a disease. The fear of developing a disease could then be formulated either as a separate disorder, a sub-group of the condition, or a dimensional element. There is generally an agreement however that when disease conviction becomes truly delusional, this is not true hypochondriasis and should be classified as a somatic delusion. Hypochondriacs have overvalued ideas, but these are distinct from the completely unrealistic convictions of those with health delusions.
Death anxiety is often in the background of hypochondriasis, as beyond the fear and conviction of disease is the belief the disease will be fatal. It is a concept first elucidated as thanatophobia, a more complex fear than other phobias as it is so often denied. Both Freud (1926), and Becker (1973), developed psychoanalytical theories about hypochondriasis; these centred around the relationship between denial, repression and anxiety.

This theory has not had much impact on clinical practice. Attitudes towards death vary enormously. Some people are constantly dicing with death as thrill seekers who would probably not describe themselves as anxious, other, more cautious individuals may live their lives with a sense of lurking danger. Others may experience episodic panic where death is an imminent threat. Some of these anxious individuals however may, on receiving a diagnosis of a serious or terminal illness, develop an attitude of serenity, perhaps illustrating the strong association between anxiety and uncertainty, and the credit for making this association is due to Freud (1926).

Becker’s (1973) existentialist interpretation takes a very different stance stating that the avoidance of the terror of death accounts for our collective and individual belief systems such as religion, and that if we do experience a mortal threat and these systems let us down, we transform this terror into a more socially acceptable ‘phobia’.

Neither of these theories is particularly helpful however when confronting an anxious patient waiting for yet more test results having been experiencing bodily changes suggestive of the particular type of cancer which recently killed a close relative. Nor do they explain that women tend to experience increased levels of death anxiety. Although there is no real association of death...
anxiety with age in either direction, you could theorise that increased proximity to death may increase fears, or conversely, that the prospect of death is less threatening because goals in life have been achieved and there has been a coming to terms with personal mortality.

**Classification**

The current classification of hypochondriasis in the two world classificatory systems, the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) (American Psychiatric Association, 2000), and the International Classification of Diseases (ICD-10) (World Health Organisation, 1993), is shown in Table 1.1. The two classifications are very similar, but in the ICD-10 classification the criterion concerned with the belief of having a serious disease, unlike DSM-IV, is confined to a maximum of two disorders. The ICD-10 classification also differs in that body dysmorphic disorder is included within the same category as hypochondriasis, but not in DSM-IV. Most authorities now regard body dysmorphic disorder as separate from hypochondriasis. Because DSM-IV is more consistent throughout the rest of this thesis the formal diagnosis used for hypochondriasis is the DSM-IV one.
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<td>B. The preoccupation persists despite appropriate medical evaluation and reassurance.</td>
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<tr>
<td>C. The belief in Criterion A is not of delusional intensity (as in Delusional Disorder, Somatic Type) and is not restricted to a circumscribed concern about appearance (as in Body Dysmorphic Disorder).</td>
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<tr>
<td>D. The preoccupation causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.</td>
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<tr>
<td>E. The duration of the disturbance is at least 6 months.</td>
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<tr>
<td>F. The preoccupation is not better accounted for by Generalized Anxiety Disorder, Obsessive-Compulsive Disorder, Panic Disorder, a Major Depressive Episode, Separation Anxiety, or another Somatoform Disorder.</td>
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</table>
| **Specify if:**  
**With Poor Insight:** if, for most of the time during the current episode, the person does not recognize that the concern about having a serious illness is excessive or unreasonable | |

**Table 1.1 Classification of hypochondriasis in DSM-IV and ICD-10 classifications**

The diagnosis of hypochondriasis in both classification systems is subsumed within the group of somatoform disorders. Somatoform disorders constitute a group of loosely defined conditions that are generally recognised to be grossly unsatisfactory under a common label (Mayou et al, 2005). The alleged common feature is the presence of physical symptoms that suggest a general medical condition (hence, the term somatoform) and are not fully explained by a general medical condition,
by the direct effects of a substance, or by another mental disorder’ (American Psychiatric Association 2000 p.485). Hypochondriasis is one of the somatoform disorders, the other ones in DSM-IV being somatization disorder, undifferentiated somatoform disorder, conversion disorder, pain disorder, body dysmorphic disorder, and somatoform disorder not otherwise specified.

In somatization disorder patients experience multiple physical complaints before the age of 30, which have persisted over several years, for which treatment has been sought or they have lead to significant interference with social or occupational functioning. They have to have experienced at least four pain symptoms, plus two gastroenterological symptoms other than pain, one sexual or menstrual symptom and at least one pseudoneurological symptom. In addition these symptoms must be at least partially medically unexplained, not due to any form of drug use, and if there is an associated medical condition, the severity of symptoms is in excess of what would normally be expected. Anxiety is not a requirement of this disorder but of course may co-exist, and many with health anxiety frequently have at least medically unexplained symptoms.

There are particular syndromes, commonly used in clinical practice, which fall within the sphere of somatoform disorders, and may also be found in or overlap with health anxiety, such as irritable bowel syndrome, fibromyalgia and chronic fatigue syndrome (CSF) and these are worth describing separately.

*Irritable Bowel Syndrome*

This is a common diagnosis given by primary care physicians, gastroenterologists, gynaecologists, general surgeons and genitourinary physicians. It is characterised by persistent abdominal pain or cramps with altered bowel habit. Many medical treatments have been tried with limited success, with no one treatment being superior to any other.
There has been more success with psychological treatments in the form of single therapy with cognitive behavioural treatments (Lynch & Zamble, 1989), and cognitive therapy (Greene & Blanchard, 1994; Payne & Blanchard, 1995), and in also in group therapy (Van Dulmen et al, 1996); stress management (Shaw et al, 1991); short-term dynamic therapy (Svedlund et al, 1983; Guthrie et al, 1991), and also some response to hypnotherapy (Whorwell et al, 1984). Most of these studies were carried out after these patients were referred to mental health settings.

**Fibromyalgia**

This condition is commonly diagnosed in rheumatology clinics where up to 20% of patients may be given the diagnosis after exclusion of arthritis and other conditions. It is characterised by chronic widespread pain and tenderness associated with poor sleep and fatigue. A series of randomised controlled trials, including hypnotics such as zolpidem (Moldofsky et al, 1996), fluoxetine (Wolfe et al, 1994) and prednisone (Clark et al, 1985) has shown no benefit, but one study with tricyclic antidepressants showed some initial benefit that was not maintained at six months (Carette et al, 1994).

Non-pharmacological treatments have only resulted in very modest reductions in discomfort with a similarly limited increase in pain-coping. Such studies have been carried out using hypnotherapy (Haanen et al, 1991), and with physical exercise linked to an educational input (Burckhardt et al, 1994).
Chronic Fatigue Syndrome

This diagnosis is made for an otherwise unexplained new episode of fatigue lasting at least six months, which leads to at least a 50% reduction in activity. It can also be associated with a whole range of other non-specific symptoms including poor memory, sore throat and tender lymph nodes, poor sleep (non-restorative), muscle and joint pains, headache and increase in fatigue after exercise. Studies in the use of medication have produced no benefit with anti-viral drugs (Straus et al, 1988), mono-amine oxidase inhibitors (Natelson et al, 1996), or serotonin reuptake inhibitors (Vercoulen et al, 1996). However psychological interventions in the form of CBT (Sharpe et al, 1996; Deale et al, 1997) and behavioural interventions in the form of graded exercise (Fulcher & White, 1997; Wearden et al, 1998) have shown benefit in reduction of fatigue, again these treatments were conducted in specialised medical clinics. 72% of a German population who had chronic fatigue also satisfied the criteria for a somatisation disorder (syndrome) (Martin et al, 2007). There is also evidence that CFS with hypochondriacal symptoms, have a worse outcome in terms of quality of life (Manu et al, 1996)

Undifferentiated Somatoform Disorder

People with this condition constitute a group who complain of one or more psychosomatic symptoms, but fail to satisfy the criteria for a specific somatisation disorder, or for any of the specific functional syndromes. These patients have also been shown to experience improvement in their symptoms with CBT compared to their normal medical care (Speckens et al, 1995). A study conducted in a general out-patient setting by physicians trained in CBT found that group CBT reduced service utilisation, and improved physical and psychological distress more than a group which only underwent stress management (Hellman et al, 1990). A further study conducted in group CBT by a physician trained in this approach showed significant improvement in physical distress,
somatic preoccupation and and hypochondriacal beliefs, compared to waiting list controls (Lidbeck 1997).

**Overlap with other anxiety disorders**

*Illness Phobia*

Although illness phobia was originally described by Ryle (1948) and Bianchi (1971) there is no mention of this in formal classifications. It is described as the fear of being exposed to or developing a disease they have not yet had, rather than, as in hypochondriasis the fear of actually having the disease. Those with illness phobia concentrate their attentions on a specific condition rather than being concerned with interpretation of multiple bodily symptoms. The nature of the phobias often reflect common and often topical anxieties and they may be culturally dependent (eg aborigines fearing evil spirits) as opposed to the fear of having cancer.

Salkovskis, Warwick and Clark (1990) (unpublished) compared hypochondriacal patients with high disease phobia and those with high disease conviction and found the latter scored higher on the core hypochondriacal features of misinterpretation of bodily symptoms and checking behaviours, but conclude that they are both encapsulated under the diagnostic category of hypochondriasis. It should also be noted that Warwick and Salkovskis (1990) showed that hypochondriacal patients demonstrate a great deal of phobic behaviour such as ritualistic checking, avoidance and reassurance seeking.
Obsessive Compulsive Disorder

In DSM-IV the diagnosis of hypochondriasis requires that it is not better accounted for by obsessive-compulsive disorder (OCD). However, the diagnosis of OCD cannot be made if the obsessions are restricted to fears of disease. Rasmussen and Eisen (1992) felt that the two diagnoses were inseparable apart from the extent of the behaviours and compulsions. However Barsky (1992a, 1994a) described some potentially distinguishing characteristics. Those with OCD view their ideas and fears as unrealistic and try to resist them whereas hypochondriacal patients tend to regard their fears as valid. In addition they have more systematic ways of thinking about disease whilst those of the obsessive-compulsive tend to be more intrusive and disorganised. Both groups include behaviours of checking, self examination and reassurance seeking which may be difficult to resist and are intended to relieve anxiety, but the hypochondriacal patients generally regard such behaviour as sensible, whilst those with OCD may be embarrassed and tend to hide their behaviour. There have, however, been no direct comparative studies of the symptoms in each condition.

Panic Disorder

Hypochondriacal fears are often found in patients who satisfy criteria for panic disorder in DSM-IV, but where the hypochondriacal features are considered to be secondary. Similar mechanisms are hypothesised to underlie both conditions, and distorted cognitions about health and heightened awareness of bodily symptoms are present in both (Warwick & Salkovskis, 1990).

Important distinctions are that during panic attacks patients experience intense fear and are convinced they are dying (eg from a heart attack or a stroke), whereas in hypochondriacs the fears are more chronic. Unlike those with panic attacks they do not perceive themselves to be at the point of death; they usually fear a slow death from chronic diseases such as cancer or slow
disintegration of the body. It is the fear of dying rather than the fear of death that is paramount (Warwick & Salkovskis, 1990). Fava et al (1990) described a series of cases where they identified panic disorder in hypochondriacal patients where the hypochondriasis had predated the panic by some years. Treatment of the panic disorder failed to resolve the hypochondriacal fears.

Although the literature supports common phenomenology, only one study in primary care has directly compared patients with these disorders (Barsky et al, 1994b), and they concluded that they were distinct in that hypochondriacal patients had more severe hypochondriacal symptoms, more somatisation and greater impairment of social functioning. This was supported by the primary care physicians who found hypochondriacal patients to be more demanding. Although in this study the two conditions did overlap more than could be accounted for by chance, they also appeared to be distinct entities.

*Generalised Anxiety Disorder*

Patients with hypochondriasis may also have other more generalised worries, and in DSM-IV the definition of hypochondriasis requires that the condition could not be better accounted for by generalised anxiety disorder (GAD). A study by Starcevic et al (1994) compared hypochondriacal phenomena in patients with GAD and panic, and showed that worry about illness in patients with GAD often lacked the intrusive quality of hypochondriacal fears. They also found that the catastrophic misinterpretation of health in hypochondriacal panic patients was lacking in GAD.

*Overlap with depression*

Fears of developing a disease, and the conviction one already has a disease are both encapsulated by the diagnosis of hypochondriasis, but the former leans more to that of an anxiety disorder and the
latter, with its concept of loss which has already occurred, may have connotations with depression. This is supported by the work of Bianchi (1973) and Mayou (1996) who identified cognitions fitting with disease phobia and disease conviction in hypochondriasis. Barsky (1992b) further noted that hypochondriacal patients with predominantly phobic cognitions presented more like anxious patients with good insight, whereas those with disease conviction, somatised more, lacked insight and were more antagonistic to their physicians; these were more likely to be suffering from depression. In a study of medical out patients, Barsky et al (1986) also showed a positive correlation between depression and hypochondriacal concerns (r=0.58).

Noyes et al (1993) also showed an association between higher depression scores among hypochondriacs than non-hypochondriacs in a general medical out-patient setting. Gureje et al (1997) also showed a weak association between depression and hypochondriasis, but in all these studies the association with other psychological and somatic symptoms was also high.

Three studies of primary care out-patients with hypochondriasis have shown this diagnosis increases the risk of depressive disorders. Barsky et al (1992a) and Noyes et al (1994) found comparable increases in the prevalence of lifetime and current major depressive episodes in patients with hypochondriasis versus controls. Both studies also found increases in the risk for dysthymia (chronic depressive disorder), but only Barsky’s study reached a satisfactory level of statistical significance for this. Gureje et al (1997) observed ICD-10 major depression in a greater percentage of hypochondriacal versus non hypochondriacal patients in primary care.

Depressed patients may present with somatic symptoms and health fears and as part of this illness, they may also experience a sense of loss and negative beliefs which are focused on physical health (Beck et al, 1985). In patients with psychotic depression these beliefs may become delusional (Lewis, 1934). Studies have shown wide variation in the incidence of hypochondriasis in depressed patients.
from 18%-69% (Creed & Barsky, 2004). De Alarcon (1964) and Burns and Nicols (1972) both found that hypochondriacal concerns arise frequently in the course of depressive illness, and Kellner et al (1986) observed that only 5% of patients with depression and hypochondriacal features remained hypochondriacal after treatment. Others, however, have found that hypochondriasis can persist after treatment and in these cases were often associated with anxiety and somatic symptoms (Kramer-Ginsberg et al, 1989; Demopoulus et al, 1996).

There was also found to be an increased association of hypochondriasis in depression with older age (Brown and Vaillant, 1981, Wallace and Pfohl, 1995), and hypochondriasis may co-exist with physical disease (de Alarcon, 1964). Living with the fear that one has or might develop a serious illness is also a depressing experience and it could be postulated that depressive features may arise as a secondary phenomenon.

**Genitourinary medicine clinics and hypochondriasis**

In my personal work in genitourinary medicine I have been aware of patients presenting with worries about their health over a long period. The only published evidence of this is a paper by Frost (1985) who found that 36% of 100 consecutively referred patients from a genitourinary medicine clinic to a psychiatric clinic had somatic symptoms of no known cause. It is unlikely that all of these had hypochondriasis.
Current Dilemmas in Classification

Should hypochondriasis be re-classified as an anxiety disorder?

One of the major problems in this area of work is where hypochondriasis belongs in the diagnostic system. Officially hypochondriasis is a somatoform disorder which can be distinguished from organic disease by the nature of the symptoms. Unfortunately, as Sharpe and Mayou (2004) point out, this is misleading as symptoms alone are not useful differentiators, and anyway it is quite possible to have both physical disease and hypochondriasis at the same time. The distinguishing feature separating hypochondriasis from somatization disorder is that in somatisation disorder there are multiple symptoms, often without obvious symptoms of anxiety, and in hypochondriasis there is great anxiety, with or without the presence of symptoms. However, whereas hypochondriasis is reasonably homogeneous with a clear framework of explanation, at least in cognitive theory, the rest of the somatoform disorders have no clear rationale when it comes to treatment, and a good diagnosis helps selection of treatment. Although somatisation disorder is a heterogeneous group its sub-category of hypochondriasis does appear to be more distinct and may be best be viewed as a separate disorder within the anxiety classification group.

As health anxiety is a substitute term for hypochondriasis this label further reinforces the notion that it should be classified with the anxiety disorders, particularly as the central tenet of the condition is fear. There is also clear overlap with other anxiety disorders as described above. Although hypochondriasis seems a distinct entity in terms of phenomenology according to the work of Barsky, its co-morbidity, with other anxiety disorders, especially specific illness phobia, panic disorder and OCD, and less so with GAD, supports its classification with the anxiety disorders. More crucially, the shared cognitive misinterpretations in these conditions brings them even more closely together, not just in their association of symptoms and mechanisms, but also in common treatment strategies. As
Olatunji et al (2009) describe it, the “model of hypochondriasis as 'health anxiety' has been advanced that draws from the cognitive (i.e. dysfunctional beliefs, body vigilance, anxiety sensitivity, intolerance of uncertainty) and behavioural (i.e. avoidance, safety-seeking) processes implicated in the development of other anxiety disorders. This conceptualisation has been translated into specific treatment techniques that: (a) help patients recognise and modify faulty beliefs about illness such as 'all bodily sensations are signs of serious illness'; and (b) eliminate behavioural responses that prevent the self-correction of faulty beliefs” (Olatunji et al, 2009, p. 482).

Should the diagnosis also include patients with somatic complaints?

Hypochondriacal patients may express fear of developing a disease in the future, whilst being free of symptoms at the time. More usually, they misinterpret symptoms and bodily sensations as evidence of severe underlying disease. Some experience longstanding symptoms or sensations, (often medically unexplained), which they are convinced represent severe underlying disease. There are also those with the diagnosis who have proven physical disease but have health concerns with regard to fears and symptoms that are disproportionate to their underlying condition.

There is also considerable overlap with, or a past history of, the somatic syndromes of irritable bowel syndrome, fibromyalgia and chronic fatigue syndrome in those with hypochondriasis. In people with these supposed medical diagnoses somatic complaints form a large component of the problem and if they have hypochondriacal beliefs also they might arguably be included within the definition of health anxiety.

Further differentiation of hypochondriacal patients into those with or without somatic complaints seems unnecessarily complicated and unhelpful in terms of management, and highly questionable in terms of the response to the management of anxiety. However there is a small number of patients
with medically unexplained somatic complaints who have strong disease convictions that can achieve the status of delusions. Such patients may well deny any disproportionate or significant anxiety, and standard psychological interventions, tailored to the treatment of anxiety could be thought unlikely to be successful. However, there is evidence that such interventions can be used successfully and lead to an improvement in symptoms, with less disability and distress (Sharpe et al, 1992). Despite the absence of overt anxiety in this group it is therefore arguable that even this group might be classified together with others under the health anxiety label.

*Is hypochondriasis a primary or a secondary disorder?*

Hypochondriacal beliefs are well documented in some cases of depression (eg Cotard’s syndrome) (Luque & Berrios, 1994), in some cases of psychosis and there is an overlap with other anxiety disorders. Even in severe depression and psychotic states, such beliefs are uncommon and, when present, tend to be fixed and delusional, linked to the severity of the primary diagnosis and only responding to treatment directed at the underlying condition. These cases have a different quality to them and are not reflected in the majority of cases with hypochondriasis.

*Abridged Hypochondriasis*

Abridged hypochondriasis differs from full blown hypochondriasis in that one or more of the diagnostic criteria for hypochondriasis in the DSM-IV classification are not present. An example of someone with abridged hypochondriasis would be a patient who is persistently preoccupied by the idea that they had an undiagnosed neoplasm despite medical reassurance, but still managed to function well in their job and everyday life (ie they would meet all but criterion B in the classification), (Gureje et al, 1997) Such patients still suffer considerable distress.
‘Health Anxiety’ and ‘Hypochondriasis’ in this thesis

The term ‘health anxiety’ is increasingly being used to describe patients with hypochondriasis. Its main advantage is that it is less pejorative and therefore more acceptable to patients, and making it easier to broach the diagnosis. As it stands it can be criticised for encompassing the range between a normal appropriate degree of health worry and gross hypochondriacal fears. However the author prefers the term ‘health anxiety’, mainly because the term rests more easily among the anxiety disorders than any other, and this has been used throughout the original research component of this thesis. The term both describes the problem and suggests a lead into treatment.

An empirical approach to health anxiety

In working practice there is a case for looking at the diagnosis of health anxiety is a new way. When reclassified as an anxiety disorder, the concept of health anxiety in its broadest terms is best illustrated by a Venn diagram (Figure 1.2). At various times in the course of illness a patient’s position in this diagram could alter, and so a patient could lose the diagnosis of ‘health anxiety’ when acute symptoms lead towards the ‘pole’ of panic. This representation is very similar to the notion of the ‘general neurotic syndrome’ in which anxiety and depressive syndromes merge at different times in connection with different life events and physical circumstances (Tyrer, 1985). This more fluid dimensional interpretation might be more useful in terms of understanding an individual patient’s pathology and so better direct therapy.
Figure 1.2 The postulated relationship between health anxiety and other common psychiatric disorders

In this Figure you will note that other effects of co-morbid physical illness, relationship difficulties, and life events can reinforce or reduce the impact of symptoms, and may also determine the primary nature of the symptoms at any one time.
Chapter 2

Epidemiology, natural history and identification of health anxiety

Prevalence

The prevalence of a disorder refers to the proportion of a particular population affected by a condition at any one time. This can be at a single point in time, referred to as ‘point prevalence’, or for specified periods of time, hence the terms ‘12 month’ and ‘life-time’ prevalence. There is a wide variation in the estimation of the prevalence of health anxiety (hypochondriasis) within different medical settings, with variation between populations in primary and secondary care, and also differences depending on which classification system is used. Gureje et al. (1997) found a low 12-month prevalence of 0.8% across primary care and general medical settings using ICD criteria, Escobar et al (1998) found a prevalence rate of 3%, also in primary care, with Faravelli et al (1997) in a community population finding a one-year prevalence of 4.5% for hypochondriasis using DSM-III-R criteria. Studies of more specialist populations have tended to show higher prevalence rates, with Aydemir and colleagues (1997) showing a point prevalence rate amongst cardiology patients with permanent pacemakers of 7.4%.

The prevalence rates in psychiatric populations, using ICD-10 and DSM-III-R classifications, including patients seen in liaison psychiatry with chronic pain, (Polatin 1993; Altamura et al , 1998; Gatchel et al 2006) have showed prevalence levels of hypochondriasis of 10-15% but the methods of assessment have varied greatly. The prevalence rates tend to be a little higher in secondary care but a great deal depends on the degree to which the populations are selected or unselected. If
unselected, the rates are lower, and Barsky et al (1990) found the six-month prevalence of DSM-III-R hypochondriasis to be only between 4.2% and 6.3% of consecutive attenders at a medical clinic.

Prevalence rates tend to be higher when hypochondriasis or health anxiety is assessed using less stringent criteria than those in DSM, which then allows those with abridged hypochondriasis to be included. Kirmayer and Robbins (1996) found in primary care that 15.7% of all patients had significant worries about their health but only 5.7% had a full hypochondriacal syndrome.

Prevalence rates also tend to be understandably higher when populations of patients with medically unexplained symptoms are studied, as these include those with health anxiety as well as other pathology. Nimnuan et al (2001) found in a survey of seven general medical clinics that no less than 52% had medically unexplained symptoms, the highest being in gynaecological clinics. It is likely that a significant proportion of these would have health anxiety too.

**Incidence**

The incidence of a disorder refers to the number of new cases arising in a defined population over a particular period of time and is usually referred to as the number of cases per 1000 of that population. There is very little information on the incidence of health anxiety, and, in view of the persistent nature of this condition, some prefer to use prevalence as the better measure. Gräsbeck et al (1993) reviewed the case notes of a cohort of patients with a diagnosis of anxiety to assess if they also satisfied the DSM criteria for hypochondriasis, finding an incidence of 3.4%. Another study carried out on a population of new ENT referrals with a variety of assessments including questionnaires, interviews and the specialist’s opinion found an incidence of 13.5% (Schmidt et al, 1993)
Gender Differences

It has been reported that women report health anxiety somewhat more than men (Faravelli et al, 1997), but most other studies find no differences in rates between men and women (Altamura et al, 1998; El-Rufaie & Absood, 1993; Escobar et al, 1998). Gender does not appear to be important in this disorder, which is of some interest as most anxiety disorders show persistently greater rates in women than in men, with, for example, twice as many women having generalised anxiety disorder as men (Vesga-López et al, 2008).

Cultural Differences

Psychogenic symptoms can take a variety of forms for example they can be generated through sensations, motor changes and pain (Shorter 1991), and although more related to somatisation than overt hypochondriasis, with these, there appears to be a shift in emphasis culturally and over time, for example from ‘neurasthenia’ described by Beard in the 1860s and the ‘hysterical paralysis’ described by Charcot and Freud to the modern day complaints of ‘chronic fatigue’ and chronic pain.

There are cross-cultural differences regarding which symptoms and which diseases tend to be regarded with the most fear (Escobar, 1995), for example Germanic cultures tend to fear cardiopulmonary disorders, whilst some countries, especially the United States and Canada, (and increasingly the UK) tend to fear diseases which have are postulated to have an immunological aetiology such as ‘sick building syndrome’ but which are likely to be within the somatoform group of disorders (Wiesmüller et al, 2003).
The media also influence the direction health fears may take. Thus, for example, the fear of brain tumours allegedly due to the use of mobile ‘phones, is a potent subject of concern. Screening health programmes may also lead to increased anxiety. A good example of this is how the ‘worried well’ have presented to genitourinary medicine departments over the last three decades. In the early eighties the fears were predominantly over the fear of contracting syphilis. The advent of the HIV/AIDS epidemic in the mid to late 80s and the huge publicity campaign accompanying it, combined with issues around stigma and lack of effective treatment, led to these became the most feared conditions. Many intensely worried people presented for HIV testing, with minor symptoms such as frequent coughs and colds thought to be due to a depressed immune system but with minimal risk (Miller, 1985). In the last decade there has been a shift of emphasis once again, also predominantly media driven, towards fear of prostatic cancer in men and concerns around Chlamydia infection and infertility, and ovarian cancer in women. There is now a return to fears of syphilis and TB, as these two conditions are becoming more common again, and, in the case of the latter, increasingly resistant to treatment.

Cultural differences are also responsible for the extent and nature of associated medically unexplained symptoms with, for example higher rates of these reported amongst Chinese (Hsu & Folstein, 1997) and Pakistani populations (Husain et al, 2004), and with somatisation more commonly found in non-industrialised settings (Angel & Guarnaccia, 1989; Katon et al 1982; Kirmayer & Young, 1998). There is also a tendency in Western societies for somatisation to be negatively correlated with income and education (Kleinman, 1983; Leff, 1997; Mezzich & Raab, 1980).

Culture-bound phenomena are also well described. Here the fears are based on well established cultural beliefs. Even though the nature of the fear may be understandable within the patient’s cultural context, this may still be sufficient to be regarded as a mental illness, where the diagnosis
becomes that of a culture-bound syndrome associated with distress and functional impairment (i.e. cultural factors influence the content of the fear but not the degree of distress or disability). A well described example in the field of health anxiety is the dhat syndrome found commonly in India. This is manifest by severe hypochondriacal concerns about the discharge of semen, white discolouration of urine and extreme fatigue (Chadda & Ahuja, 1990; Malhotra & Wig, 1975). The sufferer attributes his symptoms to semen escaping in his urine, and there may be associated guilt, regarding early masturbation, extramarital sex and homosexual relationships. Urine testing reveals no discolouration or evidence of the presence of semen.

Dhat can in its mildest form respond to simple explanation and reassurance, but it can also become the central feature within the diagnosis of hypochondriasis, or a fixed belief underpinning a delusional disorder (somatic type). The nature of this fear can be partially explained by the widely held belief in Indian society that semen is an extremely precious fluid generated by a long and complex bodily process. It is believed that 40 meals give rise to 1 drop of blood, 40 drops of which in are required to form 1 drop of bone marrow, and 40 drops of this are necessary to produce 1 drop of semen. A single ejaculation is then thought capable of severely depleting a man’s mental and physical energy. Described by Malhotra & Wig (1975) as the ‘sex neurosis of the Orient’, a study in Chandigarh showed a widespread belief that loss of a single drop of semen was harmful; and the lower the cast the higher the belief that medical intervention was required.

A similar condition to dhat has been described in China where Wen & Wang (1980) described a form of sexual neurosis associated with excessive semen loss due to frequent intercourse, masturbation, nocturnal emission or the passing of white discoloured urine, where the sufferers describe (medically unexplained) symptoms of dizziness, backache, fatigue, weakness and insomnia.
**Natural Course of Health Anxiety**

Hypochondriasis can begin at any age to fit the criteria for DSM-IV; however it in practice the onset seems to be predominantly in early adulthood. Hypochondriasis may be transient (Kellner, 1987) or occur as a feature of some other psychiatric disorder, but in cases of established hypochondriasis, Barsky showed that it tended to last up to 5 years in 50-66% of cases (Barsky et al, 1990a), and that transient hypochondriasis (which is probably linked to abridged hypochondriasis), tends to persist with continuing handicap after 22 months (Barsky et al, 1990b, 1993). In practice most cases are encountered where the problem has occurred for many years. A recent systematic review suggests that between 30% and 50% of people with a diagnosis of hypochondriasis show long term improvement (olde Hartman et al, 2009).

The onset tends to be in response to a trigger, this could be illness or death in the family (Barsky & Klerman, 1983), at a time of stress or serious illness, or associated with a health scare in the media. By necessity much of this information is anecdotal and retrospective so must be interpreted with some caution, but there is no real evidence to support a familial disposition. In a twin study between monozygotic and dizygotic twins Torgersen (1986) found no association for those who were monozygotic. Also it appears that the prevalence of hypochondriasis is not increased in families with hypochondriacal probands (Noyes et al, 1997).

There are no longitudinal studies looking at the effects of age on health anxiety, and cross-sectional studies tend to be contradictory. Altamura et al (1998) reported a trend towards higher rates in older adults (over 45 years) and Gureje et al (1997) found the same trend in those with abridged hypochondriasis, however Barsky et al (1991) found no difference in prevalence the condition between those over 65 years compared with those who were younger.
**Use of health services**

Many cases of health anxiety may be missed, at least initially, when they present to medical services. The concern expressed by the patient and the nature of their symptoms may readily prompt investigation or referral. These may be initially justified but, typically, it is only after these, often extensive, investigations have run their cause and no pathology has been found that the problem is seen for what it is.

In some cases where patients experience many symptoms they may be given a diagnosis of a functional somatic syndrome. Not all patients given such diagnoses have high health anxiety, but a proportion will, although we do not know how many. These diagnoses, including irritable bowel syndrome (IBS), fibromyalgia, unexplained vomiting syndrome and chronic fatigue syndrome, are given by the physician to attempt to explain or ‘label’ otherwise unexplained symptoms in the particular speciality concerned. This rarely serves the patient well. These conditions have poor outcomes, and giving an organic label, rather than that of medically unexplained symptoms, makes it harder to manage them. Many such patients use health services frequently, (Barsky et al, 2005; Bombardier & Buchwald, 1996; Kroenke et al., 1997; Lloyd & Pender, 1992). Not all these patients will access mainstream services; many will search out alternative treatments, sometimes incurring large expense, with some abandoning hope of ever finding a cure or symptomatic relief. It is uncertain how many of these patients suffer with health anxiety, but many of these patients during the course of their illness will qualify for more than one functional disorder. There is evidence that those with symptoms suggesting IBS are more likely to have a confirmatory diagnosis of this condition if they already suffer with hypochondriasis (Trikas et al, 1999).

**Identification of health anxiety**
Clear identification of any medical or psychiatric condition is not only important clinically but fundamental to audit and research. Classification systems underpin this and guidelines based on specific criteria are increasingly used to direct interventions and therapy in clinical care. Equally important are criteria for entry into clinical research trials where outcomes are only of value if they are clearly understood and defined.

Identification of psychological disorder within a medical setting is especially challenging. Overtly health anxious patients, who are frequent users of medical services, constantly presenting with health worries, or consulting repeatedly with innocuous symptoms, and often requesting further investigations, are relatively easily identified as suffering from health anxiety. Others may be identified after a diagnosis has been made of medically unexplained symptoms (MUS), although the proportion of those with MUS who have clinically significant health anxiety is still uncertain. Clinical suspicion alone will almost certainly miss many cases of health anxiety, or at best identify them late, after lengthy investigation. Health professionals also vary in their ability to recognise the condition and the confidence with which they feel able to diagnose it, being especially nervous in the face of what are potentially worrying symptoms. The development of screening instruments acceptable to staff and patients, that can be administered easily, is desirable to aid recognition and diagnosis in these settings. Such screening instruments need to have high sensitivity (the proportion of positive cases correctly identified) and high specificity (the proportion of negative cases correctly identified) to permit confidence in their clinical use and application to research.

Screening instruments are commonly self-rated whereas scales used to evaluate the specificity of a condition are more usually administered by interview in either a structured or a semi-structured format by trained assessors. Such scales are regularly reviewed and frequently revised in the light of new developments. In addition new scales are periodically introduced in an attempt to reach greater
precision in identification. Other scales linked to assessment and treatment, have also been introduced.

The format of the scales is often similar, both for identification and measurement of individual clinical aspects. Typically, a Likert scale format is used (Likert, 1932). A typical 5 level scale is:

a) strongly disagree
b) disagree
c) neither agree or disagree
d) agree
e) strongly agree

Such scales can apply to a host of measurements and are able to reflect and measure stability of diagnosis over time whilst also identifying and measuring therapeutic response. New scales have to be tested and compared with existing measures, in terms of accuracy, relevance and clinical usefulness, increased sensitivity often coming at the cost of reduced specificity and vice versa. Removal of duplicated items that correlate highly allows the briefest effective scale to be devised.

The best use of scales can be further enhanced by preliminary screening or ‘probe’ questions, which can be used to screen out those who would definitely not qualify for the condition. These can be administered verbally before the scale is administered, or as a preliminary header to the questionnaire.

Usefulness and adherence are further enhanced by the design of the questionnaire, the use of language, the way it is introduced, and ease of scoring and evaluation.
In Table 2.1 the main instruments used in the identification and measurement of health anxiety are described.
<table>
<thead>
<tr>
<th>Scale</th>
<th>Main features</th>
<th>Relevance to measurement of health anxiety</th>
<th>Limitations in clinical value</th>
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<tr>
<td><strong>STRUCTURED INTERVIEWS</strong></td>
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<tr>
<td>Composite International Diagnostic Interview (Robins et al, 1988)</td>
<td>Categorical scale in the form of a standardised interview. Four questions assess illness fears and beliefs, two further questions address persistence of these despite reassurance of disruptive effects in various functional areas, and one item identifies duration of at least 6 months</td>
<td>Incorporates the items that correspond to the criteria for ICD-10 hypochondriasis. Interrater reliability: 90% agreement (k = 0.71) for DSM-III-R; convergent reliability for clinical opinion. Would exclude 'abridged hypochondriasis' which includes health anxiety.</td>
<td>It restricts the diagnosis to those patients who fear a maximum of 2 physical diseases. May also include body dysmorphic disorder, which is now appreciated to be a different condition. It is crude in measuring response to treatment. It is unhelpful in identifying other clinical features of health anxiety such as safety seeking behaviours which could guide therapy.</td>
</tr>
<tr>
<td>Structured Clinical Interview for DSM-IV (First et al, 1997; Spitzer et al, 2002))</td>
<td>Categorical scale in the form of a standardized interview. A set of probe questions is introduced at the beginning of the somatoform module, with a positive response to any of these prompts leading to completion of the section on somatoform disorder and hypochondriasis. The hypochondriasis section contains questions to elicit illness fears and beliefs, failure to respond to medical reassurance and duration of at least 6 months.</td>
<td>Reliability: k = 0.57 for DSM-III-R diagnosis over 24 hours to 2 weeks.</td>
<td>It is unhelpful in identifying other clinical features of health anxiety such as safety seeking behaviours which could guide therapy. It is crude in measuring response to treatment. Implies disruption on functioning without assessing directly.</td>
</tr>
<tr>
<td>Structured Diagnostic Interview for Hypochondriasis (Barsky et al. 1992a)</td>
<td>Categorical scale in the form of a standardized interview. Designed as structured clinical interview for DSM-III-R, but never adopted. DSM-III-R now superseded by DSM-V.</td>
<td>Inter-rater reliability: 96% agreement for DSM-III-R diagnosis.</td>
<td>Scale now out of date for new classification system. It is unhelpful in identifying other clinical features of health anxiety such as safety seeking behaviours and disruption to functioning which could guide therapy. It is not a useful tool for measuring response to treatment.</td>
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<td><strong>SELF-REPORT SCALES</strong></td>
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<td>Whitely Index (Pilowsky, 1967)</td>
<td>Ordinal scale with fourteen items covering disease fear, disease conviction and bodily preoccupation. Each question rates the items on a scale from 1 ('Not at all') to 5 ('A great deal') enabling a measure of severity and an ability to identify change with treatment.</td>
<td>Cronbach’s alpha:0.78; test-retest r: 0.90 (4 weeks); concurrent validity with Structured Diagnostic Interview for Hypochondriasis: Sensitivity: 0.87, Specificity: 0.72.</td>
<td>The scale has diagnostic limitations in discriminating between health anxiety and panic, and also in failing to specify how long the problems have been present. It is unhelpful in identifying other clinical features of health anxiety such as safety seeking behaviours and disruption to functioning which could guide therapy.</td>
</tr>
<tr>
<td><strong>Self report scale</strong></td>
<td><strong>Main features</strong></td>
<td><strong>Relevance to measurement of health anxiety</strong></td>
<td><strong>Limitations in clinical value</strong></td>
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<td>Illness Attitude Scale (Kellner, 1986)</td>
<td>Ordinal scale which is a composite of nine different scales each comprised of three questions. Each of the 27 items is rated on a 5-point scale of frequency. Two additional items provide information on current diagnosed illness and treatment, but are not used in scoring. The nine scales cover: 1 – Worry about illness 2 – Concerns about pain 3 – Health habits 4 – Hypochondriacal beliefs 5 – Thanatophobia (phobia of death) 6 – Disease phobia 7 – Bodily preoccupations 8 – Treatment experience (frequency of medical consultations) 9 – Effects of Symptoms (interference with normal functioning)</td>
<td>Cronbach’s alpha: 0.87 (Illness Behavior scale), 0.96 (Health Anxiety Scale); test-retest rs for 9 subscales; 0.75-1.00 (1-4 weeks); concurrent validity with Structured Diagnostic Interview for Hypochondriasis: Sensitivity: 0.79, Specificity: 0.84 (Health Anxiety Scale)</td>
<td>The subscales contain too few questions to assess the independent constructs and a hierarchical structure has been developed, with 4 or 5 lower-order factors loading onto 1 or 2 higher-order factors with the inclusion of the health habits questionable. Some of the items on the scale do not relate to health anxiety (eg: questions assessing smoking and healthy eating). There may be a tendency for the scale to identify generalised anxiety rather than health anxiety.</td>
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<tr>
<td>Illness Behavior Questionnaire (Pilowsky, 1971; Pilowsky &amp; Spence, 1994)</td>
<td>Ordinal scale, a 62-item one comprising an expanded version of the Whiteley Index. It measures health anxiety and illness behaviour on 7 different scales: 1 – General hypochondriasis (illness fears) 2 – Disease conviction (illness beliefs) 3 – Perception of Illness (attribution to physical or psychological aetiology) 4 – Affective inhibition (difficulty in expressing distress) 5 – Affective disturbance 6 – Denial (of possible contributory life stressors) 7 – Irritability</td>
<td>Test-retest rs for 7 subscales; 0.67-0.87 (1-2 weeks); convergent validity with friends’/relatives’ ratings: rs = 0.50-0.78</td>
<td>It is unhelpful in identifying other clinical features of health anxiety such as safety seeking behaviours and disruption to functioning which could guide therapy, although despite not directly addressing illness effects the questionnaire has been shown to be predictive of an adverse impact of symptoms on functioning. There is a high correlation with anxiety and depression, with some items less specific to health anxiety. It is lengthy to complete, and would be difficult to use as a screening instrument.</td>
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<tr>
<td>Short Illness Behavior Questionnaire (Chaturvedi et al, 1996)</td>
<td>Abbreviated 11-item screening version of the Illness Behavior Questionnaire for detection of abnormal illness behaviour Comprised of 6 items from the original Disease Conviction subscale and 5 items from the original Illness Perceptions subscale</td>
<td>The abbreviated version has demonstrated good sensitivity and specificity in the detection of abnormal illness behaviour in a population with prominent somatic complaints and normal volunteers</td>
<td>Only detects abnormal illness behaviour and is not specific for health anxiety.</td>
</tr>
<tr>
<td><strong>Self report scale</strong></td>
<td><strong>Main features</strong></td>
<td><strong>Relevance to measurement of health anxiety</strong></td>
<td><strong>Limitations in clinical value</strong></td>
</tr>
<tr>
<td>----------------------</td>
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<td>---------------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Health Anxiety Questionnaire (Lucock &amp; Morley, 1996)</td>
<td>Scale devised for medical as well as psychiatric populations to tap a range of health anxiety severity. Ordinate scale comprising 21 items, rated on a 4-point scale, chosen to reflect important aspects of health anxiety identified by research and theory on the cognitive-behavioural model of health anxiety. 4 clusters of items identified: health worry and preoccupation, fear of illness and death, reassurance seeking behaviour and interference with life. Includes most cases of health anxiety and suitable for use as a screening instrument. Scale is sensitive to change and therefore of value in assessment of psychological treatment.</td>
<td>Cronbach’s alpha: 0.92; test-retest r: 0.87 (6 weeks, lay sample) and 0.95 (4 to 7 weeks in outpatient psychiatric sample); discriminative validity relative to trait anxiety and depression in distinguishing DSM-III-R hypochondriasis from anxiety disorders.</td>
<td>Not specific for classification systems. Fails to specify duration for each item.</td>
</tr>
<tr>
<td>Health Anxiety Inventory (Salkovskis et al, 2002)</td>
<td>Ordinal scale comprised of 23 items rated on a 4-point scale. Items chosen closely based on the cognitive theory of health anxiety and hypochondriasis (Warwick &amp; Salkovskis, 1990; Salkovskis &amp; Bass 1997). Designed to measure health anxiety on a continuum from no health anxiety to severe health anxiety and thus able to show change with therapy, and to be useful in medical settings with less reliance on direct questions regarding beliefs of serious illness. The severity of health anxiety identified correlates well with degree of disability.</td>
<td>Cronbach’s alpha coefficient 0.95; test-retest r:0.90 (hypochondriacal patients, 1 week apart).</td>
<td>Not specific for diagnosis of hypochondriasis.</td>
</tr>
<tr>
<td>Short Health Anxiety Inventory (Salkovskis et al, 2002)</td>
<td>Ordinal scale comprised of 14 items rated on a 4-point scale. Should include most cases of health anxiety and suitable for use as a screening instrument. Has been shown to be sensitive to change as there is also a version for measuring health anxiety over the preceding week.</td>
<td>Cronberg’s alpha coefficient 0.89</td>
<td>Not specific for diagnosis of hypochondriasis.</td>
</tr>
</tbody>
</table>

**Table 2.1 Scales used to assess hypochondriasis and health anxiety**
Assessment of the clinical utility and value of these scales

The scales described in table 2.1 broadly fall into two main categories, a diagnostic group, including the Composite International Diagnostic Interview, the Structured Clinical Interview for DSM-IV and Structured Diagnostic Interview for Hypochondriasis, which were designed only for diagnostic purposes, and the ‘self-report’ group, scales that are more clinically based, variably measuring symptoms, beliefs and factors which tend to maintain the condition. The self-report scales vary in emphasis in a number of ways which influences their usefulness in clinical application.

Firstly some of the scales, specifically the Whitely Index, the Illness Attitude Scale, the Illness Behaviour Questionnaire and the Short Illness Behaviour Questionnaire, are less specific to health anxiety, tending to over-include patients whose specific anxiety problem may be panic or generalised anxiety. Secondly they may include questions which are not directly related to health anxiety, such as those on diet and smoking, as in the Illness Attitude Scale, or asking about unrelated illness behaviours. Thirdly, with the body of work that has developed in this field, in terms of understanding the role of underlying dysfunctional beliefs and maintaining factors, scales which identify these various aspects are not only more specific but can identify areas to target within psychological therapies; the Health Anxiety Questionnaire and both versions of the Health Anxiety
Inventory are constructed in this way, and although all the self-report scales when reapplied are able to measure change, they are not orientated towards identifying domains which require further therapeutic intervention. Fourthly, not all the scales ask for how long the problem has been present – this includes the Whitley Index and the Health Anxiety Questionnaire - and as such may over identify ‘state anxiety’ which is more likely to remit spontaneously. Lastly there is ease of administration, which includes the time taken to complete the scale and how easy it is to score; lengthy questionnaires such as the Illness Behaviour Questionnaire, are unsuitable for screening purposes.

In our choice of questionnaire for the prevalence study, we required a scale that was self-rated, easy and quick to administer, and straightforward to score. It was also important to identify caseness specific to health anxiety (and this would thus be likely to include abridged hypochondriasis), and should include duration of symptoms, their severity and sensitivity to change, including the possibility of return to within the normal range if repeated over time. The scale best fulfilling these criteria was the Short Health Anxiety Inventory.
As the intervention study directly followed on from the findings of the prevalence study it made sense to use the same scale, as this proved successful in identification of health anxious patients, and, very importantly, it covered the full range of health anxiety, from lower than normal worry to excessive health anxiety.

**Further Assessment**

It is important to establish if there is co-existing organic pathology such as the use of alcohol and other drugs or the presence of existing physical illness. Pathological health anxiety can be present those with established physical disease leading to further distress and complications in management. Unfortunately co-morbid physical and anxiety disorders are all listed in the anxiety disorders section of DSM-IV (293.84) (American Psychiatric Association 2000) with no mention of health anxiety.
Chapter 3

The phenomenology of the symptoms of physical illness and health anxiety

The word ‘phenomenology’ was first given substance in psychiatry by the work of Jaspers (1963), who used it to give a more exact description of symptoms and mental state features in psychiatry. However the term has been used more recently in a wider context, and this discussion I use Andreasen’s definition (2007) as ‘the study of psychopathology, broadly defined including signs, symptoms and their underlying thoughts and emotions’ (p. 108).

The Background Psychology of Physical Symptoms and Illness

The association between physical symptoms and illness behaviour is complex. There are interactions between cognitions, mood and the context in which a symptom is experienced. Most lay people can identify the symptoms of myocardial infarction, but even so 50% of people experiencing symptoms in keeping with this diagnosis delay seeking help for at least 2 hours, thereby increasing the risk of complications and mortality. In fact screening studies have shown that many symptoms which would have benefited from medical intervention go untreated (Clark, 1959; Ingham & Miller 1979).

Conversely many visits to medical practitioners appear to be completely unnecessary, as for example with minor upper respiratory tract infections where the condition could have easily been self managed. These consultations put a strain on an already overburdened health care system in terms of resources and costs and may well result in iatrogenic side effects from unnecessary prescribed medication (Peters et al, 1998).
A symptom occurs when an individual experiences somatosensory information as aversive. This can cause physical or psychological distress, and whereas signs of illness are visibly manifest and detectable by health professionals, symptoms are entirely subjective and therefore more difficult to evaluate. There is a distinction between ordinary bodily sensations and symptoms, where the latter tend to cause troublesome disruption of ordinary functioning. However, although symptoms reflect somatosensory phenomena they do not necessarily indicate disease.

Many symptoms are managed at home without recourse to health professionals (Cameron et al, 1993); in fact probably less than half of symptomatic individuals seek medical care (Scambler & Scambler, 1985). When consultation is sought, symptoms will be the initial focus of this interaction, although perhaps this is changing to a degree. There is now an increasing trend towards check-ups and asymptomatic screening for disease (e.g. The National Chlamydia Screening Programme (Stephenson, 2007)).

**Symptoms and behaviour**

Safer et al (1997) describes three stages in the interplay between symptoms and behaviour: appraisal, where a somatic sensation is initially noted; illness, when the patient has concluded that it is indicative of this; and utilisation, when the patient decides it requires medical intervention.

Obviously there is the potential for correct and incorrect processing at all stages through recognition of symptoms, whether or not they constitute disease and the necessity for medical help. This can lead to discrepancy between a patient’s interpretation of the nature of a symptom and that of a health professional, but it is fundamentally important to realise that symptoms are equally ‘real’ whether indicative of disease, psychogenic in nature or non-specific.
The possibility that not all bodily sensations and changes are indicative of disease, and that there is the potential for incorrect processing, suggests a target area for psychological approaches to therapy.

**Interpretation of symptoms within the medical setting**

With advances in medical care and increasing sophistication and precision of medical tests, less reliance tends to be placed by physicians on patients’ symptoms when making a diagnosis. Indeed there is increasing evidence that there is also little association between severity of symptoms and the degree of underlying pathology as shown by Ruo et al (2003) in a study of patients with chronic cardiac disease. As a consequence the ability to treat disease does not necessarily reduce suffering and distress from symptoms (Wade & Halligan, 2004). In addition medically unexplained symptoms are common forming the majority of consultations in primary care, and up to a half of all out-patient consultations (Nimnuan et al, 2001). There is no evidence in these cases that hunting for hidden underlying organic pathology is likely to reveal a cause. Historically, medically unexplained symptoms have been considered as evidence of ‘hidden’ psychopathology which, too painful to be acknowledged in terms of psychological distress have somehow become ‘somatised’ into physical, and hence possibly more acceptable, phenomena. Although this theory remains in the popular domain, there is no evidence to support it (Mayou et al, 2005).

Considering the concept of medically unexplained symptoms and a discussion of the frequency with which these conditions are diagnosed within medical settings could potentially lead to a discussion of what factors might make the problem persist, leading into the identification of maintaining factors, such as reassurance seeking as discussed within the CBT model in the next chapter. However, there is no specificity of any symptom which categorically indicates that it is not organic in
origin; it is only by studying the context in which the symptom is shown, and usually only after medical assessment has been completed, that the likely cause of the symptom can be understood.

In the face of this dilemma, where symptoms are troublesome and frequently failing to fit it in with the medical model of care, there is a move towards a multidisciplinary, multifaceted approach. This approach, directed towards the symptoms themselves and based on the management of chronic pain (Clauw & Crofford, 2003), takes into consideration the contribution of social, psychological and biological factors in the aetiology, severity and management, offering a broader approach to management, allowing consideration of psychological and psychopharmacological approaches and thus avoiding the traditional separation of patients into either a medical problem or a psychiatric one, otherwise known as dualism. Research interest is growing rapidly within this area (Kroenke & Harris, 2001).

**The Common-Sense Model for Health and Illness Behaviour**

One useful way of explaining health and illness behaviour is based on Leventhal’s common-sense model of health and illness behaviour (Leventhal et al, 1967; Leventhal, 1970). This explores the explanations that ordinary people construct when they experience symptoms. It is important for medical personnel to realise that before a patient gets to the consultation he will have been through a process of formulating a tentative medical diagnosis, based on prior knowledge, nature, length, severity of symptoms, and other indices of health, often after consultation with family and friends. Symptoms act as warning triggers, generating varying degrees of fear and anxiety, which require the development of self-regulating behaviours and coping strategies. Initially a lay person has to work out what the symptoms mean and how to respond to them, and they do this in a ‘common sense way’ in the light of their own experience. These
strategies are developed using cognitive and affective determinants; they vary with the individual and may also be subject to conditioning.

Using this model it is easy to see how for some patients adverse illness experience in the past may well colour their interpretation of symptoms they have experienced since, and without treatment is likely to colour their experiences in the future. Identification of such negative past experiences could therefore be seen as fundamental to understanding the health anxious patient’s perspective, and helping a patient feel understood in this way is a crucial building block to the cognitive behavioural approach to therapy.

Sometimes behaviours that ameliorate emotional distress may prove maladaptive over time. For example, the fear of going to the dentist may be minimised by the distraction of taking a book to read, or the fear may be so great that the appointment is avoided. So although the latter strategy may reduce stress initially, it may well generate more distress in the long term as a potentially harmful condition could have been left untreated. Identification of how behaviours such as these can become unhelpful, and tend to perpetuate problems and fears, help patients ‘choose to change’ and accept a different approach in therapy.

**Phenomenology of Health Anxiety – the cognitive interpretation**

It is common for patients with a history of serious illnesses such as cancer to be highly sensitive to somatic cues that remind them of their past pathology (Easterling & Leventhal, 1989). The cognitive explanation for the development of health anxiety is based on a similar tendency to misinterpret bodily sensations and changes as evidence of underlying serious physical illness (Salkovskis & Warwick, 1986; Salkovskis, 1989; Warwick & Salkovskis, 1990; Salkovskis & Clark, 1993; Salkovskis, 1996). The impact of these misinterpretations is dependent on the degree of threat that they carry,
and how ‘awful’ the consequences would be for that person if they had that particular condition. The ‘awfulness’ is not just comprised of pain and suffering, but includes wider consequences such as the general upset to their life, with possible inability to carry out their work or maintain their role within the family, especially in the longer term. Sufferers of health anxiety may acknowledge that the risk to them may be tiny but this may be hugely magnified by the awfulness component, which is usually inflated. If the risk of developing the feared disease is much higher, for example where there is a strong family history of breast cancer, the consequent anxiety generated can be completely overwhelming.

This is further modulated by the patient’s perceived ability to cope in this situation, as well as the possibility of treatment. To complicate matters further, the treatment may be perceived as almost worse than the disease, for example, where the side effects of chemotherapy include hair loss and prolonged episodes of nausea and vomiting.

This can be expressed in the following equation (Beck et al, 1985):

\[
\text{Anxiety} = \frac{\text{Perceived likelihood of illness} \times \text{Perceived cost, awfulness and burden of the illness}}{\text{Perceived ability to cope with the illness} + \text{Perception of the extent to which external factors will help}}
\]

These considerations are the same for other anxiety disorders and indeed for normal anxiety. The cognitive behavioural approach to treating high health anxiety has the potential to address all four components of this equation with the development of specific strategies targeting the misconceptions in each area, so allowing interaction leading to an overall reduction in anxiety (Beck et al, 1985).
**Origins of underlying misconceptions**

The tendency to develop misconceptions about health is coloured by knowledge and previous experience of disease in oneself and others. This will encompass assumptions made about disease manifestation and progression, and all aspects of health care. These may be influenced by a background of personal vulnerability such as ‘I’ve always had a weak chest’ or ‘there’s a lot of heart disease in the family’. The onset may be more dramatic, with a specific health related incident challenging previously adaptive attitudes to health. For example, take the case of an unexpected finding being demonstrated during a routine screening procedure, such as cervical cytology. Here the discovery of the abnormality, alarming enough in itself, may be made worse by the very fact that this was unexpected, and but for the screening would have otherwise remained undetected; this can greatly add to the fear. Identification of underlying factors in this way, and how consequent fears are generated and maintained assists the cognitive behavioural approach in therapy of looking at alternative, less threatening interpretations of events.

The assumptions made about health in those prone to health anxiety are likely to be inflexible and maladaptive. A normal assumption about health might be that a prolonged bout of significant pain might require further investigation whereas a maladaptive assumption might be that every minor bodily sensation might be the first sign of disease and requires immediate investigation. These health anxious thoughts and the consequent anxiety generated, leads to autonomic arousal. If the symptoms of arousal are misinterpreted as an immediate threat to health then a panic attack will be the likely outcome; if however the symptoms are recognised as anxiety, or interpreted as the early signs of underlying disease, then a panic attack is less likely. There is overlap between the two, and in later stages of health anxiety, panic attacks may co-exist as the feared health outcome is perceived as drawing closer.
Concern, and sometimes catastrophic misinterpretations, about health related information are commonplace, but usually transient. What makes these misinterpretations persist in the health anxious patient are a series of reactions and responses to the perception of threat. The emphasis and precise nature of these vary from patient to patient but fall into four main areas:

**Biases in information processing**

Here patients take an over-cautious approach, where, ‘just to be sure’, they focus on information which is consistent with their feared diagnosis and disregard evidence to the contrary, viewing the latter as unhelpful or too inconclusive. This is known as ‘confirmatory bias’. In addition some patients feel they need to worry continually about their health in order to protect themselves from illness. Such activity often takes the form of selective attention. Someone with a fear of heart disease may begin to notice occasional episodes of palpitations related to exertion, disregarding the rest of the time when these are absent. Once these fears gain hold the patient frequently becomes hypervigilant and misinterprets other normal bodily sensations or changes with a bias towards further evidence for disease. The bias in selection information can also extend to misinterpreting statements made by health professionals in the course of a consultation.

Recognition of such bias and attendant maintaining behaviour is directly addressed in cognitive behaviour therapy.

**Interaction with bodily sensations**

Here the fears about health lead to an increased level of anxiety with consequent physiological arousal and the resulting symptoms are then misinterpreted as further evidence of disease. When this process occurs rapidly, and the bodily sensations are interpreted catastrophically, the result will
be a panic attack (Clark, 1988; Salkovskis, 1988b; Salkovskis & Clark, 1993), but less catastrophic interpretations can still be very worrying, leading to perpetuation of symptoms. These may be identical to the symptoms generated by excitement or anger but it is their special significance which links them to the fear. There may also be specificity in the symptoms generated, where those perceived as related to the feared disease appear to predominate (Salkovskis & Nouwen, in preparation). The selective attention to bodily sensations and the perceived need to monitor health can lead to a hyper-sensitivity to bodily sensations and changes, and health anxious patients tend to report some of these more accurately (Tyrer et al, 1980).

Specific strategies are developed in cognitive behavioural therapy to demonstrate the links with physiological symptoms of anxiety and to show how exploring alternative, less threatening explanations along with altering certain behaviours can lead to their reduction. Psychotropic medication directed at targeting symptoms of anxiety specifically could also be considered here.

Safety-seeking behaviours

These can take the form of avoidance or escape behaviours intended to avert or reduce the impact of the perceived threat (Salkovskis, 1991; Salkovskis, 1996a; Salkovskis, 1996b; Salkovskis et al., 1996); these can of course be a normal response to threat. So, for example, someone fearing the development of heart disease might exercise less to avoid putting their heart under too much strain, or repeatedly attend the doctor’s surgery requesting a further ECG, just in case new changes have developed since the last time it was performed. Patients often scour the Internet, looking for reassurance there. These behaviours all tend to focus attention on health, or more accurately, on the feared disease. Sometimes patients test out their particular fear. For example, some may jog until they collapse with exhaustion in order to monitor whether they are developing angina. They can then interpret the exhaustion as further evidence of impaired cardiac function, so increasing by
their behaviours some of the symptoms they fear. The behavioural experiments within psychological therapies are particularly relevant in addressing these issues.

Reassurance seeking causes further problems. This can take the form of requests for repeated investigations which can lead to the increased likelihood of an erroneous or false positive result, potentially generating a huge increase in anxiety. It may also lead to variations in advice provided by different health professionals or by family and friends; this can further fuel the patient’s concerns. On top of this the patient may misinterpret further tests initiated by their doctor, often performed at the patient’s repeated request ‘to reassure them’, as evidence that their doctor also feels there is a more serious underlying problem. Paradoxically, despite much of the pressure coming from them, patients believe their doctor would only send them for a test if they also believed they were ill. They also tend to believe there is a test for every condition, and that the only way to exclude the feared disease is to have ‘exactly the right test’. Health anxious patients also tend to have an over-inflated sense of responsibility with regard to their health, often irritating health professionals by producing exhaustive lists of ‘symptoms’ just in case the one of these might be the clue to what is wrong.

Sometimes this idea has developed from a previous episode where the patient or a relative experienced a ‘near miss’ with their health, so they feel they have to guard against this ever happening again. For example, when a patient has experienced instant relief on resting following an episode of breathlessness brought on by fear, he or she may feel that by doing this they have narrowly avoided a heart attack. This perceived ‘lucky escape’ is likely to lead to repetition of the same behaviour in future, hence reinforcing their fear and sense of threat.

Identification of these overdeveloped notions of responsibility is explored in the cognitive behavioural approach to therapy and specific techniques consequently used in the design of experiments to test out whether these are helpful to the patient or not.
**Effect on mood**

Negative beliefs and fear influence mood towards depression, and this further predisposes to negative beliefs. This mechanism probably underpins the rumination about the consequences of the feared ill-health which drives and helps maintain the sense of threat (Marcus et al, 2008). If this becomes ingrained and is manifest as clinical depression, both psychological and psychotropic antidepressant medication may be required.

The precise way in which these four maintaining factors work in maintaining health anxiety for a particular patient are highly specific and individualised, arising within the context of previous experience, other life stressors and coloured by their personality. Nevertheless, there are common themes running through this narrative and attention to all the maintaining features is crucial to understanding and treatment.

**Errors in thinking**

Health anxious patients also tend to think in other ways which make it difficult for them to make reasonable, balanced judgements about their health. Selective attention has been described above but they also tend to catastrophise, and jump to conclusions, imagining the worst possible outcome of a particular event. They may also overgeneralise, thinking that because one event has turned out badly, that will be true of all others; they discount times when things have turned out better than expected.
These patients find it very difficult to manage risk and uncertainty. They often want 100% certainty that they are well, and if this cannot be guaranteed they assume they must be ill. They may also feel a sense of blame or guilt, always assuming things are their fault, or that they are to blame for their illness. Emotional responses can also tend to drive and support the sense that they are ill, with them concluding that because they feel so awful they must be ill. These thinking errors are challenged directly in cognitive behaviour therapy.
Chapter 4

Modern Treatments

Drug Treatment

Despite the fact that drug treatment for delusional forms of hypochondriasis (‘delusional disorder somatic type’ in DSM-IV) (in the form of antipsychotic drugs) has been attractive to investigators since the first paper on the subject by Munro in 1978, there has been little in the way of systematic evaluation of this form of treatment until very recently. This is interesting in view of Kellner’s comments in his review article in 1987 that advances were likely to be made with drug treatment and his assertion that ‘psychotherapy as well as psychotropic drugs are effective in the treatment of functional somatic symptoms’ (Kellner, 1987, p. 2718). It is also surprising that the pharmaceutical industry has not tried to develop treatments for this condition to a greater extent, bearing in mind that similar conditions such as social anxiety disorder and obsessive compulsive disorder have been extensive subjects of focus.

Antipsychotic drugs have been mainly used for delusional hypochondriasis but have not progressed beyond the level of case reports and expert comment.

Antidepressant drugs might be expected to be of value because of the common association between hypochondriasis and depression. Although they have been used the evidence for their efficacy is very slim. Fallon et al (2003) carried out an open study in 18 patients with a DSM-IV diagnosis of hypochondriasis and concluded that the improvement was comparable with other conditions treated with fluoxetine. However, 4 patients discontinued treatment during the 2-week placebo run-in phase and 8 out of the 14 were judged to have responded. Nevertheless, Fallon reported a year
later (2004) from a review of all studies that patients with the obsessional cluster of somatoform disorders (hypochondriasis and body dysmorphic disorder [BDD]) responded well to selective serotonin reuptake inhibitors (SSRIs). It was only in 2008 that the first published randomised trial was carried out of fluoxetine with 45 patients treated for 12 weeks with maintenance treatment for another 12 weeks. The primary outcome was the Clinical Global Impression rating for hypochondriasis of much or very much improved (an unsatisfactory unpublished measure). Secondary outcome measures included severity of hypochondriasis, somatization, anxiety, and depression. At the end of 24 weeks the responders at week 24 entered a ‘12-week double-masked discontinuation phase’ but no data were reported on this as only 10 patients entered this phase. The results showed significant improvement in hypochondriasis when given fluoxetine compared with placebo, but this only applied at week 8 (50.0% vs 19.0%, P = 0.03) and at week 12 (62.5% vs 33.3%, P = 0.05). High doses were use with the mean dose at week 12 being 51.4 mg (SD, +/−23 mg). The acute treatment response was maintained and at week 24 there were more responders in the fluoxetine group compared with the placebo one (54.2% vs 23.8%, P = 0.04) (Fallon et al., 2008).

This study, and other evidence, is not strong enough to indicate that fluoxetine, and by implication other selective serotonin reuptake inhibitors (SSRIs), are effective in hypochondriasis and health anxiety. The paucity of evidence may be as much related to the nature of hypochondriasis and the problem of adverse drug effects. For a health anxious population already hypervigilant with respect to bodily sensations or changes, such side effects may be particularly intolerable, and may in themselves be misinterpreted as further evidence of underlying disease, and as a result fuel the disease conviction and worsen the health anxiety.

This is linked to the phenomenon of the nocebo effect with drug treatment. This is the opposite of the placebo effect, and describes the expectation of harm produced by treatment that can be so
strong that a placebo drug may produce serious adverse effects if these are expected (Reeves et al, 2007). In those with depression, anxiety and hypochondriasis these usually take the form of drowsiness, nausea, fatigue and insomnia (Barsky et al, 2002). Patients with high health anxiety are more likely to experience these effects than others (Barsky et al, 2002), attributing symptoms that have arisen out of anxiety, or other ordinary bodily sensations, to the drug they have been prescribed. Paradoxically drugs prescribed to alleviate anxiety in these patients, may therefore actually exacerbate it, by increasing preoccupation with health.

**Psychological Treatments**

**Stress Management**

This treatment is based on the notion that some people respond to stress by becoming excessively worried about their health, and the right way of responding to this is to teach a set of stress management techniques to reduce such stress. This can be combined with relaxation procedures such as those proposed by Öst et al (1987) and other stress reducing measures. In one controlled trial in which behavioural stress management was compared with cognitive behaviour therapy (Clark et al, 1998), behavioural stress management performed significantly better than a waiting control and, although somewhat less well than cognitive behaviour therapy initially, by the time of follow up it was equivalent in efficacy. This shows the value of stress reduction and as special efforts were made to avoid any form of cognitive interpretations in this group the improvement cannot be regarded as a form of cognitive therapy by proxy.
Psychoanalysis

There is no general model or specific interventions for hypochondriasis within psychoanalysis; the intervention follows the basic principles of the therapy.

Psychodynamic psychotherapy is based on the presumption that there are unconscious elements which are not available to the conscious part of the psyche, but which have a pervasive influence over the patient’s consciousness and behaviour. The main features of psychoanalysis are the therapeutic relationship between patient and therapist, an understanding of interpersonal relationships, identification of patterns in the way the patient functions and recognition of how unconscious fantasies may drive and influence this.

Freud (1894) originally classed hypochondria (with neurasthenia and anxiety neurosis) as independent from physical processes, arising from the consequences of unexpressed libidinal energy. He did not regard it as having any special symbolism or being amenable to psychoanalysis, and this view has tended to stick, despite being challenged (Paniagua, 2004).

When psychoanalysis is given for hypochondriasis or health anxiety it does not explicitly challenge the patient’s beliefs about health and disease and therefore fundamentally differs from most other psychological treatments. There have been no formal evaluations of psychoanalysis for hypochondriasis.

Cognitive Behaviour Therapy

This section is described in more detail than the others as I was the cognitive behaviour therapist in the randomised trial discussed later (Chapter 6). The following account represents a summary of the
approaches I have used in the course of this treatment. It is based on the Warwick/Salkovkis model (1990) but has been informed by my practice and developed further.

Cognitive behaviour therapy is based on the cognitive understanding of emotions. It specifies that the emotions experienced by people suffering from psychological and psychiatric disorders are fundamentally the same as emotions expressed by all of us; that they are experienced as a result of the way a particular situation is interpreted and hence the same situation may provoke different emotions in different people (Beck 1976). It is the meaning of the event which triggers the emotion. This in turn is coloured by the mood the person is in at the time, the context in which the event takes place, and previous experience, so the same event can produce a different emotional experience for the same person at different times.

The inherent flexibility in this model forms the basis for treatment. A person may have become trapped into a particular way of interpreting an event which is accompanied by a distressing emotional response. What the cognitive therapist aims to do is explore with the patient a range of other interpretations. It is important that these are developed with the patient so that they are consistent with their beliefs and values and so have inherent credibility. These new interpretations are then tested out by the patient so that they can identify for themselves whether they might have become trapped in a particular way of thinking. The patient is thus strengthened by having a broader range of interpretations to draw on.

The emotions leading to the distress are often severe, persistent and poignant, proving very difficult to cope with. Patients are also more likely to interpret an event as threatening because of assumptions or beliefs generated by previous life experiences. These beliefs may have been useful at the time, but have become problematic when employed for a different situation in life which in fact required a different sort of understanding.
Examples of potentially problematic assumptions in patients suffering with health anxiety are "bodily changes are usually a sign of serious disease, because every symptom has to have an identifiable physical cause"; "if you don't go to the doctor as soon as you notice anything unusual then it will be too late". Other beliefs relate to specific personal weaknesses and particular illnesses; for example, "there's heart trouble in the family", "I've had weak lungs since I was a baby". Such beliefs may be a constant source of anxiety and/or may be activated in vulnerable individuals by critical incidents.

Beck et al, (1985) also describe a conceptualisation of the cognitive component of anxiety summarised by the following equation:

\[
\text{Anxiety} = \frac{\text{Perceived likelihood of illness } \times \text{Perceived cost, awfulness and burden of the illness}}{\text{Perceived ability to cope with the illness} + \text{Perception of the extent to which external factors will help}}
\]

The cognitive model of health anxiety and hypochondriasis is based on the central notion that bodily signs and symptoms are perceived as more dangerous than they really are, and that a particular illness is believed to be more probable and/or serious than it really is (Salkovskis, 1989; Salkovskis & Warwick, 1986; Warwick, 1989). The knowledge and past experiences of illness (in self or others) lead to the formation of specific mal-adaptive assumptions about symptoms, disease and health behaviours. These have been learned from a variety of sources, including early experience and events in the patient's social circle and the mass media. Previous experience of physical ill-health in patients and their families and previous experience of unsatisfactory medical management may also be important. Even if a negative outcome to an event or situation might be thought exceedingly unlikely, the consequences of such an outcome are considered to be so distressing or disastrous, and
the person so unable to tolerate it, that it generates great fear. This train of thought is particularly common in patients with high health anxiety and obsessional problems, who may consider an adverse event, such as a serious illness, unlikely, but to be avoided at all cost, as the consequences of this event ever taking place would be utterly devastating. In addition patients are often likely to perceive themselves as both unable to prevent the feared illness, or to affect its course. In other words, they perceive themselves as helpless with no effective means of coping with the perceived threat.

The different weight attached to each component of the anxiety equation given above, will vary between individuals. A patient suffering with panic attacks might score highly for all the aspects of the equation, whereas a patient suffering with health anxiety or obsessive compulsive disorder (OCD), who may acknowledge that the probability of an adverse event is low, identifies that their main problem is feeling overwhelmed by the perceived cost or awfulness. However, it still remains important to assess all the components of the equation for each individual patient; identifying problems and potential strengths in this way helps to provide a strong, comprehensive framework on which to base therapy (Beck et al, 1985).

Cognitive model for what makes health anxiety persist

As the central component for health anxiety is the fear of having or developing a particular disease this then links into a network of maintaining features (Chapter 3). Bias in information processing leads to selective attention for information regarding the feared disease or diseases. This can take place through hypervigilance for sensations or symptoms, and the misinterpretation of these (confirmation bias). This is compounded by similar misinterpretation of information gleaned from the media or the Internet, as well as that supplied by health professionals and significant others.
These patients tend to develop a heightened sense of responsibility for monitoring their health, feeling they have a duty to worry, in order to protect themselves from future harm.

These patients also tend to develop safety seeking behaviours such as avoidance of exercise for fear of precipitating or exacerbating an adverse health related event, or of excessive reassurance seeking. These may take many forms, such as repeated bodily checking, searching for health related information on the internet, and repeated inappropriate medical consultation, all serving to focus attention back on their health related fears.

This preoccupation with health leads to an adverse effect on mood, not only maintaining, and at times, increasing anxiety, but also tending to depress mood leading to automatic negative interpretations. Patients with these features can consider themselves unlucky, with biased recollection of negative outcomes in the past and rumination over these. This state of anxiety will be accompanied by physiological changes which can be misinterpreted as signs of illness, setting up a vicious circle maintaining and leading to an escalation of the health anxiety.

A highly personalised approach lies at the core of treatment, for the same event can have different meanings for different people, or even for the same person on different occasions, as described above. It is the meaning which gives each event its particular emotional impact, and the emotional problems arise because of the way the patient interprets reality.

The specific process of CBT for health anxiety:

**Style and structure of therapy**

The style of interviewing with these patients is designed to highlight particular aspects of their anxiety. Most of this is central to basic CBT, but it is important to recognise particular problems that
the health anxious encounter when interacting with others, and how to avoid these pitfalls during therapy. Particular ways of interviewing and approaching the problem of health anxiety with these patients can prove both acceptable and illuminating.

Patients are gradually introduced to a new model which offers a quite different and less threatening account of their problems. This offers an alternative explanation to specific disease convictions. For example if the particular belief is that of cancer, the patient is asked to consider, using the evidence built up in therapy, the alternative belief that they are worried that they might have cancer. For the treatment to be effective, it is crucial that therapist and patient agree that therapeutic strategies should be aimed at reducing such worries rather than fruitless attempts to reduce risk.

The discussion usually reaches the point where further information not currently available to the patient has to be sought. This is where behavioural experiments come in. These are information-gathering exercises which help the patient reach conclusions about the beliefs which they hold.

*Engaging the patient*

It follows from the model described above, that treatment of health anxiety needs to involve a shared understanding with the patient of the psychological basis of their problem. This is crucial, because at the beginning of therapy, these patients believe that they are likely to be suffering from a serious or life-threatening illness. If this belief is held very strongly, the patient is unlikely to engage readily in psychologically (or psychiatrically) based treatment. It is not surprising that the hypochondriacal patient who believes that he has heart disease or cancer is reluctant to deal with this by psychological means. Rather, the patient seeks to solve their problem by strategies such as obtaining the best available medical advice and treatment. However, by demonstrating understanding of the patients fears, together with the frustrations they have frequently experienced
within the medical model, coupled with the fact that they can often, at one level, recognise that their fears are excessive, the therapist can begin to introduce to the patient that there may be an alternative way of understanding the difficulties they are experiencing.

The aim of treatment is to show patients how problems link to underlying fears, rather than to rule out physical illness. This process requires an early acknowledgement by the therapist that the symptoms experienced by the patient really exist, they are not ‘all in the mind’ as may have been inferred by others, and that the treatment aims to provide a satisfactory explanation for these symptoms. To achieve this goal, treatment sessions should never become combative; questioning and collaboration are the key techniques. The achievement of a better explanation of symptoms is greatly simplified if the therapist remembers that patients’ beliefs are invariably based on evidence which they find convincing. The good cognitive-behavioural therapist begins the process of challenging beliefs by discovering the observations which the patient believes to be evidence of illness; then working collaboratively with the patient they both consider whether there is other evidence which would support alternative, less threatening beliefs.

Patients may still remain sceptical about help with their anxiety, in which case it is important that the therapist emphasises that in fact nothing will be lost in trying this approach to their problems, and if they don’t get better then the problem can be thought through again.

*Guided Discovery*

This is a style of questioning where patients are encouraged to find the answers themselves, questioning their own beliefs and coming up with alternative answers. The goal is to help them think for themselves, finding answers that fit with their experience, and which make sense to them.
Helping patients get in touch with their emotions

Many patients with health anxiety struggle to express the fears surrounding the perceived problems about their health. They may be unfamiliar with the language of emotion, and find it difficult to articulate how worried they are. The skill of the therapist is to give permission for the patient to admit to anxiety in whichever way they choose to express it. This serves to validate their fears and to normalise them. The ability of the therapist to tune into these emotions is completely fundamental to therapy, with patience, encouragement, understanding, and above all warmth, central to success.

The assessment interview: emphasising the physiological concomitants of the problem and the patients' beliefs about their physical state

Therapy should begin with introducing its principles and aims, and some notion of its planned length. There should be an outline of how the therapy sessions will be structured, and tape-recording of the sessions where relevant (for client use to enhance the work done within the therapy session (Shepherd et al 2009) and for supervision purposes), and the inclusion of any planned supplementary material such as patient manuals. Individual therapy sessions should be structured including agenda setting, summarising, and homework setting where appropriate.

The assessment continues with clarification of any co-existing medical or psychological pathology, although information should have previously been gathered from the medical records. The patient is then encouraged to give a full account of their problem.

The history from the patient should include the onset of health worries, their interpretation of any medical intervention, and misunderstandings including real or perceived errors in management, and
how they perceive their current state of health. Contributory factors such as ill health within the family or significant health related events in the past should also be noted. Evaluation of current bodily symptoms and sensations and the patient’s underlying beliefs regarding these is the next step. Some patients have very long lists of symptoms and concerns. In previous medical consultations they have frequently been cut short when recounting these, as they have been perceived as irrelevant by their doctor. This is frequently worrying and extremely frustrating. Being continually vigilant about their health, monitoring every bodily change in case it might be significant, to then feel these concerns are being ignored can be very frightening.

The particular beliefs associated with these symptoms should then be elicited. An example of the list of symptoms that might be generated in the initial consultation is given below:

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cough:</td>
<td>‘Severe lung disease or possibly cancer, I’ve left it too long, so they won’t be able to treat it’</td>
</tr>
<tr>
<td>Feeling short of breath:</td>
<td>‘My lungs are permanently damaged now’</td>
</tr>
<tr>
<td>Backache:</td>
<td>‘It could be arthritis or secondary cancer in the spine, I might even be riddled with cancer!’</td>
</tr>
<tr>
<td>Abdominal pain:</td>
<td>‘An ulcer, or liver failure, or a growth, but they can’t treat this, because my lungs won’t stand the anaesthetic’</td>
</tr>
</tbody>
</table>

The therapist should be able to reflect on, and empathise, with subjects or events that are particularly sensitive, sometimes noting what the patient says verbatim. Mixed messages should be addressed and confirmation bias elicited. Some basic education may be necessary.
Moving to a formulation

The formulation is the keystone to therapy. It builds a full picture of exactly what these fears and symptoms mean. It is usually constructed from a recent episode of intense health concern where the details are completely specific and personal to the patient enabling the full meaning of the event and the specific fears it has generated to be made clear. The use of visual imagery, and the wider consequences of the feared event, along with safety seeking activities should be built in.

Example of Formulation

Specific Event
Woke up on Wed morning knowing we were going out for a special trip in the car for husband’s birthday

Images
Seeing my funeral
Knowing I am going to die
Fighting for breath
How will my husband cope if I die?

Meaning
Is this angina or something worse
Now I have tightness in my chest
Checking
Felt pulse listened to heart

Behaviour
Tried to carry on, got in car
Checked pulse all time in case heart stopped
Couldn’t concentrate, felt preoccupied and detached
Guilt
I’m spoiling husband’s day again

MY HEART IS GOING TO STOP! ANXIETY!
noticed heart was beating ‘funny’ seems to stop then an extra beat
I might have a heart attack or pass out or collapse during the day
Please don’t stop!
I know one artery is blocked, and they can’t operate

This example illustrates a vicious circle of events, meaning and fear. For this patient the deepest fear at the core of the circle is that her heart is going to stop, leading to intense anxiety. So, when she experiences palpitations this elicits all the fears listed in the formulation, whereby the factors which maintain health anxiety can also be identified.
The direction of therapy is guided by the formulation, linked to the cognitive theory of emotion, where it is conceptualised that thoughts, mood, behaviour and physiological symptoms of anxiety all interact directly with one another at a particular place and time:

![Diagram showing the interconnection of thoughts, mood, physiological symptoms of anxiety, and behaviour]

Working with any of these components tends to influence others so that therapeutic value is enhanced.

*Developing a shared understanding: choosing to change:*

*Recognition of fear of anxiety about disease rather than fear of disease itself: fear rather than disease attribution*

The construction of the vicious circle/flower and other techniques highlights the anxiety generated by the fear and conviction of disease with all the negative connotations this evokes. Helping the patient generate the case for fear of having a particular disease, rather than actually having it, allows an important cognitive shift to take place.
The patient is asked to consider two alternative explanations for their health anxiety, and list the advantages of each. As they progress in therapy evidence is gradually generated, supporting the hypothesis for fear of disease, for example:

<table>
<thead>
<tr>
<th>I have brain cancer</th>
<th>I have fear of brain cancer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What would be the advantages of having brain cancer?</strong></td>
<td><strong>What would be the advantages of this being fear of having brain cancer?</strong></td>
</tr>
<tr>
<td>Typical responses might be:</td>
<td>Typical responses might be:</td>
</tr>
<tr>
<td>None</td>
<td>I wouldn’t have brain cancer</td>
</tr>
<tr>
<td>or</td>
<td>I wouldn’t have to have those horrible treatments</td>
</tr>
<tr>
<td>I’d have an answer and they could start treating it... but I don’t want to have it!</td>
<td>I’m not going to die</td>
</tr>
<tr>
<td></td>
<td>I will be able to see my children grow up</td>
</tr>
<tr>
<td></td>
<td>But if it is fear, can I get treatment for this? <em>(to which the response would be: yes, this is how the CBT works)</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Can we build up and evidence for this actually being cancer?</th>
<th>Can we build up any evidence for this being FEAR of cancer as opposed to actually having the disease?</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Here the evidence is gradually built up by looking at the evidence for and against a particular dysfunctional belief backed up by evidence from specific techniques developed in therapy eg pie charts, pyramids (see below), the effects of reducing safety seeking behaviours etc.</em></td>
<td><em>Here the evidence is gradually built up, drawing on evidence from specific techniques developed in therapy eg pie charts, pyramids (see below), the effects of reducing safety seeking behaviours etc.</em></td>
</tr>
</tbody>
</table>
Counting the cost

Living with health anxiety and consequent dysfunctional beliefs carries a cost. The patient is encouraged to count the cost of the anxiety on their quality of life, and this helps them to choose to change. This leads on to an exploration of how the patient would like to live their life; what would they would like to achieve, and how they would like to be remembered.

Setting of goals

Realistic goal setting and the achievement of these, instils hope and marks progress for patients, increasing self-esteem. These have to be tailored to the patient and be achievable in the short, medium and long-term.

Making links with the formulation - techniques to achieve new understanding:

Examining the evidence for a dysfunctional belief

Here the patient is asked to look for evidence to both support and refute a particular belief, by considering the evidence that supports it, and looking for evidence with which it is inconsistent. Encouraging the patient to gradually challenge dysfunctional beliefs in this way, supported by the other specific techniques in therapy, enables further building on the fear of disease model, paradoxically leading to a reduction in anxiety.
Listing symptoms

Health anxious patients tend to be hyper-vigilant for bodily sensations and changes, often catastrophically interpreting them as further evidence of underlying disease. This technique helps those patients with particularly ‘noisy bodies’, who repeatedly report worrying, new symptoms.

The patient is invited to consider the difference between symptoms of disease and bodily sensations or changes, weighing up with them how likely it would be that a doctor would want to see or investigate someone with a minor complaint that had only been present for a few days. The therapist then negotiates with the patient a reasonable length of time that a symptom would need to be present before medical attention was indicated (e.g., 10 days) and invites them to try this approach out for themselves. This can help develop a new more appropriate strategy for dealing with symptoms (which have invariably disappeared by the time 10 days have passed) leading to a reduction in anxiety and a shift in beliefs.

The Pie Chart Technique

This technique helps to generate non-serious, less threatening, alternative explanations for a worrying symptom. Together the patient and therapist generate a list of all possible causes for the symptom/sensation which the patient is worried about. Including the most feared causes (e.g., cancer) but also allowing the generation of a long list of innocuous explanations. The idea is to present so many innocuous causes in addition to the serious ones by the end of the exercise that it becomes apparent that the most serious outcome is the least likely.

The patient is then asked to consider all the people in a certain locality (usually the patient’s local town) suffering with that particular symptom on that day. A pie chart is then filled up, by asking
what percentage of this population will be suffering from each particular cause starting with the most innocuous causes first. The chart is rapidly filled up by the non-threatening explanations leaving little or no space for the more serious causes let alone the more life threatening alternatives.

The life threatening group can then be further broken down into those conditions that are serious but treatable, those that are difficult to treat, those that are untreatable and the proportion of these that are fatal, thereby reducing the patient’s particular feared outcome, even further, to a very tiny percentage of the whole.

This technique helps the patient build up alternative explanations for their most feared symptoms. Previously they have always immediately equated this symptom to the most feared outcome, and been unable to think of any other explanation for it. This exercise helps to develop a sense of proportion about the patient’s feared symptom. Performed in a collaborative manner, with the patient and therapist both generating innocuous symptoms, and working out how very common these symptoms are; the completed pie chart represents the patient’s own, less threatening, conclusion. This exercise is often a complete revelation to the patient.

The Pyramid Technique

This technique is also useful for those patients who experience a lot of bodily sensations or changes which are immediately interpreted as catastrophic. It emphasises the gradual steps in medical care, from first presenting with a problem to that problem possibly being confirmed as evidence of a terminal, untreatable disease. The base of the pyramid represents all patients with that particular symptom, with each subsequent rising level representing more progressively negative outcomes. Eventually the apex is reached, representing the very tiny proportion of those patients initially presenting who end up with a life-threatening untreatable disease. The patient is asked to estimate
the proportion of patients who rise to each level, demonstrating themselves that most symptoms or bodily sensations have non-threatening outcomes.

**Testing things out:**

**Homework**

Homework is an integral part of CBT. It is tailored to the patient and can be used in several ways. It is aimed at cementing work done in the therapy session, enabling the gathering of new information, often in the form of diary keeping, and testing out new alternative ways of dealing with health information and new beliefs. For some patients some aspects of homework will be perceived as carrying a degree of risk (eg, exercising after a history of suspected heart disease), but an important message in therapy, is helping the patient understand that nothing is ever risk free; what is important, is learning to manage risk more appropriately and without undue anxiety.

**Specific interventions and symptom systems:**

**Safety seeking behaviours**

Safety seeking behaviours have been adopted by patients to keep them from harm; they are an almost universal phenomenon of health anxiety and expressed in various ways. Patients often do not disclose these behaviours, sometimes because of embarrassment but often because the behaviours have become so entrenched, so much a way of life, that the patient perceives them as normal.

The problem with safety seeking behaviours is that they tend to focus attention on health, and, having identified these, the goal of therapy is to test whether these behaviours do actually protect
them from harm or whether they tend to cause problems of their own such as perpetuating the need for medical care.

These behaviours can take various forms; reassurance seeking, bodily checking, perusing specific dietary regimes and activities such as excessive hand cleaning, or becoming preoccupied with security, such as repeatedly checking that doors are locked and plugs are switched off. There may be a clear overlap with features of obsessive compulsive disorder (OCD) in some cases, which will require assessment and treatment accordingly. These behaviours are associated with the heightened sense of responsibility these patients have towards their health.

Checking may also involve reading up about health issues in medical text books, although in recent years this has been mostly superseded by long periods spent searching the Internet, where the lack of regulation and endless links to other conditions can prove excessively alarming and further distort perception of disease.

_Dealing with requests for further tests, or checks_

Sometimes patients may ask the therapist if they can arrange, or re-refer them, for further tests. They may be under the impression that ‘just one more test would make certain once and for all’. Such requests invariably fall under the heading of reassurance seeking which should be discussed with the patient, and are invariably not medically justified. What is more, the anxiety they induce both in anticipating the test and waiting for the result, coupled with uncertainty, generated by the therapist colluding with their need for further reassurance, not only undermines the therapeutic alliance, but makes them feel worse.
Negotiation of such requests can be made easier by asking the patient to imagine they have an identical twin, identical in every way, with exactly the same symptoms and sensations as themselves except that they don’t worry about their health. The therapist then considers with the patient whether this request is appropriate in the non-anxious twin. This way the merit of further testing is decided on medical grounds rather than as a response to anxiety.

This model tends to sit well with patients. It shows that their complaint is being considered on medical grounds, and not being dismissed out of hand, helping them to feel safe and understood without blanket reassurance. Therapeutically it is also another illustration of how to weigh up symptoms and balance risk.

*Reassurance seeking*

Health anxious patients repeatedly seek reassurance, overtly and covertly, and from many different sources. However, unlike other, non health anxious patients, they fail to experience any lasting relief from this; any relief they feel, although very welcome at the time, is short lasting and their fears soon return. Despite this, because of the immediate reinforcing influence of reassurance, patients often develop a pattern of repeatedly seeking further reassurance and so compound the problem.

The need for repeated reassurance can become very time consuming, leading to a breakdown in relationships with doctors, family and friends. Its repetitive nature can become counter-productive and pathological in itself, almost like a form of compulsive behaviour as in obsessive compulsive disorder.
Addressing the problem centres around identifying with the patient the negative effects of reassurance seeking. These patients tend to rely on the support of others, rather than adopting the more constructive approach of managing their health concerns themselves. Thus reassurance seeking can become a problem behaviour in itself, wasting time and putting a strain on important relationships. The patient can be asked about how they feel when they receive reassurance, how long they feel better for, and how soon their fears return, with the effect this has on the wish for yet more reassurance.

Therapy develops by helping the patient to identify all the different ways in which they seek reassurance and then inviting them, in the light of this discussion, to try the alternative approach of resisting this behaviour. This is difficult initially for patients and requires co-operation from family and friends. But allowing the family to continue to offer comfort, whilst being freed from the burden of responding to repeated demands for reassurance, can lead to an improvement in frequently strained relationships. This is accompanied by a reduction in the patient’s anxiety and an improvement in their self esteem. This new way of behaving should then be maintained.

Checking

Health anxious patients frequently check their bodies to positively look for evidence of new disease, to monitor an existing perceived problem and sometimes in an attempt to ward off new disease. Sometimes this is overt (such as repeatedly checking their urine), or more subtle such as monitoring when symptoms have disappeared, but the ways in which they check are often manifold.

Checking focuses attention on the health concern, invariably making it worse. Patients are invited to consider this proposition for themselves, and invited to test it out, both by experiments within the therapy session, such as repeatedly prodding part of their body and noticing it becomes sore, and as
homework. For example, patients may record their levels of anxiety on the days when they check repeatedly, comparing these levels with those (invariably lower) on subsequent days when they are asked not to check. They should then adopt this new behaviour long term.

Avoidance

Patients with health anxiety often set up patterns of avoidant behaviour. This may be to minimise further risk or deterioration to their health, or because they are avoiding an activity that has made them feel worse in the past. This behaviour often makes them feel that they have had a lucky escape. Sometimes patients consider themselves so ill that they see little point in pursuing any form of normal activity. Avoiding exercise is a frequent example. A typical case might be where an episode of more strenuous activity has brought on (normal) palpitations which have been misinterpreted as the sign of an impending heart attack; immediate cessation of activity relieves the symptoms, and the patient feels that by avoiding activity in the future and resting, they can avoid running that risk again. As a consequence they become less fit and their exercise tolerance drops further.

Therapy is directed towards enabling the patient to see how these problematic behaviours have developed and test their validity by behavioural experiments.

Closely linked problems and comorbidities

Health anxious patients frequently have overlapping conditions of generalised anxiety, and other specific anxiety disorders; they may also be depressed. This associated pathology may also need to be addressed with a cognitive behavioural approach. Comorbidity with confirmed organic pathology is common and not a barrier to the cognitive-behavioural approach; the major impact here is likely
to be in the form of behavioural experiments, and clarification with those directly responsible for the medical care of these patients is necessary in most cases. Other comorbidities such as psychosis, substance misuse or eating disorders may complicate referral for more specialist care.

There may also be issues surrounding bereavement, or relationship difficulties which need to be addressed, and sometimes, particularly in those with comorbid organic pathology, fears regarding employment.

*Ending treatment and relapse prevention*

Gains made within therapy are enhanced over the course of treatment as more evidence is built and tested out; but patients also need time to learn new ways of thinking and to fully adjust to these. They may also experience new real or perceived threats to their health either within the course of therapy (where they can be worked on at the time) or after therapy has ended. A booster follow-up treatment session can be factored in to allow any set-backs to be addressed; this can be fixed or provisional.

The best therapist for relapse prevention (and its management) is the patient. Armed with their new skills, which are backed up with written and audiorecordings of the work undertaken in therapy, and their therapeutic gains, they should be in a strong position to deal with any new threat. Identification of potential triggers for relapse in the later stages of therapy will enable the patient to recognise these early, and work through potential set-backs in advance. So it is important to anticipate the possibility of relapse with the patient and rehearse how they would deal with it.
Summary

The treatments available for health anxiety are many but only one of them, cognitive behaviour therapy, has a good theoretical and practical base. Drug treatment is limited in its use and evaluation, and much of this can be explained by its low level of acceptability by patients and the sensitivity to adverse effects in patients with health anxiety. Stress management has a limited evidence base but may be effective as it reduces anxiety generally. The same principle may apply to cognitive behaviour therapy but its adaptation to address the specific components of health anxiety appears to make it an efficient and likely cost-effective form of treatment. It was therefore the main focus of the interventions described in the rest of this thesis.
Chapter 5

Aims of research programme

The previous chapters have suggested that the diagnostic concept of health anxiety is a useful one in clinical practice. It probably shows some subtle differences from hypochondriasis as a formal diagnostic term, but it is likely that both terms can identify a common group of sufferers. A review of the instruments for assessing this condition show several to have value, but the Health Anxiety Inventory (HAI), although relatively new, appears to be a reliable and valid measure and is sensitive to change. Abnormal health anxiety appears to be relatively common in both primary and secondary care with prevalence rates of around 3-7% in primary care and 5-10% in secondary care, but there is limited information on its persistence and effect on health service consultations away from the primary care level. There is also uncertainty about the role of personality factors in both the generation and course of health anxiety. My review suggested there is also a growing body of evidence that the symptoms of health anxiety can be viewed using a cognitive model and that cognitive behaviour therapy may be an appropriate treatment for the condition. This information is limited and there were no good studies of the effect of cognitive behaviour therapy in secondary care at the time this research programme was started (2002). There was also no evidence of research on health anxiety in genitourinary medicine clinics.

It was therefore felt appropriate to carry out three studies; (i) an epidemiological one of the prevalence of health anxiety in genitourinary medicine clinics linked to information on health service use, (ii) a small longitudinal study of the course of patients with both high and low health anxiety levels to measure its persistence, and (iii) a randomised controlled trial of cognitive behaviour therapy in those patients presenting with high levels of health anxiety at a genitourinary medicine
clinic, in which analysis of the costs of care would also be included. Because of the uncertainty of the role of personality status on outcome, personality was also planned to be measured.

There were six specific research questions to be addressed in this series of studies. This grew out of my personal experience that patients with high health anxiety were problematic and caused much concern in the genitourinary medicine clinic where I was based. By trying a different approach with a somewhat primitive form of cognitive behaviour therapy with one of these patients, and subsequently others, led to a promising response that kindled my interest further. However, I did not know how frequent these problems were generally. I suspected they were common but needed to know more. My questions therefore were:

(i) How common is significant (ie pathological) health anxiety in genitourinary medicine clinics?
This was planned to involve two sites as I did not know if the clinic King’s Mill Hospital was representative of other genitourinary medicine clinics.

(ii) Does high health anxiety persist in the absence of treatment?
I wanted to explore if high health anxiety, as measured by the HAI, persisted over time and was therefore likely to lead to considerable morbidity. It was important to ask if my treatment might only have speeded up a natural resolution.

(iii) Is high health anxiety linked to diagnosis in a genitourinary medicine clinic?
My clinical suspicion was that patients who were excessively worried about their health tended to have little established organic pathology. I needed to test this out.

(iv) Do patients with high health anxiety consult more often than those with low health anxiety?
This was suspected from earlier reports in the literature and from my personal experience but I needed to have quantitative data on the subject.

(v) Is cognitive behaviour therapy adapted for health anxiety effective in reducing high health anxiety in a genitourinary medicine clinic?

(vi) Is cognitive behaviour therapy adapted for health anxiety cost-effective in reducing high health anxiety in a genitourinary medicine clinic?

In other words, were the findings that I had experienced in my small sample of patients generalisable to other patients with identified high health anxiety, and would it be likely to save money? This could only be properly evaluated in a randomised controlled trial.

The remainder of this thesis describes how these studies were planned and carried out, their results and implications, and my conclusions.
Chapter 6

A prevalence and persistence study of health anxiety in genitourinary medicine clinics and its service usage

As there was evidence that levels of generalised anxiety and hypochondriasis were high in genitourinary medicine clinics (Frost, 1985; Osborn et al, 2002) it was decided to carry out a study in two such clinics. In the two studies I aimed (i) to identify the prevalence of significant health anxiety in both clinics, (ii) to establish whether such anxiety was persistent or temporary, and (iii) to examine its relationship to genitourinary diagnosis and service usage. In addition I wanted to find out whether those with significant health anxiety would consider psychological treatment if this was available.

Methods

In the first clinic, based at a general genitourinary medicine clinic at King’s Mill Hospital, North Nottinghamshire, consecutive patients waiting for a doctor’s appointment were invited to take part in the survey at the end of the clinical interview, prior to examination and tests. Those who agreed were formally consented to take part. The consent involved discussing with patients the aims of the project and our wish to find out how common it was for people to be generally worried about their health. The questionnaire survey was carried out over a ten-week period. The population included new patients, those with follow-up appointments and those re-attending the clinic with a new
problem; those excluded were patients unable to read, or with a current or past history of psychotic illness. Patients were also asked if they would agree to a follow-up questionnaire being posted to them after 9 months.

All the staff in the department were familiarised with the instruments used, and on hand to answer basic queries, and the self-evaluation questionnaires were completed at an appropriate time during the patient’s visit to the department. Demographic data were recorded for all patients eligible to take part in the study. For all those who agreed to take part, a record was made of all clinic diagnoses and all appointments by nature of health professional group, including telephone advice, for the nine months prior to their inclusion in the study and for the nine months afterwards.

In the second clinic, at St Mary’s Hospital, Paddington, London, two researchers handed out the same questionnaires, with explanation, to those who consented to take part, in consecutive ‘walk-in’ clinics over a period of two weeks. The patients generally completed the forms whilst waiting to see the doctor or nurse.

The study received full ethical approval at both sites and all data were anonymised before leaving the respective departments.

The questionnaires used were the Health Anxiety Inventory (HAI) (Salkovskis et al, 2002), and the Hospital Anxiety and Depression Scale (HADS) (Zigmond & Snaith, 1983). Patients were also asked if they would accept help for their health anxiety if it were considered to be a problem, in a yes/no format.
A random sample of 129 high (total ≥ 18) or low (total<5) scorers on the HAI were selected for follow-up questionnaires after six months at the King’s Mill site. Of these 16 had refused permission for follow-up, so 113 were sent of which 46 (40.7%) were returned.

**Analysis of data**

The distribution of data was checked before analysis and normalised, if necessary, by adding one and taking the square root. Categorical variables were analysed by Pearson corrected $\chi^2$ analyses and two-group means using t-tests.

**Results**

Of 968 potentially eligible patients (642 at King’s Mill Hospital and 325 at St Mary’s Hospital), 696 completed HAI questionnaires (276 M, 420 F). Of the remaining 272 patients, 163 were not given the questionnaire, 75 completed the questionnaire but left two or more answers out of the 14 questions, 17 refused, and 17 had no recorded reason. Thirty-two patients who completed 13 of the 14 parts of the HAI had the missing value imputed by the mean of the average of the completed 13 items. Demographic data, collected for all eligible patients to establish whether or not those who took part in the study were a self-selected group, or representative of regular clinic attenders, showed no significant differences between those who took part (43% M: 57% F), mean age 28.8 yrs, and those who did not (52% M: 48% F), mean age 30.6yrs.

Of the 696 patients, 276 (39.6%) were male; these had significantly lower HAI scores than the 420 female patients (mean HAI (male) 9.68: mean HAI (female) 11.85, $t = 4.65; P<0.001$). Of 688 patients on whom sexual orientation was available 40 were bisexual or homosexual; their HAI scores (mean
11.75, sd 5.6) were not significantly different from heterosexual patients (mean 10.97, sd 6.2). These results are shown in Table 6.1. The remaining results are presented in the format determined by the five aims of the study.

**Prevalence of health anxiety**

Comparison of the data for the King’s Mill and St. Mary’s patients showed that the patients seen in both clinics were similar in clinical and demographic characteristics. Those attending the St. Mary’s service had significantly higher proportion of those with high health anxiety scores (HAI≥20)(11.2%) compared with King’s Mill Hospital (8.6%) with a mean difference in HAI score of 1.4 (P<0.01)(Table 6.1).
Table 6.1. Main demographic and clinical differences between patients at King’s Mill hospital and at St. Mary’s hospital

**Persistence of health anxiety**

The results of the 46 patients at the King’s Mill service who returned follow up questionnaires, showed that HAI scores were persistent over time (mean HAI (baseline) : 12.67; mean HAI (nine months): 12.41; t=0.33, not significant). In particular there was an absence of regression towards the mean as both high and low scores showed relatively little change. The 12 patients with an HAI score of 20 or more (the level chosen in advance of analysis as representing most significant health anxiety) revealed one patient improving from a score of 20 to 5, one from 29 to 17, and another from 21 to 15 but all others remained above 20 or changed by 6 points or less. Similarly, the 21 patients with baseline HAI scores of 5 or less showed very little change after nine months. 15 had scores of 5 or below; three increased their scores from 3 to 11, from 2 to 8 and from 4 to 13 respectively, and three others showed an increase of 3-5 points.
**Relationship between health anxiety and genitourinary diagnosis**

There was no significant relationship between any particular diagnosis and health anxiety levels but this finding however must be interpreted in the knowledge that those attending GUM clinics may have no organic pathology or several diagnoses. Sexually transmitted infections (STIs) often coexist and may overlap with other more general problems, particularly gynaecological, urological, dermatological and psychosexual conditions. However when the results were analysed with diagnoses separated by presence or absence of an STI the former had significantly lower health anxiety scores, and lower anxiety scores on the anxiety section of the HADS, than those without STI’s (Table 6.2).
### Table 6.2. Differences in anxiety (HADS-anxiety), depression (HADS-depression) and health anxiety (HAI) in groups separated by absence or presence of sexually transmitted diseases

<table>
<thead>
<tr>
<th></th>
<th>Mean HAI score (sd) [n]</th>
<th>Mean HADS anxiety score (sd) [n]</th>
<th>Mean HADS depression score (sd) [n]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients with sexually</td>
<td>9.8 (5.8) [226]</td>
<td>7.5 (4.0) [257]</td>
<td>3.9 (3.5) [257]</td>
</tr>
<tr>
<td>transmitted diseases</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patients with other genito-</td>
<td>11.6 (6.1) [450]</td>
<td>8.4 (4.3) [523]</td>
<td>4.3 (3.5) [524]</td>
</tr>
<tr>
<td>urinary medical problems</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Significance of differences</td>
<td>t = 3.73, P&lt;0.001</td>
<td>t = 2.83, P=0.005</td>
<td>t = 1.34, ns</td>
</tr>
<tr>
<td>(t-test)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Frequency of service contacts by appointment type**

The population attending the King’s Mill service was separated into two groups, a high health anxiety group (HAI of 18 or above) (n=64) and a low health anxiety group (HAI of 9 or less)(n=238) and compared by service use. The attendance rates in the 9 months before HAI assessment and in the 9 months subsequently were compared for (i) doctor appointments, (ii) nurse appointments, (iii) independent health advisor appointments (ie not the routine health advisor contacts as part of a clinic visit), (iv) telephone appointments (usually with a health advisor) and (v) failed appointments (DNAs). Attendance rates showed no differences in the frequency of nurse contacts or DNAs but were significantly increased for doctor and health advisor contacts, particularly with respect to doctor appointments and telephone advice (Table 6.3). There was a highly significant interaction between rates of consultation and gender, with males in the high HAI group (n=21) consulting significantly more often (mean 0.86) than high HAI females (n=34) (mean 0.19) and low HAI males
(n=122) (mean 0.27) and low HAI females (n=116) (mean 0.10) (F-ratio (gender x group interaction) = 7.63; df 1,298; P=0.006). No other gender interactions approached significance.

<table>
<thead>
<tr>
<th>Appointment type</th>
<th>High HAI (&gt;=18) (n=64)</th>
<th>Low HAI (&lt;10) (n=238)</th>
<th>Significance of difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctor appointments</td>
<td>5.34</td>
<td>3.89</td>
<td>t= 2.80, P=0.005*</td>
</tr>
<tr>
<td>Health advisor appointments</td>
<td>0.41</td>
<td>0.19</td>
<td>t =2.64, P=0.014*</td>
</tr>
<tr>
<td>Nurse appointments</td>
<td>3.31</td>
<td>4.04</td>
<td>t=0.83, P=0.41, ns*</td>
</tr>
<tr>
<td>Telephone appointments</td>
<td>1.09</td>
<td>0.59</td>
<td>t=2.93, P=0.004*</td>
</tr>
<tr>
<td>All appointments</td>
<td>10.16</td>
<td>8.71</td>
<td>t=1.43, P=0.15</td>
</tr>
<tr>
<td>DNA’s</td>
<td>2.09</td>
<td>2.32</td>
<td>t=0.43; P=0.67</td>
</tr>
</tbody>
</table>

Table 6.3. Comparison of numbers of service contacts separated by personnel type in 18 month period (9 months before health anxiety assessment and 9 months subsequently) in 302 patients attending King’s Mill Hospital

There was a highly significant interaction between health advisor appointments and sex (with males in high HAI group (n=21) consulting significantly more often (mean 0.86) than high HAI females (n=43)(mean 0.19) and low HAI males (n=122)(mean 0.27) and low HAI females (n=116)(mean 0.10)(F-ratio (gender x group interaction) = 7.63; df 1,298; P=0.006). No other gender interactions approached significance.

Acceptability of psychological treatment

Amongst the patients with high health anxiety 90% would have accepted a psychological treatment if offered (Table 6.1), and indeed, some have already received this independently of this report. The self-recognition of health anxiety was high and when the information about the condition was given
in an open and non-judgmental way there appeared to be little problem in accepting the need for therapy.

**Discussion**

*First study aim – prevalence of health anxiety*

The findings indicate that health anxiety was relatively common in the two genitourinary medicine clinics and this seemed to be independent of location. The King’s Mill clinic serves a relatively static population, predominantly white Caucasian and heterosexual, in a North Nottinghamshire mixed urban and rural community with numerous pockets of economic and social deprivation; compared with St. Mary’s, Paddington, an inner London location with a large ethnic mix, a greater non-heterosexual population and with a high degree of mobility. The results indicate that health anxiety is an important cause of morbidity in both of these clinics which had been under-appreciated before the study was mounted. Approximately one in ten of all patients attending had significant health anxiety and this clearly constitutes a major health problem.

*Second study – persistence of health anxiety*

The finding that those who had high health anxiety scores in this study had similar high HAI scores after nine months is a very important one. Most anxiety and depression scores improve over time as people with these conditions tend to fluctuate in mood, but a drop of only 2% in the scores of those with high health anxiety suggests that those who are severely affected by this condition remain handicapped over a long period. This has considerable implications for long-term morbidity and impact on medical services.
Third study – effect of high health anxiety on service usage

The greater number of doctor attendances found for those with high health anxiety has major cost implications for the service. It is particularly noteworthy that doctors’ and health advisor (senior nurses) appointments were increased whereas nursing ones were not. Most appointments with nurses were for follow-up procedures, and it is likely that it is to more senior staff such as the doctor or to the health advisor that patients gravitate if seeking reassurance. This behaviour is likely to lead to higher costs. If there was a way of helping these people to avoid such unnecessary consultations or investigations it would be a great gain to the health service. The possibility that such patients may be served better by early identification of their problems and appropriate treatment was also suggested by these findings. The similar incidence of the problem in two different populations in a predominantly rural and urban area suggest our findings could be extrapolated to genitourinary medicine clinics in general, and indicate a significant burden on the service.

The considerable morbidity of those with high health anxiety is indicated by their high levels of generalised anxiety as identified by the HADS-A, and suggests that the services at present are not really meeting their needs. Those attending for the treatment of STIs alone have lower levels of health anxiety. This was not a predicted finding but may reflect the fact that those patients with an STI, in general, have to attend GUM services, whereas those with other conditions, including those with health anxiety, are opting to do so. It could also support the idea that those with clear evidence of pathology are perhaps less likely to focus on the more complex aspects of internal disease common amongst those with health anxiety, and there is some evidence for this view (Stewart et al, 1994). It may also be a manifestation, of the fact that patients can self refer to GUM clinics, providing relatively easy access to secondary care. Additionally, for many people guilt and anxiety
can both increase the fear (of underlying disease and potential infectivity) triggered by medically unexplained symptoms.

If effective services were developed for those with health anxiety in genitourinary medicine clinics, it is likely that these would also be able to deal more efficiently with anxiety itself. There is already recognition that mental distress, both depression and anxiety, is common in such settings, and the attachment of clinical psychologists to such clinics bears witness to this. The readiness of those identified as suffering from health anxiety to accept psychologically-based treatments is encouraging and suggests that these could be used more widely. The success of cognitive-behavioural treatments in those with health anxiety in other settings suggests that these might be tested in GUM clinics with benefit but evidence is needed of their value in these settings.
Chapter 7

Development and execution of a randomised controlled trial of cognitive behaviour therapy in the treatment of health anxiety in a genitourinary medicine clinic

The prevalence study described in the previous chapter indicated that a randomised controlled trial of cognitive behaviour therapy was feasible in the population attending genitourinary medicine clinics. This was therefore planned, but there were limited resources to undertake the study. A seedcorn grant was obtained from the Sir Jules Thorn Charitable Trust but this was only sufficient to fund the additional time for one person to carry out a study involving 20 patients in the first instance. After advice I decided that the best way of achieving the aims of the trial was for me to carry out the treatment of suitable patients and also for me to collect the clinical data at selected times before and after randomisation even though I could not be masked with respect to allocation of treatment. To reduce the influence of any bias all the scales chosen for assessment were self-rating ones.

Plan of trial

The study was carried out with out-patients presenting to the genitourinary medicine clinic at King’s Mill Hospital, Sutton-in-Ashfield, Nottinghamshire between April 2002 and February 2005. Although funding was only available to see up to 20 patients originally until March 2004 a subsequent grant
was obtained from the Research & Development Department of Sherwood Forest Hospitals NHS Trust to allow up to 50 patients to be recruited. Its international trial number is ISRCTN 51344336.

**Selection, identification and plan of treatment for patients with significant health anxiety**

During the course of the study I was working as a staff grade doctor in the genitourinary medicine clinic at Kings Mill Hospital. The grant allowed me to spend 5 hours each week seeing patients in the trial. The number of patients I could see at any one time was limited. I therefore decided not to screen patients attending the clinic but to let colleagues know about the study and for them (and I) to try and identify patients in the course of our normal work.

It was decided, for reasons described earlier in this theses, to use the Health Anxiety Inventory (HAI) (Salkovkis et al, 2002) as the best means of identification and to use the cut-off point of 20 at the point at which significant (ie pathological) health anxiety was present and likely to persist (see Chapter 5).

**Inclusion and exclusion criteria**

It was hoped that this trial might be a precursor of a larger pragmatic one and so as much as possible I wanted to include a representative sample of patients. To achieve this I needed to have as few exclusion criteria as possible. I also needed to have a check on the fidelity of the treatment I was giving and this entailed recording sessions and sending them to my supervisor, Dr John Green, head of clinical psychology at Central North West London Trust. This proved to be very helpful as I could also give patients copies of my recordings for use as homework. I also did not want to be treating patients who might have serious pathology that was still under investigation, or others who had
significant psychiatric pathology that was being treated in the mental health services. This led to the following criteria for inclusion and exclusion.

Inclusion criteria

These were:

(a) patients who had significant health anxiety (HAI≥20) when screened,
(b) were aged between 16 and 65
(c) were permanently resident in the immediate area,
(d) had sufficient understanding of English to read and complete the questionnaires,
(e) gave written consent for the interviews. They were also asked if they could agree for audiotaping of treatment sessions, and access to their medical records was requested but neither of these were obligatory.

Exclusion criteria

These, following the concerns mentioned above patients were excluded if they were:

(a) currently under active psychiatric treatment,
(b) on psychotropic drugs that had been newly prescribed in the previous 6 months, and
(c) were actively being investigated for suspected pathology.

Randomisation

The plan was for patients who satisfied the criteria above to have their baseline assessments completed and entered on to a data base before randomisation. They were then randomised from a
remote location (London) by an independent statistical assistant, to either cognitive behaviour therapy adapted for health anxiety, given for up to 7 sessions, or to a control treatment in which no specific psychological treatment was given apart from the initial explanation of health anxiety before randomisation. This design was therefore a comparison of cognitive behaviour therapy plus an explanatory interview versus an explanatory interview alone. As such it was not a ‘pure’ trial of cognitive behaviour therapy but it was felt that it would be inappropriate to have provided the explanatory interview after randomisation for two reasons, (i) the patients had already received a basic account of health anxiety in the course of base-line assessment and many took the opportunity to ask questions at this time, and (ii) it was felt impracticable to invite each patient back for a separate short interview after baseline data had been obtained. Randomisation was in blocks of 10 as initially only 20 patients were planned for the study, and subsequently increased by blocks of 10 until the funding was exhausted. I, as therapist, was unaware of the block size. The study was approved by the North Nottinghamshire Ethics Committee (NNHA/600).

Assessments (see Appendix 3 also)

As it was appreciated from previous work that many patients with high health anxiety also at times had comorbid generalised anxiety, panic and depression it was felt desirable to assess these symptoms also. In retrospect I also think that obsessional pathology might too have been included as my impression during the course of the study was that several patients would have qualified for the diagnosis of obsessive-compulsive disorder. As the earlier prevalence study had suggested that many patients were seriously handicapped by their anxiety it was also decided to assess social functioning.

The following assessments were made at baseline, 3 months, 6 months and 12 months.
1. Health anxiety. This was made using the Short Health Anxiety Inventory (SHAI) (Salkovskis et al, 2002), referred to as the HAI elsewhere in this section as the long form of the HAI was not used in these studies. This was always the first questionnaire given as no further questions were asked if the patient scored below 20.

2. Generalised anxiety. This was assessed in two ways; (a) using the Beck Anxiety Inventory (BAI) (Beck et al, 1981), and (b) the anxiety section of the Hospital Anxiety & Depression Scale (HADS-A) (Zigmond & Snaith, 1983).

3. Depression. This was assessed with the depression section of the Hospital Anxiety & Depression Scale (HADS-D) (Zigmond & Snaith, 1983).


The following assessment was made at baseline, 6 and 12 months:

Dependent personality features using the Dependent Personality Questionnaire (DPQ) (Tyrer et al, 2004).

Cost of services was also assessed by the collection of all hospital service data by staff blind to allocation of treatment. It was also planned to ask patients about their service use in primary and secondary care at each assessment period. However, this was only a back-up in the study, as general practice data were to be obtained by me from practice data bases over the phone with practice managers. Unit costs in GBP (£) for the financial year 2004–05 were attached to each individual service and summed to generate total costs (Curtis & Netten, 2005; Department of Health, 2005). The cost of CBT was based on the time spent by the therapist with each patient plus relevant overheads. As a key element of total costs, the cost of CBT was varied in sensitivity analysis by increasing it and decreasing it by 50%.
Main Personality Assessment

Personality assessment was made using the Personality Assessment Schedule (Tyrer & Alexander, 1979) within three months of allocation to treatment. This schedule was used because it allows hypochondriasis to be assessed as a personality feature even though this is not normally considered to be a personality variable. All the elements in the hypochondriasis ratings have been shown to be of acceptable reliability (Tyrer et al, 1979). Because of concern over distortion of personality characteristics at initial assessment this delay was considered to be desirable and has been followed in similar studies (Byrne et al, 2009).

Primary and secondary outcomes

The primary outcome was chosen in advance as the degree of improvement in the mean HAI score after 6 months, with secondary outcomes of HAI at 12 months, and changes in social function, anxiety and depression scores at 3, 6 and 12 months.

Procedure

It was planned that attenders at the clinic suspected of having significant health anxiety by any of the clinical staff in the GU clinic (nurses, health advisors and doctors) were to be given the short (14 item) form of the Health Anxiety Inventory (HAI). This could either be given by the staff member concerned or the patient referred to me. Patients who scored 20 or more on the HAI were then to
be seen by me to establish if they satisfied all the criteria for inclusion in the study. Patients were given up to 72 hours before agreeing to take part in the study and then baseline data were completed, and a simple explanation of the nature of health anxiety given.

**Active treatment arm – Cognitive behaviour therapy**

The patients allocated to cognitive behaviour therapy were to be seen by me in addition to my normal work, and to be given their sessions of treatment in the clinic at separately allocated times. Each patient was to receive a three-part booklet of the model of treatment prepared by Professor Paul Salkovskis and Hilary Warwick (Appendix 2). The plan was for patients to usually receive the first booklet after their first session and the others shortly afterwards, and any who did not attend were to be sent the handbook by post. A total of up to 7 sessions of CBT each lasting up to one hour in the clinic were planned with booster sessions required if needed as at this stage as it was not known how many treatment sessions were appropriate for this group. I also planned to tape-record my interviews with patients who agreed to recording; these were to be assessed and feedback given by Dr John Green during treatment.

**Training**

As I had not been trained in any psychological treatment I asked to see a national expert on the subject, Professor Paul Salkovskis of the Institute of Psychiatry, and he kindly agreed to give me two sessions of training in addition to one full day workshop presentation. These totalled 10 hours in all,
but I also discussed cases with him over the telephone, and I received some supervision from him with regard to the audiotaped interviews with patients, as well as the planned regular supervision I received from Dr John Green.

Control arm – Treatment in the clinic plus initial interview

Those allocated to the control arm had already received an explanatory interview at baseline. They were to continue to be seen in the clinic as necessary (by any staff member including me) but to receive no psychological input apart from their initial interview. It is also important to note that other patients in the active treatment arm were also to receive treatment as usual in the clinic; the cognitive behaviour therapy was merely an adjunct to this.

Explanatory Interview

The initial explanation was given to all participants at baseline assessment before randomisation. This consisted of the fact that health anxiety (worry over health) is common, and for some patients it persists and becomes distressing. This can make medical problems and fears more difficult for them to cope with. Frequent consultation over these worries can sometimes lead to a breakdown in the doctor patient relationship as patients can start to feel that their doctor isn’t taking their problem seriously enough, and that only if they could find the doctor who would do the right test they would
find a satisfactory explanation for their fears. They were then asked if they had ever felt this way, and were given the chance to express any difficulties they had experienced. It was reiterated that the purpose of the trial was to test out a form of psychological treatment, cognitive behaviour therapy, in addition to patients’ normal medical care, to see if this could help with their worries (these patients had already received an information sheet about the trial). They were then thanked for taking part.

It was difficult to know the extent to which this brief explanation would be helpful to patients, but my impression was that a sympathetic discussion, showing understanding, given by a doctor within the clinical setting, would be valuable.

Statistical analysis:

Main analysis

Statistical analysis was carried out using STATA version 10 for Windows primarily by analysis of variance at each time point, with adjustment for baseline differences for each variable. A further regression analysis for longitudinal data using random effects models was carried out for each measuring score, with outcome the repeated measures of the assessment scores at 6 and 12 month adjusted for the baseline scores, treatment, follow-up and interaction between follow-up and treatment. These models are essential in the analysis of panel datasets with high variability between subjects and low variability within subjects. These models produce a matrix-weighted average of the between subjects and within subjects results. Assessment for baseline scores took place before randomization to treatment, however adjustment for baseline was essential to correct for the possibility of differences in baseline scores between treatments.
**Missing data**

The follow-up scores were incomplete for the HAI, BAI, HADS-A, and HADS-D assessments. The method of multiple imputation was used to account for missingness in these scores. These method imputes plausible values for each missing value, under the assumption of missing at random. The missing at random holds when missing data are different from the observed data, but the pattern of missing data is traceable from the observed data (Little & Rubin, 1987). Results were then combined using the rules of multiple imputation. Sensitivity analysis was carried out to compare difference in the imputed outcome estimates of the repeated measures of the assessment scores at 6 and 12 months adjusted for the baseline, to the repeated measures analysis of the incomplete scores.

The cost-effectiveness analysis combined the primary outcome (HAI score) with total service use costs and the cost of the intervention at 12 months follow-up. Differences in cost were first compared using standard t-tests despite the skewed distribution of the cost data because this method enables inferences to be made about the arithmetic mean\(^{17}\). Non-parametric bootstrapping was used to assess the robustness of confidence intervals to non-normality of the cost distribution\(^{18}\). Incremental cost-effectiveness ratios (ICERs) were calculated.
Chapter 8

Results of randomised controlled trial

Patients recruited

The trial was completed in June 2006. 65 patients were considered for the trial but only 60 decided to complete the HAI after initial clinical assessment. Of these 59 had a score of 20 or more and were recruited to the study, the high rate suggesting that there may have been many more, eligible during the period of the trial, who were not approached. There was a delay in baseline assessment with one patient, whose score fell to 18 at this time, but because at the time of consent the score was 20 the patient was still included. Of the 59 patients with high HAI scores, 10 were excluded because three had current psychiatric care and seven declined participation after reading the information sheet and asking questions. Of the remaining 49 patients (26 male, 23 female), 23 were allocated to cognitive behaviour therapy and these received a mean of 4.3 sessions (range 0–13) of 45–60 min over the 6-month period, with 4 patients receiving a total of 6 sessions between 6 and 9 months. One patient refused access to her general practice records, supplying data on the number of contacts she had with primary care herself; this was also the case for one other participant with respect to consultations in both primary and secondary care. Two patients declined audio-taping because of the risk of discovery of them having attended a genitourinary medicine clinic. The CONSORT diagram for the trial is shown in Figure 8.1.
One patient withdrew from the study immediately after allocation to the cognitive behaviour therapy (CBT) arm, but no reason was given for this. Another patient allocated to CBT did not turn up for treatment or follow-up (but returned 18 months later and was taken on for treatment, this intervention was not included in the study). Two patients withdrew in the control arm: one before
their 3-month assessment and one later. Four other patients did not have assessments at all time points. Fifteen (31%) of the 49 patients (8 in the CBT group and 7 in the control group) had at least one follow-up assessment by telephone (n=8) or by posted letter (n=7). At 6 months, the primary end point, 44 patients were assessed and able to provide some data. Of the 26 patients in the control group, 4 asked to have CBT after 1 year and were treated at that time; their data are not included here. As the economic data were collected from patient records, data on 48 of the 49 patients were available for all follow-up periods, though where data are matched to outcomes in the cost-effectiveness analysis, the sample was correspondingly reduced in size.

Further details of the baseline data of the 49 patients are given in Table 8.1. Almost all had symptoms, with genital warts, chlamydial infection and non-specific urethritis being the most common diagnoses, and this reflected the population attending the clinic. 18 (37%) had no abnormal organic pathology and so the population differed from that reported by Frost (1985), all of whom had no physical pathology. There was a similar distribution between active and control arms of the trial for the proportion of new and re-referred patients, self-referrals and genitourinary pathology (Table 8.1).
<table>
<thead>
<tr>
<th>Patient no.</th>
<th>Treatment arm</th>
<th>Type of appointment</th>
<th>Source of referral</th>
<th>Genitourinary pathology</th>
<th>Genitourinary diagnosis</th>
<th>Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A</td>
<td>N</td>
<td>S</td>
<td>A</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>2</td>
<td>C</td>
<td>A/N</td>
<td>S</td>
<td>A</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>3</td>
<td>A</td>
<td>F/U</td>
<td>S</td>
<td>A</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>4</td>
<td>A</td>
<td>F/U</td>
<td>S</td>
<td>S</td>
<td>Genital warts + non-specific urethritis</td>
<td>+</td>
</tr>
<tr>
<td>5</td>
<td>A</td>
<td>A/N</td>
<td>S</td>
<td>S</td>
<td>Recurrent genital herpes</td>
<td>+</td>
</tr>
<tr>
<td>6</td>
<td>C</td>
<td>F/U</td>
<td>S</td>
<td>O</td>
<td>Bacterial vaginosis</td>
<td>+</td>
</tr>
<tr>
<td>7</td>
<td>C</td>
<td>F/U</td>
<td>S</td>
<td>O</td>
<td>Atrophic vaginosis</td>
<td>+</td>
</tr>
<tr>
<td>8</td>
<td>C</td>
<td>F/U</td>
<td>S</td>
<td>A</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>9</td>
<td>C</td>
<td>N</td>
<td>S</td>
<td>A</td>
<td>Genital warts</td>
<td>+</td>
</tr>
<tr>
<td>10</td>
<td>A</td>
<td>A/N</td>
<td>S</td>
<td>A</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>11</td>
<td>C</td>
<td>F/U</td>
<td>S</td>
<td>S</td>
<td>Genital warts</td>
<td>+</td>
</tr>
<tr>
<td>12</td>
<td>A</td>
<td>A/N</td>
<td>S</td>
<td>A</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>13</td>
<td>A</td>
<td>N</td>
<td>F/P</td>
<td>S</td>
<td>Chlamydia infection</td>
<td>+</td>
</tr>
<tr>
<td>14</td>
<td>C</td>
<td>F/U</td>
<td>S</td>
<td>S</td>
<td>Pelvic inflammatory disease</td>
<td>+</td>
</tr>
<tr>
<td>15</td>
<td>A</td>
<td>A/N</td>
<td>S</td>
<td>A</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>16</td>
<td>C</td>
<td>F/U</td>
<td>S</td>
<td>S</td>
<td>Genital warts</td>
<td>+</td>
</tr>
<tr>
<td>17</td>
<td>C</td>
<td>A/N</td>
<td>S</td>
<td>A</td>
<td></td>
<td>–</td>
</tr>
<tr>
<td>18</td>
<td>A</td>
<td>N</td>
<td>C</td>
<td>S</td>
<td>Chlamydia infection</td>
<td>+</td>
</tr>
<tr>
<td>19</td>
<td>C</td>
<td>A/N</td>
<td>S</td>
<td>SC</td>
<td>Contact of chlamydia</td>
<td>+</td>
</tr>
<tr>
<td>20</td>
<td>C</td>
<td>A/N</td>
<td>S</td>
<td>A</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>21</td>
<td>C</td>
<td>A/N</td>
<td>S</td>
<td>O</td>
<td>Candidiasis</td>
<td>+</td>
</tr>
<tr>
<td>22</td>
<td>A</td>
<td>N</td>
<td>S</td>
<td>S</td>
<td>Non-specific urethritis</td>
<td>+</td>
</tr>
<tr>
<td>23</td>
<td>C</td>
<td>N</td>
<td>S</td>
<td>SC</td>
<td>Contact of chlamydia</td>
<td>+</td>
</tr>
<tr>
<td>24</td>
<td>A</td>
<td>N</td>
<td>S</td>
<td>S</td>
<td>Genital warts</td>
<td>+</td>
</tr>
<tr>
<td>25</td>
<td>C</td>
<td>A/N</td>
<td>S</td>
<td>O</td>
<td>Candidiasis</td>
<td>–</td>
</tr>
<tr>
<td>26</td>
<td>A</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>Bacterial vaginosis</td>
<td>+</td>
</tr>
<tr>
<td>27</td>
<td>C</td>
<td>N</td>
<td>GP</td>
<td>O</td>
<td>Vulvitis</td>
<td>+</td>
</tr>
<tr>
<td>28</td>
<td>A</td>
<td>F/U</td>
<td>S</td>
<td>A</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>29</td>
<td>C</td>
<td>A/N</td>
<td>S</td>
<td>A</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>30</td>
<td>A</td>
<td>F/U</td>
<td>S</td>
<td>A</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>31</td>
<td>C</td>
<td>F/U</td>
<td>S</td>
<td>A</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>32</td>
<td>C</td>
<td>F/U</td>
<td>S</td>
<td>A</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>33</td>
<td>A</td>
<td>F/U</td>
<td>S</td>
<td>A</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>34</td>
<td>A</td>
<td>F/U</td>
<td>S</td>
<td>A</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>35</td>
<td>C</td>
<td>A/N</td>
<td>S</td>
<td>O</td>
<td>Folliculitis</td>
<td>+</td>
</tr>
<tr>
<td>36</td>
<td>C</td>
<td>N</td>
<td>GP</td>
<td>O</td>
<td>Vulvitis</td>
<td>+</td>
</tr>
<tr>
<td>37</td>
<td>A</td>
<td>A/N</td>
<td>S</td>
<td>S</td>
<td>Non-specific urethritis</td>
<td>+</td>
</tr>
<tr>
<td>38</td>
<td>A</td>
<td>F/U</td>
<td>S</td>
<td>SC</td>
<td>Contact of non-specific urethritis</td>
<td>–</td>
</tr>
<tr>
<td>39</td>
<td>A</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>Candidiasis</td>
<td>+</td>
</tr>
<tr>
<td>40</td>
<td>C</td>
<td>N</td>
<td>S</td>
<td>S</td>
<td>Pelvic inflammatory disease</td>
<td>+</td>
</tr>
<tr>
<td>41</td>
<td>C</td>
<td>F/U</td>
<td>S</td>
<td>O</td>
<td>Pelvic inflammatory disease</td>
<td>+</td>
</tr>
<tr>
<td>42</td>
<td>A</td>
<td>F/U</td>
<td>S</td>
<td>S</td>
<td>Genital warts</td>
<td>+</td>
</tr>
<tr>
<td>43</td>
<td>C</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>Candidiasis</td>
<td>–</td>
</tr>
<tr>
<td>44</td>
<td>A</td>
<td>F/U</td>
<td>S</td>
<td>A</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>45</td>
<td>C</td>
<td>F/U</td>
<td>S</td>
<td>O</td>
<td>Chlamydia infection</td>
<td>+</td>
</tr>
<tr>
<td>46</td>
<td>C</td>
<td>A/N</td>
<td>S</td>
<td>O</td>
<td>Candidiasis</td>
<td>+</td>
</tr>
<tr>
<td>47</td>
<td>C</td>
<td>A/N</td>
<td>S</td>
<td>S</td>
<td>Genital warts</td>
<td>+</td>
</tr>
<tr>
<td>48</td>
<td>A</td>
<td>N</td>
<td>S</td>
<td>S</td>
<td>Non-specific urethritis</td>
<td>+</td>
</tr>
<tr>
<td>49</td>
<td>A</td>
<td>A/N</td>
<td>S</td>
<td>S</td>
<td>Non-specific urethritis + genital warts</td>
<td>+</td>
</tr>
</tbody>
</table>

Table 8.1 Source of referral and comorbidities of patients with high health anxiety recruited to trial treatment arm

A, cognitive behavioural therapy; C, control.

Appointment type: N, new to service; A/N, new episode (has previously attended); F/U, follow-up appointment.

How referred for this episode:
S, self-referral; FP, referred from Family Planning; GP, referred by GP; C, contact of another patient.

Genitourinary pathology:
S, sexually transmitted infection; O, other diagnosis; A, no abnormality detected; SC, contact of infection.

Symptoms (genitourinary): +, present; –, absent.
**Treatment with cognitive behaviour therapy**

The details of the treatment sessions given to the 23 patients allocated to cognitive behaviour therapy are shown in Table 8.2a and an account of one patient treated is given in Appendix 1 to demonstrate application of the various techniques. A mean of 4.3 sessions (range 0-13) was given, with 4 patients given booster sessions after 6 months. The mean period of treatment was 15.1 weeks and most treatment was completed at a mutually agreed time. 14 (72%) of the 18 patients who received the bibliotherapy component (manual) of the treatment felt it was of assistance to them (Table 8.2b).
<table>
<thead>
<tr>
<th>Patient no.</th>
<th>Number of treatment sessions and reasons</th>
<th>Number of booster sessions (after 6 months)</th>
<th>Weeks from start to end of treatment</th>
<th>Treatment feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>6 mutually agreed number of treatments</td>
<td>1</td>
<td>5</td>
<td>Phoned a year later, no symptoms - said 'I had been like a rock'</td>
</tr>
<tr>
<td>03</td>
<td>6 mutually agreed number of treatments</td>
<td>1</td>
<td>16</td>
<td>Said treatment 'very helpful' after 1 year</td>
</tr>
<tr>
<td>04</td>
<td>1 patient had one session only and did not attend again</td>
<td>–</td>
<td>3</td>
<td>Profuse letter of thanks, wants to help others</td>
</tr>
<tr>
<td>05</td>
<td>5 mutually agreed number of treatments</td>
<td>–</td>
<td>18</td>
<td>Phoned a year later, no symptoms - said 'I had been like a rock'</td>
</tr>
<tr>
<td>07</td>
<td>7 mutually agreed number of treatments</td>
<td>1</td>
<td>19</td>
<td>Fulsome letter after end of treatment; 'whenever I felt I might slip back I went over the work we had done and got better'</td>
</tr>
<tr>
<td>10</td>
<td>0 did not attend after baseline assessments</td>
<td>–</td>
<td>0</td>
<td>Note of thanks at end of study</td>
</tr>
<tr>
<td>13</td>
<td>4 mutually agreed number of treatments</td>
<td>–</td>
<td>21</td>
<td>Letter of thanks at 12 m confirming absence of symptoms</td>
</tr>
<tr>
<td>22</td>
<td>7 mutually agreed number of treatments</td>
<td>–</td>
<td>26</td>
<td>Verbal praise at end of treatment</td>
</tr>
<tr>
<td>28</td>
<td>13 mutually agreed number of treatments</td>
<td>–</td>
<td>51</td>
<td>Note of thanks at end of study</td>
</tr>
<tr>
<td>30</td>
<td>4 mutually agreed number of treatments</td>
<td>–</td>
<td>11</td>
<td>Verbal thanks and promise of support with further research</td>
</tr>
<tr>
<td>33</td>
<td>3 mutually agreed number of treatments</td>
<td>–</td>
<td>5</td>
<td>Verbal praise at end of treatment</td>
</tr>
<tr>
<td>34</td>
<td>7 mutually agreed number of treatments</td>
<td>–</td>
<td>26</td>
<td>Verbal thanks and promise of support with further research</td>
</tr>
<tr>
<td>37</td>
<td>3 mutually agreed number of treatments</td>
<td>–</td>
<td>12</td>
<td>Verbal thanks and promise of support with further research</td>
</tr>
<tr>
<td>38</td>
<td>2 mutually agreed number of treatments</td>
<td>–</td>
<td>3</td>
<td>Verbal praise at end of treatment</td>
</tr>
<tr>
<td>39</td>
<td>1 did not return after first treatment</td>
<td>–</td>
<td>6</td>
<td>Verbal praise at end of treatment</td>
</tr>
<tr>
<td>42</td>
<td>4 did not complete planned course because of family problems never attended</td>
<td>–</td>
<td>13</td>
<td>Verbal praise at end of treatment</td>
</tr>
<tr>
<td>48</td>
<td>5 mutually agreed number of treatments</td>
<td>–</td>
<td>19</td>
<td>Verbal praise at end of treatment</td>
</tr>
<tr>
<td>49</td>
<td>8 mutually agreed number of treatments</td>
<td>–</td>
<td>19</td>
<td>Verbal praise at end of treatment</td>
</tr>
<tr>
<td>Mean and totals</td>
<td></td>
<td>4.3 not including non-attendees 0.15</td>
<td>15.1</td>
<td></td>
</tr>
</tbody>
</table>

Table 8.2a. Number and timing of treatment sessions in cognitive–behavioural therapy group (n=23) with details of planned and unplanned termination and opinions of face-to-face therapy

One patient in the control group also wrote a letter of thanks, and two expressed their thanks verbally.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>●</td>
<td></td>
<td></td>
<td>Moderately helpful – supported work he'd done himself</td>
</tr>
<tr>
<td>03</td>
<td>●</td>
<td></td>
<td>●</td>
<td>'Some help'</td>
</tr>
<tr>
<td>04</td>
<td>●</td>
<td></td>
<td>●</td>
<td>'Didn't bother to read it'</td>
</tr>
<tr>
<td>05</td>
<td>●</td>
<td></td>
<td>●</td>
<td>'Helped a little'</td>
</tr>
<tr>
<td>10</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>●</td>
<td></td>
<td></td>
<td>Not particularly helpful</td>
</tr>
<tr>
<td>22</td>
<td>●</td>
<td></td>
<td>●</td>
<td>Patient dyslexic so manual tape recorded</td>
</tr>
<tr>
<td>24</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>●</td>
<td></td>
<td></td>
<td>Only helped a bit</td>
</tr>
<tr>
<td>30</td>
<td>●</td>
<td></td>
<td></td>
<td>Recognised himself</td>
</tr>
<tr>
<td>33</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>●</td>
<td></td>
<td></td>
<td>Helped a bit</td>
</tr>
<tr>
<td>37</td>
<td>●</td>
<td></td>
<td></td>
<td>Easy to relate to – recognised himself</td>
</tr>
<tr>
<td>38</td>
<td>●</td>
<td></td>
<td></td>
<td>Can refer back</td>
</tr>
<tr>
<td>39</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>●</td>
<td></td>
<td></td>
<td>Helped a bit</td>
</tr>
<tr>
<td>44</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>48</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>●</td>
<td></td>
<td>●</td>
<td>Helped a bit</td>
</tr>
</tbody>
</table>

Means and totals: 14, 4, 2

Table 8.2b. Reported opinions of the bibliotherapy component in cognitive–behavioural therapy group (n=23)

Efficacy of cognitive behaviour therapy

Using repeated measures analysis of variance with baseline, 6-month and 12-month data, and with imputed missing values, there was a significantly greater improvement for the primary outcome of change in health anxiety scores at 6 months ($P=0.001$), which was achieved early in the course of the trial and established by 3 months although further developed by 6 months. There was neither further improvement nor relapse at 6 months or 12 months and no interaction between treatment and time in the follow-up period (Tables 8.3 and 8.4). Very similar benefit in the active treatment
group was found for the symptoms of generalised anxiety with the HADS–A (P=0.036) and depression with the HADS–D (P=0.002) (Table 8.4), but the BAI scores, possibly influenced by scores in the control group being 30% higher in the control group at baseline (Table 8.3), did not quite reach a significant difference (P=0.055). Social function showed no significant differences between groups except at 3 months, when those treated with CBT had lower scores that those in the control group (P<0.01).
<table>
<thead>
<tr>
<th>Assessment</th>
<th>Treatment</th>
<th>Baseline Mean [n]</th>
<th>3 m Mean [n]</th>
<th>6 m Mean [n]</th>
<th>12 m Mean [n]</th>
<th>Difference between treatments (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Anxiety Inventory (HAI)</td>
<td>CBT</td>
<td>23.8 [23]</td>
<td>16.0 [19]</td>
<td>11.7 [20]</td>
<td>10.4 [18]</td>
<td>4.4 (1.1 to 9.5)</td>
</tr>
<tr>
<td>Beck Anxiety Inventory</td>
<td>CBT</td>
<td>20.4 [23]</td>
<td>11.8 [19]</td>
<td>7.1 [19]</td>
<td>6.3 [18]</td>
<td>0.9 (-5.2 to 10.2)</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>27.1 [26]</td>
<td>19.4 [24]</td>
<td>17.0 [23]</td>
<td>18.5 [23]</td>
<td>3.2 (0.72 to 12.6)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.5 (-4.3 to 12.0)</td>
</tr>
<tr>
<td>HADS - Anxiety</td>
<td>CBT</td>
<td>13.0 [23]</td>
<td>8.3 [18]</td>
<td>7.1 [20]</td>
<td>6.2 [18]</td>
<td>3.9 (1.9 to 6.9)</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>13.6 [26]</td>
<td>12.4 [24]</td>
<td>11.5 [22]</td>
<td>10.7 [23]</td>
<td>3.8 (0.8 to 6.2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.9 (0.6 to 7.0)</td>
</tr>
<tr>
<td>HADS - Depression</td>
<td>CBT</td>
<td>7.5 [23]</td>
<td>4.4 [18]</td>
<td>2.5 [20]</td>
<td>2.9 [18]</td>
<td>1.8 (0.1 to 4.7)</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>7.2 [26]</td>
<td>5.9 [24]</td>
<td>6.5 [21]</td>
<td>5.9 [23]</td>
<td>4.3 (1.2 to 6.5)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.3 (0.8 to 6.2)</td>
</tr>
<tr>
<td>Social Functioning Questionnaire</td>
<td>CBT</td>
<td>7.9 [22]</td>
<td>5.3 [19]</td>
<td>5.1 [20]</td>
<td>5.2 [18]</td>
<td>2.1 (0.5 to 5.0)</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>9.7 [26]</td>
<td>9.2 [24]</td>
<td>7.6 [23]</td>
<td>8.3 [23]</td>
<td>0.7 (-1.3 to -3.6)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.3 (-1.1 to 4.2)</td>
</tr>
</tbody>
</table>

Table 8.3. Outcome of cognitive behaviour therapy (CBT) and control groups for scores on Health Anxiety Inventory, self-rated anxiety (Beck Anxiety Inventory and Hospital Anxiety and Depression Scale – Anxiety, self-rated depression (Hospital Anxiety and Depression Scale – Depression), and social function (SFQ) at 3, 6 and 12 months after randomisation
### Regression on Longitudinal Data

#### Treatment Significance of Follow-up (6m, 12m)

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Coeff (P-value)</th>
<th>Coeff (P-value)</th>
<th>Coeff (P-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Anxiety</td>
<td>6.60 (0.001)</td>
<td>-1.64 (0.172)</td>
<td>0.98 (0.565)</td>
</tr>
<tr>
<td>Beck Anxiety Inventory</td>
<td>5.81 (0.055)</td>
<td>-0.98 (0.639)</td>
<td>2.29 (0.417)</td>
</tr>
<tr>
<td>HADS-Anxiety</td>
<td>2.93 (0.036)</td>
<td>-0.323 (0.742)</td>
<td>0.428 (0.737)</td>
</tr>
<tr>
<td>HADS-Depression</td>
<td>3.79 (0.002)</td>
<td>0.46 (0.506)</td>
<td>-0.55 (0.557)</td>
</tr>
<tr>
<td>Social Function Questionnaire (SFQ)</td>
<td>1.63 (0.138)</td>
<td>0.39 (0.549)</td>
<td>0.60 (0.523)</td>
</tr>
</tbody>
</table>

Table 8.4. Significance of random effects models of panel data, after accounting for missing data using multiple imputation with each outcome the repeated measure of the score at 6m and 12m adjusted for baseline, treatment groups, follow up (6m and 12m) and interaction between treatment and follow up.
**Influence of assessment procedure**

Because the assessments were not masked, even though they were all self-ratings and therefore not subject to observer bias, it was felt important to evaluate the outcome in those assessed by telephone and post only. It was postulated that if I. was demonstrating any bias in assessments this would show most prominently in telephone interviews and least in those completed by post. This hypothesis was not supported for any measure. For example, for the health anxiety scores the relative reductions in scores after 1 year for interview ratings in CBT and control groups were 56% and 17%, for telephone ratings 47% and 42%, and postal ratings 43% and 19% respectively.

**Economic evaluation**

In the CBT group, the number of primary care contacts (down 22%) and out-patient appointments (down 57%) fell over the 12-month period of the study, whereas the equivalent contacts in the control group (primary care up 3%, and hospital out-patients (down 37%) remained at a higher level (Table 8.5). The greater part of the reduction in contacts in the CBT group was in the second 6 months, after most of the treatment had been completed. The lower levels of service use over follow-up in the CBT group were reflected in £150 lower mean total service costs per patient (£634 v. £484) (Table 8.6). However, this difference in cost was not sufficient to offset the cost of the CBT sessions, which were, on average, £427 per patient. Thus, the mean costs per patient over 12 months follow-up were £911 in the CBT group and £634 in the control group. None of these differences in costs was statistically significant.
<table>
<thead>
<tr>
<th>Source of cost</th>
<th>CBT group n = 18 (sd)</th>
<th>Control group n = 23 (sd)</th>
<th>CBT costs minus control costs</th>
<th>95% Confidence interval (CI)</th>
<th>Significance (P)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBT sessions</td>
<td>427 (304)</td>
<td>0 (0)</td>
<td>427</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service costs</td>
<td>484 (354)</td>
<td>634 (602)</td>
<td>150</td>
<td>-174 to 474</td>
<td>0.354</td>
</tr>
<tr>
<td>Total costs</td>
<td>911 (560)</td>
<td>634 (602)</td>
<td>276</td>
<td>-648 to 95</td>
<td>0.141</td>
</tr>
</tbody>
</table>

Table 8.6. Mean total costs in £ (SD) over 12 months of study
The results were not altered after the sensitivity analysis. CBT intervention resulted in improvements in outcomes alongside higher costs, and in these circumstances further analysis is necessary to identify whether the intervention is cost-effective. Currently this is done using cost-effectiveness acceptability curves which show the probability that an intervention is cost-effective and from which is derived the incremental cost-effectiveness ratio (ICER), an illustration of the cost of each unit change in outcome (Fenwick & Byford, 2005). In my randomised trial the costs of my treatment were only partly offset by the savings in primary and secondary care. In these circumstances in ordinary practice a decision has to be made whether the outcome is worth a small increase in cost. These data need therefore to be made available to a decision maker (likely to be my Trust Executive Board) so all the relevant information is taken into account. In this study the incremental cost-effectiveness ratio was calculated at £33 per unit reduction in HAI score, so the Trust would need to decide if this relatively small cost was worth the extra clinical value if they were to adopt this treatment.

Subsequent analysis (by my colleague, Barbara Barrett) showed the CBT intervention to be an important cost-driver. When the cost of the intervention was lowered by 50% (which would probably be the case if an assistant psychologist or nurse gave the treatment), the difference in cost between control and CBT groups fell to only £63, generating an incremental cost-effectiveness ratio of only £8 per unit reduction in HAI score. Conversely, when the cost of the intervention was increased by 50%, the difference in cost between the CBT and control group was substantial (£490) and reached statistical significance ($P=0.02$) and the incremental cost-effectiveness ratio increased to £59 per unit reduction in HAI score.
With the current government initiative to improve access to psychological therapies (IAPT) such cost-effective psychological treatment interventions are now becoming practicable. Thus, for example, the Hillingdon chronic obstructive pulmonary disorder service has been claimed to save £70,000 in six months by providing CBT to patients at a cost of £25,000 (Department of Health, 2009).

**Influence of personality on outcome**

Of the 44 patients who provided data, personality assessment showed that 10 (48%) in the CBT group and 14 (61%) in the control group had a personality disorder. However, as personality status was only assessed after 4 months those who dropped out early were not seen and in this analysis only the 38 patients who completed all stages of treatment are shown.

The results were unequivocal in showing that neither personality disorder nor hypochondriacal personality had a negative influence on the outcome of cognitive behaviour therapy. Patients with any personality disorder had a similar outcome to those with no personality disturbance (P=0.90)(Figure 8.2), with both groups after receiving CBT having a mean HAI score of 10 after one year, a score within the normal population range (Salkovskis et al, 2002). Similar results were shown in those with hypochondriacal personality, except in this group there was a somewhat better response (although not significant) in those with the personality disturbance (Figure 8.3)(P = 0.68).
Influence of personality disorder on treatment effects
Group/time/personality interaction $F(2, 68) = 0.11, p = 0.90$

![Graph showing the influence of personality disorder on treatment effects with means and standard errors for baseline, 6 months, and 12 months for both CBT and control groups with and without personality disorder.]

Figure 8.2. Influence of a categorical diagnosis of personality disorder on the effects of treatment with CBT in health anxiety over 12 months
Influence of hypochondriacal personality disorder on change in HAI scores by treatment group

Group/hypo pd/time effect: F(2, 68)= 0.39, p =.68

Vertical bars denote 0.95 confidence intervals

<table>
<thead>
<tr>
<th>GROUP</th>
<th>A</th>
<th>Group</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>No hypochondriacal disorder</td>
<td></td>
<td>Hypochondriacal personality disorder</td>
<td></td>
</tr>
</tbody>
</table>

Figure 8.3. Influence of a diagnosis of hypochondriacal personality on the effects of treatment with CBT in health anxiety over 12 months

(No hypochondriacal personality disorder: CBT group n=7, Control group n =7
Hypochondriacal personality disorder: CBT group n=10, Control group n =14 )

The analysis of secondary outcomes also showed no negative influence of personality disturbance (Table 8.7) where personality disturbance on the outcome of treatment outcome was uniformly negligible. There was no significant difference between the dependence scores for the DPQ in the control and cognitive behaviour therapy groups (P=0.64) and overall there was a small but significant improvement in DPQ scores over the 12 month period (P=0.034)(Figure 8.4). In those allocated to the control group the mean reduction in scores was only 0.8 and not significant (P = 0.31).
Figure 8.4. Change in mean DPQ scores by treatment group over time

CBT group (n = 17); Control group (n = 21)

The costs of care separated by personality status showed no significant differences in cost between those with and without any PD (P=0.80), but those with hypochondriacal personality incurred substantially greater costs than those without this personality disturbance, but this difference fell just short of significance (mean difference £284 per patient per year)(P=0.08)(Table 8.8).
<table>
<thead>
<tr>
<th>Measure</th>
<th>Baseline</th>
<th>6 months</th>
<th>12 months</th>
<th>F-ratio, degrees of freedom &amp; significance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No PD</td>
<td>PD</td>
<td>No PD</td>
<td>PD</td>
</tr>
<tr>
<td>BAI</td>
<td>CBT</td>
<td>Con</td>
<td>20.67</td>
<td>25.1</td>
</tr>
<tr>
<td></td>
<td>(se)</td>
<td>(se)</td>
<td>(3.6)</td>
<td>(3.6)</td>
</tr>
<tr>
<td>HADS Anxiety</td>
<td>13.1</td>
<td>12.3</td>
<td>14.8</td>
<td>12.5</td>
</tr>
<tr>
<td></td>
<td>(1.2)</td>
<td>(1.3)</td>
<td>(1.3)</td>
<td>(1.0)</td>
</tr>
<tr>
<td>HADS Depression</td>
<td>7.1</td>
<td>5.4</td>
<td>9.2</td>
<td>8.1</td>
</tr>
<tr>
<td></td>
<td>(1.2)</td>
<td>(1.3)</td>
<td>(1.2)</td>
<td>(1.1)</td>
</tr>
<tr>
<td>SFQ</td>
<td>CBT</td>
<td>Con</td>
<td>6.7</td>
<td>8.8</td>
</tr>
<tr>
<td></td>
<td>(1.5)</td>
<td>(1.5)</td>
<td>(1.6)</td>
<td>(1.3)</td>
</tr>
</tbody>
</table>

Table 8.7. Interaction between scores separated by personality status (personality disorder (PD) vs no personality disorder (No PD)) for secondary outcomes of anxiety (Beck Anxiety inventory (BAI)), Hospital Anxiety and Depression Scale - Anxiety section (HADS Anxiety), Depression section (HADS Depression), and social functioning questionnaire (SFQ)

CBT = cognitive behaviour therapy (No PD =9, PD = 8); Con = control group (No PD = 9, PD=12) (se = standard error)

Only the treatment group/personality status/time interactions are shown – all are non-significant
### Table 8.8. Change in mean total costs (£) of care (GP and hospital combined) in patients separated by personality status (no personality disorder (no pd) vs any personality disorder (any pd)) and by hypochondriacal personality (hyp pd) and no hypochondriacal personality (no hyp pd)

<table>
<thead>
<tr>
<th>Total costs by time (m)</th>
<th>any pd (n=20)</th>
<th>no pd (n=18)</th>
<th>mean diff (95% CI)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-6</td>
<td>520 Mean (£)</td>
<td>454 Mean (£)</td>
<td>65 (-173 to 304)</td>
<td>0.58</td>
</tr>
<tr>
<td></td>
<td>425 SD</td>
<td>274 SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-12</td>
<td>231 Mean (£)</td>
<td>249 Mean (£)</td>
<td>-18 (-231 to -195)</td>
<td>0.86</td>
</tr>
<tr>
<td></td>
<td>333 SD</td>
<td>313 SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(0-12)</td>
<td>750 Mean (£)</td>
<td>703 Mean (£)</td>
<td>47 (-320 to 414)</td>
<td>0.80</td>
</tr>
<tr>
<td></td>
<td>637 SD</td>
<td>451 SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hyp pd (n=24)</td>
<td>554 Mean (£)</td>
<td>377 Mean (£)</td>
<td>177 (-27 to 381)</td>
<td>0.09</td>
</tr>
<tr>
<td></td>
<td>413 SD</td>
<td>205 SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>no hyp pd (n=14)</td>
<td>279 Mean (£)</td>
<td>172 Mean (£)</td>
<td>107 (-111 to 324)</td>
<td>0.33</td>
</tr>
<tr>
<td></td>
<td>348 SD</td>
<td>260 SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(0-12)</td>
<td>833 Mean (£)</td>
<td>549 Mean (£)</td>
<td>284 (-30 to 598)</td>
<td>0.08</td>
</tr>
<tr>
<td></td>
<td>629 SD</td>
<td>324 SD</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Influence of CBT experience on the results of intervention

When I started the trial I was very inexperienced in delivering cognitive behaviour therapy and over the course of the study learnt both from experience and through feedback from Dr John Green and Professor Paul Salkovskis. I therefore thought it would be useful to compare the outcome of the first half of patients seen with that of the second. This was carried out by carrying out the same analysis split by groups with the first 24 patients analysed separately from the second group of 25, and differences between the CBT and Control groups compared.

There was an unusual difference between the two halves of the trial, with the patients seen for CBT in the second half of the trial, when I was more experienced, having a significantly better outcome than the first group of patients for the change in HAI scores over time (group/half/time interaction, P=0.047). However, the degree of improvement was similar in each half of the trial (with a 57% drop
in the scores at 1 year in the first half and 56% in the second), but the variance in the first half group was much greater, so making the difference an insignificant one (Figure 8.4). My interpretation of this is that as the trial went on I became more consistent in my delivery of therapy.
Results from first half of study
Treatment/time interaction $F(2, 28)=1.6013, p=0.22$
Vertical bars denote 0.95 confidence intervals

CBT (n = 11)
Control (n = 13)

Baseline                      6 months                    12 months

Mean HAI score

Results from second half of study
Treatment/time interaction $F(2, 42)=8.5136, p=.0008$
Vertical bars denote 0.95 confidence intervals

CBT (n=12)
Control (n=13)

Baseline                  6 months                  12 months

Mean HAI score

Figure 8.5. Mean changes in HAI scores in first and second halves of the trial illustrating the possible effects of greater experience
Value of tapes

Of the 23 patients allocated to cognitive behaviour therapy 19 had tapes recorded, one refused because of fears over confidentiality and another was not recorded because of technical difficulties on the one occasion they attended. Of these 15 reported having listened to the tapes and 14 gave feedback that they were helpful. This represents a comprehensive use of tapes by the patients who entered into therapy (89%) and high levels of satisfaction (93%) for those who listened to them.

Summary of results

The results of the trial were clear cut. Treatment with cognitive behaviour therapy for health anxiety was superior to a control treatment in this population of patients at a genitourinary medicine clinic, and this superiority was shown most strongly for the main outcome of the change in the health anxiety score, with somewhat lesser, but still significant improvement, in the secondary outcomes of generalised anxiety and depression. The benefits of cognitive behaviour therapy might have been greater if I had been more experienced in delivering it at the start of the trial in view of the evidence that CBT/Control differences were greater in the second half of the trial. The difference in improvement between CBT and Control treatments began to be shown after three months of treatment, was consolidated at six months, and maintained at 12 months. Personality status had no inhibitory or negative effects on the degree of benefit with cognitive behaviour therapy and may have influenced dependent personality characteristics positively. The cognitive behaviour therapy intervention was appreciated by most of the patients treated and the bibliotherapy component in the form of the manual was also largely regarded as useful.
Chapter 9

Discussion and implications of findings

*General Overview*

The results of the main studies in this thesis have demonstrated that (i) health anxiety is common in genitourinary medicine clinics, (ii) such anxiety represents a considerable burden of persistent morbidity, (iii) it is associated with increased costs in the clinic, (iv) treatment with cognitive behaviour therapy is both feasible and acceptable for patients with health anxiety in this setting, and (v) a pilot study of this treatment has demonstrated clear benefits in terms of clinical effectiveness, and to a lesser degree in terms of cost, in a randomised controlled trial. The main findings have also been published elsewhere (Seivewright et al, 2004, 2008).

*Major Implications and Limitations*

*Limitations*

The results showed that cognitive behaviour therapy for health anxiety given for a mean of just over 4 sessions per patient over a mean period of 15 weeks significantly reduced symptoms of the primary outcome of health anxiety, and the secondary outcomes of generalised anxiety and depression after six and 12 months compared with a control group. Although these findings suggest that cognitive behaviour therapy for health anxiety is likely to be of value in secondary medical clinics as well as in primary care, this should be qualified approval only. This is necessary as the trial
had limitations. Firstly its numbers were small. The selection of patients was more opportunistic than systematic (this also goes towards explaining why recruitment was slow, for although awareness of the study was repeatedly encouraged within the clinic setting, medical and nursing colleagues were slow to identify health anxiety in their patients, other factors such as remembering the study was taking place and the time and effort involved in speaking to the patients about it will also have contributed). Secondly, the assessments were not blind (even though all were self-ratings), and only one therapist gave the treatment. However, before the brief training for the trial I had not any experience of any form of delivery of psychological treatment, except as part of standard medical training, although I had carried out previous research as an assessor in psychiatric studies. Thirdly, the control group received no treatment apart from a single interview and so therapy time was not equivalent; a recent study has shown the effects of cognitive behaviour therapy (in a similar population with medically unexplained symptoms) are largely attenuated when treatment time is equivalent (Sumathipala et al, 2008).

**Clinical implications**

However, these findings are encouraging and one of their most striking aspects was the maintenance of therapeutic benefit beyond the period of active treatment. Only four patients had any treatment after 6 months yet the differences in scores between the two randomised groups were as great at 12 months as they were at 6 months (Table 8.3). This is somewhat unusual, as although cognitive behaviour therapy has been shown to be effective in the short and medium term treatment of many anxiety disorders, including those with medically related conditions common in liaison settings (Kroenke and Swindle, 2000; Bisson et al, 2007; Tyrer and Baldwin, 2006), there is also evidence that its effects diminish in the medium and long-term (Tyrer and Baldwin, 2006; Kennedy et al, 2006). Part of this apparent loss of efficacy is the natural tendency for many of these disorders to improve over time irrespective of specific treatment, but this may not apply to health
anxiety as it is more persistent (Seivewright et al, 2004). The amount of improvement was substantial and at 12 months the levels of anxiety in the treatment group (mean HAI score 10.4) were generally well within the normal range (mean of HAI for normal controls 9.4) (Salkovskis et al, 2002). This symptomatic improvement also extended to social functioning as the mean scores at 6 m (5.1) and 12m (5.2) were only marginally greater than the mean of 4.6 found in a large random sample in a national survey (Tyrer et al, 2005). As these gains were achieved with a mean of just over four sessions of treatment it appears that this adaptation of cognitive behaviour therapy for health anxiety in such clinics could offer a significant opportunity to reduce, if not eliminate, an unpleasant, persistent and often undetected form of morbidity.

These findings were shown with a comparative treatment that was not a full control one. All the patients received a brief explanation of the nature of health anxiety (Chapter 8) and it is likely that the degree of improvement (13%) shown in this group was to some extent a consequence of this intervention. My reason for suggesting this is that the prevalence study (Chapter 5) showed that there was no meaningful improvement in patients with high health anxiety reassessed after 9 months without any form of treatment. I also received one letter of thanks, and two verbal expressions of thanks from patients with in the control arm.

It is also well known that early trials of many interventions generally demonstrate greater effect sizes than later large trials for a variety of reasons (Kjaergard et al, 2001) and it would be unreasonable to expect the same active/control difference in a large trial. In this particular study I was the sole therapist as well as being the main instigator of the trial and therefore I could be regarded as a product champion of this treatment in health anxiety, and more likely to get positive results. As I was not a blind assessor, and carried out the assessments, which constituted the major admitted limitation to the study described above, careful consideration of how this may have affected the results is warranted. It could be postulated that as most of the assessments were
carried out by face to face contact by their therapist, those in the treatment arm might feel obliged to be positive in their responses. I took various measures to try and minimise this effect. Patients were asked to fill out the questionnaires expressing exactly how they had felt over the particular time period asked for the scale. I also asked patients to complete their questionnaires before any other discussion about their progress either in treatment or in the control arm. The fact that all assessments were self-reports, and the evidence that there were no differences between the telephone and postal active/control groups, gives more credence to the findings.

**Importance of adjunctive treatments**

It is not clear to what extent the bibliotherapy component contributed to the improvement. Most of the patients regarded the written material as helpful (Table 8.2), but verbal feedback suggested this was being used as an aid to recognition of abnormal health perception and to underpin work done in therapy. A preliminary study has, however, suggested that bibliotherapy alone may be of benefit without the need for face-to-face contact (Jones, 2002).

The audiotaping of interviews was intended both to help patients recollect the work done within the therapy session and to assess my treatment fidelity, and the results (Chapter 8) showed that these aims were achieved. Most patients listened to the tapes, and found them helpful. For some patients hearing themselves voicing their fears and directly identifying these as unreasonable was also of therapeutic benefit. One patient after listening to the first session said ‘I couldn’t believe I could think like that, hearing myself saying these things sounded ridiculous and I knew I couldn’t go on like this, I had to do something about it’. This positive conclusion is unlikely to be confined to our study; this finding has also been shown by others (Shepherd et al, 2009).
Implications for cognitive therapy within secondary care

Whilst the benefits of cognitive behaviour therapy might accrue from other structured psychological treatments, I feel that the administration of treatment within the framework of the clinic by one of its regular practitioners was an important asset and also was likely to improve acceptability and adherence to treatment. The possibility of booster sessions, or even simple reminders, of the essential aspects of treatment, is also more appropriate in an integrated treatment programme. The bibliographic component of the treatment may also help in preventing or anticipating minor relapse. The evidence that cognitive behaviour therapy continued to exert benefit is also important as cost effectiveness of treatment appears from this study to be dependent on gains in reduced consultations being maintained over a long period.

The results suggest there is no reason in principle why future treatment for health anxiety should not include many other secondary care doctors having this expertise. This would require much greater training to increase awareness of psychological aspects of health anxiety as well as teaching in the technology. Such a development is in keeping with recent recommendations about the expansion of CBT away from classical psychiatric locations (Layard, 2006) and, more radically, could be the start of what Rief and Sharpe (2004) have called ‘a move toward a psychologically sophisticated health care system in which psychological assessment and intervention are fully (re)integrated into medical care’. This would lead to liaison psychiatric services not just acting as a secondary referral source for a minority of patients, but as an integrated service within secondary medical care in which both identification and treatment of health anxiety would be improved and expensive investigations reserved for those whom really require them rather than as a procedure driven by defensive medicine and clinical doubt.
Our findings also suggest that benefit is likely to be achieved not only in terms of morbidity but in improvement of clinic function by reducing the number of (unnecessary) consultations, but a much larger study would be necessary to have the power to confirm this. Service use by participants in the cognitive behaviour therapy group was substantially lower than by those in the control group in the second 6 months of the study after treatment had been completed, suggesting that over a longer follow-up period, the cost of the cognitive behaviour therapy could be offset, but only if the improvements seen over 12 months were maintained. Cognitive behaviour therapy for health anxiety improved outcomes, but the costs of this was not entirely offset by reduced service use elsewhere in the health system, and so the total costs were slightly higher. Any gain in costs after one year would automatically reduce the difference between the treatment and control arms of the trial, so the expectation would be that the cost of treatment could be completely offset over time. The incremental cost of the intervention was £33 per unit reduction in HAI score. Adoption of cognitive behaviour therapy for health anxiety would thus depend on decision-makers willingness to pay for improvements in outcomes. The sensitivity analysis demonstrated that the cost of the cognitive behaviour therapy therapy has a substantial impact on the cost-effectiveness of the intervention. In addition, if the costs of cognitive behaviour therapy can be kept low, without impacting on the effectiveness (eg employing nurses instead of doctors) then there is a strong possibility that the intervention costs will be offset by lower levels of service use in the cognitive behaviour therapy group elsewhere in the health system.

The results presented here suggest that cognitive behaviour therapy is significantly more effective and may have a positive effect on health service costs than simple control measures, so that the cost per unit improvement effectiveness outcome is low. A pilot study such as this can only provide limited evidence of efficacy and cost equivalence and has to be a precursor of a larger definitive scale study.
Health Anxiety, Hypochondriasis and implications for classification

The improvement in secondary outcomes, particularly those in generalised anxiety recorded by the Hospital Anxiety and Depression Anxiety subscale and the Beck Anxiety Inventory, alongside the improvement in HAI scores, shows that anxiety symptoms in particular are helped by cognitive behaviour therapy. Although the depression scores on the HADS improved as well, this was not a depressed population, and the reduction shown in these scores probably reflected an improved sense of well-being. It is relevant that only 5 of the 49 patients in the trial had a depression score on the HADS of 12 or more (four had a HADS score of 13, one had a score of 16), only 10.2% qualified for significant depression, as the level of 12 is now becoming the agreed score for pathological depression (Pallant & Tennant, 2007). By contrast 38 of the 49 patients (77.6%) had a HADS anxiety score of 12 or more, the equivalent agreed score for pathological anxiety, which is a strong indicator that this was a primarily anxious population. This is not to deny that health anxiety can be part of depression, but it clearly does not appear to be a feature of patients with health anxiety in genitourinary medicine. Depression is well known to be a fluctuating mood whereas anxiety tends to be more persistent. The evidence from the prevalence study that high health anxiety persists in the absence of treatment also supports the view that this condition is largely independent of depression. The evidence from both the prevalence study and the trial both suggest that people with high health anxiety are willing to accept psychological treatment and this is an important difference from those with somatoform disorders. Together these findings supports the suggestion that health anxiety should be detached from other forms of somatoform disorder and classified with the anxiety disorders as put forward by Olatunji et al, (2009). There is now a clear rationale for specific treatments for health anxiety that are very different from those for somatisation and other somatoform disorders and this adds clinical usefulness to this suggestion.
Requirements for cost-effectiveness in a larger study

Effectiveness

This study showed effectiveness in a randomized controlled trial for a single, un-blinded therapist, for a relatively for small sample size of 49 patients. The requirements for a larger randomized controlled trial would have to be different in several respects.

A larger trial would require a greater number of therapists whose competence and fidelity would need assessing throughout the trial. The nature of these therapists would also need to be determined. The premise that such a trial would be delivered within a medical out-patient clinic setting, training staff from those clinics to administer the therapy, begs the question, who would be the ideal therapist to choose, and would they all be available? If a variety of staff was chosen, then a range of costs, competence, fidelity and consistency are likely to be found, and would need to be evaluated in the light of the results. To accommodate these factors a larger number of participants would be required in what would be a pragmatic trial reflecting the services on the ground, and in which training in advance of the trial, as well as assessment of competence during it, would be needed.

The assessors of both clinical outcome as well as of economic outcome would need to be blind or masked to knowledge of treatment when making their assessments, and any un-blinding recorded.
The effect of un-blinding on the fidelity of the outcome measures could also be assessed, as could alternatives such as changing the assessor whenever unblinding occurs.

The length of cognitive behaviour therapy administered varied for patients within this trial, but was relatively brief. A different setting with different therapists poses difficulties over the ideal length of treatment. This has implications on effectiveness, costs and potential future deliverability as a service. Most psychological treatments are delivered within a fairly rigid framework. This is helpful when costing a particular type of intervention for funding purposes, and for guidance in treatment. However if this framework is too tightly drawn so that an inadequate duration of therapy is a consequence, then effectiveness is reduced, or conversely if treatment continues to be administered to those who have recovered, there is unnecessary cost. Reasonable flexibility should be adopted with regard to routine, more typical cases, but also allowing further options for those which are more difficult or exceptional in other ways. All patients are different in their response to treatment. If a larger trial were to test out the efficacy of this treatment in different medical settings then the study might need to be sufficiently powered to account for comparison across clinical settings and also to examine whether there may be specific clinical difficulties with regards to treatment, such as co-morbidity with certain types of organic pathology. If a larger population with more serious range of medical conditions was being considered the study would require correspondingly larger numbers of participants.

Cost

To show full cost-effectiveness a larger trial should probably be conducted with a period of follow-up over a much longer time scale to detect the full savings on health care consequent on therapeutic benefit. This also has the advantage of assessing the longer term efficacy of treatment, both in the ability of these patients to maintain gains and deal with set-backs, but also to evaluate rates of
relapse or conversely, be able the factors associated with continued improvement. This would not only help inform future service provision and development, but also tailor future research. A follow-up period of at least two years would be the minimum necessary to achieve this.

**Significance of personality**

Hypochondriasis has been linked to personality disturbance since the earliest writings on the subject and personality disorder is highly prevalent in all somatisation disorders (Stern et al, 1993). Because of the evidence of earlier studies (Tyrer et al, 1999; Newton-Howes et al, 2006) it was predicted that outcome would be worse in my study in those with personality disorders, and especially so in those with hypochondriacal personalities. There has also been concern that cognitive behaviour therapy is less effective than other treatment modes in those with personality disorder (Fournier et al, 2008) and so this might further complicate the outcome of those with health anxiety and personality disturbance. In the analyses this hypothesis was almost completely refuted; personality disorder and hypochondriacal personality disturbance had no negative effects on the outcome of the patients I treated with cognitive behaviour therapy, and the comparison with the control group showed a trend towards a better outcome in those with hypochondriacal personalities (Figure 8.3) even though the numbers were too small to reach clear conclusions. However, as the core features of hypochondriacal personality disorder are long-standing: ‘excessive preoccupation with the maintenance of health, the perception of minor symptoms is magnified into major and life-threatening disorder, repeated recourse to medical and associated disciplines for reassurance, investigation and treatment, and rigidity of abnormal beliefs about health and behaviour’ (Tyrer et al, 1990), it is perhaps not surprising that successful treatment with cognitive behaviour therapy improves these symptoms also. Some would argue that they are intrinsic components of severe
health anxiety and so perhaps cognitive behaviour therapy specifically focusing on health anxiety is therefore likely to be successful. However, in this context it is interesting that dependent personality features also seemed to improve with treatment with cognitive behaviour therapy, so it is possible that the treatment goes further than treating symptoms and addresses the core beliefs that are said to be fundamental in personality disorders (Davidson, 2007).

**Future developments**

It would be unwise to go too far in predicting the use of cognitive behaviour therapy in this form of anxiety in secondary care as its use is still relatively new. Nevertheless, it is reasonable, particularly in the light of the introduction of cognitive behaviour therapy for depression and anxiety in primary care under the Improved Access to Psychological Treatments (IAPT) initiative, to speculate on how this could be developed further. Unlike simple depression and generalized anxiety, which cause clear distress and commonly lead to help-seeking in the form of treatment for these conditions, health anxiety is distressing in a different way. For those with health anxiety, they continue to seek medical answers to their problems; a futile and frustrating task exacerbating the problems rather than providing any lasting relief.

It is also uncertain whether patients can be easily identified within the medical out-patient setting. These patients are not pursuing help specifically for their health anxiety, and want medical rather than psychological help. Within a busy clinical setting only the more problematic cases, usually manifest in terms of extensive use of services, are likely to be identified. But in my work both the prevalence study and randomized trial showed that all recruited seemed to show similar benefit from cognitive behaviour therapy. Routine screening within clinical out-patients is certainly a possibility, but a more sensitive targeted approach might help medical staff to recognize these
patients. This approach would be likely to have the added benefit of increased medical understanding of the problem, better management in terms of resisting over-investigation, improving the doctor/patient relationship and thus enhancing the uptake of psychological care within the medical setting.

A series of successive questions built into the consultation such as:

‘Have you been worrying a lot about this?’

If the answer is yes, proceeding to further questions such as:

‘Do you tend to worry about your health in general?

‘Have you ever felt your problem might be more serious than the doctors have found?’

If the answer to either of the supplementary questions is yes, then this could be followed up by:

‘In this department we are interested in the extent to which our patients worry about their health, as this can make their problems more difficult to cope with.’

They could then be invited to complete a screening questionnaire, and if they scored significantly further basic discussion of the nature of health anxiety and an offer of referral for help could ensue.

It is also uncertain who would treat these patients. My personal view is that interested, experienced senior nurses from within the specialty would be best suited to carry out the treatment after adequate training and with appropriate supervision. They would have the additional advantage of understanding the organic pathology that many of these patients would have, and patients could perceive this treatment as a standardized part of their care. The alternative of having an integrated psychological service focused on health anxiety also has attractions. This approach has already been tried successfully in the treatment of depressive disorder in patients with cancer (Strong et al, 2008).

Although such approaches would need evaluation and refinement, it is reasonable to assume that they are likely to be successful as we know these patients are keen to accept help for their worrying
once it has been identified and discussed. Within King’s Mill Hospital there has been growing interest in this subject since the results of the research, and this has led to another prevalence study being carried out in cardiology, respiratory medicine, gastroenterology and endocrinology clinics. The results of this have shown that health anxiety has even greater prevalence in these settings than in genitourinary medicine clinics and probably constitutes a greater problem. As investigations in these clinics are usually more complex and expensive than in genitourinary medicine, the potential costs savings, following successful treatment of health anxiety would be correspondingly greater than in the study described here.

Together, the studies described in this thesis have proved to be essential ground work in developing a proposal for a definitive trial of over 400 patients in a multicentre controlled trial. This study, Cognitive behaviour therapy for Health Anxiety in Medical out- Patients (CHAMP), International Standard Randomized Controlled Trial Number (ISRCTN) 14565822, began recruiting patients in October 2008. The data derived from the pilot study described in this thesis proved to be invaluable in developing the CHAMP study. The sample size for the study (465 patients) was derived entirely from the economic data in the pilot trial and, because I found that the main gains were made in costs in the second 6 months of the study it was felt reasonable to extend the period of economic data collection to two years. This was reinforced by my finding that improvement in health anxiety was maintained between 6 months and one year in the virtual absence of continuing therapy.

The CHAMP trial is being carried out in five types of medical clinic; gastroenterology, cardiology, respiratory medicine, endocrinology and neurology, and we surmised that the costs of investigations in these settings were likely to be much greater than in genitourinary medicine. We are also using the Health Anxiety Inventory as a screening measure with only those with a score of 20 or more being considered for the CHAMP trial. The control group also consists of the single explanatory
interview as in the pilot trial. The CHAMP trial will finish recruiting in June 2010 and the results will be available in 2013.

For years people have looked at the hypochondriac as untreatable, or at best, only to be helped with palliative therapy:

‘The hypochondriacal patient does not seek cure but palliation through a long-term relationship with the physician. If cure is the goal of physicians they will almost certainly be disappointed’ (Adler, 1981 p.1395)

This view can now be challenged. The work in my thesis shows that this is untrue; these health anxious patients, with appropriate treatment, can recover.
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Appendices

Appendix One

Case Study for patient 05 Treatment Arm

History and Presentation

N was a 38 year old man attending our genitourinary medicine clinic requesting repeat HIV testing. He was experiencing multiple symptoms of tiredness, itching, abdominal pain, recurrent toothache and intermittent pins and needles, which had been generally increasing over the last year. He had become convinced he was HIV positive despite repeated negative testing.

One year previously his Thai girlfriend had died of an infection presumed to be HIV related. He had initially met her in Thailand but then brought her over to the UK to live with him, and during this time they had, at times, had unprotected sex. Whilst in the UK she became ill and expressed a desire to return to Thailand to be with her family, where she subsequently deteriorated and died. N had returned with her and stayed with her until her death, and although she had always refused an HIV test, her death was almost certainly AIDS related. He had discussed the likely cause of death with her physician, and had had a (negative) HIV test whilst in Thailand.

His fear that he had contracted HIV persisted, despite repeated (negative) testing in the UK several times over the following year. All tests were outside the ‘window’ period for seroconversion. His
various symptoms were virtually all attributed by him to undiagnosed HIV infection, although he also had some additional health concerns.

Compounding these anxieties, he continued to grieve for his girlfriend with feelings of terrible loss. But he was also experiencing anger. He felt very distressed that she had refused to discuss with him the possibility that she was at risk for HIV infection, and that she had refused testing for this. He had also continued to maintain contact with her family in Thailand, occasionally sending them money, initially spontaneously, but later on in response to specific requests. He acceded to these requests, increasingly reluctantly, with mixed feelings. He had been pleased to send them some money at first, it helped to relieve his feelings of distress and guilt, but latterly his feelings were more of annoyance and a sense that he was being exploited.

During the preceding year his persisting symptoms had led him to become increasingly convinced that he was HIV positive, the negative results interpreted by him as the result of some inaccuracy in the testing process, or a an exceptionally long seroconversion period. He reported that although a negative result produced some welcome initial relief, the worries always returned shortly afterwards necessitating further testing.

On recruitment to the trial he was randomised to the treatment arm of the study and received in total 5 sessions of CBT each lasting approximately one hour, spanning 4 months. His treatment was completed before his 6 month assessment, and follow up was complete at 12 months.

Baseline scores were: HAI 20, HAD-A 11, HAD-D 10, SFQ 9, BAI 25

CBT Management: Initial assessment
Although a full medical and sexual history had been taken as part of his genitourinary investigations he was asked to list his symptoms again, with clarification of the underlying fears they generated, these are summarised below:

**Tiredness and general sleepiness** – these had been present for a year and were put down to the general debilitation caused by HIV infection.

**Itching in the genital area and on his arms** – this was intermittent and not associated with a rash, although he often noticed marks on his arms; he was aware that skin problems were often a feature of HIV infection and as he hadn’t particularly noticed these before the last few months, he felt it they almost certainly related.

**Abdominal pain** – bouts of this had been present on and off from the age of 20 although they had become more troublesome over the previous 12 months. A liver scan and an endoscopy had both been reported as normal, but N continued to attribute the pain to serious, probably irrevocable, damage due to alcohol (he was not a particularly heavy drinker) and though not directly related to HIV, he felt this combination of disease would lead to a worse prognosis.

**Pins and needles** – again these had been present fairly frequently over the last year, and once again were attributed to HIV infection.

**Toothache** – this he (probably correctly) attributed to an abscess which he’d failed to go back to the dentist for.

**CBT Management: Discussion of the generation and maintenance of health anxiety**
We discussed the various concepts embedded in health anxiety including the perceived awfulness of the feared outcome, with all the implications that entailed; hyper-vigilance with regard to bodily sensations and symptoms, and the interpretation of these; the habit of checking and the role of reassurance seeking; and whether these behaviours were helpful or might tend to perpetuate the problem, despite being perceived of as useful at the time.

We then developed a formulation for a recent episode of anxiety. This illustrated the interaction of all these different elements and how they combined to form a vicious circle, the central fear of which was the fact that he was going to die from AIDS. It also showed how his beliefs and behaviours maintained and fuelled the health anxiety.

In addition we identified other issues which were contributing to the overall picture, most importantly that of bereavement; with the ongoing problem of his health anxiety, there had been little in the way of coming to terms with his girlfriend’s death. Further more the increasing demands for money from her family were also a continual reminder of her death as well as a source of guilt and a potential financial burden.

Initially he had spent hours looking up his symptoms on the Internet but now this generated so much anxiety that he had to avoid going on line completely, along with avoiding any kind of media coverage of related issues.

**CBT Management: A collaborative exercise in exploring and testing out alternate hypotheses about his health, and dealing with some bereavement issues**
Pie charts were used to illustrate how a specific symptom such as tiredness has many causes, with minor ones very common and accounting for the vast majority of cases. We also used the pyramid technique to illustrate how unlikely it is for a particular symptom is to lead to the diagnosis of a very serious illness for which there is no cure.

We then moved on to discuss the consequences of checking for signs of illness and how this might tend to increase the focus on health, testing this out with behavioural experiments.

There was an educational element to the sessions, countering some basic misconceptions regarding specific illnesses. This mainly surrounded his abdominal pain, which after careful questioning and diary-keeping, was discovered to be entirely related to excess alcohol intake. In addition, the negative investigations, including normal liver function tests, also supported the conclusion that the pain was due to periodic gastritis. The avoidance of too much alcohol could therefore potentially completely remove the problem, and this was confirmed by testing it out. Examination of the BAI illustrated how the sensation of pins and needles could be explained by anxiety.

Discussion of his girlfriend’s illness and death, centred around why she had behaved as she did, and the rights and wrongs of that; the fact that it was acceptable, normal and completely understandable to have mixed feelings about her, which could quite legitimately include feelings of anger, sadness and loss alongside one another. We also worked on replacing some of the images he had of her when she was ill and dying, with those of happier times.

His girlfriend’s family’s continuing requests for money, were, after discussion, felt to be related to an overestimation of his wealth, compounded by his generosity to date. He was also able to conclude that having spent time with them that they did have an adequate income and a network of support
available. So he made the decision to write them a kind but firm letter explaining that he would be unable to send further money.

**CBT Management: Counting the cost and goal setting**

N had started to adopt the life-style of an invalid. He had given up any form of exercise, and spent long periods in bed. He was losing touch with family and friends, and avoided making plans. He was invited to consider, based on the evidence gathered so far in the therapy, whether he might be suffering from fear of HIV infection, rather than actually having the disease. He was then asked what he would like to be able to achieve in the short and longer terms.

The early goal of being able to go on a run again, was easily achieved, and he was surprised and pleased to find he felt a lot better afterwards, he kept the running up, extending the distance on each occasion. This success and the increasing belief that he didn’t have HIV gave him the confidence to socialise more, whilst continuing to moderate his alcohol intake. He eventually felt well enough to make plans for the future, and was arranging to go travelling again. He made no further requests for HIV testing.

All the sessions were tape-recorded. He received a copy of the tape each time and was encouraged to listen to it.

**CBT Management: Summary of outcome and relapse prevention**
N had generally managed all the exercises and homework well. He reported being much less preoccupied with thoughts of illness, appearing more cheerful and relaxed, and was increasingly less troubled by symptoms. However, he had continued to avoid watching TV programmes about HIV infection and those concerning Thailand. Towards the end of his therapy, whilst at a friend’s house, he was unable to avoid related TV footage, which brought back a flood of anxiety, with all the familiar fears. He was able to go over some of the strategies he’d learnt by the next day, gradually regaining control. This setback and how he managed to deal with it successfully, was used to discuss potential triggers for relapse, and how he could use the techniques and new skills learnt in therapy, not only to keep himself well but to enable him to cope with setbacks. It also highlighted an area in which he needed to do more work (increasing his exposure to related media coverage, and sensible use of the Internet).

He had found listening to the tapes fairly helpful, but also felt upset and guilty at hearing the extent of his anger towards his girlfriend. This lead to further helpful discussions concerning aspects of her illness her behaviour in the later stages of this and how she coped with her death. As a result of this he began to understand and accept why she behaved as she did. He had also read the manual which was given out over the first three sessions, but found it the least helpful component of the treatment.

**Scores at three months:** HAI 13, HADS-A 9, HAD-D 5, SFQ 6, BAI 12  
**Scores at six months:** HAI 8, HADS-A 7, HADS-D 5, SFQ 3, BAI 10  
**Scores at twelve months:** HAI 13, HADS-A 7, HADS-D 2, SFQ 9, BAI 2  
**PAS – No personality disorder identified**
Appendix 2 Patient Booklet

Cognitive-behavioural therapy for health anxiety

Paul Salkovskis & Hilary Warwick

Part 1: What is health anxiety, and how is it best treated?

A GUIDE TO COGNITIVE THERAPY FOR HEALTH ANXIETY

Everyone experiences anxiety; we get anxious about meeting new people, about giving a talk to a group, about passing a test or interview, about whether we will get somewhere on time. One of the commonest types of anxiety is anxiety which focuses on health. This is not surprising, as anxiety usually involves worrying about disasters that might happen. The idea of something going wrong with your health is a particularly worrying, as this could have bad effects on almost all areas of your life.

If anxiety and worry is something which happens to everyone, what can I do about it?

It is normal to experience anxiety from time to time, but when your anxiety is either particularly strong and intense, or is particularly persistent, so that it doesn’t go away it can cause problems in your life. For most people who are asking for help with health anxiety, this form of anxiety is both very intense and very persistent. The programme described in these booklets is intended to make it
possible for you to work with your therapist to help you reduce the amount of time you are worried about your health, and to make the anxiety about health less severe and easier to cope with. It will not remove all anxiety about health all of the time, because it is useful to have some health concerns from time to time.

With health anxiety, people focus on the idea that they might be ill. This is usually (but not always) triggered off by noticing a change in their body. Sometimes, people notice a sensation in their body (for example, they notice that their heart is beating faster than usual or that they have an unexpected pain) or some other type of change (for example noticing a lump where one was not noticed before). Anxiety about health happens when the person thinks that these things are or may be a sign that they are suffering from a serious illness, and they can’t get rid of this idea. Most people with health anxiety also become very preoccupied with their fears. Some, (but not all) may also experience panic attacks, in which their anxiety becomes almost unbearably strong, often with a huge increase in bodily sensations.

To summarise, for the majority of people, anxiety generated about a particular health issue tends to disappear quickly, perhaps when the symptoms which triggered it off subside, or after reassurance from a doctor. In some people however, the anxiety persists, and then this health anxiety can become a severe and disabling problem in its own right.

**Cognitive-behavioural treatment**

The type of treatment which research shows us helps most for this kind of health anxiety problem is called cognitive-behavioural treatment. In this type of treatment, you the patient and the therapist work together as partners looking for effective ways of changing what you think (the “cognitive” bit) and what you do (the “behavioural” bit). This treatment sets out to help you do several things.
1. To understand what your particular worries are, and how these might affect you by producing unpleasant and frightening symptoms.

2. To understand why it is that your worries and anxiety are particularly severe.

3. To work out exactly why your particular worries have persisted.

4. To understand how these worries have got to the point where they have become a major problem interfering with your daily life.

5. To find the best ways of changing all of these factors.

Part of this will involve you and your therapist working out why it is that your particular fears were so intense and why they kept going where someone else may have got rid of their fears more quickly. This is true not only for the example above with chest pain, but a whole range of physical problems which trouble people, including fears about cancer, brain disease, and any other serious disease which people dread.

**What is Health Anxiety?**

The problem is always associated with frightening thoughts or sometimes images (mental pictures).

Some examples of the type of thoughts experienced by people anxious about their health are:

- "No one is taking my symptoms seriously".
- "I feel so ill that there must be something wrong with me".
- "How can the doctor know that there is nothing wrong without doing tests?"
- "The symptoms haven’t gone away, so they must be caused by a physical illness".
- "Maybe this symptom means I have cancer".
- "I have a disease which the doctors don’t know about".
- “What if the doctor hasn’t done the right test, or the result isn’t correct”.

Images can be of yourself being ill, of the devastating effect this may have on your family, of something going wrong inside your body, and so on.

People’s thoughts about their physical symptoms in a variety of ways; these are just some examples. Research shows that people who suffer from severe and persistent health anxiety are particularly likely to react to changes in their body with thoughts like these, in which they believe the worst will happen, which of course leads to feelings of anxiety. Thinking the worst is why they are feeling anxious! Thus, anyone who has the type of thoughts listed above is likely to feel anxious. These type of thoughts are both the key to understanding health anxiety and to dealing with the problem.

When these thoughts persist and become a continual worry the anxiety persists as well. So thoughts and beliefs that the worst is going to happen are crucial in understanding why you worry so much about your health, and changing them, (and the things which keep them going) is important if you are to get rid of the problem.

Vicious circles

An important factor in what keeps health anxiety going is the type of vicious circles which build up. For example, a person notices palpitations. They then think “Maybe this means that there is something wrong with my heart”. This thought is very frightening; unfortunately, the anxiety makes the person’s body react, so that their heart now beats faster, and this seems to confirm their fear, and so on like this:

**Example of an anxious vicious circle**

You notice palpitations

Palpitations get worse, feel short of breath, etc

There is something wrong with my heart

Feel frightened
A vicious circle of fear is then set up where frightening thoughts leading to particular bodily reactions, which make the frightening thoughts seem even more believable. This then causes is therefore vitally important to know why these thoughts persist in some people, so that they deal correctly. Your therapist will help you understand the way this type of vicious circle operates. This one is simply one of many examples.

So, health anxiety is a combination of frightening thoughts about health and the things which make them persist as part of vicious circles. It is not a “mental illness”, but is a special type of anxiety or stress reaction which makes people focus on their worries about their health and interferes with the things you would rather be getting on with. In this way, it is very similar to other types of anxiety, such as anxiety about heights or social anxiety. For this reason, another name sometimes used to describe health anxiety is “Illness Phobia”.

People who are anxious about their health usually overestimate the risk of being seriously ill and that the illness will affect them particularly badly in the same type of way that people who are socially anxious overestimate the risk that other people will dislike or reject them. In both instances, the cause of the problem is a pattern of distorted thinking. For some people, the idea of being ill also seems more awful compared to the way other people might react. It is important to work on this aspect of the problem as well.

**What is cognitive therapy?**

Cognitive therapy will teach you to understand your problem better, and to interpret symptoms and changes in your body in less frightening ways. Special techniques are used to help you identify things which trigger worries about health, the upsetting thoughts you have, how they can make things
worse, and then find out how realistic they are. Research has also shown that such thoughts lead to changes in behaviour (such as checking and spending a lot of time and energy getting reassurance) and another important part of treatment will be to help you to modify these changes. We know that changing thoughts and reactions about health and illness is likely to lead to overall improvement in your problems with health anxiety. Where it is likely to be helpful, you may also be taught techniques which could help you to control your symptoms and the anxiety which they produce.

You will be offered up to 10 sessions of treatment, over a period of about 3 months. Each will last for up to an hour.

**Diary and Record Keeping**

In order for you and your therapist to work together and keep track of your progress, you may be asked to complete a diary and several other records of how you have been feeling. These give us important information about your problems. It is very important that you fill these in as carefully as possible and bring them along to each appointment. At the beginning of every session your therapist will go over this information with you.

**Agenda Setting**

At the beginning of each session you and your therapist will plan an agenda for that session, in order to make the best use of your time together. This may involve looking at your diary and record sheets, discussing any symptoms or worries you have had, what progress you have made with treatment and what problems are left. Once you have decided on the issues it is important to decide which are the most pressing, and roughly how much time to spend on each one. It helps to try and stick to the agenda and avoid jumping from one issue to another. You will usually accomplish more by tackling things one at a time.
Session Summary

During the sessions you and your therapist will often cover a lot of material. Towards the end of the session your therapist will ask you if you can review together what has been accomplished during the session. This is important, to make sure you have followed all the things to be learned in that session about your problems.

You will also be given a recorded copy of the session to take home and listen to each week, so that you can clarify what has happened in the session and bring back any questions to your therapist.

Working at the treatment

Cognitive therapy is a very active, practical treatment. It has been shown that simple reassurance alone is not a very effective way of dealing with health anxieties. Indeed your own G.P. may well have tried to reassure you in the past, but this will probably only have had a temporary effect. This is not surprising, as reassurance is generally intended to show you what is NOT wrong with you. This is often helpful in the short term, but not in the longer term.

In the longer term, the best way of dealing with health anxiety is to discover how for you anxiety is involved in producing your symptoms, and how learning to control the anxiety helps in dealing with them. This should allow you to understand what your problem IS rather than what it IS NOT, and the skills you develop will provide you with the ability to deal with health anxiety should it recur or focus on a different type of illness. In cognitive therapy you and your therapist will be working hard to make discoveries about what keeps the problem going, in order for you to be able to overcome it
permanently. You may already have started to make efforts in this direction. Cognitive therapy will offer you new techniques and will strengthen your own efforts.

**Homework**

Therapy is only for one hour, every one to two weeks to suit you and your therapist, but there are twenty four hours in a day, and there will be lots of things you will want to follow up between sessions. Your therapist will ask you to perform certain homework assignments between the sessions, in order for you to learn new things about your worries, and try out the techniques discussed with your therapist. This will speed up your progress in learning to completely control your health anxiety. This is essential in building your confidence and making the most of your therapy.

**Be your own therapist**

One of the most important goals of cognitive therapy is for you to learn how to be your own therapist. You will learn to identify and evaluate problematic thoughts, beliefs and behaviour. This will help you to improve upon your progress, even when treatment has ended. You may well find that as well as getting rid of your health anxieties, cognitive therapy could well help you in other areas of life. No-one is forever free of emotional problems but you will find that the anxiety they create need not dominate your life.

Please ask your therapist if you have any queries about what you have read. At the next appointment, you will start to learn about the way your health anxiety works.
Part 2: Why health anxiety doesn’t go away on its own.

HEALTH ANXIETY

This booklet will help to explain persistent unnecessary health anxiety. Your therapist will probably go through some of the information included in this booklet with you, as part of explaining how your own pattern of symptoms and problems works. It is important to remember that everyone is different, so some of the things in this booklet will apply to you, others will not. You will have been given a recording of your first session with your therapist, and have been asked to listen and comment on it. You may also find it helpful to read through this booklet, which will give you further information about the problem. Some people find it helpful to mark sections of the booklet they find particularly helpful or that are difficult to understand, or which don’t make sense to you. If you do this, try and remember to bring the booklet back to your next session to discuss these bits with your therapist. The information in this booklet will be considered in more detail during your appointments and an individual treatment programme will be devised for you.

WHEN IS A SYMPTOM NOT A SYMPTOM? NOTICING PHYSICAL SENSATIONS ARE COMMON AND NORMAL

We often talk about noticing “symptoms” in our body, particularly if we are worried about them. That word, “symptom”, can be a problem. There is a tendency to associate the word “symptoms” with the idea of “diseases”. In fact, many of the things we think of as “symptoms” are actually body sensations and have nothing at all to do with disease. Using the word “symptom”, even just to ourselves, constantly reminds us of the disease we fear. However, if you feel something happening in your body, it does not necessarily mean you have an illness. Physical symptoms are very, very common - everybody is aware of several physical symptoms every day; stiff joints, tingling feelings,
palpitations, rumbling stomach, headaches and so on. In almost all of these instances, they are not a symptom of any physical illness and can safely be ignored. However, one of the effects of being anxious about your health is that you become more sensitive to such symptoms, and better at spotting them. This can set up a vicious circle (sparked off by worry), which works like this:

You may also be surprised to learn that most of the people who consult doctors (that is, more than 50%) actually do not have any physical illness. The most common reason for anyone seeing a doctor is being worried about the symptoms or sensations they experience, and what they might mean. So, when we notice something unusual happening to our body, we weigh this up and decide whether this could be a sign of illness and whether we need to see the doctor. Usually we can do this very quickly and easily - most of us would ignore a slight ache that lasted for just ten seconds, while most of us would get some help if we suddenly found that we could not stop a bad cut bleeding or if our
leg was broken. Sometimes we watch some symptoms and then visit the doctor if they do not go away over a longer period.

So, what happens when we visit the doctor if we are worried about symptoms? The doctor will listen to the details of our symptoms and ask us questions, and do an examination and tests if they are required. Once we know that a symptom is not a threat to our health in any way then normally we cease to worry about it, even if it does not go away. However in some other people this sequence goes wrong. They have become worried about their symptoms and convinced that they have a physical illness. For a variety of reasons, which will be described in more detail later, the doctor’s reassurance does not work and they remain unnecessarily worried about symptoms and become increasingly convinced that they have a physical illness. Sometimes, the worry can be made worse by being sent for a medical test. This may be precautionary, or to set the patient’s mind at rest but the person often thinks “Why is the doctor sending me for tests unless he or she things there is something seriously wrong with me?”, and the test can serve to increase anxiety even more. This worrying can often upset people a great deal, pervading other aspects of their life, and can stop them from doing a lot of their normal activities. It can also make them see doctors very frequently to try to find out what is causing their symptoms. We have found that the best term to use to describe this sort of problem is health anxiety and this term will be used throughout the booklet.

Again please write down any comments or questions you have about the booklet. It is important to note that this booklet is given to a large number of patients, every detail will not apply to you as an individual and some of your symptoms or worries may not be included here. If this is the case, do not become alarmed, just note down your comments and discuss them at your next treatment session. If we were to write an account of every symptom that people worry about, this pamphlet would turn into a very large book!
TYPES OF PHYSICAL ILLNESS

You may wonder which illnesses people worry about unnecessarily. The answer to this is that it can be any serious and unpleasant illness that doctors know about. Sometimes people worry about very rare or unusual diseases, or think that they have a disease “unknown to medical science”, that is, a disease that hasn’t even been discovered yet. Certain illnesses do seem to cause more unnecessary fears than others, usually because the effects of the disease are so unpleasant and therefore particularly frightening. Typical examples of this are cancer of any type, heart trouble and brain diseases, such as multiple sclerosis. When there is a lot of publicity about a disease, then we always see a number of people who have become afraid that they have it, although there is no reason for their fears. An example of this was AIDS a few years ago, and more recently, some people became worried about “mad cow disease” and TB. In both of these particular problems there is another reason why worries can be prominent: the symptoms of these diseases are very hard to detect, and those who are health anxious may feel it is important to be extra vigilant, even so that very ordinary and common problems which we all experience very frequently can be interpreted as an indication that you might have this type of disease. For example, being troubled by minor infections or having episodes of forgetfulness. We have already mentioned the way attention is important. If you are looking for trouble, it is easier to find it. If you are afraid that your immune system is having problems, then noticing normal coughs and infections can lead you to jump to the wrong conclusion (“this must mean I have become infected”).

Why do particular people become concerned about physical symptoms? Often this is because a particular disease seems especially likely to happen to you, or seems particularly awful. For example, if you know someone who was very ill and suffered horribly with it, then that experience will make you more sensitive to illness fears for yourself. That experience will influence your idea of what it
means to be ill. Your therapist will discuss this with you. Other times the disease which you become worried about is the one which seems to you to be closest to the symptoms you have experienced; you may have worked this out for yourself, or been told by someone else or even read about it somewhere, or looked it up on the internet.

THE MOST IMPORTANT REASONS FOR UNNECESSARY HEALTH ANXIETY IS THE MISINTERPRETATION OF HARMLESS PHYSICAL SYMPTOMS OR CHANGES IN YOUR BODY - that is, people suffering from health anxiety wrongly believe that their symptoms mean that they are physically ill. Anyone can jump to the wrong conclusion, and it is clear that everyone is capable of thinking the worst about their health when this is not justified. Obviously, someone suffering from health anxiety is doing this either more often that other people, or there is something which is making the false idea of illness persist for longer than happens in other people. The importance of vicious circles has already been mentioned; we will now look at the way this works in greater detail.

Vicious circles and health anxiety

It turns out that health anxiety is kept going by several different things; these are different for different people, but some components are always there. Your therapist will help you work out which apply to you.

All health anxiety vicious circles contain the belief that you are seriously ill. This can be a thought ("These symptoms must mean I have cancer") or a brief image or mental picture, (for example, seeing a picture in your minds eye of yourself looking pale and ill, surrounded by doctors, or even seeing yourself actually dead). This thought or image is often triggered by noticing a symptom in your body, by hearing about something related to illness, or may simply pop into your mind "out of the blue". Sometimes the thoughts (and especially the frightening images) are only there for a
moment before you push it away. Even a very brief moment of such terrifying ideas is enough to cause you problems with health anxiety. Once the belief is there, it has a number of effects.

1. Focussing on your body.

Firstly, the idea that you might be ill may make you focus more on your body. When you do that, you often notice things which you had not noticed before. If you don't realise the way this works, you may reach the false conclusion that something has changed, and become more worried, which would increase your tendency to focus and so on. It's a bit like what happens, for example, when you learn the meaning of a new word. Once you know the meaning of the word, you begin to notice examples of it in everything you read for a while. These were always there, but you only notice them when they mean something to you personally. So, if someone became worried about his heart, he might notice that whenever he climbs stairs he gets out of breath at the top. In fact, this is normal and it would have happened before to him, but because he didn't have the worry he didn't notice it, so it seems like something has changed in a worrying way. Another example is when you get a new car; suddenly you notice that type (and often that colour) everywhere you go. Of course, this doesn’t mean that there are more of these cars about, it just means that you have begun to notice them because they are important to you personally. The same thing happens with changes in our body, but it can seem as if there has been a real change in the way your body works.

For your future reference, it would be helpful to you if you could write here the ways in which paying particular attention to changes in your body affect you personally. You could add things your therapist mentioned and discussed as well.

2. Behaviours which change.

When someone worries about their health it changes what they do. Often, this means checking their body or symptoms to see what is happening. This can focus attention on symptoms (see above), but
can also make the symptoms worse in other ways. For example, of someone has a pain and keeps prodding the painful area to see how bad it is, the pain will usually get worse, or for example on noticing a mark on their face rubbing it and examining it can make it more prominent. There are lots of examples of this type of thing. Also, checking has the effect of making you more preoccupied. The more you check things, the more it brings them to mind.

*List here the behaviours such as checking and testing yourself that you tend to do when you are worried about your health*

Seeking reassurance is another thing which people do for understandable reasons. However, it can cause problems. If you seek reassurance several times, you can get to the point where it seems to you that your doctor won’t take you seriously. Sometimes, reassurance accidentally increases worry, because things the doctor says in order to be helpful can cause further worry. A patient with health anxiety went to his doctor with bad headaches. His doctor said that it couldn’t be a brain tumour, because if it was, he would feel dizzy from time to time. Of course, everyone has moments when they feel dizzy and simply don’t notice; this man started to notice this, and became more convinced that he had a brain tumour. The doctor had several very good reasons for knowing that this man did not have a brain tumour, but only mentioned one of these so as not to confuse him. The doctor had tried to be helpful, but the man ended up more worried than before. Reassurance, which tells you *what you probably haven’t got*, is not usually helpful for people suffering from persistent health anxiety. The health anxiety, which IS the problem, needs to be dealt with directly, rather than the physical illness which the person fears, which are NOT the problem! Another example of the way reassurance can make things worse was a woman who went to her doctor for reassurance that she did not have cancer. The doctor told her that cancer "is at the bottom of the list". She was very upset by this, because she thought he was saying that cancer *was on the list*, but in fact he was saying that he did not believe she had cancer. This illustrates the problem with reassurance very well. No one can be *certain* about things going wrong, whether it is to do with your health, your family or having
an accident. For example, it is very unlikely that a satellite will fall out of orbit and you will be hit on
the head by a piece. BUT.....can you be certain that you will not? It is the same with illness. It is not
possible to be completely certain they you do not have cancer....or heart disease....or brain
disease.......and so on. Trying to prove that you do not have and will not get a disease will not
decrease your anxiety. The harder you try to be certain, the more worried you will tend to get.

Trying to reassure yourself about the symptoms doesn't help much either. The symptoms of many
diseases are so common that everyone gets them. For example, people often worry that headaches
can be a sign of brain disease. But everyone gets headaches. Seeking reassurance and checking can
have other effects on anxiety; your therapist will discuss how these may affect your problem.

Reassurance can be helpful for some people, if they are only mildly worried and there are simple
answers to their questions. However, once health anxiety gets a grip on you, reassurance can
become part of the problem rather than a way of solving it. Most people with health anxiety begin
to notice that they might feel better once they have asked for reassurance (and got it), but
sometimes find they are more worried. Sometimes they don’t get it, or get it in a way which worries
them more. Most common of all is when reassurance is asked for, the person feels better
immediately but worse in the long term. This means that reassurance ends up being like an
addiction; you get your “fix” of reassurance, but soon afterwards want more, and more.......  
Please note that we are not saying that you should not go to your doctor ever. The aim is to work
out the difference between times you need to go and times when you don’t. Your therapist will be
helping you find the best way of you making this kind of decision, and there is a section in a later
booklet about this. Getting this right is a good way of dealing with the problem of “crying wolf”. That
is, many people with health anxiety have gone so often to their doctor that they fear that the doctor
won’t take them seriously even if they were seriously ill. Obviously, working out a way of needing to
go less often will reduce this problem, particularly if the doctor realises that you are going less often.
Describe here the effect reassurance has had on you in the past, and ways in which it has been (1) helpful and (2) unhelpful for your health anxiety.

3 Worries about your health make you anxious and depressed.

Another way in which health anxiety is made worse, is because worrying affects your mood. This can be due to the physical reactions we all experience when we get anxious. We experience a range of physical, bodily changes, many caused by adrenaline which is released by fear (including fear of illness). However, these physical changes brought about by fear can make you more frightened. For example, if you were worried about palpitations, thinking that these might show that there is something wrong with your heart, the anxiety about this may in turn make your heart race or beat irregularly, which seems to confirm your fears, and so on. As your anxiety increases, your breathing may become faster and more difficult, and you may feel you have to struggle for breath. That increases the anxiety further. In a lot of people suffering from health anxiety, these effects can be so strong that they experience panic attacks, during which they experience an overwhelming build up of symptoms (which can include some combination of palpitations, chest pain, difficulty breathing, feeling sick, feelings of numbness or tingling, feeling faint, hot flushes, feelings of unreality, and many others). Many physical symptoms are increased or produced by anxiety. If you have panic attacks, your therapist will discuss this further with you to help you to make sense of these.

Make a list here of the physical sensations which you experience, or which get worse, when you feel anxious about your health.

Make a list here of physical sensations which are there all the time, and which don’t increase when you feel anxious or worried about your health

The other thing which happens when you have severe and persistent anxiety about health is that the ideas which are bothering you can make you feel unhappy, upset and even depressed. After all, the
idea that you have a serious and possibly fatal illness is very distressing. Some people worry about what will happen to their family and loved ones. Others cannot see the point of carrying on with the daily grind or bothers to do anything new if they are going to die very soon anyway. It can also be a very depressing thing to find that your doctor or even your family don’t take your concerns seriously after a while. This can also make you angry. Sometimes, people get angry with themselves, thinking that they should “pull themselves together”, but of course, if you could “pull yourself together” you would. The problem is knowing how! *(That is what this programme is about; helping you to find better ways of helping yourself).*

One effect of feeling anxious, depressed or angry is to make you dwell on negative ideas. For example, thinking about what it would be like for your family if you were to die, how they would manage without you, or perhaps the fact that you would miss out on all the things they would do in life can make you yet more unhappy and anxious. Unfortunately, being unhappy and anxious makes it hard to shake off the unpleasant thoughts, which go on to make everything seem even worse. Sometimes, people try NOT to think about the things that they fear. Unfortunately, this too can be counter-productive; trying NOT to think about something usually has the effect of making you think about it more, often as an uneasy idea in the back of your mind just waiting for the chance to come forward. These unpleasant illness-related ideas then become much more easily triggered off.

*List here any unhappy ideas which you find yourself dwelling on when you think about the consequences of being ill.*

How all of these factors fit together can begin to make sense of the worries you experience. So it is very important that you try hard, with your therapist, to see how this all fits together for you and how it produces the particular problems you are experiencing.

An example of some of these vicious circles which can be involved in health anxiety is shown below. Remember, your therapist and you will produce one which applies to you.
As therapy progresses, you and your therapist will probably add extra components to the vicious circle, helping you make even more sense of your problem. Other factors which might be included are your previous experience, general beliefs about health, fitness and illness, current life stresses and so on. Again, you are an individual, and will therefore have a unique pattern and combination of factors. Ask your therapist to go over this diagram and explain to you how it works.

An example of how vicious circles keep worries going and can make symptoms worse in a person who misinterprets their symptoms as a sign that they have cancers. Your therapist will go over this with you.

**TYPES OF SYMPTOMS**

As you may know, you can get changes happening in any part of your body, both inside and outside. These changes and sensations can be aches, pains, swellings, itching, rashes, tingling, loss of feeling and very many others. Any symptom can be misinterpreted as a sign of illness, this happens when
the person weighs up their symptoms and comes to a wrong conclusion, ie. that they are ill, when they are not. As already described, people who are prone to worrying about their health also sometimes misinterpret things which their doctor tells them or which they read in the papers, or in the media. These things are usually about the type of diseases which CAN go along with particular types of symptoms. However, just because a physical change CAN go along with a particular disease does not mean that it does. For example, a cough CAN be a symptom of lung cancer, but it is also a symptom of laryngitis, smoking, or just being in a dry environment.

CAUSES OF PHYSICAL SYMPTOMS

- "The pain is so bad there must be a physical cause".
- "There must be something serious causing these symptoms".
- "I have had these symptoms so often, that they must be caused by an illness".
- "I do not feel well like I used to, the doctors must have missed something".
- "What is making me feel so ill"?

These thoughts and questions are often expressed by people with health anxiety. It is crucial to understand that physical symptoms do not have to be caused by an illness. This section will now go on to explain some common reasons for having physical symptoms.

a. Natural Variation

Our bodies are not always the same, there are many fluctuations going on all the time. If you think carefully it is likely that you will be able to remember times when you have had a symptom which has come on for no reason and gone away again. Research has shown that this happens to everybody and usually we take no notice of these symptoms. If we have health anxiety then we are
likely to notice more of these variations and to pay more attention to them than most people. We are also more likely to misinterpret these variations, thinking that they must be signs of illness. There are literally thousands of different types of sensation and physical change, such as feelings of dizziness, aches or pains, skin blemishes, tingling, feeling short of breath, white marks on you nails, lumps under the skin, one side of your body being a different shape to the other, floaters in front of your eyes.... the list is endless. There is, in fact, something very odd about someone whose body is always the same and is completely perfect in all areas.

b. Physical symptoms of anxiety

As we mentioned above, anxiety itself can and does cause many physical symptoms. If you think back to a time when you were very tense, such as waiting to go into an exam or the dentist, waiting to take your driving test, or waiting to hear some important news, try to recall any physical feelings that you had. Often people are aware of their heart pounding, of butterflies in the stomach, dry mouth, muscle tension and many other sensations. These are just examples and many more sensations can result from anxiety. You may have heard of adrenaline - when someone becomes tense or anxious this substance is released by body cells and it is adrenaline which causes these physical feelings. This is harmless and happens to many, many people every day.

c. Over-breathing

When people get anxious they may also over-breathe or hyperventilate. Both of these terms just mean that the person is breathing more quickly than usual because they are worried. This can cause a whole range of physical symptoms, such as heart racing, feeling giddy, pins and needles and many others. These sensations are only caused by over-breathing, they are not harmful in any way and are temporary and reversible.
d. Normal symptoms

We are all subject to many minor ailments, such as indigestion, coughs and sneezes, aches and pains, skin blemishes. These will have simple explanations - eg. Over-eating, hay fever and pulled muscles. Some will have no explanation at all, and are just like having an itch! I am sure you can think of other examples which you have experienced.

e. Side-effects from medicines

This is a very common cause of physical sensations. There are a very large number of symptoms which can be caused by medications, both those which are prescribed by your doctor and those from other sources eg. homeopathic remedies and medicines bought directly from the chemist. Many symptoms also occur when people are discontinuing their medicines.

f. Effects of diet

Can you remember a time when you overate, had too much alcohol to drink, or had several cups of coffee? It is very likely that you will have experienced a number of uncomfortable physical symptoms then, too.

g. Fatigue

Overwork, being physically tired, not getting enough sleep and so on, can make you feel strange in various ways.

h. Physical fitness (and unfitness) –
When we stop doing much exercise while we feel we are unwell, we can easily become unfit. Then unexpected exercise will tend to cause unpleasant symptoms. Even when exercise is deliberately started again, unless it is done very gradually the person will experience a wide range of aches and pains and other sensations.

It is unlikely that just one of these causes could account for the way you have been feeling, but it may be that in most cases of health anxiety several of these factors are likely to be important. Often it needs only the slightest symptom to set off anxiety, leading to the sort of vicious circle that you and your therapist have discussed.

At your next appointment your therapist will make sure that you have understood the contents of this booklet. You will then start to learn why such harmless symptoms are misinterpreted and about the sort of things which keep the vicious circle going.

Part 3: the importance of the way you think

As you read in the previous booklets, people become upset because they think in particularly negative ways. Negative thinking can make you feel anxious, depressed, angry, or some combination of these. Research has shown that certain thinking errors and behaviour patterns are very important in health anxiety. This is because they maintain the fears and worries about ill health, despite the doctor’s view that there is nothing physically wrong. Please read through this carefully and mark any parts that you do not understand and also any parts that you think are relevant to your problems.

In this booklet, typical thinking errors and behaviour patterns are described with examples. See if you recognise any:-
Thinking Errors

1. **Jumping to conclusions** - When a symptom is noticed, the person with health anxiety immediately thinks that this means illness, without stopping to weigh up any other possible causes of the symptoms, for example:

   "This pain is so bad that it must mean I am ill."

   "I’m sweating more than I should in this hot spell, I must be ill".

2. **Catastrophizing** - Often, they do not just jump to a conclusion, they jump to the worst conclusion. Someone will not just think that they have an illness, but will assume that the illness is a very serious or even fatal condition. They may start to imagine all sorts of unpleasant consequences, in terms of severe pain and suffering and also in terms of distress to family and friends. This type of thinking often applies to prospects of treatment for an illness, so the person will often assume that if they did have a condition, it would be impossible to cure, for example:

   "This must be cancer."

   "I will be just a burden to my family."

   "Despite what they say, no-one is ever really cured of cancer".

3. **Superstitious thinking** - Some patients believe that worrying about their health somehow protects them from any harm.

   "If I think I am well I will tempt fate."

   Some people feel that everyone develops an illness at sometime and the fact that they have been well for a while means that the time must come for them to develop a serious illness.
4. **Over-generalising** - This is a very common error. If someone hears about an illness or symptoms, they may assume that any similarities or common factors mean that they have it themselves.

5. **Making false links** - It is easy to get hold of the wrong information about health particularly on the internet and to incorrectly assume that certain symptoms are always linked with illnesses.

"Everything always goes wrong for me in April, I'm more likely to get ill in that month."

"I have had problems in my right arm and my right leg. This is a sign of weakness in that side and means I will get further trouble."

For example a person might notice pins and needles in his arm and on looking up this symptom on the internet find through various links that it can be a symptom of multiple sclerosis, but of course there are **many** other causes – such as lying in a certain position.

6. **Ignoring the positive** - It is easy to assume that an illness is present, whilst ignoring signs of good health.

7. **Exaggerating**: Here the error is to overestimate the chances of going down with a particular illness.

"I look like my sister who had heart trouble, that must mean that I have it as well".

8. **Selective attention and memory**: When someone is worried about an illness, they will only tend to notice and remember information which tends to fit in with their worries. All this information then tends to make them more convinced that they are ill.

9. **All or nothing**: It is a common error to think that the body can only be either entirely free from symptoms or physically ill.
Another example of this is the view that both sides of the body have to be identical, if there is the slightest variation it is interpreted as a sign of illness.

10. **Certainty thinking**: Another error is to strive for the certainty that you are perfectly well. Clearly no-one can ever be completely certain that they are not going to develop an illness, in the same way that you cannot be completely certain that you will not be run over sometime in the future. Patients with health anxiety often need help with dealing with uncertainty.

"I must always know that I am completely well."

"I had a test three months ago, maybe it has "run out" and I am due for another."

11. **Preoccupation with health**: Very little time is spent thinking of anything else.

12. **Misunderstanding medical information** - This is extremely common, especially as medicine becomes more complicated and technical. It is hardly surprising that people who have not had any medical training may not have fully understood the information they have been given, especially if consultations are rushed. They may feel they have been given a proper explanation for their symptoms and so do not feel reassured.

"The doctor cannot be sure I am well without doing tests or an operation to look inside me".

"He said that special blood cells have caused my allergy, but I have read that special blood cells cause cancer."

All these types of thoughts make people feel that their health is under threat, and often that there is very little that they can do about it, and of course they become very anxious.

Don’t worry if you are not immediately aware of such thoughts. They are often hard to recognise at first, because you have probably had them many times, and they come into your mind automatically, like a habit. These thoughts have some other characteristics:
1. The thoughts are unreasonable, as you will realize when, with the help of your therapist, you learn to challenge them with more logical thoughts.

2. Even though the thoughts are not true, they probably seem completely sensible to you now and even more so at times when you are very worried about your health.

3. These thoughts serve no useful function and interfere with your ability to control your own behaviour. The more you accept them, the more anxious you feel.

Patterns of Behaviour

When patients are anxious about their health there are often changes in their behaviour. On the face of it, these changes might seem sensible ways of ensuring that they remain healthy, however they actually make these unnecessary anxieties more persistent and harder to get rid of.

1. Avoiding: It is common for people with health anxiety to avoid things which they think will adversely affect their health. So the man who is unnecessarily afraid that he has heart trouble will avoid running or using flights of stairs, in case he brings on an attack. However each time he avoids these activities, he is reminded of his fears and gets more worried in the long run. Further, being apparently unable to take exercise, although this is his own choice, will confirm to him and his family the idea that there is something wrong.

Other things are avoided too. Some patients are afraid to discuss health and illness because they become tense and worried. Another patient was too worried to say "I'm fine" if someone asked her how she felt and instead would awkwardly change the subject and then often to avoid acquaintances she saw approaching in the street. This was a result of the sort of superstitious thinking described above - she felt that saying she was fine would "tempt fate" and which would
then somehow make her ill. In the same way as the first example, this type of avoidance will lead to more severe anxieties in the long run.

Many patients avoid reading articles or watching programmes about illness, or avoid even reading or saying words like cancer or heart attack. All these will have the same effect.

2. **Checking** - It is sensible to carry out the checks of health state that are medically recommended. However, in those who are anxious about their health, this checking can get out of all proportion and can be done many times a day. People check their bodies for lumps, pains, rashes and many other changes, such as weight loss. They may also check their clothes, the toilet and things they have touched for evidence of abnormal bleeding or discharges.

Looking up information about illnesses and symptoms is another type of checking. This **excessive** checking maintains the worries in two main ways; firstly it keeps attention on health and illness and leads to more anxiety and thinking errors of the types described.

Secondly, repeatedly prodding and poking at a part of the body will lead to symptoms. A common example is worrying if a simple spot or insect bite is a cancer - checking it will prevent it from healing in the usual way and the person starts to think "it must be serious because it hasn't gone."

Repeatedly examining an area of the body is likely to make it sore - "It's hurting now, I **must** be ill."

These symptoms are only **temporary** and are not serious, if the checking stops, they go away.

3. **Rituals** - These are a further result of superstitious thinking. We all do this to some extent - "touching wood" to "prevent" harm is probably the commonest example. In patients with health anxiety we have seen countless other examples, such as repeated counting and relying on "lucky numbers", having objects in exactly the same place at all times, cleaning in exactly the same order and many, many others. Logically such things cannot affect our health. They will keep our attention on worries and help to maintain the whole problem.
4. **Reassurance seeking** - It is very common to feel a strong urge to discuss symptoms and worries with family, friends and others. It is also common to keep seeing doctors to get their opinion and to try to get further tests and investigations. The trouble with this is that going over the same information time and time again can easily lead to misunderstandings and doubts.

"Maybe he didn't really understand how I felt, so I should explain again."

"The test was done at a time when I didn't have symptoms, so maybe it should be done again."

"My doctor didn't spend much time with me, maybe I should ask to see another specialist."

People can find themselves "getting hooked" on seeking reassurance. Repeated reassurance does not provide any new answers and again leads to more anxiety in the long run.

Part of your treatment is learning how to change these thoughts and behaviours. You will also learn how these changes improve your symptoms and anxieties.
Appendix 3.1 – (Short) Health Anxiety Inventory (HAI)

Each question in this section consists of a group of four statements. Please read each group of statements carefully and then select the one, which best describes your feelings, over the past six months. Identify the statement by ringing the letter next to it, i.e. if you think that statement (a); it may be that more than one statement applies, in which case, please ring any that are applicable.

1. a. I do not worry about my health.
   b. I occasionally worry about my health.
   c. I spend much of my time worrying about my health.
   d. I spend most of my time worrying about my health.

2. a. I notice aches/pains less than most other people (of my age).
   b. I notice aches/pains as much as most other people (of my age).
   c. I notice aches/pains more than most other people (of my age).
   d. I am aware of aches/pains in my body all the time.

3. a. As a rule I am not aware of bodily sensations or changes.
   b. Sometimes I am aware of bodily sensations or changes.
   c. I am often aware of bodily sensations or changes.
   d. I am constantly aware of bodily sensations or changes.

4. a. Resisting thoughts of illness is never a problem.
   b. Most of the time I can resist thoughts of illness.
   c. I try to resist thoughts of illness but am often unable to do so.
   d. Thoughts of illness are so strong that I no longer even try to resist them.

5. a. As a rule I am not afraid I have a serious illness.
   b. I am sometimes afraid I have a serious illness.
   c. I am often afraid that I have a serious illness.
   d. I am always afraid that I have a serious illness.

6. a. I do not have images (mental pictures) of myself being ill.
   b. I occasionally have images of myself being ill.
   c. I frequently have images of myself being ill.
   d. I constantly have images of myself being ill.

7. a. I do not have difficulty taking my mind off thoughts about my health.
   b. I sometimes have difficulty taking my mind off thoughts about my health.
   c. I often have difficulty taking my mind off thoughts about my health.
   d. Nothing can take my mind off thoughts about my health.

8. a. I am lastingly relieved if my doctor tells me there is nothing wrong.
   b. I am initially relieved but the worries sometimes return later.
   c. I am initially relieved but the worries always return later.
   d. I am not relieved if my doctor tells me there is nothing wrong.

9. a. If I hear about an illness I never think I have it myself.
   b. If I hear about an illness I sometimes think I have it myself.
   c. If I hear about an illness I often think I have it myself.
   d. If I hear about an illness I always think I have it myself.
10. a. If I have a bodily sensation or change I rarely wonder what it means.
b. If I have a bodily sensation or change I often wonder what it means.
c. If I have a bodily sensation or change I always wonder what it means.
d. If I have a bodily sensation or change I must know what it means.

11. a. I usually feel at very low risk for developing a serious illness.
b. I usually feel at fairly low risk for developing a serious illness.
c. I usually feel at moderate risk for developing a serious illness.
d. I usually feel at high risk for developing a serious illness.

12. a. I never think I have a serious illness.
b. I sometimes think I have a serious illness.
c. I often think I have a serious illness.
d. I usually think that I am seriously ill.

13. a. If I notice an unexplained bodily sensation I don’t find it difficult to think about other things.
b. If I notice an unexplained bodily sensation I sometimes find it difficult to think about other things.
c. If I notice an unexplained bodily sensation I often find it difficult to think about other things.
d. If I notice an unexplained bodily sensation I always find it difficult to think about other things.

14. a. My family/friends would say I do not worry enough about my health.
b. My family/friends would say I have a normal attitude to my health.
c. My family/friends would say I worry too much about my health.
d. My family/friends would say I am a hypochondriac.

Scoring: a =0. b=1, c=2, d=3  Maximum score = 42
Appendix Instrument 3.2
Hospital Anxiety and Depression Scale (HADS)

Name…………………………………………… Date……………………

Doctors are aware that emotions play an important part in illnesses. If your doctor knows about these feelings he will be able to help you more. This questionnaire is designed to help your doctor to know how you feel. Read each item and place a firm tick in the box opposite the reply, which comes closest to how you have been feeling in the past week. Don’t take too long over your replies; your immediate reaction to each item will probably be more accurate than a long thought-out response.

Tick only one box in each section
I feel tense or ‘wound up’       Score
Most of the time.....................3
A lot of the time.....................2
Time to time, occasionally.........1.
Not at all..............................0

I still enjoy the things I used to enjoy
Definitely as much....................0
Not quite so much....................1
Only a little.........................2
Hardly at all.........................3

I get a sort of frightened feeling as if something awful is about to happen
Very definitely & quite badly.......3...
Yes, but not too badly...............2
A little, but it doesn’t worry me........1...
Not at all..............................0

I can laugh and see the funny side of things
As much as I always did.............0
Not quite so much....................1
Definitely not so much now............2...
Not at all..............................3

Worrying thoughts go through my mind
A great deal of the time.............3
A lot of the time.....................2
From time to time but not often......1....
Only occasionally........................0

I feel cheerful
Not at all..............................3
Not often..............................2
Sometimes..............................1
Most of the time........................0

I can sit at ease and feel relaxed
Definitely...............................0
Usually.................................1
Not often..............................2
Not at all..............................3

I feel as if I am slowed down       Score
Nearly all of the time...............3
Very often.............................2
Sometimes.............................1
Not at all..............................0

I get a sort of frightened feeling like butterflies in the stomach
Not at all..............................0
Occasionally...........................1
Quite often............................2
Very often.............................3

I have lost interest in my appearance
Definitely...............................3
I don’t take so much care as I should....2....
I may not take quite as much care......1....
I take just as much care as ever........0.

I feel restless as if I have to be on the move
Very much indeed.....................3
Quite a lot................................2
Not very much..........................1
Not at all..............................0

I look forward with enjoyment to things
As much as I ever did....................0.
Rather less than I used to.............1
Definitely less than I used to........2...
Hardly at all...........................3

I get sudden feelings of panic
Very often indeed.....................3
Quite often.............................2
Not very often..........................1
Not at all..............................0

I can enjoy a good book or radio or TV programme
Often.................................0
Sometimes.............................1
Not often..............................2
Very seldom............................3

NB. Alternate questions refer to anxiety
(1,3,5,7,9,11,13) and depression
(2,4,6,8,10,12,14) components
Appendix Instrument 3.3 – Beck Anxiety Inventory (BAI)

**Name:** ………………………………………………………… **Date:** …………………

Below is a list of common symptoms of anxiety. Please carefully reach each item in the list. Indicate how much you have been bothered by each symptom during the PAST WEEK, INCLUDING TODAY, by placing an X in the corresponding space in the column next to each symptom.

<table>
<thead>
<tr>
<th></th>
<th>NOT AT ALL</th>
<th>MILDLY It did not bother me much</th>
<th>MODERATELY It was very unpleasant, but I could stand it</th>
<th>SEVERELY I could barely stand it</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Numbness or tingling</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Feeling hot</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Wobbliness in legs</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Unable to relax</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Fear of the worst happening</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Dizzy or light headed</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Heart pounding or racing</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Unsteady</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Terrified</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Nervous</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Feelings of choking</td>
<td>11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Hands trembling</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Shaky</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Fear of losing control</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Difficulty breathing</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Fear of dying</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Scared</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>18. Indigestion or discomfort in abdomen</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>----------------------------------------</td>
<td>----</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>19. Faint</td>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>20. Face flushed</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>21. Sweating (not due to heat)</td>
<td>21</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Score</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
</table>

199
Appendix Instrument 3.4 – Dependent Personality Questionnaire (DPQ)
Please read each of the statements below. Then tick one of the four answers that comes nearest to your feelings. Please take into account how you are normally, not just how you are feeling at the moment.

Please check you have completed all the items.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I am an independent person</td>
<td>Yes, definitely</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Yes, a little</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>No, not much</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>No, not at all</td>
<td>3</td>
</tr>
<tr>
<td>2. I prefer coping with problems on my own.</td>
<td>Yes, definitely</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Yes, a little</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>No, not much</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>No, not at all</td>
<td>3</td>
</tr>
<tr>
<td>3. I tend to give in to other people.</td>
<td>Yes, definitely</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Yes, a little</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>No, not much</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>No, not at all</td>
<td>0</td>
</tr>
<tr>
<td>4. I do not like being on my own.</td>
<td>Yes, definitely</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Yes, a little</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>No, not much</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>No, not at all</td>
<td>0</td>
</tr>
<tr>
<td>5. I am good at making decisions.</td>
<td>Yes, definitely</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Yes, a little</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>No, not much</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>No, not at all</td>
<td>3</td>
</tr>
<tr>
<td>6. I am a self—confident person.</td>
<td>Yes, definitely</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Yes, a little</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>No, not much</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>No, not at all</td>
<td>3</td>
</tr>
<tr>
<td>7. I rely a lot on my family and friends.</td>
<td>Yes, definitely</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Yes, a little</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>No, not much</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>No, not at all</td>
<td>0</td>
</tr>
<tr>
<td>8. When things go wrong in my life it takes me a long time to get back to normal</td>
<td>Yes, definitely</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Yes, a little</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>No, not much</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>No, not at all</td>
<td>0</td>
</tr>
</tbody>
</table>

(Ranges of scores: 0 to 24)
**Appendix 3.5 SOCIAL FUNCTIONING QUESTIONNAIRE**

Please look at the statements below and tick the reply that comes closest to how you have been over the past two weeks.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Most of the time</th>
<th>Quite often</th>
<th>Sometimes</th>
<th>Not at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>I complete my tasks at work and home Satisfactorily</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>I find my tasks at work and at home very stressful</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>I have no money problems</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have difficulties in getting and keeping Close relationships</td>
<td>Severe difficulties</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Some problems</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Occasional problems</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No problems at all</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have problems in my sex life</td>
<td>Severe problems</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Some problems</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Occasional problems</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No problems at all</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I get on well with my family and other relatives</td>
<td>Yes, definitely</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes, usually</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No, some problems</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No, severe problems</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel lonely and isolated from other people</td>
<td>Almost all the time</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Much of the time</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not usually</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not at all</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I enjoy my spare time</td>
<td>Very much</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sometimes</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not often</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not at all</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix 3.6: Personality Assessment Schedule (PAS)

This schedule is designed to formalize the assessment of personality disorder and may be used with any subject irrespective of psychiatric status. The way in which the schedule is used will depend on the current mental state of the patient and an assessment of this is a necessary precursor to the personality ratings. It is recommended that the screening schedule of the Present State Examination or SCID (Structured Clinical interview for DSM-III) be used for the mental state examination, but, if this is not possible, sufficient information should be obtained from the history and examination to make a diagnostic formulation of any psychiatric problems, which should be recorded on the assessment form. If this is not carried out there is a danger that the personality ratings will be contaminated by the mental state.

There are 24 personality variables to be assessed in the schedule. Each of these can be rated by interview with the subject and interview with an informant.

An interview with an informant is desirable in all cases. The interview with the subject is not necessary if he or she is unable to give coherent answers to questions because of gross abnormalities in mental state; the interview with the informant indicates that there has been a marked qualitative change in the subject’s personality so that replies to questions about past personality are unlikely to be correct; the subject displays severe memory disturbance, whether of organic or psychological origin, and is unable to recall aspects of his premorbid state. If an interview with an informant is not possible, additional independent information about personality may be obtained from other sources (e.g. general practitioner, social worker, probation officer), if this information is considered valid. If several informants are available the final score can be a composite of those in which the most reliable informant carried the greatest weight.

Use of the schedule

(1) The initial questions for each personality variable are obligatory. The questions preceded by an asterisk are amplifying questions which may be asked in response to the subject’s initial reply. The questions in brackets are direct closed questions which may be asked if replies to other questions have been evasive, contradictory or vague. Although the questions are confined to a specific personality variable there is sometimes overlap with other variables. It may therefore be necessary to re-rate the variable later in the interview.

(2) Ratings of severity: The ratings are made on a nine-point scale for all variables. The number is recorded in the appropriate box at the side of each item or an accompanying sheet. The scale is specifically designed to record abnormal personality traits and most normal variation will occur between scores 0 and 3. The greater the severity of the trait the greater will be the rating. In addition to the specific points mentioned for each scale, the following general principles should be used to determine the score for a particular trait. (The word trait is synonymous with personality variable in this account, although it is less often used for severe personality disturbance).

0 Trait absent. Presence of the trait is undetected both in respect of feelings and behaviour.
1 Subject recognizes the presence of the trait but it is shown chiefly in terms of feelings rather than behaviour. When the trait does affect behaviour, it is not an habitual response so much as a tendency to indulge more in that type of behaviour when several choices are open. Knowledge of how the subject spends spare time may help with this rating, as it is in spare time activities that the element of choice is most obviously shown. (An informant is unlikely to make a distinction between 0 and 1 ratings).

2 Personality trait is definitely present and affects behaviour, but only to a limited extent. It is not associated with problems in occupational, social and interpersonal life. The changes in behaviour produced by the trait are such that those close to the subject will notice them but most friends and acquaintances would not.

3. The personality trait markedly affects feelings and behaviour. The presence of the trait may be noticed by others who are not closely related to the subject and may occasionally give rise to the problems in occupational, social and interpersonal life. However, these problems will seldom be persistent and those around the subject can normally accommodate to them without much difficulty.

4. The personality trait is marked and is apparent to the subject and to most people who have frequent contact with the subject. The trait produces some difficulties in occupational, social and interpersonal adjustment and this tends to be of a mild but persistent nature.

5. The personality trait is marked to both the subject and most people who come into contact with the subject. It has a marked influence on behaviour and leads to problems in occupational, social and interpersonal relationships. This rating differs from 4 in that the problems lead to more serious difficulties in adjustment in society and marked underachievement (e.g. inability to settle in one job, refusal to meet people, episodic aggression).

6. Personality trait has a major influence on behaviour and tends to affect all aspects of life. The problems in occupational, social and interpersonal relationship are such that major breakdown occurs (e.g. divorce, social isolation, prolonged unemployment), as a direct result of the personality abnormality.

7. The personality trait is so marked that it is noticed by almost all who come in contact with the subject, even those who only see the subject once. Independent life in the community is impossible because of the severity in occupational, social and interpersonal relationships so some form of supervision or continuous support is necessary.

8. The personality trait dominates behaviour completely (therefore it cannot be given to more than one rating in the schedule). The disturbance produced by the trait is so marked that prolonged periods of institutional care (e.g. hospital, prison, nursing home) take up a large part of the life history in the absence of any formal illness.

Note: most normal variation is accounted for between the ratings of 0 and 3. Only a small number of individuals rate higher scores than 3. The key issues in deciding whether a score of more than 3 is justified are:

(a) The production of problems in daily living because of the severity of the trait.
(b) The suffering and underachievement that the trait produces.
(c) The inability of those around the subject to deal with these problems without asking for additional (often professional) help.

An informant’s information is primarily of value for ratings of 3 and upwards. A reliable subject is best fitted to rate lower ratings as these have little or no persistent effect on behaviour.

(3) In all instances of abnormal personality traits try and get the subject or informant to provide examples of the problems produced by the trait.

(4) Assess the reliability of the subjects’ and informants’ replies at the end of interview and score on the nine-point scale. Wherever the informants’ and subjects’ ratings for an item differ by three or more points ask further questions, and where possible, obtain independent information about the trait in question.

Additional notes on PAS

Procedure for scoring

It will be noticed on the final scoring sheet there is a space for ‘the final score’. If the reliability of the informant’s ratings is considered to be greater than the subject’s ratings or equal to them, the final score will normally consist of the informant’s ratings alone. If, however, the difference between informant’s and subject’s ratings for a personality attribute is greater than two points, it is advisable to ask further questions to establish the reasons for the discrepancy, possibly with both informant and subject present together. On an individual item it may also be considered that the subject’s ratings are more reliable than those of the informant even though the rest of the ratings may be more accurately determined by the informant. In such instances the scoring may more closely approximate to the subject’s ratings for that item.

If the subject’s ratings are to be considered more reliable than those of the informant (which is particularly likely if the informant is not a close relative and has only known the subject for a limited period), the subject’s ratings will take greater precedence in the final scoring. However, any informant rating that is greater than 3 must be carefully followed up by further questioning if it significantly disagrees with that of the subject. This is because any abnormal behaviour as a consequence of the personality attribute is likely to be more accurately detected by the informant than by the subject.

If an informant is not available, the subject’s ratings alone can be used although this is much less satisfactory than having the informant’s ratings also. If the subject’s ratings are to be used, as much independent information as possible about premorbid personality is needed to corroborate the subject’s ratings. This may be possible from past medical or social records but useful fact (p. 143) recording major life events may be useful. This is administered before the PAS, preferably with other independent information as well, and any relevant positive findings introduced at the appropriate point in the PAS when this is administered subsequently. The subject will then have to explain the reasons for the apparently abnormal behaviour and, if the abnormality is judged to be related to a personality attribute, it will be scored appropriately. The additional schedule therefore serves in some way as a lie schedule.
When scoring each rating use the notes below each personality trait for guidance only. The scoring should follow the principles outlined in pages 133 and 134 for all traits.

**Comparison of scores in different subgroups of patients**

The individual scores for personality attributes can be compared separately by the usual statistical methods. The investigator may, however, wish to know to which category of personality each patient belongs. A program based on cluster analysis is available, which places each patient into one of five personality groups: normal, sociopathic, passive-dependent, anankastic or schizoid (Tyrer and Alexander, 1979). If investigators would like to know how their patients are classified according to their system they may either obtain a copy of the program (Tyrer and Tyrer, 1997) from Peter Tyrer at the Paterson Centre, London W2 1PD, or, alternatively, use the scoring system on pages 156 to 159 to categorize the disorders. Additional classification with modified questions suitable for DSM-III diagnostic categories is also available from the above address if required. Details of hand scoring of schedules are also available for those who do not have access to a computer; these are given on pp. 164-167.

**Useful facts**

Sometimes both subjects and informants have a distorted impression of previous personality and make it sound more favourable than it really was. The rater therefore needs as much information as possible about the patient’s past experience so that these can be introduced into the questioning at relevant points in the interview. Below is a list of some of the important events that are affected frequently by personality characteristics. The rater should have information about these events, preferably obtained independently, before the interview. If this is not possible questions should be put to both subject and informant during the interview. It would be wrong to assume that any of these events are necessarily associated with personality abnormality but they are useful anchor points around which questions about personality can be asked. If there are serious discrepancies between independent evidence of these events and the subject’s or informant’s responses the rater should resolve these before making a final score for that personality item. As in other parts of the schedule independently derived information is given greater weight when making this decision.

1. *Marital relationship* – if unmarried has the subject ever cohabited? If married or divorced how many times have the couple separated for any reason during marriage?
2. *Child care*. Have there been any problems with the children of the patient? Have any children been involved with the police or official agencies and have they ever been in care?
3. *Has the subject ever been in debt?* What were the circumstances?
4. *Employment*. How many jobs has the subject had since leaving school? What were the circumstances of leaving these jobs? Was the subject ever sacked from a job or did they leave because of problems with colleagues?
5. *Legal.* Has the subject ever been convicted of an offence? If so, what was the offence and outcome?
6. *Does the subject drink alcohol. Take illegal drugs or gamble?* If so, have any problems arisen as a consequence of these activities?
(7) *Housing.* How many addresses has the subject had in the last 10 years? What were the reasons for moving? Has the subject ever been homeless?

(8) *Adolescent problems.* Did the subject have any problems when attending school after the age of 11? If so, what was the outcome?

**Interview procedure**

It is helpful to have a check list of ratings of severity for each personality trait and the ‘useful facts’ above when interviewing the patient or informant. These are appended and may be detached for ease of reference when interviewing. The list of facts may be completed after the interview if necessary.

**Subject**

I am going to ask you some questions about the type of person you are normally.

*I am trying to find out what you were like before your present problems began.*

In answering these questions I would therefore like you to think about your personality as it has been throughout your life. I am going to ask you some more questions about this but first of all how would you describe your personality in a few words? (Note main features and record on sheet at end of schedule).

**Informant**

I am going to ask you some questions about the type of person S is normally.

*I am trying to find out what S was like before his/her present problems began.*

In answering these questions I would therefore like you to think about S’s personality as it has been throughout his/her life. I am going to ask you some more questions about this but first of all how would you describe S’s personality in a few words? (Note main features and record on sheet at end of schedule).

1. **PESSIMISM**

**Subject**

Do you get depressed easily or are you reasonably cheerful?

Are you pessimistic or optimistic about the future or do you just take it as it comes?
*Have you always felt depressed and low spirited, or has this only happened recently?
*Do other people notice it? (Give examples)

(Has this affected you at work, at home and with friends? In what way?)
(Have you ever thought seriously about suicide?)

Further questions may be needed to separate episodes of depressive illness from persistent depressive attitudes and behaviour.

**Informant**

Does S get depressed easily or is he/she reasonably cheerful?
Is he/she pessimistic or optimistic about the future or does he/she just take it as it comes?

*Has S always felt depressed and low spirited or has this only happened recently?
*Does S appear gloomy to other people?

(Has this affected him/her at work, at home and with friends? In what way?)
(Do people avoid S because he/she is so miserable?)

**Subject/Informant**

<table>
<thead>
<tr>
<th>Note</th>
<th>Ratings 1-3</th>
<th>Ratings 4-6</th>
<th>Ratings 7-8</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A pessimistic outlook on life with no effect on behaviour.</td>
<td>Depressive behaviour including social withdrawal and morbid depression to the extent that others notice and are affected by the behaviour.</td>
<td>Persistent pessimism and depressive behaviour with almost complete withdrawal and isolation.</td>
</tr>
</tbody>
</table>

Ratings of 5 and above are only justified when depressive feelings and behaviour, associated with hopelessness about the future, are present or have been present in the absence of formal psychiatric illness. Do not include recurrent depressive illness in this category unless the personality between episodes is also abnormal or there is evidence that S has been clinically depressed all his/her like. Short periods of pessimism or depressed feelings of less than two weeks should be regarded as evidence of lability of mood rather than evidence of abnormal pessimism. If in doubt delay rating until lability trait scored.

**2. WORTHLESSNESS**

**Subject**

How do you think of yourself in relation to other people? Do you feel better, worse, or about the same?
*Do you feel inferior to others? In what way? For how long?
*How does it affect you?

(Have you always felt like this or only just recently?)

*Do you think your like would have been different if you did not feel inferior to others? In what way?

(Do you feel useless or worthless most of the time?)
(Has he/she always felt like this or only just recently?)

*Does he/she feel inferior to others?  
*Do others notice this?

(Does S feel useless or worthless most of the time?)

**Informant**
How does S think of himself/herself in relation to other people?  
Does he/she feel better, worse, or about the same?

*Does he/she feel inferior to others?  
*Do others notice this?

(Has he/she always felt like this or only just recently?)

*Does he/she think his/her life would have been different if he/she did not feel inferior to others? In what way?

(Does S feel useless or worthless most of the time?)

**Subject/Informant**

**Note**

<table>
<thead>
<tr>
<th>Ratings 1-3</th>
<th>Mild feelings of inferiority, fully compensated and not Obviously apparent to others.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ratings 4-6</td>
<td>Strong feelings of inferiority, affecting behaviour. Subject will not do things he/she is capable of because of abnormality low self-esteem. At least some impairment at work and social adjustment.</td>
</tr>
<tr>
<td>Ratings 7-8</td>
<td>Strong feelings of inferiority amounting to worthlessness. Because of those feelings subject requires continuous reassurance and support. Not able to work regularly or make any useful relationship.</td>
</tr>
</tbody>
</table>

Do not confuse worthlessness with depression although the two often coexist.

**3. OPTIMISM**

**Subject**

I asked earlier whether you were normally a cheerful person. (Refer to answer)
*Are you more or less cheerful than most other people?
Have you always felt very cheerful no matter what has been happening in your life?

*Sometimes cheerfulness and over-confidence can lead to difficulties in life, such as overspending or making plans to do something which cannot succeed. Is this true of you?
*Would you describe yourself as too optimistic? (Examples of problems associated with optimism.)

*Have you any special abilities that make you feel optimistic and successful?

(Have you ever been in debt or got into trouble in any way because of over-confidence?)

Exclude problems associated with irresponsibility or childishness.

Informant
I asked earlier whether S was normally a cheerful person. Do you think of S as cheerful? Would others describe him/her as cheerful? Has S always felt very cheerful no matter what has been happening in his/her life?

*Sometimes even cheerfulness can lead to difficulties in life, such as overspending or making plans to do something which cannot succeed.
*Would you describe S as too optimistic? (Examples of problems associated with optimism.)

*Does S think of himself/herself as a special person who is bound to succeed?
(Has S ever been in debt or got into trouble in any way because of over-confidence?)

Subject/Informant

Note

Ratings 1-3 Subject is more cheerful than most others and is capable of communicating his/her cheerfulness to them.
Ratings 4-6 Over-cheerfulness leads to unrealistic ambitions and aspirations, including overspending, over-confidence and impaired judgement, so subject may be sacked from work or be in serious debt. Subject remains optimistic and self-important in spite of these problems.
Ratings 7-8 Breakdown in relationships, inability to maintain stability in any aspect of social, occupational or interpersonal life because of abnormal cheerfulness, over-optimism and self-importance.

To merit a high rating the optimism has to be more or less continuous and not part of the manic phase of manic depressive illness. Short periods of abnormal optimism of less than 2 weeks should be regarded as evidence of lability of mood rather than evidence of abnormal optimism. If in doubt delay rating till lability trait scored.

4. LABILITY

Subject
Do your spirits change from day to day or week to week, or do they remain more or less the same?

Are these changes connected with what is going on in your life or are they separate?

How long do they last?
Do they lead to problems?
(Can you predict your changes in mood?)
(How often do you laugh and cry?)

Informant
Does S’s mood change from day to day or week to week, or does it remain more or less the same?

Are these changes connected with what is going on in his/her life or are they independent?
How long do they last?
Do other people notice these changes? Do they lead to problems?
(Is S unpredictable because of these sudden changes in mood?)
(How often does he/she laugh and cry)
(Do you ever feel that he/she can turn these feelings on when he/she wants?)

Subject/Informant
Note

Ratings 1-3 A tendency towards mild exaggeration of mood swings in response to life changes.
Ratings 4-6 Marked lability, noticeable to others and leading to problems because of strength of mood swings. Most mood changes responsive to life events but may be independent. Unpredictability of subject’s behaviour because of mood change also a source of difficulties.
Ratings 7-8 Breakdown in social, occupational and personal relationship because of abnormal swings in mood. In these instances it would be more likely that the changes are independent of life events so that they cannot be manipulated in any way. What is known as ‘cyclothymia’ will be included here if the swings in mood occur at least as frequently as once every 2 weeks. If they occur less frequently than this, but still produce important personality problems, then the relevant rating should be included under the pessimism and optimism scales.

5. ANXIOUSNESS

Subject
Are you normally an anxious or a calm person?
When things go wrong in your life (e.g. illness in family, accident) do you get more nervous, the same or less nervous than most people?

☐

*Do you every worry about things that most people would not be concerned about? (Give examples)
*Do you show your nervousness to other people or do you cover it up?
*Have you always been an anxious person?

(Do you worry about something or someone most of the time?)
(Has your anxiety ever led to problems?) (Specify)

Informant

Is S normally an anxious or calm person?
When things go wrong in his/her life (e.g. illness in family, accident) does he/she get more nervous, the same or less nervous than most people?

☐

*Does S ever worry about things that most people would not be concerned about? (Give examples)
*Do other people notice that S is an anxious person or does he/she keep it to himself/herself?
*How has this worrying affected S?

(Does S worry about something or someone most of the time?)

Subject/Informant

Note

Ratings 1-3  Mild anxiety-proneness which is normally suppressed so that others are not aware of it.
Ratings 4-6  Anxiety noticeable to others, leading to changes in behaviour.
Ratings 7-8  Frequent or continuous free-floating anxiety of such severity that breakdown in social adjustment occurs.

Life-long phobic anxiety may contribute to this rating but the severity of the rating would depend on the same categories mentioned in the outline to scoring (i.e. it is the extent to which it interferes with personal and social adjustment that determines the rating).

6. SUSPICIOUSNESS

Subject

How well in general do you get on with other people?
Do you normally trust them or are you suspicious of them, at least at first?
How long does it take for you to get to know people before you will trust them?

*Do you tend to worry what is going on behind your back?
*Do you ever think that other people might be against you or criticize you unfairly?

(Have you many friends?)
(Are you worried in case someone might find out what you have been saying to me?)

Informant

How well in general does S get on with other people?
Does S normally trust them or is he/she suspicious of them, at least at first?
How long does it take for him/her to get to know people before he/she will trust them?

* Would you say that S is a suspicious person?
*Does he/she have many friends? (If yes) is this because he/she will not trust anybody?
*Is S a jealous person?

Subject/Informant

Note

Ratings 1-3 Mild feelings of suspiciousness, not noticed by others. Subject tends to have relatively few friends but is capable of close relationships and will trust those he/she knows well.

Ratings 4-6 Problems in social adjustment because of abnormal suspiciousness. Takes a very long time to get to know people and only trusts a very small number of people. Feels that others criticize him/her without adequate cause.

Ratings 7-8 Breakdown in relationships and social adjustment because of abnormal suspiciousness. At extreme ratings the patient is completely isolated because he/she feels all are against him/her.

7. INTROSPECTION

Subject

Do you think a great deal about how you feel and what you do or do you think about them very little?
Do you prefer being on your own to being with other people?
*Are you a person who spends a lot of time thinking? (If yes) What about?
*Are you an introvert?
*Are you like this all the time or only when there is a problem on your mind?

**Informant**

Does S think a great deal about how he/she feels and what he/she does or does he/she think about them very little?
Does S prefer being alone to being with other people?

*Is S an introvert?
*Is S completely bound up in himself/herself? How often?
*Does S appear to live in a world of his/her own?
*How does this affect his/her relationship with other people?
*Do other people notice that S in like this?

**Subject/Informant**

<table>
<thead>
<tr>
<th>Note</th>
<th>Ratings 1-3</th>
<th>Ratings 4-6</th>
<th>Ratings 7-8</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mild introspection and introversion, not noticeable to others.</td>
<td>Problems in adjustment because of excessive rumination and introspection, often with a tendency to indulge in fantasy. These feelings may lead to problems by indecision, impaired judgement and poor relationships.</td>
<td>Completely bound up in self to the exclusion of other matters, indulges in much fantasy. Self-neglect frequent.</td>
</tr>
</tbody>
</table>

8. SHYNESS

**Subject**

Are you normally a shy person or are you confident with other people?
Do you get to know people quickly or do you take a long time before feeling at ease with them?
Do you lack self-confidence?

*Do you ever go out of your way to avoid people because of shyness?
*Do you have difficulty in making friends because you are shy?
*Would you like to feel more at ease with people? Has shyness caused problems for you?
(Do you feel uncomfortable even in the presence of friends?)
(Are you feeling shy or uncomfortable now?)

Informant
Does S get to know people quickly or does he/she take a long time before feeling at ease with them?
Is S normally a shy person or does he/she have no difficulty getting on with people?
Is S a self-confident person?

□ (16)

*Does he/she ever go out of his/her way to avoid people because of shyness?
*Does S have difficulty in making friends because S is shy?
*Do other people notice that S is shy?
*Has shyness caused problems for S?

(Does S feel uncomfortable even in the presence of friends?)

Subject/Informant

Note

Ratings 1-3 Mild shyness, but this is compensated and others do not notice it.
Ratings 4-6 Excessive shyness and lack of self-confidence leading to avoidance of people and personal discomfort when with people.
Ratings 7-8 Subject unable to work adequately or make relationships because of symptoms. In severe cases may be completely isolated.

It is important to exclude natural aloofness and detachment from shyness – the former group are not distressed in the company of other people, shyness is always associated with some feelings of anxiety.

9. ALOOFNESS

Subject

Are you a person who likes to stay apart from other people or do you like to have close relationships?
Have you any really close relationships? (If no, does this bother you?) □ (17)
Do you need people in any way or can you do without them?
(Would you mind living entirely on your own without any contact with other people?)
(Do others ever say you are stand-offish or aloof?)

Informant

Is S an (isolated/alof) person who likes to stay apart from other people or does he/she like to have close relationships?
Has he/she any really close relationships?

* Does S ever appear stand-offish or detached to other people?
* Is S happier when he/she is on his/her own?

(Do other people tend to stay apart from S?)
(Has this tendency to be aloof led to any problems in S’s life?)

**Subject/Informant**

<table>
<thead>
<tr>
<th>Note</th>
<th>Ratings 1-3</th>
<th>Mild detachment leading to a reluctance to involve subject in close relationships. Not noticeable to others, and adequate relationships made with close friends and relatives.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ratings 4-6</td>
<td>Abnormal aloofness noticeable to others and leading to problems in social adjustment, mainly in interpersonal relationships.</td>
</tr>
<tr>
<td></td>
<td>Ratings 7-8</td>
<td>Excessive detachment and lack of interest in other people. No close relationships. Indifference to other people’s feelings and opinions.</td>
</tr>
</tbody>
</table>

Lack of interest in other people is unrelated to shyness or psychiatric symptomatology such as social fears. Subject does not feel distressed with other people and merely has no interest in them.

**10. SENSITIVITY**

**Subject**

Are you a {touchy/sensitive} person or does it take a lot to upset you?
How do you react to criticism? (Give examples)

* Do people ever say you are too touchy?
* How long does it take for you to get over criticism?

( Have any of my questions upset or disturbed you in any way?)
( Do you tend to take things personally?)

**Informant**

Is S a {touchy/sensitive} person or does it take a lot to upset him/her?
How does S react to criticism? (Give examples)
*Have people to be careful what they say to S in order not to upset him/her?
*Do people ever say S is too touchy?
*Does he/she take a long time to get over criticism?

(Has this sensitivity led to problems in S’s relationships with others?)

**Subject/Informant**

<table>
<thead>
<tr>
<th>Note</th>
<th>Ratings 1-3</th>
<th>Mild sensitivity. May be upset easily but does not show it except to close friends and relatives.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ratings 4-6</td>
<td>Excessive personal sensitivity with a tendency to self-reference (e.g. feels people are being critical when they are not). This leads to problems in social adjustment (e.g. frequent changes of job, broken relationships).</td>
</tr>
<tr>
<td></td>
<td>Ratings 7-8</td>
<td>Excessive sensitivity leads to breakdown in social performance. Extreme tendency to self-reference.</td>
</tr>
</tbody>
</table>

Sensitivity to the feelings of others is not an abnormal phenomenon and should not be included in this rating. This rating is concerned with personal sensitivity and touchiness. If in doubt about this rating, delay till ratings of vulnerability and irritability are made. Also differentiate between sensitivity and suspiciousness. Although the two may overlap, sensitivity leads to emotional distress whereas suspiciousness is usually independent and may frequently be prominent in insensitive people.

**11. VULNERABILITY**

**Subject**

Do you find that when things go wrong in your life it disturbs you a great deal or do you remain on an even keel?

Does it take you a short time or a long time to get back to normal after some mishap (e.g. illness in family, accident, loss of job)?

(How do you think you would cope with a crisis such as death in the family, car accident or loss of your job?)

**Informant**
Does S find that when things go wrong in his/her life it disturbs him/her a great deal of does he/she remain on an even keel?
Does it take S a short time or a long time to get back to normal after some mishap (e.g. illness in the family, accident, loss of job)?

*Does S need to be protected from unpleasant things because others know he/she will take them very badly? (If yes) Could you give an example?
*Are other people aware that S is vulnerable? How do they show it?

(Do you protect S from unpleasant events?)

**Subject/Informant**

<table>
<thead>
<tr>
<th>Note</th>
<th>Ratings 1-3</th>
<th>Reacts more than most to adversity but does not show these feelings to others.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ratings 4-6</td>
<td>Abnormally vulnerable, reacts excessively to adversity, so leading to social maladjustment for a prolonged period. Eventually, however, more normal functioning is resumed until the next adverse episode.</td>
</tr>
<tr>
<td></td>
<td>Ratings 7-8</td>
<td>Subject vulnerable to even the minor stresses of life to which he/she reacts as though they were major problems. Breakdown in social adjustment because of this.</td>
</tr>
</tbody>
</table>

It is important to separate vulnerability from sensitivity and resourcelessness. Although all three may be present in one individual, the characteristics are separate. The sensitive person is touchy and reacts easily to implied criticism, the vulnerable person reacts to major life events by feelings of distress which may take a long time to resolve and are not commonly associated with compensatory action, and the resourceless person reacts to adversity by not coping and just giving up. When assessing vulnerability do not include sensitivity and resourcelessness.

**12. IRRITABILITY**

**Subject**

Are you an irritable or a placid person?
Are you impatient at times? Under what kind of circumstances?
How do you show it?

*Do you keep it to yourself or do other people notice that you are impatient and irritable?
*Does this lead to problems in your relationships with other people?

(When was the last time you were really irritable?)
(How did you show this?)
Informant

Is S an irritable or a placid person?
Is he/she impatient at times? Under what kind of circumstances?
How does he/she show it? □ (24)

*Does he/she keep it to himself/herself or do other people notice that S is impatient and irritable?
*Does this lead to problems in S’s relationships with other people? (Specify)

Subject/Informant

Note

Ratings 1-3 Mild irritability, kept under control.
Ratings 4-6 Abnormally irritable. Leading to social adjustment problems (e.g. poor relationships with others)
Ratings 7-8 Severe irritability, making it very difficult for subject to make adequate relationships with others. Inability of the subject to cope in any environment which involves sudden changes because of severe irritability.

In making this rating, impulsiveness and aggression should be excluded. An impulsive act is followed by regret. Irritability is largely shown in verbal responses and does not include physical violence, which should be scored under aggression. ‘Passive-aggressive’ features may be included here if the irritability leads to procrastination, obstruction and delay in completing tasks.

13. IMPULSIVENESS

Subject

Do you always think carefully before you do something or do you act on impulse? □ (25)

*Have you ever done things on impulse and regretted them afterwards? (Give examples)
*Have to ever been in trouble because you are impulsive? (Give examples)
*When have you been impulsive has it ever harmed other people?

If ‘Useful facts’ section (p.143) suggests impulsivity is a problem (e.g. criminal offences) mention them here is subject answers negatively.

Informant

Does S think carefully before he/she does something or does he/she act on impulse?
*Does he/she ever do things on impulse and regret that afterwards?
*Has S ever been in trouble because he/she is impulsive? (Give examples)
*Has his/her impulsiveness ever harmed other people?

(Has S had problems with drugs or drink because he/she is impulsive?)

**Subject/Informant**

<table>
<thead>
<tr>
<th>Note</th>
<th>Ratings 1-3</th>
<th>Mild impulsiveness, not noticeable to others, or causing no problems in social adjustment.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ratings 4-6</td>
<td>Impulsiveness associated with regret which has led to problems of social adjustment (e.g. loss of job).</td>
</tr>
<tr>
<td></td>
<td>Ratings 7-8</td>
<td>Frequent impulsiveness leading to criminal behaviour and/or breakdown in social functioning throughout adult life.</td>
</tr>
</tbody>
</table>

As impulsiveness may sometimes be associated with aggression, this rating may be delayed until aggression is assessed.

**14. AGGRESSION**

**Subject**

Do you lose your temper easily or does it take a lot to make you angry? When you get angry how do you show it?

*Have you ever lost control completely?
*Are you normally like this or only on certain occasions (e.g. after heavy drinking)?

(Do you ever react by physical violence?)
(Have you ever been in trouble with the law?)

**Informant**

Does S get angry easily or is he/she generally placid? When S does get angry how does he/she show it?
*Has he/she ever lost control completely?  
*Is he/she normally like this or only on certain occasions (e.g. after heavy drinking)?  
*How do other people react to S’s violence? What problems does it cause?

(Does he/she ever react by physical violence or does he/she keep it to himself/herself?)  
(Has S ever been in trouble with police/law?)

**Subject/Informant**

<table>
<thead>
<tr>
<th>Note</th>
<th>Ratings 1-3</th>
<th>Anger and aggression felt frequently but kept to himself/herself.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ratings 4-6</td>
<td>Aggression abnormal and leads to social difficulties (e.g. trouble with police), and violence at home. Do not rate criminal offences here unless they are a direct consequence of aggressiveness.</td>
</tr>
<tr>
<td></td>
<td>Ratings 7-8</td>
<td>Breakdown of social adjustment with long history of antisocial behaviour, usually with criminal record.</td>
</tr>
</tbody>
</table>

**15. CALLOUSNESS**

**Subject**

Are you easily affected by other people’s feelings or can you ignore them?

☐ (29)

*Do you care much about other people? (Do you care at all?)

(Do you find it difficult to sympathize with and understand other people’s feelings?)  
(Have you ever enjoyed hurting other people?)

**Informant**

Is S easily affected by other people’s feelings or can S ignore them?

☐ (30)

*Does S care much about other people?  
Does S find it difficult to sympathize with and understand other people’s feelings?  
*Does he/she ever appear to get pleasure from hurting people in any way?  
*How does this affect his/her relationships with other people?
(Has he/she ever hurt people (physically or mentally) deliberately?)
(Give examples)
(Is S callous or sadistic?)

**Subject/Informant**

**Note**

Ratings 1-3  Mild insensitivity and indifference to others feelings.
Ratings 4-6  Cold and indifferent to the extent that S is only capable of a few relationships, and these are really close.
Ratings 7-8  Marked callousness with or without sadistic behaviour, leading to breakdown in social functioning and frequent criminal involvement.

**16. IRRESPONSIBILITY**

**Subject**

Do you ever do things without caring about the consequences or are you always careful in what you do? Would you describe yourself as a responsible or an irresponsible person?

☐ (31)

Do you ever get into serious difficulties because of irresponsibility (e.g. into debt, criminal acts, sexual difficulties)? How has irresponsibility affected your life? (Give examples). Bring up any information derived from the section 'Useful facts' if negative answers given but past history suggests irresponsibility.

**Informant**

Does S ever do things without caring about the consequences or is S always careful in what he/she does? Would you describe S as a responsible or an irresponsible person?

☐ (32)

*Does he/she ever get into serious difficulties because of irresponsibility (e.g. into debt, criminal acts, sexual difficulties)?
*How does this affect his/her relationships with others? How has irresponsibility affected his/her life? Has it caused serious problems?
Note

**Ratings 1-3** Mildly irresponsible, feelings kept under control, not noticed by others or, if manifest, not causing real problems.

**Ratings 4-6** Highly irresponsible, takes risks repeatedly, problems in social adjustment (e.g. in debt, frequent accidents, unwanted pregnancies). Do not rate criminal offences automatically unless they stem from irresponsibility.

**Ratings 7-8** Irresponsibility so great that S needs to be constantly supervised and cannot live independently because of this.

17. **CHILDLINESS**

**Subject**

Do you ever act in a childish way or would you regard yourself as fairly mature?
Do you ever manipulate people to get your own way?

*Do you like being the centre of attention?
*Have you ever acted selfishly, only thinking of yourself?
(Has this led to problems?)

**Informant**

Does S ever act in childish ways or would you regard him/her as fairly mature?
Does he/she ever manipulate people to get his/her own way?
Has this ever led to problems?

*Is S a selfish person who only cares about himself/herself?
*Does he/she appear to be younger than his/her years?
*Does he/she like being the centre of attention?

(How does this affect his/her relationships with others?)
(Has he/she any mature relationships?)
(Do other people tend to treat S as a child?)

**Subject/Informant**

Note

**Ratings 1-3** Self-centred attitudes with occasional childish behaviour but this is seldom noticeable to others.

**Ratings 4-6** Immature behaviour and marked selfishness leading to social adjustment problems.
18. RESOURCELESSNESS

Subject

When you are faced with a challenge do you usually respond to it well or do you give in to it?
When there are problems in your life do you usually tackle them alone?
Are you somebody who can normally solve your own problems?

□ (35)

*How have you coped with major problems in the past? (Get examples)
(When was the last time you coped with a serious problem on your own?)

Informant

When S is faced with a challenge does he/she usually respond to it well or does S give in to it?
When there are problems in S’s life does he/she usually tackle them alone or does S need help from others?

□ (36)

*Does S constantly need support to cope with life’s problems?
*How does this affect his/her relationships with others?
*How has S coped with major problems in the past?

Subject/Informant

Note

Ratings 1-3 Copes with problems with some difficulty but does not involve others to an unnecessary extent.
Ratings 4-6 Others involved in coping with S’s problems, impairing social functioning. Frequent problems in work.
Ratings 7-8 Unable to cope with life’s practical difficulties without continuous support. Not able to live independently because of this.

19. DEPENDENCE
Subject

Do you rely on other people a great deal or are you an independent person?

□ (37)

*Do you find it difficult to make up your mind without involving others?
*How would you like and/or work alone?

(Who do you depend on most?) (In what way)
(Would you like to be less dependent?)
(Has you dependence led to problems in your relationships?)

Informant

Does S rely on other people a great deal or is he/she usually independent?

□ (38)

*Does he/she find it difficult to make up his/her mind without involving others?
*Do you think S could cope with living and/or working alone? What would happen?

(Do you think S is too dependent? On whom?)
(Does this lead to problems? (Give examples)
(Has he/she always been like this?)

Subject/Informant

Note Ratings 1-3 Some dependence in excessive need for advice and reassurance from close relatives or friends but behaviour seldom abnormal
Ratings 4-6 Excessive reliance on others, leading to social adjustment problems.
Ratings 7-8 Completely dependent on individual group or institution. Unable to work or function independently at any level.

20. SUBMISSIVENESS

Subject

Do you give in easily to others or do you stand up for yourself?

□ (39)
*Do you go along with decisions made by others even if you feel it is the wrong decision?  
*Do you prefer to avoid arguments?  
*Do people ever take advantage of you? (Give examples)

(Are you easily dominated?)  
(Do you wish you could stand up for yourself better?)

Informant

Does S give in easily to others or does S stand up for himself/herself?

□ (40)

*Does S go along with decisions made by others even if he/she feels they are the wrong decisions?  
*How does this affect relationships with others?  
*Do people ever take advantage of S because they know he/she will not retaliate?

(Is S easily dominated?)  
(Is he/she afraid to say what he/she really thinks?)

Subject/Informant

Note  
Ratings 1-3 Mild submissiveness and compliance, but stands firm on major issues.  
Ratings 4-6 Very submissive, unwilling to express own views, is dominated in most relationships.  
Ratings 7-8 Gives in to everybody, no independent function, exploited by others. Breakdown in social functioning.

21. CONSCIENTIOUSNESS

Subject

Are you normally a fussy or a carefree person?  
Do you plan everything down to the last detail or do you seldom plan anything in life?

□ (41)

*Do people ever say you are too fussy or conscientious, or even a perfectionist?  
*Do you wish you were less conscientious?  
*Are you a person with high standards?
*Does conscientiousness ever lead to problems in your life? (Specify)

(Did you worry that you might be late today?)
(If I had been late would it have upset your routine?)
(Do you think you work harder than the average person?)

Informant

Is S normally a fussy or a carefree person?
Does he/she plan everything down to the last detail or does he/she seldom plan anything in life? □ (42)

*Do people ever say S is too fussy or conscientious, or even a perfectionist?
*How does this affect his/her relationships with others?
*Is he/she a person with high standards?

Subject/Informant

Note  
Ratings 1-3 Over-fussy and conscientious, preoccupied with routine and excessively meticulous, but no social adjustment problems.
Ratings 4-6 Conscientiousness abnormal, plans excessively far ahead, adjustment problems because of need for meticulous planning.
Ratings 7-8 Excessive conscientiousness accompanied by doubt. Unable to achieve anything as the smallest of tasks becomes a major enterprise. Unable to work or use leisure, leads to interpersonal breakdown. In severe cases subject will usually have many obsessional symptoms.

In making a rating do not include obsessional symptoms (i.e. symptoms which the subject recognizes to be silly and consciously tries to overcome), unless these are part of the underlying personality of the subject. Also recognize that conscientiousness is thought to be a favourable personality trait and may be exaggerated by S or informant.

22. RIGIDITY

Subject

Do you find difficulty in adjusting to new situations or are you an adaptable person?
Do you get upset if your plans are changed for any reason or are you flexible? □ (43)
*Can you adjust to others who act or feel differently from you (e.g. at work, with family)?
(Do you always have to have your own way?)

Informant

Does S find difficulty in adjusting to new situations or is S an adaptable person? Does he/she get upset if his/her plans are changed for any reason or is S flexible?

*Can he/she adjust to others who act or feel differently from him/her (e.g. at work, with family)? *Is he/she a person of fixed ideas? *Do other people get upset with S because he/she is inflexible? (Give examples of problems caused by inflexibility)

Subject/Informant

Note Ratings 1-3 R rigidity present but attempted compensation by subject leads to no social adjustment problems.
Ratings 4-6 R rigidity extreme, refuses to change, often dominating others. Marked problems in social adjustment because of rigidity, although if subject is driving and energetic he/she may appear successful initially.
Ratings 7-8 Inflexibility so severe that life is completely ritualistic and impairment of adjustment so marked that independent life is impossible.

23. ECCENTRICITY

Subject

Do you think you are very different from other people? In what way?

*Have you any unusual habits or interests? What are they? *Have you any unusual beliefs in things like telepathy and mind control? (Have these beliefs caused problems in your life?)

(Direct questions may be asked about any eccentric features noted at interview.)

Informant
Do others ever regard S as eccentric in any way? In what way?

□ (46)

*Has he/she any unusual habits or interests? What are they?
*Does he/she tend to conform with other people or is he/she unaware of them?
*Does he/she deliberately set out to shock people by being unconventional?
*Has he/she any unusual beliefs about telepathy and mind control?
(Do you find his/her thoughts and speech difficult to follow?)
(Can you give examples and problems they have caused?)

Subject/Informant

Note

Ratings 1-3 Mild eccentricity, often deliberately stressed because it does not conform, but no social adjustment problems.
Ratings 4-6 Marked eccentricity. S unable or unwilling to conform, recognized as odd by others, marked social impairment. Has odd thinking, speech and beliefs that cause problems in adjustment.
Ratings 7-8 Behaviour and attitudes so bizarre that life in society impossible without supervision.

A low rating should be given if the subject acts in an eccentric way to attract attention. The true eccentric is oblivious to others’ reactions. Any unusual beliefs or perceptions may only be rated if they are independent of mental illness such as schizophrenia.

24. HYPOCHONDRIASIS

Subject

Do you worry a great deal about your health or do you seldom give it a thought?

□ (47)

*When you have been ill have you worried that it might be more severe than it turned out to be?
*Are you more concerned about your health than most other people?

(How often do you visit the doctor? What for?)
(Feel you have ever been really well?)

Informant
Does S worry a great deal about his/her health or does S seldom give it a thought? □ (48)

*When he/she has been ill has he/she worried it might be more severe than it turned out to be? *Is S more concerned about his/her health than most other people? *Do you or other people think of S as a hypochondriac?

Subject/Informant

Note Ratings 1-3 Mild hypochondriasis. Over-concerned about minor illness and health (e.g. takes vitamins or health foods regularly). Ratings 4-6 Hypochondriasis marked. S frequently considered himself/herself to be ill even when physically healthy. Social adjustment problems; hypochondriasis affects behaviour and relationships. Ratings 7-8 Hypochondriasis dominates S’s life. Considers himself/herself to be ill despite contrary evidence. Unable to live independently because fears about health dominate behaviour.

Many people with a history of mental illness are naturally concerned about its likely recurrence and its effects on other people. Do not rate such concern as abnormal unless it is excessive.

Reliability of subject

On the basis of your interview, do you consider the subject to have been a reliable witness?

Note Rating 0 Highly reliable witness. Evidence from behaviour and demeanour at interview and any previous knowledge of witness all consistent. □ (49)

Ratings 1-3 Probably a reliable witness but independent information lacking. Ratings 4-6 Possibly an unreliable witness from demeanour at interview but no independent evidence of this. Ratings 7-8 Unreliable witness. Report inconsistent with previous knowledge of witness and evidence of incorrect report from demeanour at interview.

Reliability of informant

On the basis of your interview, do you consider the informant to have been a reliable witness?

Note Rating 0 Highly reliable witness. Evidence from behaviour and demeanour at interview and any previous knowledge of witness all consistent.
Ratings 1-3  Probably a reliable witness but independent information lacking.
Ratings 4-6  Possibly an unreliable witness from demeanour at interview but no independent evidence of this.
Ratings 7-8  Unreliable witness. Report inconsistent with previous knowledge of witness and evidence of incorrect report from demeanour at interview.