Screening for depression in older stroke survivors: An initial assessment of the reliability and validity of the Brief Assessment Schedule Depression Cards and the Beck Depression Inventory-Fast Screen

by

Anna Healey

Volume One

Submitted for the degree of Doctor of Psychology
(Clinical Psychology)

Department of Psychology
School of Human Sciences
University of Surrey

July 2006

© Anna Katharine Healey 2006
Acknowledgements

I would like to thank each of my placement supervisors and Nan Holmes, my clinical tutor, for their guidance and encouragement. I would also like to thank the teams I worked with whilst on placement who welcomed me as one of their colleagues.

Thanks to the trainees in my year group for sharing the experience, the ups and the downs. Particular thanks to Eleanor, Kelly, Rachel and Rav for their peer supervision, support and ability to find the positives in most situations.

I would like to thank my wonderful friends and family for their support and encouragement. Special thanks to my Mum and Dad for their endless encouragement and belief and to Glyn for his humour, support, commitment and scanning! Particular thanks to my surfing companions, Glyn and Rachael, for taking me surfing when I really needed it and sharing the waves.
## Volume One: Contents

<table>
<thead>
<tr>
<th>Contents</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Academic Section</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Adult Mental Health Essay</strong></td>
<td>5</td>
</tr>
<tr>
<td>Psychotic Experiences (e.g. auditory hallucinations and delusions) are not understandable or meaningful. Critically discuss this statement and any implications for treatment.</td>
<td>6</td>
</tr>
<tr>
<td><strong>People with Learning Disabilities Essay</strong></td>
<td>26</td>
</tr>
<tr>
<td>Critically discuss the argument that it is not possible to use Cognitive Behavioural Therapy with people with a learning disability.</td>
<td></td>
</tr>
<tr>
<td><strong>Children and Young People Essay</strong></td>
<td>47</td>
</tr>
<tr>
<td>“Divorce is bad for children”. Critically discuss with reference to the literature on the psychological effects on children of divorce and parental conflict.</td>
<td></td>
</tr>
<tr>
<td><strong>Older People Essay</strong></td>
<td>66</td>
</tr>
<tr>
<td>Discuss how psychological theory and therapy can make a contribution to working with issues of loss and bereavement in relation to older people. To what extent do they accommodate issues of social and emotional context and issues of cultural diversity and difference?</td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Section</strong></td>
<td>86</td>
</tr>
<tr>
<td><strong>Overview of Clinical Experience</strong></td>
<td>87</td>
</tr>
<tr>
<td>A summary of clinical activity during each placement</td>
<td></td>
</tr>
<tr>
<td><strong>Case Report Summaries</strong></td>
<td>94</td>
</tr>
<tr>
<td><strong>Adult mental health case report summary</strong></td>
<td>95</td>
</tr>
<tr>
<td>Relapse prevention work with a 44 year old woman with bipolar affective disorder</td>
<td></td>
</tr>
<tr>
<td><strong>People with learning disabilities case report summary</strong></td>
<td>99</td>
</tr>
<tr>
<td>A systemic approach to working with a 30 year old man presenting with anger difficulties within a relationship</td>
<td></td>
</tr>
<tr>
<td><strong>Children and young people case report summary</strong></td>
<td>102</td>
</tr>
<tr>
<td>Integrative therapy with a cognitive behavioural focus with an eight year old boy presenting with Obsessive Compulsive Disorder</td>
<td></td>
</tr>
</tbody>
</table>
Older people case report summary
Rational Emotive Behaviour Therapy with a 75 year old man who presented with anxiety and depression in the context of physical health problems

Specialist placement (Neuropsychology) case report summary
Neuropsychological Assessment with a 35 Year Old Woman who had Survived a Stroke

Research Section

Research Logbook
A summary of research activity during the three year course

Service Related Research Project
Evaluation of a staff training programme in relapse prevention for psychosis

Major Research Project
Screening for depression in older stroke survivors: An initial assessment of the reliability and validity of the Brief Assessment Schedule Depression Cards and the Beck Depression Inventory-Fast Screen
Academic Section

The academic section contains four essays. These were completed alongside each core clinical placement of the same specialisation.
Adult Mental Health Essay

Psychotic experiences (e.g. auditory hallucinations and delusions) are not understandable or meaningful. Critically discuss this statement and any implications for treatment.

January 2004

Year 1
Introduction

Psychotic experiences, particularly delusions and auditory hallucinations, have been the focus of intensive research over the last 15 years. This has largely been due to a shift away from investigating schizophrenia as a syndrome to investigating specific symptoms. This has liberated and energised psychological research and practice (Chadwick et al., 1996). This essay seeks to illustrate the influence that this research has had on the view that psychotic experiences are not understandable or meaningful, a view perpetuated by a purely biomedical model of the experiences.

The author views the terms understandable and meaningful as intimately linked. In the context of the essay title meaningful will be taken as whether psychotic experiences are expressive of something other than as an indication of a diagnosis. Understandable will be interpreted as whether psychotic experiences are theoretically understandable; that is whether the cause and maintenance of psychotic experiences can be explained.

The essay question is considered within the context of delusions and auditory hallucinations, specifically hallucinations of voices. The difficulty in offering an adequate definition of these terms has been recognised (Garety & Hemsley, 1997). There are many different definitions of delusions and auditory hallucinations which reflect different theoretical stances, most of which underestimate the complexity of these experiences. The author considers the following definitions to be, at present, the most useful. Oltmanns (1988 as cited in Garety & Hemsley, 1997) offers the following disjunctive definition of delusions in which defining features are listed, none of which are necessary or sufficient:

a. The balance of evidence for and against the belief is such that other people consider it completely incredible;
b. The belief is not shared by others;
c. The belief is held with conviction. The person's statements or behaviours are unresponsive to the presentation of evidence contrary to the belief;
d. The person is preoccupied with (emotionally committed to) the belief and finds it difficult to avoid thinking or talking about it;
e. The belief involves personal reference, rather than unconventional religious, scientific or political conviction;
f. The belief is a source of subjective distress or interferes with the person’s occupational or social functioning; and
g. The person does not report subjective efforts to resist the belief (in contrast to patients with obsessional ideas).

Hallucinations can be defined as:
any percept-like experience which occurs a) in the absence of an appropriate stimulus, b) has the full force or impact of the corresponding (real) perception and c) is not amenable to direct and voluntary control by the experiencer (Slade & Bentall, 1988, as cited in Bentall, 1990a, p.83).

The essay will begin with a consideration of why auditory hallucinations and delusions have traditionally been seen in psychiatry as neither understandable nor meaningful. It will then be demonstrated that the assumptions that this view is based upon are inaccurate. The content and themes of delusions and hallucinations will be explored to show that these experiences are meaningful. Persecutory delusions and auditory hallucinations will then be focused on to illustrate how cognitive theories in psychology have suggested new ways of understanding these experiences. It will then be emphasised that from a service user’s perspective psychotic and psychotic-like experiences are often both meaningful and understandable. Implications for treatment will be outlined throughout the essay and will be reviewed at the end. Implications for services will also be outlined. It will be concluded that delusions and hallucinations are meaningful but as yet incompletely understood in terms of a theoretical model. It is likely that they have the potential to be understood within a multi-factorial theory. It is therefore argued that current treatment should take a holistic approach.

Traditional View of Hallucinations and Delusions within Psychiatry
A distinction between psychosis and neurosis was made in the twentieth century which came to be included in psychiatric diagnostic systems. Neurosis was assumed to be to some extent understandable and likely to have psychological aetiology. Psychosis, however, was viewed as qualitatively different from normal experience and
therefore psychologically irreducible. It was assumed that psychosis had an organic basis, partly due to the observation that physical things, such as a brain tumour, can sometimes cause psychotic-like experiences. Karl Jaspers was instrumental in creating this distinction:

The most profound distinction in psychic life seems to be that between what is meaningful and allows empathy and what in its particular way is ununderstandable, mad in the literal sense, schizophrenic psychic life, even though there may be no delusions. Pathological psychic life of the first kind we can comprehend vividly enough as an exaggeration or diminution of known phenomena and as an appearance of such phenomena without the usual cause or motives. Pathological psychic life of the second kind we cannot adequately comprehend in this way. (Jaspers, 1963, as cited in Freeman & Garety, 2003, p.924)

Delusions and hallucinations have therefore been viewed as symptoms of a disease with a biological cause. People, who present to psychiatric services with these symptoms, in the absence of any known organic basis such as epilepsy, are assigned diagnoses such as schizophrenia, schizo-affective psychosis, delusional disorder, depressive psychosis or bipolar disorder. Delusions and hallucinations viewed in this way are inherently meaningless as there is no need to attempt to understand them beyond their presence or absence for the purpose of making a diagnosis (Jones et al., 2003).

The emphasis on organic aetiology led to a search for biological dysfunction in psychosis such as the search for the biological cause of schizophrenia. The aim of treatment was to suppress or eliminate symptoms of psychosis. Medication was used to this effect and mental health professionals were advised to avoid discussing these experiences for fear of exacerbating them. However, findings of research into genetics, brain chemistry and brain structure have been inconclusive. In addition, medication does not work in all cases and furthermore two thirds of people who take medications regularly experience a relapse of their symptoms within two years (British Psychological Society, 2000). It seems that biological and genetic factors are
likely to offer only part of an explanation of hallucinations and delusions. Psychologists such as Bentall (1990b) and Boyle (1990) have argued that schizophrenia as a concept has low validity and reliability. In this context psychological research moved to the investigation of symptoms rather than syndromes. It is within this research that the assumptions that the above approach made regarding psychotic experiences were found to be invalid.

The Continuum Argument
Consensus has emerged that psychotic experiences lie on a continuum with normal experiences, meaning they are quantitatively, rather than qualitatively, different (Johns & van Os, 2001). Peters, Joseph et al. (1999) developed the Peters et al. Delusions Inventory (PDI) in order to measure delusional ideation in the normal population. They found that nearly 10 per cent of a healthy sample scored above the means of a deluded group. Verdoux et al. (1998) used the PDI to measure delusional ideation in primary care patients. They found that the range of individual items endorsed varied between 5 per cent and 70 per cent in subjects with no psychiatric history.

Auditory hallucinations do not only occur in the context of psychosis, they feature in many clinical conditions such as dementia. Hallucinations can also be produced in normal individuals as a result of stressful circumstances such as sleep deprivation, bereavement and solitary confinement. Romme, Honig et al. (1993) report the results of an appearance on a Dutch television programme in which they asked people who heard voices to contact them after the broadcast. They sent out a questionnaire to the 450 voice hearers who contacted them and of the 173 people who responded 76 were not in psychiatric care. Studies which have investigated hallucinations in normal populations have found that a considerable proportion of people have experienced auditory hallucinations at some point on their lives (e.g. Johns et al., 1998).

Hallucinations and delusions are not restricted to organic states and do not occur solely as a symptom of mental illness. They lie on a continuum with normal experience and behaviour. They are therefore, likely to be understandable and meaningful and should have the potential to be explained by psychological processes in the same way as normal experiences do. Treatment aimed at people on the
continuum at risk of developing psychotic symptoms may be effective in presenting transition to a clinical state. This area of treatment has recently been targeted by the recommendation of development of early intervention services within the National Health Service (National Institute for Clinical Excellence, 2002).

**Delusions as Multi-Dimensional Phenomena**

Traditional psychiatric definitions have emphasised that delusions are fixed beliefs held with unshakeable conviction, being of bizarre content and not responsive to alternative argument (Garety & Hemsley, 1997). This led to the view that they could not be understood in terms of normal psychological processes and would be resistant to psychological intervention. However, these definitions underestimated the complexity of delusions; research has shown that delusions are multi-dimensional. Conviction, preoccupation, distress and action have emerged as key dimensions which can vary between individuals but also within an individual over time (Garety & Hemsley, 1997). For example, Stanton and David (2000), in a review of first person accounts of delusions, stated that 'recovery was also gradual with an intermediate stage of reality testing or fluctuation between belief and disbelief' (p.333). Furthermore Myin-Germys et al. (2001) found that the degree of delusional thinking in psychiatric inpatients varied during the course of a day. The most recent *Diagnostic and Statistical Manual* (DSM IV, American Psychiatric Association, 1994) acknowledges that delusions may show varying levels of conviction. This dimensional view of delusions encouraged psychological research into delusions and the development of psychological treatments.

**Delusions and Hallucinations as Meaningful Experiences**

If delusions and hallucinations are viewed as symptoms of a diagnosis it follows that the focus will be on whether they are present rather than the content of the experience. It is argued that it is the lack of investigation into the content of delusions and hallucinations that led to them being conceptualised as meaningless.

The view of psychotic experiences as meaningless implies the content should be random. Berrios (1991) supports this view in his description of delusions as 'empty speech acts whose informational content refers to neither world nor self. They are not
the symbolic expression of anything' (p.12). However, the content of psychotic experiences can often be related to personal experience and concerns. Rhodes and Jakes (2000) explored the correspondence between the contents of delusions and personal goals in a qualitative study. They found that themes within the delusions reflected persistent and serious concerns of the participant. Furthermore, they proposed that if personal delusions relate to personal motives, general delusions could relate to general motives. Some types of delusions do suggest this, for example, delusions of pregnancy and love as a desire for attachment and grandiose delusions as a desire for the achievement of power (Rhodes & Jakes, 2000). Clinically the author has observed the expression of individual concerns in the content of delusions. For example, a gentleman who had emigrated to England in early adulthood, with his wife, placed great emphasis on achieving financial security and had worked hard for this resulting in him having paid off the mortgage on his home. When unwell, his delusional beliefs focused on the idea that the British Broadcasting Corporation were trying to take his house away from him.

Similar results have been found in investigations of auditory hallucinations. Birchwood et al. (2000) found that the power differential between voice and voice hearer was closely paralleled by power differences between the individual and others in the patient's social world. Hallucinations can also be seen as a meaningful response to emotionally undigested events. Read et al. (2003) found that community mental health centre clients who had experienced childhood sexual abuse were three times more likely to experience auditory hallucinations than non-abused clients. If physical abuse was involved as well, this rose to four and a half times more likely. In addition, they found many examples of the content of the auditory hallucination being related to the abuse, for example, hearing the voice of the abuser.

It would appear from the above that meaning arises through linking the content of delusions and hallucinations with an individual's life experience and goals. Therefore an implication for treatment is that exploring these links may enable a better understanding of the client's experience for both client and clinician. Hallucinations and delusions which are related to traumatic experiences in people's lives might also benefit from the inclusion of trauma models when considering treatment.
The Cultural Context of Delusions and Hallucinations

Research has demonstrated that the content of psychotic experiences can be related to sociocultural context in addition to personal context. Suhail and Cochrane (2002) found that Pakistanis living in Pakistan were much more likely to have delusions of grandiose identity than Pakistani or British people living in Britain. The delusions were specifically likely to involve being a star, hero or famous person. The researchers speculate that this could be due to the large gap between higher and lower strata in Pakistan in which it is difficult to gain higher status; this status can only be achieved for some through delusional ideation. Delusions of reference, on the other hand, were much more frequent in the two groups living in Britain than in the group living in Pakistan. The references came from different sources (e.g. television, radio) and included being talked about, spied on and recorded. Suhail and Cochrane (2002) draw attention to the fact that in Britain we are surrounded by technology (e.g. television, mobile phones) which we have little understanding of and we are often observed in public places (e.g. CCTV). It is therefore, not surprising that this makes its way into the content of delusions.

Psychotic experiences are viewed differently in different cultures. In non-western cultures hallucinations can be seen as sacred experiences and not necessarily as unreal. For example, Gollingher and Sillons (1976, cited in Al-Issa, 1995) indicate that the Mitsoghi tribe in Gobi, West Africa ingest drugs in order to permit one to reveal the hidden ‘reality’ behind everyday experiences. In the Xhosa culture of South Africa, voice hearers are trained to become indigenous healers (Sodi 1995, cited in Thomas & Leudar, 1996). When assessing people who hear voices or experience delusional ideas care should be taken to ensure that a culturally sanctioned experience is not misdiagnosed as a symptom of mental illness. Religious experiences can often present very similarly to psychotic experiences and there is evidence that misunderstandings are common (British Psychological Society, 2000). In western culture and other cultures which generally perceive these experiences as negative it should be recognised that people who experience auditory hallucinations and delusions, especially if in conjunction with a diagnosis, are likely to have faced social stigma and exclusion. This alone is likely to be stressful and impede recovery. Treatment, therefore, should take a normalisation approach.
Contrary to the traditional psychiatric approach, auditory hallucinations and delusions can be seen to be meaningful in their expression of an individual’s social, personal and cultural background. Research has shown that it is not the actual experience of auditory hallucinations and delusions which determines whether people access psychiatric services but the distress caused by them (e.g. Peters, Day *et al.*, 1999; Romme *et al.*, 1992). The aim of treatment can therefore be reframed to reduce distress rather than eliminate symptoms. It seems likely that distress is a result of the meaning of an experience for an individual therefore care should be taken to understand this meaning during therapeutic work.

**Psychological Frameworks of Understanding Delusions and Hallucinations**

In light of the evidence, it is concluded that hallucinations and delusions are meaningful experiences. The focus now moves to explore whether psychotic experiences are theoretically understandable. The majority of research into hallucinations and delusions in psychology has been within a cognitive framework; exceptions include cognitive neuropsychological models (e.g. Frith, 1992). The success of Cognitive Behavioural Therapy (CBT) in disorders such as depression and anxiety led psychologists to consider how it might be applied to hallucinations and delusions. Development of treatment and theory in this area is mutually contributory and models proposed can be seen as clinical working models. In order to illustrate how cognitive theories have increased understanding in this area, theories of persecutory delusions are focused on. Persecutory delusions cause the most distress and are the most common type of delusion in clinical settings (Freeman *et al.*, 2002).

An example of a persecutory delusion from the author’s clinical work is as follows: a man in his early 30s had made a mild complaint about some colleagues at work. He became increasingly paranoid about their subsequent actions towards him to the point that he became fearful that they would try to break into his flat and kill him.

Maher (1974, cited in Garety & Freeman, 1999) proposed that delusional thinking occurred as a search for meaning as a result of an anomalous experience. This idea has been integrated into the majority of models of delusions, which often do not explain the cause of the anomalous experience.
Bentall and Kinderman (1998) propose that paranoid delusions have functional significance. Based on well established findings that paranoid patients make abnormal external attributions for negative events, they suggest that ‘patients’ delusional attributions are a dysfunctional mechanism for the maintenance of a positive perception of the self’ (p.128). Based on more limited evidence, they propose that attributions for negative events are not only external but also personal rather than situational (Garety & Freeman, 1999). They argue that external-personal attributions lead to paranoia whereas external-situational attributions appear to be psychologically benign. Kinderman and Bentall (1997) present a case study in which a patient’s level of expressed paranoia fell dramatically following CBT which involved specifically altering the patterns of attribution expressed by the patient. This theory is a description rather than a causal explanation of paranoid delusional beliefs, although the researchers speculate that the origins of this attribution bias lie in childhood.

The functional role of delusions in protecting self esteem has been noted by other authors. Trower and Chadwick (1995, cited in Chadwick et al., 1996) suggest there are two types of paranoia: ‘poor me paranoia’, in which the paranoia is seen as a defence against low self esteem and ‘bad me paranoia’, in which a negative view of the self results in paranoia which is consistent with the person’s view that they deserve persecution or punishment. An implication of treating delusions which are serving to protect self esteem is that psychological intervention should also aim to increase low self esteem.

Freeman et al. (2002) have recently proposed a cognitive model of persecutory delusions, which differs from earlier models in that it posits a central role for emotion. It is proposed that anxiety is the key emotion in the formation of persecutory delusional beliefs. Furthermore they conceptualise these delusions as threat beliefs and suggest that the maintenance of persecutory delusions involves similar mechanisms to threat beliefs in anxiety. The model suggests many areas for treatment but Freeman et al. (2002) state that the ideal objective of therapy is ‘the reduction of emotional distress via change in the degree of conviction in the threat beliefs’ (p.341). This theory is important in that it weakens the distinction between psychosis and neurosis and suggests rather that they are intimately linked.
Recent advances have also been made in understanding auditory hallucinations. It is now widely agreed that auditory hallucinations occur as a result of misattributing internal experiences as external experiences. In a review of research on hallucinations, Bentall (1990a) concludes 'hallucinators make hasty, overconfident judgements about the source of their perceptions and have a bias toward inappropriately attributing their perceptions to an external source' (p.90). The experience of hearing voices is very personal and varied. Some people find hearing voices distressing, others are reassured, some seek to engage and interact with their voices whereas others avoid them. Chadwick and Birchwood (1994) demonstrated that the link between the content and form of the voice and the affective and behavioural response is mediated by beliefs about the voice. In their study of voice hearing in ‘psychotic patients’ they found that voices perceived as malevolent led to patients resisting the voices, whereas the most common reaction to voices perceived as benevolent was engagement with the voices. Uncertainty as to whether the voices were malevolent or benevolent led to no clear pattern or behaviour. As part of their study they conducted cognitive therapy which focused on changing beliefs about the voice. Out of four cases they report three cases were successful and one not so due to environmental factors. Reduction in frequency and duration of voice activity also occurred which had not been predicted.

The above theories illustrate that rather than being psychologically irreducible, psychological processes are likely to be involved in the formation and maintenance of delusional beliefs and auditory hallucinations. Research is importantly conducted from the premise that these experiences will come to be understood. However, the theories offer more detailed description of the experiences rather than causal explanations. They are also supported by limited and in some instances conflicting evidence. Research involved in developing the models has mostly been conducted with people with diagnosis of non-affective psychoses such as schizophrenia.

The nature and causes of psychotic experiences are complex and at present incompletely understood. Due to the variability and complexity of delusions and hallucinations and the number of factors that appear to be related to these phenomena (e.g. biological, social, cultural and psychological factors), it is likely that a multi-
factorial account will be necessary to offer a full theoretical explanation. A stress-vulnerability framework is likely to be the basis of this account, in which different factors constitute vulnerability and different factors contribute to stress which precedes the onset of symptoms. Current models have been based in this type of framework (e.g. Freeman et al., 2002) but clearer links need to be made to illustrate how factors interact. Connection will eventually need to be made between biological findings and psychological research. However, at present psychological models offer much more to the theorist, researcher, service user and clinician than biomedical models.

To understand psychotic symptoms fully it will be necessary to offer an explanation of why they occur together and how they interact. Therefore future research may focus on why symptoms cluster together. Garety et al. (2001) have recently developed a cognitive model of the positive symptoms in psychosis in which delusions and hallucinations are included in the same framework. However, it is clear that symptom specific models have facilitated theory and treatment development.

**Service User Frameworks of Understanding**

It is important to draw attention to the fact that people who experience delusions and hallucinations are likely to have developed their own understanding of these experiences. Romme and Escher (1992) in their book *Accepting Voices* note that there are a huge range of frameworks which individuals use to account for their experiences, for example: psychodynamic, mystical and parapsychological frameworks. Jones et al. (2003) conducted a qualitative study into voice hearers' understanding of their own experiences. They included participants who were using mental health services as well as those who had never accessed services. They found that individuals' understanding of voices were diverse and complex. Frameworks of understanding included spiritual, psychological and paranormal perspectives. Some people felt pessimistic about their experiences whereas others found them positive. Interestingly, none of the participants adhered to all the biomedical concepts despite the predominance of this view in our culture. The gap between a medical model understanding of voice hearing and service users' understanding of voice hearing has led to the emergence of user groups such as the British Hearing Voices Network.
These groups emphasise the importance of voice hearers meeting together to discuss the experience and different ways of understanding hearing voices. The British Psychological Society (2000) have recently emphasised the importance of respecting an individual's framework of understanding. Indeed, attempting to understand an individual's experience from a single theoretical framework held by a clinician is likely to lead to disengagement with treatment. In recognition of the diversity of psychotic and psychotic-experiences, it is particularly important for a clinician to be aware of their own thinking about these experiences and ensure that this is not portrayed to client in a didactic way. In summary, it is clear from the point of view of some people who hear voices that they are meaningful and furthermore are understandable.

**Implications for Treatment**

Implications for treatment of new ways of thinking about hallucinations and delusions have been mentioned throughout the essay. It is argued that a CBT approach addresses many of these implications. The above psychological theories have led to innovative new ways of working with voices and delusions within a CBT framework. An important aspect of the approach is the change from the medical perspective, which, if taken to the extreme, involves ticking a box if delusions and hallucinations are present, to the core of the approach being the way the individual understands and gives meaning to psychotic experience. The CBT approach recognises the client as an expert on their own experience and this forms the basis for developing a collaborative and empathic therapeutic relationship (Fowler et al., 1998). Powerful beliefs and emotions are part of the experiences of auditory hallucinations and delusions and it can be difficult to engage clients in therapy. Therefore establishing a relationship in which a client feels understood and involved is important, particularly so for clients who have had contact with mental health professionals who have invalidated their 'real' experiences before.

A collaborative individualised formulation is central to the process of CBT for psychosis. Links are made between the characteristics of delusions and voices, the individual's life history and the circumstances around the formation of psychotic symptoms (Fowler et al., 1998). This is important considering the strong link between
content, themes and life experience explored above. In discussing this formulation with the client it is hoped a new perspective on delusions and voices will be achieved to create ground for addressing delusions and voices. It is here that specific ways of working suggested by the clinical models above are implemented. However, work is likely to include identifying and monitoring specific delusional interpretations of events or distressing appraisals of voices then seeking alternative explanations (Fowler et al., 1998). It should be noted that some beliefs will be strongly held and challenging the beliefs, even gently, may lead to the individual becoming more distressed. The therapist should then appreciate that it may be more helpful to work within the delusion or with the voices and focus treatment on reducing anxiety, working on self esteem or helping with practical solutions depending on what is appropriate for the client.

Recent randomised controlled trials have demonstrated that CBT can be an effective treatment approach for hallucinations and delusions. Sensky et al. (2000) found that CBT was effective in treating positive and negative symptoms in schizophrenia which was resistant to anti-psychotic medication. They found that whilst befriending was also effective, only CBT had sustained efficacy at a 9 month follow up. CBT has been recommended as a treatment option for schizophrenia in recently published guidelines (National Institute for Clinical Excellence, 2000).

There is now a general consensus that a theoretical explanation of delusions and hallucinations is likely to be multi-factorial in causation and maintenance. Therefore it should be emphasised that CBT should be seen as one treatment option within an individualised holistic treatment approach. Treatment may involve an integration of medical, psychological, social and practical approaches, such as medication, CBT, psychoeducation and family intervention.

Implications for Services
A barrier to implementing a holistic approach to treatment is that the beliefs propagated by earlier models of psychosis are strongly held within services. For example, the belief that it is not a good idea to talk to people about the voices they hear or the delusional beliefs they hold. Work needs to be conducted on overcoming
attitudinal barriers. In addition, it is important to train people with new skills for working with psychotic experiences such as CBT to aid a coordinated approach. Training is important in CBT because if CBT is used as a package solution to psychotic symptoms rather than being based on individualised formulation, it could become a didactic rather than collaborative approach.

**Conclusion**

The traditional view, within psychiatry, of auditory hallucinations and delusions as neither understandable nor meaningful was based on assumptions which have been shown to be invalid. It has been demonstrated that auditory hallucinations and delusions are meaningful experiences. Auditory hallucinations and delusions are expressive of personal, social and cultural themes.

The nature and causes of psychotic experiences are incompletely understood. However it has been demonstrated that psychotic experiences can be explained in terms of psychological processes and that psychological models have led to innovative new treatments which have been shown to have some success. Due to the variability and complexity of delusions and hallucinations and the number of factors that appear to be related to these phenomena (e.g. biological, social, cultural and psychological factors) it is likely that a multi-factorial account will be necessary to offer a full theoretical explanation.

It is emphasised that many people who experience psychotic or psychotic-like experiences will view them as both meaningful and understandable and that this point of view should be respected. In terms of treatment, it is concluded that a holistic approach should be taken in which treatment is tailored to a person's needs. Formulation in CBT can be a useful basis for this approach.

In terms of future research it would be useful to investigate delusions and hallucinations in a broader range of clinical groups and at various points on the continuum of these experiences. More qualitative research should be conducted in this area considering the very subjective nature of delusions and hallucinations. There is healthy debate between research teams working in this area which should ensure both
the continued development of ways of working with, and the understanding of, delusions and hallucinations.
References


Critically discuss the argument that it is not possible to use Cognitive Behavioural Therapy with people with a learning disability.

August 2003

Year 1
Introduction

Cognitive Behavioural Therapy (CBT) has been shown to be an effective intervention for a wide range of disorders including generalised anxiety disorder (e.g. Butler et al., 1991), depression (e.g. Blackburn & Twaddle, 1995), psychosis (e.g. Haddock et al., 1998) and pain (e.g. Turk, 1996). Furthermore, it is the treatment of choice for panic disorder, agoraphobia and simple phobias (Blenkiron, 1999). However, whilst CBT is used extensively in the general population, this has not been the case with people with learning disabilities. This essay will consider the argument that it is not possible to use CBT with a person with a learning disability.

Definitions of CBT vary due to the fact that the term subsumes a range of approaches which place different emphasis on the cognitive and behavioural components of therapy. The most commonly used type of CBT is based on the idea that maladaptive emotions and behaviour are the result of maladaptive thoughts and beliefs (e.g. Beck et al., 1979). Therapy aims to help clients to identify and modify these maladaptive thoughts and beliefs in order to reduce symptoms. Cognitive components of therapy include keeping a diary monitoring situations, thoughts and feelings to develop awareness of these, identifying connections between thoughts, affect and behaviour, examining the evidence for and against thoughts and helping clients learn to challenge negative thoughts. Behavioural components of therapy include setting up behavioural experiments to test irrational thoughts, graded exposure to feared situations, goal setting and activity scheduling and teaching specific skills such as relaxation.

The British Psychological Society (BPS; 2000) emphasise that people with learning disabilities do not constitute an homogenous group but state that there are three core criteria which must all be met for a person to be considered to have a learning disability. These are:

i. significant impairment of intellectual functioning;
ii. significant impairment of adaptive/social functioning; and
iii. age of onset before adulthood.

The BPS (2000) recommends that any sub-classification of diagnosis of a learning disability is based on intellectual and social or adaptive functioning. For intellectual
functioning, an IQ of 55 or below is characterised as a severe impairment and an IQ between 55 and 69 is characterised as a significant impairment. For social or adaptive functioning they suggest looking at the level of support needed by the person, extensive or pervasive social support is classified as severe impairment and limited or intermittent social support as a significant impairment. (see BPS (2000) for a detailed description of these categories).

The essay will begin with a discussion of the mental health needs of people with learning disabilities. The evidence base for the use of CBT as a treatment approach for depression and anger with people with learning disabilities will then be reviewed. It will be proposed that although the evidence base is limited, early research suggests that CBT can be made accessible for this population with good outcomes. It will be acknowledged that CBT is likely to be suitable for a minority of clients and methods of assessing the suitability of CBT for an individual will be discussed. Finally, key issues that therapists will need to be mindful of when considering the use of CBT with a person with a learning disability will be outlined. It will be concluded that it is vital that the use of CBT, as well as other psychotherapies, receives the funding and research to ensure that people with learning disabilities can benefit from a therapy that is widely used in the general population.

The Mental Health Needs of People with Learning Disabilities

It is important to initially look at why CBT has historically not been considered for people with learning disabilities and therefore why it is only now that the argument as to whether or not it is possible to use CBT with people with learning disabilities is being debated.

Firstly, the mental health problems which CBT might be considered as a treatment approach for were until recently not recognised in people with learning disabilities. Signs of emotional disorder were likely to be attributed to the biological cause of the learning disability (Borthwick-Duffy, 1994). In 1994 Borthwick-Duffy noted that ‘less than a decade ago, the term dual diagnosis, indicating the coexistence of mental retardation and mental illness, was a new buzzword in the field of mental retardation’ (p.17). However, following the processes of de-institutionalisation and inclusion,
which can be viewed as an objective improvement in the lives of people with learning disabilities, attention has turned to subjective experiences including their emotional lives and mental health needs (Arthur, 2003).

Secondly, there were concerns regarding the ability of people with learning disabilities to engage in CBT and other psychotherapies due to deficits in social and language skills. However, these concerns were not addressed in terms of looking at what skills were needed and little research was conducted on making therapies more accessible for people with learning disabilities. Interestingly, therefore, Bender (1993) proposed that the lack of therapeutic work being carried out was due to therapeutic disdain within the profession, stating that ‘psychotherapy involves intensely relating over quite a long time period to another person – a certain kind of intimacy. The giving of this intimacy is more difficult, aversive and time consuming when that person is seen as unattractive’ (p.11).

Borthwick-Duffy (1994) reviewed prevalence studies of mental health problems in people with learning disabilities and found rates of between 10 and 80 per cent reported. Suggested reasons for the widely varying rates were lack of reliability and validity in diagnosis, the method of case identification and what populations were studied.

Hatton (2002) identified lack of reliability and validity in diagnosis as due to concern as to whether standard psychiatric classification systems (e.g. DSM-IV, American Psychiatric Association, 1994; ICD-10, World Health Organisation, 1993) are applicable to all people with learning disabilities and whether ‘challenging behaviour’ is included in mental health problems. He also noted the difficulty in gaining information about mental health difficulties due to possible difficulties describing mental states and pointed out that typical referral pathways to mental health services are not as accessible to people with learning disabilities. Recently, the Royal College of Psychiatrists (2001) have developed a set of criteria intended for use alongside ICD-10 (World Health Organisation, 1993) for people with ‘mild’ learning disabilities and which can be used as a stand alone measure for people with ‘moderate’ to
'profound' learning disabilities. It is hoped this will improve validity and reliability of diagnosis.

Although there is little agreement between prevalence studies, the present consensus is that the prevalence of mental health problems is substantially higher among people with learning disabilities and they are likely to be exposed to identified risk factors such as genetic conditions, neurological damage, inappropriate living environments, abuse and lack of social support (Prosser, 1999). The recent white paper 'Valuing People' (Department of Health, 2001b) emphasised that 'the National Service Framework for Mental Health applies to all adults of working age. A person with a learning disability who has a mental illness should therefore expect to be able to access services and be treated in the same way as everybody else' (p. 66).

In the last decade, as the mental health needs of people with learning disabilities have become more visible, there has been a move within clinical psychology from the dominant model of behaviour modification and behaviour skills training towards offering a wider range of therapies and services. This is illustrated by the publication of books on using CBT with people with learning disabilities (Kroese et al., 1997) and psychodynamic approaches with people with learning disabilities (Sinason, 1992). A book on systemic approaches to working with people with learning disabilities is likely to be published next year (S. Baum, personal communication, 7 June 2004). A national network of psychologists using CBT with people with learning disabilities has also been set up, which reflects the growing interest in this area (Institute for Health Research, n.d.).

A Review of the Evidence for the use of CBT with People with Learning Disabilities

If it is argued that it is not possible to use CBT with people with learning disabilities, one might presume that it would not be being used. However, Nagel and Leiper (1999) surveyed qualified clinical psychologists working in the National Health Service (NHS) with people with learning disabilities and of the respondents found 35 per cent routinely used CBT approaches.
Volume One People with Learning Disabilities Essay

CBT has been applied to a range of presenting problems with people with learning disabilities, these have included: anger (e.g. Willner et al., 2002), depression (e.g. Lindsay et al., 1993), anxiety (e.g. Lindsay et al., 1997), psychosis (e.g. Leggett et al., 1997) and sexual offending (e.g. Lindsay, Neilsen et al., 1998).

In order to review the research evidence concerning the possibility of using CBT with people with learning disabilities, the presenting problems of depression and anger are focused on. Depression is chosen due to the large evidence base within the general population that CBT is an effective treatment. Anger is chosen as referrals for anger management are very common within learning disability services and there is a relatively large amount of literature discussing the use of different anger management approaches, some of which use CBT.

**Depression**

*Prevalence*

Studies focusing on prevalence rates of depressive symptoms among people with a learning disability have reported fairly high rates from 44 per cent (Marston et al., 1997) to 57 per cent (Meins, 1993). Hatton (2002) noted that the validity of diagnosing depression in people with severe learning disabilities, who may present depression through atypical symptoms such as screaming and irritability, is questionable.

*Evidence Base for the use of CBT with the General Population*

The most influential and widely used form of CBT for depression is that developed by Beck et al. (1979). Beck’s cognitive model for depression (1976) suggested that depression occurs as the result of the formation of dysfunctional assumptions through early experience. These dysfunctional assumptions are activated by a critical incident and produce an increase in negative automatic thoughts which result in the symptoms of depression. Therapy includes the following essential components: establishing the relationship between thought, feeling and behaviour, monitoring thoughts, isolating negative thoughts, attempting to elicit underlying assumptions, reviewing the accuracy of these cognitions, generating alternative thoughts and practise them in role plays and real settings (Lindsay et al., 1993). The Department of Health (2001a) state that
depressive symptoms can be treated effectively with psychological therapies with the best evidence being for CBT. This is based on evidence from meta-analysis of Randomised Controlled Trials (RCTs), which are viewed as the gold standard for treatment evaluation (NHS Executive, 1996).

Evidence Base for the use of CBT with People with Learning Disabilities

Nezu et al. (1995) conducted a study to investigate whether cognitive factors were related to depression in people with significant learning disabilities. They found that, in a sample of 107 adults, depressive symptom level was significantly correlated with the frequency of negative automatic thoughts and feelings of hopelessness. This suggested that depression experienced by people with learning disabilities is mediated by similar cognitive variables as those in the general population, therefore, they recommend that CBT should be considered as a treatment.

Lindsay et al. (1993) present two case studies in which they used CBT for depression with two people with a significant learning disability. Treatment maintained the components of Beck et al.'s (1979) cognitive therapy, although methods were adapted. As an outcome measure they used a revised version of the Zung Depression Scale (Michie & Lindsay, 1988, cited in Lindsay et al., 1993), although they did not report the psychometric properties. They found clients showed improvements on the Zung Depression Scale and in the daily monitoring of depressive feelings.

Adaptations

Lindsay et al. (1993) adapted traditional CBT methods to make them more accessible for people with learning disabilities. Adaptations included a greater use of role play to: identify negative automatic thoughts during re-enactment of situations, to understand links between thoughts, feelings and behaviour and to practise more adaptive ways of thinking. In the generation of alternative cognitions they used the simplest cognition, as suggested by the evidence, such as using the converse of a negative thought. They found that clients did not have sufficient language to monitor thoughts in detail and instead used an analogue scale to monitor daily worries of depression. Different points on the scale were accompanied by bars and clients were taught that the low bar
indicated no worries and the highest bar lots of worries. They found that clients could use these scales consistently.

Summary
Published research concerning the use of CBT for depression among people with learning disabilities is limited to a small number of case studies such as that described above and a case series (Lindsay, 1999). Further research is needed before the question of whether CBT for depression is effective with people with learning disabilities can be addressed. However the results of the case studies are promising and indicate that research should continue in this area. In focusing on the adaptations that Lindsay et al. (1993) made, one might argue that they were not using ‘CBT proper.’ However, they state that the essential components of Beck et al.’s approach were maintained.

Anger
Prevalence
Harris (1993) found a 17.6 per cent prevalence of aggression, which has been shown to be linked to poor anger control, within a sample of 1362 people with learning disabilities. In addition, Lindsay and Laws (1999, cited in Willner et al., 2002) reported that more than 60 per cent of clients with learning disabilities referred to a community based service for challenging of offending behaviours had clinically significant anger problems. Anger presents significant management problems for staff, therefore it is a difficulty which is very likely to be referred for (Kiely & Pankhurst, 1998).

Evidence Base for the use of CBT with the General Population
The evidence base for the use of CBT to treat anger problems is more limited than for the treatment of depression. Blenkiron (1999) identified the current clinical status for CBT and anger as ‘minimal evidence for it’s effectiveness’ whilst CBT for depression was identified as having ‘a major role in clinical practice’. Vecchio and O’Leary (2004) conducted a meta-analysis looking at the effectiveness of different treatments for anger within the general population. They found that overall the largest effect size was for relaxation therapy followed by cognitive therapy then CBT.
Evidence Base for the use of CBT with People with Learning Disabilities

Whitaker (2001) reviewed 16 studies which had used cognitively based anger control with people with learning disabilities. He identified that the following core components featured in at least half of the studies: relaxation, self-monitoring of behaviour or feelings, education about anger and other emotions, self-instruction and problem solving. Cognitive restructuring was also included in some studies. He stated that due to problems with experimental design none of the studies produced a clear demonstration of the effectiveness of a cognitively based anger control package with people who have a learning disability. Whitaker (2001) suggested that relaxation was the only component of the studies which could be concluded to be effective in reducing anger as studies had shown it to be effective on its own (Lindsay, Overland et al., 1998).

Since Whitaker’s (2001) review Willner et al. (2002) have published a RCT in which 14 clients with significant learning disabilities were assigned to either a waiting list or treatment group. Clients were matched for age, IQ and pre-treatment ratings of anger. Treatment was conducted in a group and covered the following topics: triggers which evoke anger, physiological and behavioural components of anger, behavioural and cognitive strategies to avoid the build up of anger and for coping with anger provoking situations and acceptable ways of displaying anger. They reported that the main methods utilised were brainstorming and role play. Significant improvements were found on clients and carers ratings on both the Anger Inventory (Benson & Ivins, 1992) and the Provocation Inventory (PI: Novaco, 1994) which were maintained and further improved at a three month follow up. However, they stated that there was no published psychometric data on these scales. With regards to the effectiveness of the cognitive component of treatment, they noted that ‘it was apparent to the facilitators that whereas clients developed a good grasp of behavioural coping strategies, they had great difficulty with cognitive restructuring of anger provoking situations and our impression was that only one of the group adequately acquired this skill’ (p. 228).

Taylor et al. (2002) have also recently conducted a controlled study using a manualised individual anger treatment of 18 one hour sessions. Clients had a mean IQ
of 69 putting them just within the range for a significant intellectual impairment and were in a specialist in-patient service setting for people who had offended. They used a delayed waiting list control design, clients were allocated to either anger treatment or routine care. They stated that cognitive restructuring was a central feature of the approach but arousal reduction and behavioural skills training were also included. They found that clients’ ratings on the PI improved significantly, however, the generalisability of the results is questionable due to the treatment setting.

Adaptations
In order to make CBT more accessible for their client group, Wilner et al. (2002) adapted the PI, using cartoon faces to support the likert scale. They included carers in the group and encouraged carers to assist with homework. They also used role play and brainstorm and used simplified language such as ‘thinking differently’.

Summary
There is a larger literature base focusing on the use of CBT with anger than with depression among people with learning disabilities. This is in contrast to the corresponding literature bases in the general population. This is of some concern given the high rate of depression among people with learning disabilities. One possible reason is that anger presents as a larger problem for services than depression due to the effect it has on the quality of life for people working with clients with learning disabilities. None of the studies which look at the use of CBT demonstrate which of the components is effective. Further studies are needed to compare, CBT with BT for example, which would demonstrate if the cognitive component was contributing to the treatment outcome. However, as Taylor et al. (2002) point out ‘it is premature to disregard cognitive restructuring with this client group when such procedures have not been implemented concertedy’ (p. 153).

Ideas for Further Research
The criterion employed for the provision of therapies within the NHS is evidence based practice. However, it is clear that there is currently not a sufficient evidence base to state that CBT is an effective approach to use with anger and depression. It should be noted that due to the relatively recent recognition of the mental health needs
of people with a learning disability, research in this area is in its infancy and many of the methodological problems and lack of evidence base is linked to this fact. It can be argued that it is important to use CBT if it likely to be a suitable approach for a client with learning disabilities (see below), in this way practice based evidence can be built up. It is important to clarify what steps could be made to improve the evidence base. Firstly, the establishment and common use of reliable and valid assessment and outcome measures is necessary. Encouragingly, there has been a move to producing self report as well as informant based measures following research evidence that people with learning disabilities are able to give consistent self reports of their emotional states (Lindsay et al., 1994). Recent research has shown the following self report instruments to have good reliability and validity, for example for multiple mental health problems; an adapted version of the SCL-R 90 (Kellet et al., 1999) and for depression; the Glasgow Depression scale-LD (Cuthill et al., 2003).

The national network of psychologists working with people with learning disabilities has agreed that the sharing and development of common treatment protocols for conducting CBT with people with learning disabilities and different mental health problems, as well as the use of common assessment measures in order to conduct case series across individual therapists, are needed to establish the basis for larger, controlled trials (Institute for Health Research, n.d.). Bouras and Holt (2004) point out that a particular difficulty in gaining funding for research in this area is that bodies funding mental health research tend to consider mental health for people with a learning disability as the responsibility of learning disability organisations and vice versa, this needs to be addressed.

In summary, early findings of research into the use of CBT with people with learning disabilities are promising and indicate that it is likely that it is possible to use CBT with a minority of clients with learning disabilities. It is now useful to consider how to assess who this minority are likely to be.
Assessing whether CBT is a Suitable Approach to use with a Client with a Learning Disability

Several researchers have suggested areas which should be assessed in order to make a decision of whether CBT is a suitable approach to use with a client with a learning disability.

Dagnan et al. (2000) have recommended the use of an A (antecedents), B (beliefs such as negative automatic thoughts and underlying assumptions) C (consequences, such as emotions and behaviours) model to clarify what must be understood to have grasped the CBT model. They summarise the abilities needed as the ability to recognise and differentiate emotions, the ability to link an emotional response to an activating event and the ability to recognise cognitive mediation. They carried out a study, with 40 participants who had been identified by their keyworkers to have sufficient language skills to have a conversation, to investigate client’s performance on a set of assessment procedures designed to assess these abilities. To investigate awareness and differentiation of emotion they asked participants to indicate which of five pictorial facial expressions indicated a stated emotion (Dagnan & Proudlove, 1997). Participants were able to recognise a mean of 2.7 facial emotions. In order to assess the ability to link an emotion to an activating event they used the Reed and Clements (1989) assessment in which six scenarios are described and participants are asked to identify whether in that situation they would feel happy or sad. They found that 75 per cent of participants passed this assessment. They then investigated the ability to pick an emotion given a scenario and a belief, 10 per cent of the participants passed this task. Finally they investigated the ability to pick a belief given a situation and emotion (happy or sad), they found 25 per cent of participants passed this task. The significance of this study is that it is the first to offer a structured stepwise approach of assessing the suitability of CBT for a client with learning disabilities. It also clarifies the need to assess a number of skills, for example, performance on the cognitive mediation tasks was below that of the tasks just linking situation and emotion.

Additional areas of assessment have been proposed by other researchers. Black et al. (1997) suggest investigating communication skills and screening for cognitive aptitude. They point out that people with learning disabilities may have short term
memory problems and concentration and attention difficulties which could lead to difficulties in therapy. Safran et al. (1993) recommend that the ability to access automatic thoughts is assessed, this may be tested by re-enacting a situation to investigate whether a client is able to produce an automatic thought. They also emphasise the importance of the ability to form a collaborative relationship and to take on personal responsibility for change, this may be difficult for clients who have a history of not being involved in choices in their lives. It is therefore important that the therapist has an understanding of the client’s background experiences including past social experiences. Although a diagnostic criteria for learning disabilities is a social impairment, the lack of relationships in a client’s past may not be due to inability but to lack of opportunity. Finally, the therapist should also be aware of potential response biases such as acquiescence, confabulation and suggestibility throughout assessment and intervention.

In summary, in order to investigate whether it is possible to use CBT with a client with a learning disability, it is likely that more time will need to be spent at the assessment stage. The above criteria suggest that CBT would not be a suitable approach to use with people with a severe learning disability, to date the author is not aware of any research that has been conducted on the use of CBT with this population. For some of the above areas of assessment, adaptations can be made to the therapy methods to overcome difficulties, for example, if someone has attention or concentration difficulties sessions could be kept short. Furthermore, initial preparatory work may help clients establish the abilities needed. In terms of further research it would be interesting to investigate the relationship between a structured assessment and outcome of a CBT intervention.

Key Issues in using CBT with People with Learning Disabilities
There are a number of issues which it is important to remain aware of whilst considering the use of CBT with a person with a learning disability. Firstly, as with any other treatment intervention, it is necessary for a client to give informed consent to engage in therapy. This will involve describing each element of therapy and presenting the potential costs and benefits of participating in the therapy, in order to help the client gain understanding of these to make a decision.
Although, CBT may appear to be a suitable approach in terms of a client’s abilities and the presenting problem, contextual influences on the presenting problem should not be overlooked. The possible influences of parents or carers, their peers and wider systems on the development and maintenance of dysfunctional thinking needs to be recognised. Viewing the person without recognising or involving significant systemic influences would appear inappropriate for many people in this client group. It may be more appropriate to work systemically or solely with the staff group. Interestingly, CBT has been used as a consultation model with a staff group (Kushlick et al., 1997), further research is needed in this area.

A number of studies have referred to the involvement of carers in CBT, this has included being involved actively in a therapy group (e.g. Rose et al., 2000; Willner, et al., 2002) and supporting clients with homework, for example, helping with the recording of hallucinations in a diary (Leggett et al. 1997). Willner et al. (2002) found in their study on an anger management group that improvements were significantly greater in clients accompanied by their carers. The implication of involving carers in supporting clients to use CBT is that carers also need to understand and accept the CBT model. Possible obstacles to this are that carers may have difficulty in understanding the concepts in CBT, they may not value therapy and may prefer behavioural or medical models. Furthermore they may not see this as part of their role and may have difficulty taking on extra tasks, particularly if there is no support from management. Although some of these difficulties may be overcome by training and consultation, others are more problematic and may mean that carers are not able to support their clients in this way.

It is important to remain aware of the power dynamic within the therapeutic relationship when working with people with learning disabilities. Clients with a learning disability are unlikely to have referred themselves for therapy and may not have known about the referral, so before therapy has even begun the client’s power is diminished. Kroese (1997) recommends that the therapist should be prepared to take on a didactic role if needed in helping people with learning disabilities understand abstract concepts in CBT. However, Procter (2003) points out that the power balance
can be influenced by 'the extent to which the therapist determines what can be put on
the agenda to talk about or guides the client to solutions or how much the client has
been shaped to say what the therapist wants to hear' (p. 15).

Conclusion
People with learning disabilities experience higher rates of mental health problems
than the general population. The Department of Health (2001b) have emphasised that
people with learning disabilities should have access to the same range of services for
their mental health needs as the general population.

CBT is used extensively with people in adult mental health services and there is an
evidence base to show it’s effectiveness for a wide range of disorders. However, the
evidence base for the use of CBT with people with learning disabilities is limited, this
is partly due to the fact that research looking at the mental health needs of people with
learning disabilities is in its early stages. Early findings indicate that CBT methods
can be adapted to make it more accessible for people with learning disabilities, with
good outcomes. It is acknowledged that CBT is only likely to be an appropriate
approach for a minority of clients with learning disabilities. Ways of assessing
whether CBT is an appropriate approach to use with a client with a learning disability
have been reviewed. However, it is clear that a diagnosis of a learning disability does
not automatically mean people are unable to recognise their cognitions and how this
affects their emotions and behaviours.

It is imperative that the profession of clinical psychology continues to strive towards
meeting the mental health needs of people with learning disabilities, to ensure that
they do not remain 'one of the most ignored populations in terms of receiving mental
health services' as stated by Reed (1997, p.53). Therefore, it is vital that the use of
CBT, as well as other psychotherapies, receives the funding and research to ensure
that people with learning disabilities can benefit from a therapy that is widely used in
the general population.
References


Children and Young People Essay

“Divorce is bad for children”. Critically discuss with reference to the literature on the psychological effects on children of divorce and parental conflict.

December 2004

Year 2
Introduction

In the United Kingdom 28 per cent of children experience the break up of their parent’s relationship by the time they reach the age of 16 (Office for National Statistics, 2002). Children with divorced parents comprise a large social group and it is therefore useful to have an understanding of what the psychological effects of divorce may be on these children.

Divorce can be defined as the legal termination of a marriage. However, as within the literature, the terms divorce and marital separation will be used interchangeably, indicating that a legal termination may not have taken place. If a study specifies that it used a sample focusing on legal termination of marriage only, this will be stated. Bad can be defined as ‘harmful.’ It is difficult to offer a precise definition of what will be included as psychological effects as many studies have used aggregate or broad outcome measures, for example, psychological adjustment or well-being, as well as specific outcomes such as anxiety, depression and conduct.

There are several major challenges in addressing the question of whether divorce is bad for children. Firstly, there is an immense amount of literature to review, secondly, this literature is value laden and thirdly, there are pervasive methodological problems. Blow and Daniel (2002) comment that ‘reviewing the literature on divorce/separation is in itself an exercise in holding multi-realities in mind’ (p.87). This essay will focus on the effects of divorce for children who were under the age of 18 at the time of their parent’s separation and first marriage separations, research on subsequent family transitions or multiple experiences of separation will be excluded.

This essay will begin by demonstrating the importance of remaining mindful of the social and political context of the question of whether divorce is bad for children when reviewing the literature. The development of research on the psychological effects of divorce on children will then be discussed, highlighting the difficulty of drawing conclusions due to prominent methodological problems. An overview of the research will demonstrate that whilst groups of children whose parents have divorced do appear to be slightly ‘worse off’ psychologically than those whose parents have remained married, this masks diversity and causality cannot be inferred from the current
Evidence will be shown that the psychological effects of divorce on children are likely to be influenced by a complex interaction of risk and protective factors, the literature on parental conflict and divorce will be used to illustrate this. Implications for clinical psychologists will be considered, followed by recommendations for further research. The essay will conclude that due to the issues raised above and the fact that the majority of children adjust well to divorce following an initial 'crisis' period, there is no justification for making a blanket statement such as 'divorce is bad for children'.

A Context for the Question

It is important to begin by contextualising the question of whether divorce is bad for children in terms of the current social and political climate. The question raises interest for not only researchers (who include academic social scientists, demographers and clinicians) and practitioners but also policy makers, the legal industry and the general public. There are frequent debates in the political and media arena in both the UK and the US concerning the breakdown of the 'nuclear family', rising divorce rates, anxiety about the loss of traditional 'family values' and the impact that this is having on society. This has influenced what literature on the effects of divorce on children has entered the media and therefore reached the public. For example, Coltrane and Adams (2003) presented the finding that media references to Judith Wallerstein's work, who portrays children as 'victims' of divorce and emphasises long term negative consequences for children, outnumber references to Mavis Hetherington's work, who presents a more balanced conclusion regarding the effects of divorce on children, by 14 to 1 despite the questionable methodology of Wallerstein's work. Whereas, an investigation of the Social Sciences Citation Index (1975 – 2002) lists more references to Hetherington than to Wallerstein.

Coltrane and Adams (2003) argue that this inaccurate representation of research has been used to socially construct the 'so-called divorce problem [together with] the symbolic use of the child as a victim of divorce...to reinforce the interests of certain groups of family moralists' (p.70). Furthermore, Hetherington and Stanley-Hagan (1999) suggest that the popular view (in the US) is that 'the optimal child-rearing environment occurs in families with two married parents who are biologically related.
to their children, although research scientists suggest that competent, well-adjusted children can develop in a variety of family forms’ (p.129).

Pryor and Rodgers (2001) emphasised that ‘researchers are not immune from the intrusion of their own value systems into their work and that questions are often asked and data interpreted within their particular subjective frameworks’ (p.53).

The Development of Research on Divorce and Children

Prior to looking at what research has shown regarding the effects of divorce on children, it is important to draw attention to the methodological limitations in the literature.

Early research on divorce in the 1950s to 1980s took place in the context of views that the two parent family was vital for adequate child socialisation and that the absence of fathers would have serious negative consequences for children, particularly boys (Hetherington & Stanley-Hagan, 1999). These early ‘father absence’ studies tended to utilise a cross-sectional comparison of children in ‘intact’ families to children in families where divorce had taken place. This design together with the use of small unrepresentative clinical samples and invalid and often single outcome measures meant that often results did show the severe negative consequences predicted.

Amato (2001) noted several methodological improvements, in the replication of an earlier meta-analysis (Amato & Keith, 1991a), for studies on the effects of divorce on children conducted in the 1990s. There was an increase in the use of: random samples, coupled with a drop in the use of clinical samples; control variables to adjust for pre-divorce factors; multiple item instruments; and larger samples.

One prominent change in methodology has been from cross-sectional to longitudinal designs. This has occurred in conjunction with a change in the view of divorce as an event to a process which starts long before the actual separation and carries on long after it. These longitudinal studies have been based on nationally representative samples from large sociological surveys such as the National Longitudinal Study of Youth in the US and the National Child Development Study (NCDS) in the UK.
However these studies often have limited data available (e.g. the date of separation is rarely recorded) and use inadequate outcome measures whilst psychological studies which tend to include more sophisticated measures tend to use clinical samples.

**What Conclusions can be Drawn from the Literature?**

This essay will now focus on what can be surmised from the literature on the psychological effects of divorce on children as to whether divorce is bad for children, whilst remaining mindful of methodological issues and the social context of research.

*Amato and Keith's (1991a) Meta-analysis*

Amato and Keith’s (1991a) conducted a widely cited meta-analysis which encompassed 92 studies from the 1950s to the 1980s which included a sample of children living with a parent who was single because of divorce and a sample of children living with continuously married parents. Outcomes were coded into the following categories: school achievement; conduct; psychological and emotional adjustment (depression, anxiety, general happiness); self-concept (self-esteem, self-efficacy); and social relations (mother-child relations and father-child relations). The results showed that whilst as a group the children with divorced parents tended to be worse off, compared to children who were living with continuously married parents, on all variables, the effect sizes were very small, ranging from the largest mean effect size of -0.26 for father-child relationships to the smallest mean effect size of -0.08 for psychological adjustment. The overall result was replicated by Amato (2001) with a meta-analysis of 67 studies conducted in the 1990s. However, he noted that of 177 effect sizes produced by the studies although 42 per cent were negative and significant indicating a worse outcome for children of divorce, the majority, 58 per cent, did not lead to a rejection of the null hypothesis.

Analysing the results from both meta-analyses, Amato (2001) found that all outcome variables showed curvilinear trends with the weakest effect sizes present in the 1980s and stronger effect sizes in earlier decades and the 1990s. He also found that methodologically more sophisticated studies produced smaller effect sizes. Amato (2001) therefore re-analysed the data controlling for methodological advances and found that studies in the 1990s produced significantly larger effect sizes for
psychological adjustment and emotional adjustment than studies in the 1980s. This was also true for academic achievement and to a lesser extent self-concept. Amato (2001) suggested that this could be a result of divorce becoming more common and therefore acceptable in the 1990s, and subsequently, more moderately rather than extremely dissatisfied marriages dissolved. He argued that this type of divorce can be more distressing for children, as it is unexpected and does not hold many benefits for the child. He also proposed that the result could be a reflection of the recognised increase in economic gap between married and single parents in the 1990s.

Cherlin et al.'s (1991) study
Cherlin et al. (1991) conducted a prospective longitudinal study which was instrumental in demonstrating the need to consider divorce as a process and therefore the need to take into account pre-divorce factors. They looked at data from the National Child Development Study in the UK. When children were aged 7, parents completed measures of behavioural problems, teachers completed a behavioural assessment and children had reading and mathematics tests, these measures were completed again when the children were aged 11. They then compared children whose parents had been in an intact marriage at age 7 and remained married when the children were aged 11 with those whose parents had separated by their 11th birthday. They found that both boys and girls in the latter group performed worse on all four outcome measures, these differences were small but significant. However, when the pre-separation characteristics from the data collection at age 7 were entered into the analysis, they found that all differences for boys dropped to no longer be significant and for girls the academic achievement data dropped but the behavioural data remained significant. They concluded that many of the 'negative effects' of divorce described in the literature were likely to be attributable to pre-divorce characteristics.

How long and how pervasive are the ‘effects’?
There is a consensus view in the literature that there are negative short term psychological effects of marital separation on children (Hetherington & Stanley-Hagan, 1999). Although there are notable exceptions, for example, children escaping pre-separation households which are very high in conflict (Jekielek, 1998). These short term effects include depression, anxiety and anger with the greatest effects for
externalising disorders, for example, antisocial, aggressive and non-compliant behaviour and lack of self regulation (Hetherington & Stanley-Hagan, 1999). However, it should be noted that the majority of studies showing these effects are unlikely to have controlled for pre-separation characteristics. Evidence has shown that these effects reduce two years after separation. It is not surprising that children react to what is frequently rated as the most stressful life event, which is likely to be accompanied by other stressful life events such as moving house and moving schools. In this sense divorce can be referred to as a ‘crisis’ as defined by Rapoport (1970, cited in Butler et al. 2003) as ‘an upset in a steady state’.

A major source of contention in the discussion of the psychological effects of divorce on children is the duration of the effects of divorce. A complicating factor in this discussion is that the date of separation is not referred to in many studies, therefore it is difficult to know whether studies are picking up short or long term effects.

Judith Wallerstein, in her recent book *The Unexpected Legacy of Divorce: a 25 year landmark study* (Wallerstein et al., 2000) presented the effects of divorce on children as long term, pervasive and very negative. She described that the most negative effects for children of divorce occur when they reach adulthood and begin to form relationships. Wallerstein et al. (2000) state that ‘divorce is a cumulative experience, it’s impact increases over time and rises to a crescendo in adulthood (p.298)’ and later ‘many end up with unsuitable or very troubled partners in relationships that were doomed from the start (p. 300).’ As mentioned earlier, Wallerstein’s research has attracted considerable media attention in the US, however many criticisms can be made of her methodology. Sweeping generalisations are made from a 25 year longitudinal study of a small clinical sample of 60 families, in which the parents were offered counselling in return for participation. Furthermore, in an earlier book Wallerstein and Kelly (1980) described that a substantial number of the parents were suffering from serious psychological problems at first contact. A comparison group was not included until the 25 year interview point and even then systematic comparisons were not made in the most recent book.
Mavis Hetherington, a prolific researcher on divorce, in her recent book *For Better or for Worse: divorce reconsidered* (Hetherington & Kelly, 2002) argued that the negative long term effects of divorce had been exaggerated. Her data found that 25 per cent of children whose parents divorced reached adulthood with 'a serious social, emotional or psychological problem' compared to 10 per cent of children with continuously married parents. Therefore, she suggested that whilst divorce can be seen as a risk factor for psychological problems, the majority of children (75 per cent) reached adulthood as well functioning individuals. Chase-Lansdale et al. (1995) in a longitudinal study found the likelihood of scoring above the clinical cutoff on a screening measure for a range of mental health problems (e.g. depression, anxiety, phobias) rose from 8 to 11 per cent for 23 year olds whose parents had separated in childhood or adolescence. This indicated that for the majority of children there was no difference compared to children whose parents had not divorced. In some support of Wallerstein, studies have shown that the experience of divorce as a child is a risk factor for difficulties in their intimate relationships as young adults. For example, they are more likely to marry earlier, report more marital disruptions and are more likely to divorce themselves (e.g. Amato, 1996; Tallman et al., 1999).

**Summary**

Meta-analyses and reviews (e.g. Hetherington & Stanley-Hagan, 1999; Leon, 2003) of the psychological effects of divorce on children do tend to conclude that as a group children whose parents have divorced are worse off on a number of outcomes including psychological adjustment than children whose parents have remained continuously married. However this conclusion needs to be qualified, firstly, the over-interpretation of statistical associations as causal has worryingly led to a general assumption that a causal link between divorce and negative psychological effects on children has been established, this is not the case (Ni Bhrolchain, 2001). Secondly, the differences are generally very small and it should be noted that the majority of studies included in the reviews and meta-analyses are unlikely to have controlled for pre-divorce characteristics, Cherlin et al. (1991) demonstrated the importance of this.

There is continued debate about the size and duration of the effects of divorce. Whilst researchers such as Wallerstein et al. (2000) argue that the effects are negative, large
and long term. Other researchers suggest that although divorce is a risk factor for psychological problems and difficulties in relationships in young adulthood, the majority of children whose parents are divorced are not distinguishable from their peers in terms of well-being when they reach young adulthood. The question of what influences the diversity of the psychological effects of divorce on children is now considered.

Factors Influencing the Psychological Effects of Divorce on Children

There has been a shift from looking at the mean differences between children whose parents have divorced and children with continuously married parents (Hetherington & Stanley-Hagan, 1999) to looking at diversity in patterns of adjustment. Many researchers are now taking a risk and resiliency view of divorce (e.g. Hetherington & Stanley-Hagan, 1999; Kelly & Emery, 2003; Leon, 2003). That is that different combinations of risk and protective factors influence what the psychological effects of divorce will be. Numerous risk and protective factors have been researched, these include individual characteristics such as age, gender and developmental stage (e.g. Amato & Keith, 1991a) for which there is inconsistent evidence (Hetherington & Stanley-Hagan, 1999). Other factors which have been investigated include the loss of the non-custodial parent, adjustment of the custodial parent, parental conflict, economic hardship and stressful life changes such as moving home and school. Amato (1993) reviewed the evidence for the influence of the last five factors and concluded that there was most support for the parental conflict factor.

It is not possible to review evidence for each of the different risk and protective factors. Therefore, the next section will focus on looking at parental conflict and divorce, the majority of researchers agree that this factor does have an influence on the psychological effects of divorce on children.

Focus on Parental Conflict and Divorce

Research has consistently found that parental conflict has a negative impact on children's psychological well-being (Grych & Fincham, 2001). It has been emphasised that conflict can vary in frequency, intensity, content, resolution and can be overt and covert and that some conflict can be positive for children, for example, if
parents model positive styles of conflict resolution (Davies & Cummings, 1994; Grych & Fincham, 1990). Although it should be acknowledged that children whose parents have divorced will have varied experiences and exposure to conflict (Kelly & Emery, 2003). It could be that some of the negative ‘effects’ of divorce are connected in some way with parental conflict. There are several hypotheses regarding the relationship between divorce, parental conflict and psychological effects on children. Firstly that the negative ‘effects’ of divorce on children are spurious and that pre-divorce conflict accounts for these effects. Secondly, that both divorce and parental conflict have negative effects on children, these are independent and thirdly, that divorce and parental conflict interact to influence psychological effects on children (Amato, 1993; Jekielek, 1998).

Amato et al. (1995) conducted a 12 year longitudinal study which investigated the relationship between marital conflict, divorce and children’s long term outcomes (offspring’s psychological distress, overall happiness, marital happiness and social resources). They looked at these outcomes in young adults, 8 of whom had experienced divorce between the ages of 9 and 12, 24 as teenagers and 10 in their early 20s. Parents were asked to complete a measure of conflict at three time points. They found that whilst individually neither divorce nor parental conflict showed significant associations with the outcomes. However, in cases where parents had rated conflict as high, children had higher levels of well being as young adults if their parents divorced compared to those whose parents had stayed together. Whereas, when parents had rated conflict as low, children had higher levels of well being if their parents had stayed together compared to those who had separated. These interactions were significant for all four outcomes. They also found that in marriages that did not end in divorce parental marital conflict was negatively associated with the well-being of offspring.

Although the study has merit in that a longitudinal design was utilised, the sample size was small, only one rating of conflict was used, none of the children in the sample were under 9 at the time of divorce and pre-divorce characteristics were not controlled for. However the results do show support for the third hypothesis.
Jekielek (1998) conducted a well designed study using data from the National Longitudinal Study of Youth. She looked at the association between level of parental conflict, as measured in biological two parent families in 1988 and children’s anxiety and depression/withdrawal in 1992. She divided the sample of 1640 children, aged 6 to 14 yrs in 1992, into two main groups, those whose parents had divorced between 1988 and 1992 (241 children) and those whose parents had remained married. Children’s sex, age, race/ethnicity, mother’s education and family income were controlled for in analyses. Mean levels of anxiety and depression were slightly lower for children whose parents had divorced over 24 months previous to 1992 than those who had been divorced for under 24 months offering support for the short term effects of divorce.

Parental conflict in 1988 and parental separation were each associated with higher levels of anxiety and depression in children in 1992, even when the control variables and the other factor was added into the regression equation. The finding that parental separation had a significant association even when conflict was included provides evidence against the first hypothesis that the effects of divorce on children are spurious due to pre-divorce conflict. The interaction between parental conflict and parental separation was also significant for both child outcomes. Children whose mother had rated higher levels of parental conflict in 1988 had lower levels of anxiety and depression in 1992, if their parents had separated between 1988 and 1992, in comparison to those children whose parents had remained together. The significant findings remained even when child’s anxiety and depression in 1988 was controlled for.

The lowest anxiety and depression was found for those children whose mother had rated low conflict in 1988 and whose parents had remained together. However, those children whose mother had rated high conflict in 1988 and whose parents had separated over two years previous to 1992 had similar low levels of anxiety and depression. The different findings from Amato et al.’s (1995) study could be due to methodological factors, such as the use of different measures, alternatively, it could be because the length of time since divorce was longer and the age of the children older in Amato et al.’s (1995) study.
There have been mixed findings regarding the influence of post-separation conflict on the psychological effects of divorce. Booth and Amato (2001) found no association between adjustment in young adults and post-separation conflict. Hetherington (1999) conversely found that post-divorce conflict was more detrimental to children than conflict in married families, leading her to suggest that for children in high conflict families which remain high after divorce it would be better if families had stayed together. However, Booth and Amato (2001) found that pre-divorce conflict was not a good predictor of levels of post-divorce conflict. Buchanan et al. (1991, cited in Kelly & Emery, 2003), found that young children whose parents involved them in high post-divorce conflict, for example denigrating the other parent in front of the child, were more depressed and anxious when compared to children whose parents left them out of high post-divorce conflict. When parents continued to have conflict but did not involve their children, their children did not differ from children whose parents had low or no conflict. This finding has important clinical implications.

Summary
One of the main difficulties with this area of research is the lack of reliable and valid measures of conflict, notably both the above studies used single informants for conflict. It will be important for future research in this area to include multiple methods and multiple informants of assessing parental conflict and outcomes for children.

The studies described demonstrate that the psychological effects of divorce are associated with pre-separation conflict. Results indicate that children from high conflict families whose parents divorce with the result that conflict drops, or at least excludes them, are better off than those who remain in high conflict families, for these children divorce is clearly not bad. It is apparent from the studies that the interaction between parental conflict, separation and psychological effects on children is complex.
Cultural Differences
The vast majority of the research on the psychological effects of divorce on children has taken place in the US. It is questionable as to whether results from this research can be generalised to other countries or even diverse cultures within the US which are under-represented in the research. Amato and Keith (1991a) reported that non-US studies included in their meta-analysis found more problems with conduct, psychological adjustment, mother-child relations and father-child relations. They suggested that this was due to the higher divorce rates at that time in the US, implying that divorce was less stigmatised and more interventions were taking place, lessening the effects in the US studies. Amato (2001) does not mention cultural differences in the updated meta-analysis. Within the US Amato and Keith (1991b) found some indication that negative effect sizes of divorce were weaker for African Americans than Caucasians. They suggested that the more common social support of extended families following divorce in African American families could explain this. If changes in divorce rate influence the effect sizes of outcomes for children as suggested by Amato (2001), this implies that the psychological effects of divorce on children will differ between cultures that have different divorce rates.

Clinical Implications
It is important to clarify what the profession of clinical psychology can take away from the literature on the psychological effects of divorce on children to inform clinical practice.

Awareness of our own assumptions and values when working with children whose parents have divorced is important, particularly because of the prevailing negative view in society of the outcomes for children whose parents have divorced. Research has indicated that the effects of divorce on children are diverse, this means it is important not to make assumptions but to explore with a child what divorce has meant for them. We should also remain aware that children, whose parents are divorced, who present in clinical services are not representative of children whose parents have divorced as a group.
The recently published National Service Framework for Children and Young People and Maternity Services (2004) highlighted that parents may require access to specialist forms of support following serious relationship conflict, divorce or starting a second or subsequent family, in order to enable them to cope effectively and to minimise the potential negative impact on the children. It could be that systemic family therapy would be a useful approach in these situations, particularly as in this model individual, family and extra-familial risk and protective factors can be taken into account. There has been little research on specific interventions for children whose parents have divorced (Hetherington & Stanley-Hagan, 1999). Although services for children whose parents are in the process of legal separation are likely to be provided by other agencies, clinical psychologists, with an understanding of the risk and protective factors following divorce and children’s psychological well-being could provide consultancy to these services.

**Future Directions for Research**

Firstly, as identified above there is a need for cultural, ethnic and racial factors to be considered, as there is a paucity of research in this area. Hetherington and Stanley-Hagan (1999) point out that ‘divorce occupies a very different place in Muslim, Christian and Jewish cultures and little research is available on differences in the concomitants and consequences of divorce for these groups’ (p.138).

Methodological issues in this area of research have been repeatedly emphasised by reviewers (e.g. Amato, 2001; Ni Bhrolchain, 2001) therefore researchers need to take recommendations on board, for example, conducting studies which are longitudinal in design and which control for pre-separation factors. It would also be useful to develop or at least use valid and reliable outcome measures consistently across studies to facilitate comparison.

There is limited qualitative research in this area and that which has attracted attention (e.g. Wallerstein’s work) has been methodologically problematic. However combining qualitative and quantitative methodology could mean that children’s voices about divorce are heard more, something which is severely lacking in the literature. Quantitative studies could also incorporate children’s ratings for example, their
perception of conflict and their own well-being. As Butler *et al.* (2003) stated ‘children are often the only reliable witnesses of their own experience’.

Research is also needed to investigate what type of interventions work best to promote protective and reduce risk factors for children following divorce. This is an area in which practice-based evidence could be used to inform researchers, there needs to be stronger link between clinicians and researchers to ensure a body of research which is clinically relevant.

Finally, there is a need for more research looking at linking risk and protective factors for children’s adjustment to divorce to specific outcomes and identifying the processes through which they may operate.

**Conclusion**

The essay began by demonstrating the need to remain mindful of the social and political context of the question of whether divorce is bad for children and the methodological limitations which are prevalent in the literature. An overview of research in the area demonstrated that negative associations have been found between children whose parents had divorced and their psychological well-being, compared to children whose parents had remained married. However the effect sizes in this literature are small and there is insufficient evidence to infer causality.

Whilst there is a consensus that most children will experience some short term negative psychological effects following divorce most research has shown that the majority of these children do not show different levels of psychological well-being compared to their peers by the time they reach young adulthood. Furthermore, research on parental conflict has shown that children from high conflict families whose parents divorce, with the result that conflict drops or at least excludes them, are better off than those who remain in high conflict families, for these children divorce is clearly not bad. As Rodgers and Pryor (1998) state ‘there is no simple or direct relationship between parental separation and children’s adjustment and poor outcomes are far from inevitable’ (p.32). The psychological effects of divorce on children are diverse and are influenced by a range of risk and protective factors which interact in
complex ways. Therefore, it can be concluded that there is no justification for making a blanket statement such as 'divorce is bad for children'.
References


Older People Essay

Discuss how psychological theory and therapy can make a contribution to working with issues of loss and bereavement in relation to older people. To what extent do they accommodate issues of social and emotional context and issues of cultural diversity and difference?

August 2005

Year 2
Introduction

The majority of older people encounter bereavement and loss and continue their lives without persistent distress, however, this is not so for a minority of older people whose distress can be debilitating. This essay will focus on bereavement which is commonly defined as the ‘loss of a loved one by death’ (Center for the Advancement of Health, 2004, p.498). The majority of psychological research on bereavement in older people has concentrated on the loss of a spouse, consequently, this is the main type of bereavement considered. The term ‘grief’ will also be used which can be defined as the ‘distress resulting from the bereavement’ (Center for the Advancement of Health, 2004, p.498). The most frequent chronological age cut-off used to define ‘older people’ in western psychological research and clinical practice is 65 (Britton & Woods, 1999).

Social context may include factors such as the level and type of social support available to the bereaved, the family and wider social networks expectation of grieving and the families and wider social networks attribution of meaning of the death. Emotional context may include whether the person had previous mental health difficulties, their attachment style and their emotional experience of prior loss.

There is huge cultural diversity in the experience of bereavement and more clearly in visible social practices such as mourning, the social behaviour following bereavement. Eisenbach (1984, cited in Dein & Huline-Dickens, 1997) reviewed the grieving process in a number of cultures and found that the mode of expression of grief was culturally determined, as were the ways of dealing with it. The majority of research cited in this essay has been conducted with participants who can be identified as white and western in terms of culture and implicit in the research is a westernised idea of normative versus non-normative grief.

This essay will begin by exploring the issues of bereavement for older people. A finding which emerges from this is that older people have been treated as a homogenous group and more research is needed to investigate the issues of bereavement for different sub-groups of older people. It will then be shown that the influential psychoanalytic stage models of grief are an inadequate way of
conceptualising issues of bereavement in older people. Contemporary theories such as the Dual Process Model of coping following bereavement and social constructionist theory, which accommodate contextual variables to a greater extent will be presented as potential frameworks for issues of bereavement in older people. It will be demonstrated that psychological interventions are only justified with older people at high risk of or experiencing difficulties in the grief process. An individualised assessment, conceptualisation and intervention, potentially drawing on different psychological theories and therapies is needed in order to accommodate individual difference and contextual variables in working with difficulties in the grief process with older people. It will be concluded that more methodologically sound research is needed before recommendations can be made for the use of specific psychological therapies for particular issues of bereavement in relation to older people.

The Issues of Loss and Bereavement in Relation to Older People

Rosenzweig et al. (1997) state that in the United States by the age of 65 over half of all women and over 10 per cent of all men have been widowed at least once and that among those who are 85 years or older, 81.3 per cent of women and 40.5 per cent of men are widowed. There is a clear gender difference due to the longer life expectancy of females.

Researchers, utilising quantitative methodology, have investigated the 'symptomology' of grief in older people and have shown that bereavement often impacts on older peoples’ mental and physical health. The National Service Framework for Older People (Department of Health, 2001) identified bereavement as a trigger factor for depression and as a risk factor for suicide. Rosenzweig et al. (1997) state that one third of widowed older people will meet diagnostic criteria for a major depressive episode one month after the death, one quarter will meet criteria after two to seven months and fifteen per cent will still meet criteria after thirteen months. Lund et al. (1989, cited in McKieman, 1996) found that at two years following the bereavement 10 to 17 per cent of a group of 108 bereaved spouses were significantly depressed compared to 5 to 12 per cent of a matched control group of still married people. Depression in older people who have been bereaved has been historically minimised and under treated, partly due to the difficulty differentiating a
'normal' grief reaction and a major depressive episode (Rosenzweig et al., 1997). Cattell (2000) found that older men had a relative risk of three times that of married men of attempted or completed suicides following the death of their spouse. However, older widowed women had a similar risk to older married women. Increased anxiety (Prigerson et al., 1996) and increased consumption of alcohol in older men (Byrne et al., 1999) have also been linked to bereavement. Physical health problems associated with bereavement include reduced immune function (Irwin & Pike, 1993) and increased mortality rates (Stroebe & Stroebe, 1993).

In the last ten years, several studies utilising qualitative methodology have investigated the experience of grief for older people. These studies add to the grief symptomology studies by adding depth to the description of the experience of grief and can be generative in terms of theory. Costello and Kendrick (2000) investigated the grief experience of 12 bereaved older people, the average age of participants was 74, whose partners had died in hospital within the last year. They found three main themes in their interviews which were feelings of isolation, a sense of loneliness and depression and perceived inner representations (including feelings of a perceived continued bond and feelings of presence of the deceased) and the development of a dialogue with the deceased. This perception of a continued relationship with the deceased was also found in two further qualitative studies with bereaved older people (Anderson & Dimond, 1995; Bennett & Bennett, 2000). Anderson and Dimond (1995) interviewed 12 older people, investigating the experiences of bereavement up to two years following the death. They found that particular difficulties associated with the bereavement were: loneliness, learning new skills, learning to socialise as a single person and concurrent difficulties such as financial hardship and conflict with step children. They also investigated coping skills and found those commonly used were: keeping busy, reflecting on the loss, talking with others (not all people found this useful), religion and prayer.

Loneliness emerges in studies as a key difficulty for older people following bereavement (McKiernan, 1996). The author is currently working with a 78 year old man, whose wife died 9 years ago, he reports ongoing loneliness describing particular
difficulties such as “missing someone to share the day’s events with” and “a lack of physical contact”.

Lund et al. (1986) found that nearly three quarters of bereaved spouses found it difficult to cope with tasks of daily living which had been performed by their partner but there was an increase in self esteem in those who did learn to cope. In the current cohorts of older people, wives and husbands may generally have taken gender specific roles. Therefore, older women may find it difficult to manage finances and household tasks, whereas older men may find cooking, cleaning and washing clothes difficult following the death of their spouse. Aging processes such as degeneration in biological systems impacting physical and cognitive functioning or illness may impact on the individuals’ ability to learn new skills, or to use existing coping strategies following a bereavement.

Older people are likely to have experienced other forms of loss, for example, their parents, friends, their jobs at retirement and physical health. If they have had difficulty coping with any of these previous losses, this may make them more vulnerable to the loss of their spouse. The current cohort of older people may have experienced traumatic loss or separations (e.g. evacuation) in the 20th century conflicts which may make them more vulnerable (Moss et al., 2001). This is also a factor for older people from different cultures who have migrated and may not have addressed previous losses of security, family, culture and friends (Corwin, 1995).

There is a vast body of research looking at risk factors for difficulties adjusting to bereavement, however methodological problems are pervasive (see Stroebe & Schut, 2001b for a review). The majority of this research disregards social and emotional context and cultural diversity, focusing on aspects of the bereavement situation and demographics such as age and gender of the bereaved. For example, a review of the literature failed to find any studies looking at the effects of existing and past mental health difficulties in adjusting to bereavement.

Whilst one would expect that type of death, such as sudden death or suicide, would effect outcome, research has produced inconsistent findings (Stroebe & Schut, 2001b).
However several factors have been shown to lead to difficulties in bereavement for older people. Older men have been shown to be more at risk of mortality, depression and suicide following bereavement than older women, although the reasons for this are not clear (Goldman et al., 1995; Umberson et al., 1992). Caregivers of older people, for example those whose partners have dementia, have been identified as having difficulty adjusting to the death of their spouse (Raphael et al. 2001). A consistent finding has been that securely attached individuals become distressed following bereavement but find it easier to adapt than insecurely attached people (Shaver & Tancredy, 2001). Corwin (1995) points out that individuals who have migrated from their country of origin may experience difficult grief reactions when they are unable to comply with traditional cultural prescriptions for mourning and may also find it difficult if there are different levels of acculturation in the family and therefore different cultural ideas about mourning.

It is clear from this research that the experience of grief and effects of bereavement for older people are individual, multi-dimensional and complex. The majority of research looking at issues of bereavement has treated older people as a homogenous group perhaps reflective of the pervasive ageism in western society. Moss et al. (2001) emphasise the need to further investigate factors such as attitudes towards their own death, and their reactions to deaths of others, the meaning and impact of multiple sequential deaths, the differential coping styles of subgroups of older people such as the young-old and old-old, relatively healthy and relatively frail, ethnic and religious, cognitively alert and cognitively impaired. More research is also needed on the gender differences suggested in existing research and the impact of different types of death such as the death of a sibling and the death of an adult child. Most studies also focus on the first two years following bereavement which may not give an accurate picture of the issues of bereavement.

**Psychological Theories of Bereavement and Loss**

Early psychoanalytic theory has arguably dominated views on bereavement and the grief process in western culture including clinical psychology and the bereavement counselling profession. This theory will be reviewed together with two more contemporary theories, the Dual Process Model of Coping following bereavement...
(Stroebe & Schut, 1999) and current social constructionist views on bereavement in terms of how they can contribute to working with issues of bereavement in older people.

**Early Psychoanalytic Theory**

Freud (1917/1957, cited in Stroebe & Schut, 1999) described that driven by an attempt to reduce the emotional and physiological arousal which is produced when someone is bereaved the individual struggles to cut ties with the deceased person. He proposed that a gradual detachment from the deceased, allows the person to reinvest in new relationships and that this is achieved by working through the loss. He suggested that failure to detach from the deceased would result in a difficult bereavement reaction.

Bowlby (1980) conceptualised bereavement in terms of attachment theory, he proposed that the same instinctive systems that a child experiences when separated from their mother are triggered when a person loses ‘a loved one’. He proposed the following four phases: shock, yearning and protest, despair and reorganisation. Like Freud he believed that working through these different phases is seen as important for an uncomplicated grief. Worden (1991) furthered the idea of grief work by conceptualising the grief process as four tasks which the bereaved needed to complete in order to adapt to the loss. These tasks can be summarised as working: to acceptance of the loss, to experience the pain of grief including identification and expression of feelings, to adjust to and continue living in an environment without the deceased and to withdraw emotional attachment from the deceased and form new attachments.

Despite the dominance of stage models of grief in clinical psychology literature and practice, the sole use of these models or theories in conceptualising grief in older people is inadequate, particularly given the individual nature of grief. These theories are essentialist, that is they assume a grief process which is universal, and thereby do not accommodate issues of cultural diversity and difference. The models are intra-psychic and do not account for issues of social context and the consideration of emotional context is limited to the quality of the attachment relationship to the deceased. Furthermore, the assumptions made by the models have been criticised in the past 15 years (See Wortman & Silver, 1989, 2001 for a review). For example,
older people do not necessarily experience a period of intense distress and may experience positive emotion following a bereavement. Zisook et al. (1997) found that two months after bereavement, 49 per cent of older widows and widowers did not meet diagnostic criteria for major depression, minor depression or sub-syndromal depression. Secondly, there is no research which shows that confronting a loss leads to a better outcome than avoiding a loss (Wortman & Silver, 2001). For some older people, the notion of breaking down attachments is inappropriate as evidenced by the qualitative studies above. Zisook and Schuchter (1993) showed that 13 months after a spouse’s death 63 per cent of respondents agreed that they feel their spouse is with them at times, 47 per cent that he or she is watching out for them and 34 per cent that they talked with their spouse regularly.

The Dual Process Model of Coping with Bereavement

Stroebe and Schut’s (1999) model proposes that both loss-oriented and restoration-oriented stressors are associated with bereavement and that oscillation between these two types of stressor (i.e. confrontation and avoidance of the different stressors) is the key to adaptive grieving. They suggest that there is usually a shift away from loss-oriented to restoration-oriented stressors as the period of bereavement lengthens. Loss-oriented stressors involve the actual processing of the loss of the person, separation distress and positive and negative meaning making of the loss. It will also include loss-orientated cognitions such as ‘I miss her every day’. Restoration-oriented stressors are the secondary stressors that come about as an indirect consequence of the bereavement, for example, changing identity from wife to widow or mastering the skills that the bereaved had contributed to a relationship. It also involves coping with a range of additional psychosocial transitions such as the rebuilding of shattered assumptions about the world and one’s own place and dealing with restoration-oriented cognitions such as ‘I am a single person in a couples society’. Strobe and Schut (1999) suggest that difficulties will occur when there is too much focus on loss oriented stressors resulting in ‘chronic grief’ or too much focus on restoration oriented stressors resulting in absent grief.

Whilst this model is largely theoretical and has not yet been empirically tested. The model appears to have face validity as a general framework in which to consider the
issues of loss and bereavement for some older people. Anderson and Dimond (1995) found that both keeping busy (restoration-oriented) and reflecting on the loss (loss-oriented) were coping skills used by the group of older people in their study. It also takes into account the stressor of learning or taking over the roles or tasks which the dead spouse completed which research has shown is relevant for a lot of older people. However, for some older people the idea of a general move away from loss-oriented stressors may be inappropriate. The ‘old-old’ may be at a stage in their lives where it is best to consolidate their memories and draw on them for sustenance throughout their remaining years (Miller et al., 1994).

The theory accommodates cultural difference and diversity to a limited extent, for example, cultures and sub-cultures could differ in the extent to which they are loss or restoration oriented (Stroebe & Schut, 2001a). Within western culture, they suggest that older men are more loss-oriented leading to the higher depression and suicide rates. The theory does make an assumption that a balance between loss and restoration-oriented stressors is the key to adaptive grieving, this may not be so for all cultures. Individual difference, including social and emotional context can be accounted for in the degree of focus on loss or restoration-oriented stressors as well as the fact that different stressors will be more or less important for different people.

Social Constructionist Theories of Bereavement
The social constructionist approach denies the essentiality and universality of thoughts, feelings and words said in or about bereavement. They suggest that bereavement being part of reality is socially constructed and that construction occurs through conversation. Neimeyer et al. (2002) draw on social constructionist ideas and propose a constructivist theory of bereavement which suggests that what is important is the meaning an individual makes of the loss. He suggests that through grieving individuals are struggling to affirm or reconstruct a personal world of meaning that has been challenged by a loss. Nadeau (2001) expands on this notion of meaning making from an individual to the family and suggests that the meaning a family makes of the death of a family member effects how they will grieve. These emerging post-modern theories of bereavement may be useful for working with older people as they easily accommodate social, emotional and cultural context because no prior
assumptions of meaning are made. Evidence for the social constructionist approach to bereavement is that grief and mourning practices differ both historically and culturally.

**Summary**

Following this brief review, it is questionable how early psychoanalytic models can make a contribution to working with issues of loss and bereavement in older people. This is due to the lack of attention to individual difference, social and emotional context and cultural difference and diversity and the refutation of key assumptions of the models by recent research. The focus on loss and restoration-oriented stressors in the Dual Process Model is consistent with the different issues reported by older people following bereavement and therefore may be a useful framework to use. Social constructionist theory, in particular, and the Dual Process Model accommodate issues of social, emotional context and cultural difference and diversity to a greater extent than earlier theory and in this way demonstrate a shift in focus from intra-individual to inter-individual processes of bereavement. There is currently little research looking at the evidence for either of these theories and this is clearly needed.

**Psychological Therapies with Issues of Bereavement and Loss**

Several reviews of psychological interventions for the bereaved have recently been conducted (e.g. Center for the Advancement of Health, 2004; Forte *et al.*, 2004; Kato & Mann, 1999; Raphael *et al.*, 2001) which conclude that there is a lack of evidence to recommend any particular psychological intervention for bereavement or in fact little evidence to suggest that any form of intervention is effective at all. There are a lack of studies focussing on bereavement interventions with older people specifically, which is surprising given the age-related issues discussed earlier and the frequency of bereavement in this population.

Theory-practice links are tenuous in most reported intervention studies. There is a general failure to describe the theoretical models which underlie the intervention, this is unusual in literature on psychological interventions (Neimeyer, 2000). Where there is a reference to a model it is often a stage model of grief indicating a lack of interventions derived from contemporary theories.
Neimeyer (2000) conducted a review of only randomised controlled studies and found a more promising result. Studies were divided into those who offered interventions for 'normal' bereavement reactions and those who focussed on traumatic grief (which they defined as those offering interventions for bereavement which had been violent, sudden, untimely or for people whose grief had been more chronic). Interventions for normal bereavement reactions had no measurable positive effect on any outcome variable, whereas the studies for traumatic grief showed a reliable positive effect. They also calculated a statistic which indicated treatment deterioration effects, those people who were worse at the end of treatment than they were at the start. They found that deterioration effects were substantially lower for the 'traumatic grief' group than for the 'normal' bereavement group where nearly half the participants got worse.

The majority of older people are able to manage their grief without showing persistent distress or a significant lasting impact on their physical and mental health. The available evidence shows that intervention with this group is unlikely to provide any benefit and may have a negative effect. Providing an intervention to this group of older people is unjustified and may undermine an older person’s successful coping (McKiernan, 1996). Conversely, older people who may benefit from intervention may be those identified with high risk factors for having difficulty adjusting to bereavement and/or those who are already having difficulties.

An Individualised Approach to Working with Issues of Bereavement

A review of the issues of bereavement for older people indicated that the experience of bereavement is individual and grief is multi-dimensional and complex. Therefore, it is clearly important that interventions are flexible and adaptable to a person’s individual response. Arguably the stage theories of bereavement have led to a rather generic way of working with bereavement in older people, leading to a tendency to facilitate emotional expression which is not usually effective (Stroebe et al., 2005).

In order to provide an individualised intervention, a thorough assessment and conceptualisation is needed. An assessment could include background history, a description of difficulties facing the older person and screening for depression and
anxiety, for example. It would also be vital to investigate the variables associated with the loss, for example: the type of death, the previous relationship with the deceased, what roles the deceased filled in the relationship, previous experiences of loss and how the person had coped, the meaning of the death for the individual and coping strategies. Enquiry about an older person’s spiritual or religious background is important and something which may be neglected in an increasingly secular society. Furthermore, attention should be paid to the social and cultural context, for example whether other family members’ views on the death are congruent with the individuals and whether the person has social support.

In working with older people who have been bereaved who have a different cultural background to the therapists it is not enough just to be aware of the cultural practices of mourning. Knowledge of how an individual or family relates to the views on death and mourning in that culture is also important. It is important to be aware of the families migration history, the clients’ perception of their own and the families adjustment to a death and the degree to which their ethnic background is significant. (Corwin, 1995).

Assessment and intervention are not necessarily separate processes, through assessment of an older person’s rich experience they may rediscover skills they have used to cope in the past. It may be that a simple intervention can be indicated following assessment, for example normalising the experience of seeing the dead person for someone who had take this as evidence that they were going mad leading to their distress. Referral for practical support such as support in managing finances or with shopping may be appropriate if this is impacting on the person’s distress.

Working with Bereavement-Related Depression and Anxiety
Recent developments in working therapeutically with grief in older people are now considered. Whilst historically there has been a paucity of research on psychological therapy for older people generally, recently there have been considerable developments in the evidence base (Pachana, 1999). The identification of depression or anxiety in older people who have been bereaved and the provision of evidence-based therapies for these is likely to be an effective way of working with this group of
people. This may be particularly true for those who have previously had depression or anxiety and whose bereavement had triggered another episode. Miller et al. (1994) report that the use of Interpersonal Psychotherapy (IPT) with bereavement related depression in 6 older people produced a mean change from 18.5 to 7.2 following an average of 17 weekly sessions. IPT does address the social and emotional context of bereavement, focussing on previous and current relationships. There are some useful guidelines which suggest ways in which clinical depression can be differentiated from normal depression (e.g. Rosenzweig et al., 1997).

**Cognitive Behaviour Therapy (CBT)**

There is growing attention as to how CBT may be used with people who are having difficulties adjusting to bereavement and there is some limited evidence for its effectiveness (e.g. Powers & Wampold, 2001). Given the established evidence base for the use of CBT with depression and anxiety in older people, there is no reason why advances in this area will not be applicable for older people.

Kavanagh (1990) suggested a broad cognitive behavioural approach to working with bereavement. This included controlled exposure to stimuli and cognitions associated with the loss, gradual (re)-activation of activities, building up social support and cognitive therapy. Interestingly, this approach can be linked theoretically to the Dual Process Model of coping with bereavement (Stroebe & Schut, 1999). Gradual activation may be more effective for a person who is predominantly loss-oriented whereas controlled exposure to stimuli and cognitions associated with loss would be more effective for a person who is more restoration-oriented.

Recent theoretical debate and research evidence has linked the importance of both surface level cognitions and core beliefs to the grieving process, indicating the possibility that cognitive therapy could be used to address these. Boelen et al. (2003) found that global negative beliefs about life, world and future and threatening interpretations of grief reactions each explained a unique proportion of variance in traumatic grief symptom severity in a group of bereaved adults. Neimeyer (2000) and Janoff-Bulman (1992) have conceptualised grief as a challenge to the individual’s construction of the self and world, which can be viewed within a cognitive model as a
challenge to the individual’s core schema or beliefs. Janoff-Bulman (1992) states that restructuring these beliefs involves moving towards a view of world and self in positive terms but also incorporating loss into new beliefs. Techniques and ways of working with core beliefs taken from the CBT literature (e.g. Greenberger & Padesky, 1995) may prove to be useful in this context (Fleming and Robinson, 2001).

Family Therapy
Nadeau (1996), building on her theory about the importance of family meaning making in grief, suggests that families may benefit from family therapy if there is an inhibition of family meaning making or there is inter-generational conflict. Dein and Huline-Dickens (1997) suggest that family therapy enables a team to work using flexible models which can sensitively be adapted to families of ethnic minorities.

Summary
The evidence base for interventions with issues of bereavement in older people is very limited and this is clearly a challenge for therapists working in this area. Theory-practice links are tenuous with a continued reliance on the stage models of grief for guidance for interventions. The individual nature of grief in older people indicates a number of approaches are potentially beneficial with older people who are experiencing difficulties following bereavement. Arguably, conducting a thorough assessment leading to an individualised conceptualisation and intervention rather than use of a specific therapy, is most important in accommodating individual differences and contextual variables. However, family therapy may be more easily adapted to working with cultural diversity than CBT. Promising developments in CBT and family therapy point to new ways of working with bereaved older people, however further research on these interventions is needed. In working with older people, the therapist should strive to be aware of their own anxiety of death and fears of dependency which may impact on the therapy. In addition, ending therapy could be experienced as another loss by the person and this needs to be managed.

Conclusion
The issues of bereavement for older people are varied and individual and the process of grief is multi-dimensional and complex. The majority of older people encounter
bereavement and continue their lives without persistent distress. Research has shown that psychological intervention with this group of older people is not justified and could potentially be negative.

The assumptions of early psychoanalytic theory and stage models of grief and the generic ways of working with grief suggested by the models have largely been refuted by research. Furthermore they are inadequate in conceptualising grief in older people given their lack of consideration of individual difference including social and emotional context and cultural difference and diversity. Contemporary psychological theories such as the Dual Process model and social constructionist theories accommodate these contextual variables to a greater extent and illustrate a shift from an intra-psychic to a more inter-individual perspective on the grief process. However it is argued by the author that the way in which psychological theory and therapies are most likely to make a contribution to working with older people who are experiencing persistent distress following bereavement is through individualised assessment, conceptualisation and intervention. In this way a number of psychological theories and therapies can be drawn upon to accommodate contextual variables and to develop a more effective intervention. Considerably more methodologically sound research is needed before we can make recommendations about the use of specific therapies for particular issues of bereavement for older people.
References


Clinical Section

This section is comprised of two parts:

- An overview of the clinical experience gained from each of the placements undertaken during clinical psychology training; and

- A summary of the five case reports written for each core placement and for the first specialist placement.

The full case reports and full records of clinical activity are submitted in Volume Two of this portfolio. Volume Two also contains placement contracts, logbooks and evaluations.
Overview of Clinical Experience
Adult Mental Health Core Placement

Setting
This placement was split between a psychology department working with clients referred from primary care and an Assertive Outreach Team (AOT). The services covered rural and urban areas. Clinical work was conducted at clients’ homes, in the community, in the psychology department and at a day hospital.

Models
The main theoretical models were cognitive behavioural and narrative.

Clinical Experience
This placement involved assessment and/or intervention with clients with the following presenting problems: depression (including bipolar depression), anxiety (including Obsessive Compulsive Disorder, generalised anxiety, agoraphobia with panic attacks and health anxiety), psychosis, anger, sexual abuse and cognitive impairment in the context of psychosis and substance misuse.

The placement included co-facilitation of a twelve session cognitive-behavioural group for clients with depression.

Other experiences included:
- Participation in weekly clinical case review meetings at AOT, Care Programme Approach meetings, psychology department business meetings and an away day.
- Observation of narrative therapy with couples, ward rounds at the local inpatient psychiatric unit and a team meeting of the local Community Mental Health Team.

Presentations, training and research
Attendance at fortnightly psychology department training sessions on topics such as formulation and personality disorder. Trust-wide psychology training days on severe and enduring mental illness and supervision. A service related research project was completed to evaluate a multi-disciplinary staff training programme in relapse prevention for psychosis using a focus group and questionnaires.
People with Learning Disabilities Core Placement

Setting
A Community Learning Disabilities Team (CLDT) which covered a predominantly rural area. Clinical work was conducted at clients' homes including residential services and family homes and a day hospital.

Models
The theoretical models used were cognitive-behavioural, behavioural and systemic.

Clinical Experience
This placement involved assessment and/or intervention with clients with the following presenting problems: anxiety, anger, bereavement, challenging behaviour, dementia, forensic risk and parenting skills.

Assessment and intervention involved individual work with clients, including a couple, and indirect work with professional carers and families.

Other experiences included:

- Participation in clinical team meetings and a family therapy session.
- Observation of a ‘best interest’ meeting for a client who was unable to consent to medical treatment and two suitability assessments for the CLDT.
- Discussion of adult protection issues with a social care assessor and speech and language therapist to discuss communication issues.

Presentations, training and research
The development and co-facilitation of a working with bereavement workshop for a residential home staff group and a dementia training workshop. A joint presentation for the CLDT on ‘hearing voices’ and development of an information leaflet on the same topic.
Children and Young People Core Placement

Setting
The placement was based in a Child and Adolescent Mental Health Service (CAMHS) which served two medium sized towns and a rural area. Clinical work was undertaken at the CAMHS base and at schools.

Models
The models used were cognitive-behavioural, behavioural, narrative, solution focused and systemic.

Clinical Experience
This placement involved assessment and/or intervention with clients with the following presenting problems: anxiety (including phobias and obsessive compulsive disorder), attention and hyperactivity difficulties, autistic spectrum disorders, behavioural difficulties, eating disorders, depression, low self-esteem, sexual abuse and sleeping difficulties.

This placement involved joint working within CAMHS and between agencies with children and their families.

Other experiences included:
- Participation in weekly CAMHS team meetings, fortnightly business meetings, clinical child psychology meetings and a CAMHS away day.
- Observation of a family therapy session.
- Visited an adolescent inpatient unit and a pupil referral unit.
- Participation in an Adolescent Outreach Team home visit to assess a 16 year old presenting with severe obsessive compulsive disorder.

Presentations, Training and Research
Attendance at a child protection training day and a presentation by the youth substance misuse team.
Older People Core Placement

Setting
The placement was based in a service providing clinical psychology for older people in neurological and physical rehabilitation settings. Clinical work was undertaken in inpatient rehabilitation units, a day hospital, clients' homes and a day centre.

Models
The main models used were cognitive-behavioural and rational-emotive behavioural.

Clinical Experience
This placement involved assessment and/or intervention with clients with the following presenting problems: adjustment difficulties, anxiety, cognitive impairment, dementia, depression, fear of falling. These were in the context of neurological illnesses including dementia, Multiple Sclerosis, Parkinson's disease, Stroke and other illnesses requiring physical rehabilitation.

A reminiscence group for clients with dementia was co-facilitated with a voluntary sector support worker at a day centre. Two psychoeducational sessions for clients with newly diagnosed Parkinson's disease on coping and relaxation were facilitated.

Other experiences included:
• Participation in weekly multi-disciplinary team meeting on rehabilitation unit.
• Shadowing clinical psychologist in older people community mental health team.
• Observation of occupational therapy and physiotherapy sessions.

Presentations, training and research
Attendance at a training day on the Mental Capacity Act. Presented the rationale and design for the major research project 'Screening for Depression after Stroke in Older Stroke Survivors' at a psychology meeting and at a one day conference for 'Psychologists Researching into Stroke (PSYRIS)'. Presented clients at regular peer supervision sessions.
Specialist Placement: Neuropsychological Rehabilitation

Setting
The setting was a nine bedded intensive post-acute rehabilitation unit based in a hospital for people with severe neurological difficulties.

Models
The models used were neuropsychological, cognitive-behavioural and psychodynamic. Interventions were informed by systemic ideas about working with families.

Clinical Experience
This placement involved assessment and/or intervention with clients with the following presenting problems: anxiety, depression, suicidal ideation, cognitive impairment, adjustment difficulties and lack of insight. This was in the context of a range of neurological disorders including cerebrovascular accident, conversion disorder, head injury and Huntington’s disease.

A psychotherapeutic group was co-developed and co-facilitated with the clinical supervisor and an assistant psychologist.

Other experiences included:

- A psychoanalytic observation on a unit for people with Huntington’s Disease.
- Participated in daily handover meetings, weekly clinician meetings, a case review meeting and an inter-agency discharge planning meeting.
- Visited units for people who are in a minimally conscious and vegetative state.
- Observed a medico-legal assessment and an outpatient Huntington’s Disease clinic.

Presentations, training and research
Facilitated a training workshop on neuropsychological assessment for rehabilitation assistants. Attended “Working with Families with Brain Injury” training day and presented summary of day to team. Attended presentations on the Mental Capacity Act 2005, care aims and goal setting.
Specialist Placement: Working with Adolescents in Child and Adolescent Mental Health Service

Setting
The placement was based in a Child and Adolescent Mental Health Service working with adolescents (15 to 18 years).

Models
The models used were cognitive-behavioural, psychoanalytic and systemic. Interventions were informed by models of adolescent development.

Clinical Experience
This placement involved assessment and/or intervention with clients (and families) with the following presenting problems: anger, anxiety, attachment difficulties, autistic spectrum disorder, depression, emetophobia, panic attacks and agoraphobia, self-harm and somatisation.

Other experiences included:
- Involved in weekly CAMHS tier 2/3 case discussion and allocation meetings.
- Met with clinical nurse specialist (substance misuse and mental health difficulties) from a Youth Offending Team to discuss provision of mental health services to adolescents in YOT.
- Visited service for young unaccompanied asylum seekers and spent a day with the primary mental health worker in this service. Included joint assessments of mental health problems of newly arrived asylum seekers.
- Participated in meeting with newly developed Youth Advice and Counselling service.

Presentations, training and research
Researched and gave a presentation to the CAMHS team on ‘Copying Letters to Clients in CAMHS’. The presentation generated a lot of discussion within the team which resulted in a change in team policy. Attended presentation/teaching session by a newly developed ‘Early Intervention in Psychosis’ team. Attendance at child protection training session on ‘Emotional Neglect’.
Clinical Case Report Summaries

Names and identifying information have been changed in the following summaries to preserve anonymity
**Adult Mental Health Case Report Summary**

*Relapse prevention work with a 44-year-old woman with bipolar affective disorder*

**Referral**

Sarah was a 44-year-old white British woman who had a history of bipolar affective disorder with psychotic symptoms. She was referred to the clinical psychologist within an Assertive Outreach Team (AOT) by her care coordinator for relapse prevention work.

**Presenting Problem**

Sarah experienced frequent relapses of depression, mania and/or mixed mood, which often included hearing voices and visual hallucinations that she found very distressing. Sarah had become aggressive, harmed herself and had taken an overdose at these times. She wanted to reduce the number of relapses not only for the distress they caused her but also to reduce the impact of these episodes on her family including her teenage sons and husband. Sarah described that as soon as she began to feel unwell, she felt ‘out of control’. One team member described that they rescued Sarah at times of crisis rather than working collaboratively to manage her illness.

**Assessment**

A review of Sarah’s case notes gave a comprehensive history of her family background and mental health difficulties, which had resulted in her first admission to hospital aged 18. Therefore, assessment focused on Sarah’s experience of, and attitudes towards, relapse and what this meant for her and her family. Sarah related most episodes of illness to stressors in her life. Assessment revealed maladaptive coping strategies, for example, when Sarah noticed she was becoming ill, she tended not to tell people ‘in the hope that it may go away’. At these times she thought that there was nothing she could do to prevent herself becoming ill and indicated that medication and AOT were more important than her actions in preventing relapse.

Sarah’s case notes indicated that she had been admitted to hospital on four occasions (two involved being sectioned) in the previous two years spending a total of 120 days as an inpatient. It was proposed to use this as a baseline to monitor long term change.
following the relapse prevention work together with a questionnaire regarding attitudes to relapse to monitor short term change.

**Formulation**
Sarah’s vulnerability to relapse was formulated using a stress-vulnerability model and cognitive theory. It was hypothesised that early experiences in her family and frequent forced hospitalisations during her teenage years and early twenties were likely to have led to feelings of helplessness when unwell. This may then have led to an external locus of control regarding her illness resulting in dependency on mental health services.

It was hypothesised that Sarah was vulnerable to illness at times of stress. When Sarah began to experience symptoms, this may have activated certain attitudes and beliefs regarding her illness and relapse (e.g. ‘I am helpless’, ‘I am going to lose control’, ‘If I don’t tell anyone about my symptoms they will go away’) and fear regarding hospital admission. These may have led Sarah to adopt a maladaptive coping strategy of not letting anyone know about early signs of illness to try and prevent becoming unwell. Other people therefore were likely not to notice Sarah was ill until the symptoms had got worse. At this later stage intervention was more likely to involve admission to hospital. This then acted as a maintaining factor of vulnerability to relapse as it reinforced beliefs that she had little control over her illness and that being unwell always resulted in hospital admission. Protective factors included the fact that she was motivated to work on reducing relapse, that she was engaged with the AOT and that she had a good social network and supportive husband.

**Intervention**
The aim of the intervention was to reduce the number of Sarah’s relapses, to increase her feelings of control over her illness and to work more collaboratively with Sarah on managing her illness. The intervention involved an early warning signs approach to relapse prevention which is based in cognitive behavioural therapy. This involved initially working with Sarah to discuss previous relapses and draw links between precipitating stressors and thoughts, feelings and behaviours at these times. This aided
a collaborative discussion and production of a list of Sarah’s early middle and late warning signs of illness. Guided discovery and socratic questioning was used to work with Sarah to produce a plan of personal coping strategies and service interventions at each stage of warning signs.

Exploration of what would help Sarah to use the plan of coping strategies and what would stop her using them revealed some dysfunctional assumptions which Sarah held regarding letting people know she was starting to feel unwell. For example, ‘If I ask for help then it is a sign of not coping when I should be’. Socratic questioning was used to develop more adaptive assumptions that could be tested.

An important aspect of the intervention was working with Sarah to hand over the work to her case coordinator, the relapse prevention plan was also presented to the AOT. The team and Sarah’s case co-ordinator were also consulted during the work.

The intervention also included bereavement work after Sarah’s father died unexpectedly. This involved normalising some of Sarah’s feelings such as numbness and anger.

Reformulation
Negative beliefs regarding the consequences of telling her family she was becoming ill were elicited and incorporated into the formulation.

Outcome and Evaluation
Sarah showed minimal change on the attitude to relapse scale. There were two positive indicators of change. Firstly, Sarah arranged a meeting with her family and case co-ordinator to explain how they could help her at times of stress and potential relapse. Secondly, following the death of her father she did experience warning signs of illness and used steps in her relapse prevention plan demonstrating an active role in managing her illness. This included asking her husband to arrange some relaxation time for them both. These symptoms did not lead to a hospital admission.
It was recognised that further cognitive therapy would be useful to continue to work on her negative thoughts regarding helplessness, lack of control and asking for help.
People with Learning Disabilities Case Report Summary

A systemic approach to working with a 30-year-old man presenting with anger difficulties within a relationship

Referral

Matthew Walker was a 30-year-old white British man with a mild learning disability who was referred to the Community Learning Disability Team by the manager of the residential home he lived in. He was referred as a result of anger and 'controlling behaviour' towards his girlfriend, who lived in the same residential home.

Presenting Problem

Staff at the residential home described that Matthew expressed an inappropriate level of anger towards his girlfriend Caroline (which included swearing) and were concerned that his behaviour was ‘controlling’. No physical abuse was reported to have occurred. Staff were concerned about the level of risk to Caroline, particularly of physical aggression, and a set of guidelines for the relationship had been implemented. These guidelines restricted Caroline and Matthew to seeing each other at certain times and in certain places, a staff member was also required to be present. The implementation of the guidelines highlighted the power the staff had over the relationship.

Assessment

Assessment interviews were conducted with Matthew himself, a member of care staff and his ex-foster mother (his advocate) to gain different perspectives on the presenting problem. Assessment revealed that everyone agreed that the relationship was important to Matthew and Caroline. Rules had been in place regarding the relationship from its commencement such as where the couple were able to spend time together. Matthew was upset that he was not allowed to spend time alone with his girlfriend as he ‘could not be trusted’. He reported that he sometimes got ‘frustrated’, said ‘nasty things to Caroline’ and told her what to do. Matthew identified that a trigger could be ‘having a bad day’, he wanted to ‘be calmer’, so he would be allowed to spend more time with Caroline. Matthew’s description suggested that he had possibly internalised staffs views. A risk assessment for physical
aggression was carried out that identified that there was minimal risk. Matthew and Caroline were not spending time alone together and Matthew had never been physically violent.

The assessment also revealed that Matthew had recently moved into the residential home, where other residents had more severe learning disabilities, from a bungalow in the same complex where he had experienced more independence. He referred to his current room as his ‘independent flat’.

**Initial Formulation**

Matthew’s anger difficulties were conceptualised systemically in the interactions between the staff, Matthew and Caroline. It was hypothesised that Matthew’s self-esteem was low, possibly as a result of physical abuse when young, and due to the stigmatisation of people with learning difficulties. It was suggested that he protected his self-esteem by emphasising his independence. This included downward social comparison to other people with learning disabilities including Caroline, which could explain the ‘controlling’ behaviour. The restrictions on his relationship were experienced as a threat to his independence and therefore his self-esteem, which it was hypothesised was responded to by anger. Unable to attack staff due to the power imbalance, his anger was dysfunctionally directed towards Caroline. This caused concern to staff, who therefore imposed more restrictions, leading Matthew to feel more angry. Therefore, the problem had intensified with the staffs’ attempts to control it and in that way the solution had become the problem.

**Intervention**

The intervention was based on the strategic family therapy model as a brief therapy model was needed due to the likelihood of breakdown of the relationship and/or Matthew’s residential placement if change did not occur. The specific aim was to disrupt the cycle of escalation. Different parts of the system, Mathew, Caroline and the staff were met at different times. An important aspect of the intervention was meeting with Matthew and Caroline together which emphasised the equality of parties in relationship. A major concern for them was that they were not allowed to sit together at dinner. Therefore, part of the intervention involved empowering Matthew
and Caroline to negotiate sitting together, role plays were used to facilitate this. The problem was also reframed with staff members, although they were anxious that the guidelines would be removed altogether. Through the assessment and intervention process the recent reduction in Matthew’s independence became clearer and was discussed in the latter stage by Matthew. He expressed a lot of distress regarding this.

**Reformulation**

The formulation was substantiated during the intervention. On one occasion Mathew had been angry that a session had conflicted with an extra day at work. Matthew expressed anger towards Caroline regarding this in a session rather than towards the trainee psychologist. The relationship between restrictions on Matthew’s independence and his anger became clearer through the intervention and recommendations were made to the staff team to support an increase in his independence.

**Outcome and Evaluation**

At the end of the intervention Matthew and Caroline were sitting next to each other at the dinner table and there had been no difficulties with this. There had been no major incidents of anger or aggression between Matthew and Caroline. Therefore, staff were considering other opportunities where they could spend time together if they wished. More positive stories about the relationship were also being presented by staff members. Matthew and Caroline reported that things were good. Staff and Matthew were considering ways in which they could increase his independence. Matthew was also considering whether living apart would be easier for his and Caroline’s relationship indicating that he saw a future in it.

The intervention involved holding a complex set of issues and perspectives, it may have been beneficial to have a co-therapist. However supervision enabled me to reflect on these and aided the management of issues of confidentiality.
**Children and Young People Case Report Summary**

*Integrative therapy with a cognitive behavioural focus with an eight-year-old boy presenting with Obsessive Compulsive Disorder*

**Referral**

Ben Granger was an eight-year-old white British boy who was referred to the Child and Adolescent Mental Health Service by a school nurse after his mother had presented concerns about obsessive behaviour.

**Presenting Problem**

Ben had a number of obsession and compulsions, including frequent and intense worries about becoming ill and lengthy hand-washing and grooming rituals. These impacted on Ben and his family's life to the extent that Ben and his twin brother were frequently late for school and family outings could be delayed by two hours whilst Ben completed his rituals. Ben's difficulties were causing arguments within the family, particularly between Ben and his twin brother.

**Assessment and Formulation**

Assessment interviews were conducted with Ben, his mother Sue, and his class teacher. Ben's father was unable to attend due to work commitments. Ben lived at home with his brother and his parents. A developmental history revealed that both Ben and his brother experienced some separation anxiety when attending nursery school. Ben engaged in imaginative play and showed good social communication skills including good eye contact. Ben had an excellent academic performance and had lots of friends and interests. A difference between Ben and his brother was that he had a tendency to feel overly responsible or guilty for things which were not his fault. Ben's difficulties had started following the death of his grandfather and had exacerbated whilst the family were living temporarily in a caravan. His mother was extensively involved in the rituals. The school had not observed any rituals or remarkable behaviour. Assessment revealed a maternal and paternal history of depression and paternal history of obsessions and compulsions. The Children's Yale-Brown Obsessive Compulsive Scale (CY-BOCS: Goodman et al., 1989 a, b) was used
to assess the severity of Ben's obsessions and compulsions which were in the moderate range.

**Formulation**

Ben's obsessions and compulsions were formulated in an integrative model using cognitive-behavioural and systemic theory. It was hypothesised that Ben was predisposed to develop obsessions and compulsions due to genetic vulnerability and a tendency to feel overly responsible and guilty for things beyond his personal control. Ben’s difficulties may have been precipitated by stressful life events including the death of his paternal grandfather. A negative cycle of reinforcement was hypothesised as a maintaining factor for Ben’s compulsions. Certain stimuli (e.g. a dusty object) triggered an obsessive thought (e.g. I’m going to get ill) which caused anxiety which was then reduced as a result of performing the compulsion (e.g. washing hands). In this way Ben did not find out that the obsessive thought would not come true. Sue’s involvement in the rituals, the reorganisation of the family’s routine around the rituals, modelling of his father’s rituals and reassurance were proposed as maintaining factors in the family system. The tendency for Ben to be shouted at due to delays increased his distress and may have made him less able to resist compulsions. His parents’ own mental health difficulties may have impacted on their resources to cope with Ben’s distress. A number of protective factors were identified as a good basis for the intervention.

**Intervention**

The intervention was carried out independently with Ben and his family for nine weekly sessions. Psychoeducation was initially provided for Ben and his family to normalise Ben’s symptoms and provide a rationale for the intervention. Exposure and response prevention were used to break the hypothesised cycle of reinforcement. This involved working with Ben to expose himself to situations or stimuli which would normally elicit an obsessive thought and cause him to carry out a ritual and encouraging him not to engage in this. Externalisation of the obsessions, a key element of narrative therapy, was included and used with Ben and his family to help reduce the feelings of guilt and shame identified. Ben engaged well with the externalisation. Positive self-statements, a cognitive therapy technique, were
introduced as talking back to the externalisation when carrying out exposure tasks. Statements were generated with Ben when conducting tasks within sessions.

The above was supported by involving family members in some therapeutic sessions. Utilising drawings and visual representations helped Ben to understand and engage with the work. A 'fear thermometer' was used to order exposure tasks and drawing was also used to support externalisation. A 'workbook' for Ben to record information from each session supported the intervention. A reward system was used to encourage Ben to complete exposure tasks.

Reformulation
The initial formulation was substantiated and elaborated during the intervention. However, the impact on family relationships including Ben’s parents’ marital relationship became clearer during the intervention and was incorporated into the formulation.

Outcome and Evaluation
The ratings on the CYBOCS remained in the moderate range. However, Ben described through externalisation language that the obsession and compulsions had reduced in strength and he had increased in strength. He described ‘my strength is getting bigger the more I talk back to [the externalisation] and don’t wash my hands and now I don’t have to jump up the stairs or touch the lines’. Ben’s mother also described a reduction in rituals and that those which remained were quicker. She also described that Ben was happier generally and that the family, as well as Ben, were feeling more positive about change. There was less conflict within the family as a whole. However, Sue’s engagement in some rituals remained a problem and the intervention was handed over to the clinical supervisor to continue work on this aspect.

The following factors were thought to have contributed to the successful development of the therapeutic relationship, which formed the basis for the progress made. These were: working in a collaborative and open way, ensuring time was spent each session on ‘non-problem talk’, incorporating Ben’s interests such as drawing and
externalising the OCD which helped Ben and the family view the OCD as something they could work together against.

References


Older People Core Placement Case Report Summary

Rational Emotive Behaviour Therapy with a seventy-five-year-old man who presented with anxiety and depression in the context of physical health problems

Referral of the Problem

Jim Southern was a seventy-five-year-old white British man who was referred by his GP due to health anxiety. Jim had seen a clinical psychologist for twelve Cognitive Behavioural Therapy (CBT) sessions in the previous year.

Presenting Problems

Jim visited his GP frequently with health concerns which had led to his referral. His main concern was that he had become less mobile on his legs in the past year and was no longer able to undertake activities such as bowling and dancing. He described that this resulted in him ‘feeling down’ and ‘frustrated’.

Initial Assessment

The assessment was conducted independently over three one-hour sessions. Jim lived alone, his wife had died nine years ago, however his daughter and son-in-law lived nearby. Jim had a long term history of health problems and health anxiety and had had osteoarthritis for 25 years.

The previous intervention had used a Rational Emotive Behaviour Therapy (REBT) approach and had focussed on reducing Jim’s health anxiety. The outcome had been a reduction in avoidance behaviour (e.g. walking to local shops) which had been maintained. However, he reported that he had continued to feel down and frustrated about the reduction in his mobility.

Jim denied any cognitive difficulties, such as memory, concentration or problem solving difficulties and none were apparent during the assessment. He completed activities of daily living without assistance including bathing, cooking and dressing. An activity diary showed that Jim was driving to the local town for shopping, had visited his daughter and had attended the University of Third Age and a social club. At home, he had enjoyed gardening, reading and television programmes.
Jim scored 8 on the depression scale (borderline range) and 10 on the anxiety scale (borderline range) of the Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983).

**Initial Formulation**

Jim's mixed symptoms of anxiety, depression and frustration were formulated within a CBT model as difficulty adjusting to change in physical mobility. It was hypothesised that contextual factors such as cohort beliefs, role investments, and socio-cultural context (Laidlaw et al., 2003) together with long term anxiety had contributed to difficulties in adjustment. It was also suggested that Jim was struggling with redefining personal goals and compromise which are considered important for adjustment to illness (Davies, 1996).

Maintaining factors for Jim's difficulties were formulated within Ellis's (1999) ABC model from REBT. It was hypothesised that situations which emphasised the reduction in Jim's mobility, for example, difficulty getting up from a chair were an activating event for Jim (A), which triggered an irrational belief (B) 'I must do what I used to do when I was younger and more physically mobile otherwise I am incomplete and a dead loss'. The emotional consequences (C) being depression and frustration, a behavioural consequence was hypothesised as avoidance of some situations where an activating event could happen leading to excess disability and a cognitive consequence was that Jim tended to minimise his current activities.

It was hypothesised that whilst the previous psychology intervention had addressed Jim's health anxiety, it had not addressed adjustment difficulties leading to the re-referral.

**Intervention**

The intervention involved 11, one hour therapy sessions at Jim's home. The ABC model was discussed to provide a framework for the intervention. The intervention was developed to work on the factors maintaining Jim's difficulties. Firstly, sessions focused on working with Jim to replace irrational beliefs with more balanced beliefs,
for example: 'I may not be able to do everything I used to be able to do but I still enjoy a lot of things'. Secondly, small goals were set each session to help reduce avoidance. Therapy also worked on reducing Jim’s minimisation of current activities using a weekly diary and considering the things which he liked about himself which had stayed the same as well as those which had changed.

During the intervention, Jim began to discuss his relationship with his daughter. He believed that she did not spend enough time with him and she described that this was because he complained about his aches and pains. Jim thought that this was probably true and described that he did this to help himself feel better. During a therapy session Jim was asked to talk about his aches and pains and found that it actually made him feel worse (a behavioural dispute). He was then asked to talk about good things that had happened in the week and he felt better. Jim was asked to challenge his belief by talking to his daughter about other interests they shared instead of his physical health problems. This had a positive outcome, he and his daughter had enjoyed their time together more than usual.

Outcome
The HADS did not show a change in Jim’s level of anxiety or depression. Jim was more aware of the link between his beliefs and his mood, however he reported that he found it difficult to dispute the beliefs on his own. He continued to find it difficult to accept the limitations on his activities. One outcome which also had not been anticipated from the start, was that Jim was enjoying sharing interests such as sport with his daughter rather than focusing on his aches and pains.

Reformulation of the Problem
The contribution of relationship issues, particularly Jim’s relationship with his daughter, to his difficulties became clearer during the intervention. It emerged during therapy that Jim believed that ‘there must be a cure for my osteoarthritis which would make me more mobile again’. Attempts were made to dispute this belief, however this was unsuccessful. It was hypothesised that this belief was a maintaining factor in his adjustment difficulties.
Critical Evaluation of the Work
A tendency to attempt too many disputes within a session, exacerbated by Jim’s tendency to bring a lot of information to each session, may have limited the success of the intervention.

References


Specialist Placement (Neuropsychological Rehabilitation) Case Report Summary:
Neuropsychological assessment with a thirty-five-year-old woman who had survived a stroke

Reason for Referral
Clare Tomlinson, a thirty-five-year-old white British woman was referred to a transitional living unit for rehabilitation following a stroke. The unit provided interdisciplinary rehabilitation for people with severe brain injury. Given the complex nature of residents' difficulties, an individualised neuropsychological assessment was conducted routinely on admission to aid the identification of areas impacting on rehabilitation and the development of appropriate interventions.

Presenting Problem
Clare described that as the result of a stroke, she had difficulties with balance, writing and speech. She described that she had memory and concentration difficulties initially but believed that these had resolved.

History of Presenting Problem
Clare had survived a stroke which had occurred six months prior to her admission to the transitional living unit. A Computerised Tomography scan had revealed a large lesion in her cerebellum. She had since undertaken a five month period of rehabilitation at a general hospital.

Medical History
Clare’s significant medical history included hypertension and migraines. Clare reported no history of mental health problems. Neurological and medical examination on arrival to the transitional living unit confirmed that Clare was medically stable. As a result of the stroke she had severe dysarthria and ataxia.

Personal History
Prior to the stroke, Clare had lived with her husband Nicholas and daughter, Helen, aged 11. Clare’s mother, Judith had helped care for Helen since her birth due to Clare and Nicholas’s long working hours. Clare achieved five ‘O levels’ at grades B and C
and five 'CSEs,' equivalent to O level grade C. At the time of her stroke she had worked in a specialist department of a bank, supervising seven people.

**Previous Assessments**

A brief standardised cognitive assessment, which had been conducted at the referring hospital by an Occupational Therapist, highlighted some problems with abstract thinking and memory.

**Literature Review**

Studies have shown that damage to the cerebellum can result in difficulties with executive functioning (planning, set-shifting, abstract reasoning, verbal fluency), working memory, visuo-spatial ability, speed of processing and disinhibition and inappropriate behaviour with relative sparing of verbal memory (e.g. Botez *et al.*, 1996; Schmahmann & Sherman, 1998). Those who have included a follow-up at 9 or 12 months found considerable improvement in neuropsychological test results (e.g. Neau *et al.*, 2000).

**Hypothesis**

It was hypothesised that Clare was likely to have impairment in cognitive functioning consistent with damage to the cerebellum.

**Rationale**

Psychometric tests with good reliability and validity (e.g. Wechsler Adult Intelligence Scale III UK: Wechsler *et al.*, 1998), including ecological and/or face validity where possible (e.g. Doors and People Test: Baddeley *et al.*, 1994) were used. Tests were also included which would be less affected by, or could be adjusted for Clare's dysarthria and ataxia. For example, the Spot the Word Test (Baddeley *et al.*, 1993), in which the respondent is asked to indicate rather than pronounce the real word out of the choice between an irregular and a nonsense word, was used as a substitute for other pre-morbid tests of ability based on word reading. Reaction to physical illness and disability, mood disorder and her family’s coping were assessed as well as her cognitive functioning. The assessment was completed in five, one hour sessions with Clare and a one hour session with Nicholas.
Presentation
Clare readily understood the rationale for the neuropsychological assessment and was a motivated participant in the process. She was not overly anxious and easily maintained concentration during the assessment sessions.

Findings and Discussion
Clare scored in the superior range on a test of pre-morbid intellectual functioning. The test results suggested that there had been an overall decline in Clare’s intellectual functioning compared to her estimated pre-morbid ability. In line with research findings with patients with cerebellar damage and the hypothesis, Clare had difficulties with working memory, speed of information processing and abstract reasoning tasks, whilst relatively preserved areas of cognition included verbal recall and recognition and prospective memory. These findings were consistent with functional observations by the rehabilitation team.

Clare did not have difficulties in some areas which have been found to be frequently impaired following cerebellar damage, for example, set-shifting. One possible reason was that the assessment was completed 6-7 months after her brain injury, studies of patients with cerebellar damage have shown significant improvements at follow up (9 months-1 year). Clare did not show any signs of clinical dysexecutive syndrome which have been found in some previous studies of patients with cerebellar damage. This was supported by the results of a questionnaire, completed by Nicholas.

Nicholas, Clare and their daughter’s school described that Helen appeared to be coping very well. Clare was adjusting well following her stroke, symptoms of mood disorder were not present in her behaviour or self-report. However, some sensitive family issues were raised particularly regarding roles within the family. Clare expressed that she wished to return to the family home and be a full-time mother for Helen. However, she was considerably worried how this would be negotiated as she believed that her mother would feel rejected. Nicholas was also having some difficulty coping with practical stressors.
Recommendations
The results were fed back to Clare and Nicholas and the rehabilitation team. Recommendations resulting from the assessment included: individualised brain injury education for Clare and her family, including a family day on the unit, work with the family regarding the role issues highlighted and support with problem solving of practical stressors for Nicholas. It was further recommended that the results of the psychometric assessment could be consulted if Clare considered employment or voluntary work in the future and support should be provided for Clare with more complex problem solving.

Critique
A strength of the assessment was that it focussed on mood, adjustment and family issues, as well as cognitive functioning in line with the BPS recommendations (BPS, 2002). Further investigation of attention difficulties would have been helpful, as the results were confounded by slowed motor and cognitive speed of processing.

References


Research Section

This section is comprised of three parts:

- Research Logbook - a checklist of research activity completed over the three years;

- Service Related Research Project - conducted in Year One during the Adult Mental Health Placement; and

- Major Research Project - conducted during Years Two and Three.

Identifying information has been changed to maintain anonymity of services, professionals and participants who contributed to these projects.
## Research Logbook

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Formulating and testing hypotheses and research questions</td>
</tr>
<tr>
<td>2</td>
<td>Carrying out a structured literature search using information technology and literature search tools</td>
</tr>
<tr>
<td>3</td>
<td>Critically reviewing relevant literature and evaluating research methods</td>
</tr>
<tr>
<td>4</td>
<td>Formulating specific research questions</td>
</tr>
<tr>
<td>5</td>
<td>Writing brief research proposals</td>
</tr>
<tr>
<td>6</td>
<td>Writing detailed research proposals/protocols</td>
</tr>
<tr>
<td>7</td>
<td>Considering issues related to ethical practice in research, including issues of diversity, and structuring plans accordingly</td>
</tr>
<tr>
<td>8</td>
<td>Obtaining approval from a research ethics committee</td>
</tr>
<tr>
<td>9</td>
<td>Obtaining appropriate supervision for research</td>
</tr>
<tr>
<td>10</td>
<td>Obtaining appropriate collaboration for research</td>
</tr>
<tr>
<td>11</td>
<td>Collecting data from research participants</td>
</tr>
<tr>
<td>12</td>
<td>Choosing appropriate design for research questions</td>
</tr>
<tr>
<td>13</td>
<td>Writing patient information and consent forms</td>
</tr>
<tr>
<td>14</td>
<td>Devising and administering questionnaires</td>
</tr>
<tr>
<td>15</td>
<td>Negotiating access to study participants in applied NHS settings</td>
</tr>
<tr>
<td>16</td>
<td>Setting up a data file</td>
</tr>
<tr>
<td>17</td>
<td>Conducting statistical data analysis using SPSS</td>
</tr>
<tr>
<td>18</td>
<td>Choosing appropriate statistical analyses</td>
</tr>
<tr>
<td>19</td>
<td>Preparing quantitative data for analysis</td>
</tr>
<tr>
<td>20</td>
<td>Choosing appropriate quantitative data analysis</td>
</tr>
<tr>
<td>21</td>
<td>Summarising results in figures and tables</td>
</tr>
<tr>
<td>22</td>
<td>Conducting semi-structured interviews</td>
</tr>
<tr>
<td>23</td>
<td>Transcribing and analysing interview data using qualitative methods</td>
</tr>
<tr>
<td>24</td>
<td>Choosing appropriate qualitative analyses</td>
</tr>
<tr>
<td>25</td>
<td>Interpreting results from quantitative and qualitative data analysis</td>
</tr>
<tr>
<td>26</td>
<td>Presenting research findings in a variety of contexts</td>
</tr>
<tr>
<td>27</td>
<td>Producing a written report on a research project</td>
</tr>
<tr>
<td>28</td>
<td>Defending own research decisions and analyses</td>
</tr>
<tr>
<td>29</td>
<td>Submitting research reports for publication in peer-reviewed journals or edited book</td>
</tr>
<tr>
<td>30</td>
<td>Applying research findings to clinical practice</td>
</tr>
</tbody>
</table>
Service Related Research Project

Evaluation of a staff training programme in relapse prevention for psychosis.

June 2004

Year 1
Acknowledgements

I am grateful to the staff who participated in the evaluation, who gave up their time to fill in the questionnaires and attend the focus group. I am also grateful to the course facilitator and the clinical psychologist involved in teaching on the course, who supervised the project, for proposing the idea and offering advice and assistance. Finally I would like to thank my supervisor on the clinical psychology training course team.
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Abstract</strong></td>
<td>121</td>
</tr>
<tr>
<td><strong>Introduction</strong></td>
<td>122</td>
</tr>
<tr>
<td><strong>Method</strong></td>
<td>125</td>
</tr>
<tr>
<td>Participants</td>
<td>125</td>
</tr>
<tr>
<td>Description of the course</td>
<td>125</td>
</tr>
<tr>
<td>Design</td>
<td>125</td>
</tr>
<tr>
<td>Measures/Data Collection</td>
<td>126</td>
</tr>
<tr>
<td>Procedure</td>
<td>127</td>
</tr>
<tr>
<td><strong>Analysis and Results</strong></td>
<td>129</td>
</tr>
<tr>
<td>Level of satisfaction with teaching</td>
<td>129</td>
</tr>
<tr>
<td>Self rating of knowledge, skills and perspectives on relapse prevention</td>
<td>129</td>
</tr>
<tr>
<td>Participants views on structure of the course</td>
<td>133</td>
</tr>
<tr>
<td><strong>Discussion</strong></td>
<td>134</td>
</tr>
<tr>
<td>Summary of results</td>
<td>134</td>
</tr>
<tr>
<td>Strengths and Limitations</td>
<td>135</td>
</tr>
<tr>
<td>Summary of Recommendations</td>
<td>136</td>
</tr>
<tr>
<td><strong>References</strong></td>
<td>138</td>
</tr>
</tbody>
</table>

### Appendices

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appendix 1</td>
<td>Timetable of Relapse Prevention for Psychosis Training Course</td>
<td>140</td>
</tr>
<tr>
<td>Appendix 2</td>
<td>Training Acceptability Rating Scale</td>
<td>142</td>
</tr>
<tr>
<td>Appendix 3</td>
<td>Self Rating Scale of Knowledge, Skills and Perspectives in Relapse Prevention for Psychosis</td>
<td>146</td>
</tr>
<tr>
<td>Appendix 4</td>
<td>Focus Group Questioning Schedule</td>
<td>151</td>
</tr>
<tr>
<td>Appendix 5</td>
<td>A letter given to participants regarding the evaluation</td>
<td>154</td>
</tr>
<tr>
<td>Appendix 6</td>
<td>Responses to open ended questions on Training Acceptability Rating Scale</td>
<td>156</td>
</tr>
<tr>
<td>Appendix 7</td>
<td>Focus Group Transcript</td>
<td>158</td>
</tr>
<tr>
<td>Appendix 8</td>
<td>Feedback to Course Trainers</td>
<td>171</td>
</tr>
</tbody>
</table>

### Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1</td>
<td>Demographic and work environment data for the participants (N=12)</td>
<td>125</td>
</tr>
<tr>
<td>Table 2</td>
<td>Standardised item alpha coefficients for the different</td>
<td>127</td>
</tr>
</tbody>
</table>
sections of the scale

Table 3 Evaluation topics, instruments used and timing of assessment
Table 4 Results of Friedman test and Wilcoxon post hoc tests for the knowledge and skill scales and the perspective items
Table 5 Results of Friedman test and Wilcoxon post hoc tests for the individual knowledge items
Table 6 Results of Friedman test and Wilcoxon post hoc tests for the individual skills items
Table 7 A summary of discussion concerning the structure of the course

Figures

Figure 1 The Training Cycle
Abstract

This study evaluated a staff training course in relapse prevention for psychosis in terms of changes in self-rating of knowledge, skills and perspectives and learners’ reactions (satisfaction with training and views of the training experience). The course consisted of three teaching days followed by four fortnightly supervision sessions. A further aim was to evaluate the success of this structure. Learners’ reactions were assessed post-teaching. Self-ratings of knowledge, skills and perspectives were taken pre-teaching, post-teaching and post-supervision. A focus group was held post-supervision to explore participants’ views on the course structure and transferring learning from the course to the workplace. Twelve people attended the first teaching day and completed the first questionnaire, however four people did not attend the last training day and/or the last supervision session leaving a total sample of eight.

Learners’ reactions to the course were very favourable. Significant differences in self-ratings of knowledge and skills were found between pre and post-teaching assessment points. Inspection of the descriptive statistics shows this was an increase. Discussion within the focus group suggested that the participants had positive opinions regarding the course structure and valued the supervision sessions. In summary, the findings demonstrate that participants were highly satisfied with the training, gave higher ratings of their skills and knowledge in relapse prevention following the training and that the course structure had good face validity. The findings suggest that the training course should continue and that the training structure could be considered for other topics.
Introduction

The National Health Service (NHS) plan (Department of Health, 2000) and the National Service Framework for Mental Health (Department of Health, 1999) have emphasised the importance of a skilled workforce in order to deliver effective mental health services. In the last 15 years, there have been major developments in psychosocial interventions with people with severe and enduring mental illness (British Psychological Society, 2000). It is therefore important that training programmes for the dissemination of these new skills are in place in local NHS trusts. Furthermore, the focus on evidence based practice has meant that post-qualification training has gained importance in all fields including mental health. There is also a growing expectation that the training programmes themselves should have evidence for their effectiveness (Department of Health, 2003).

Good training practice can be conceptualised as a cycle (see figure 1), (Department of Health, 2003). Initially training needs are assessed, these needs then lead the design of the training programme, the delivery of the training follows and evaluation is the final and a key aspect of the cycle. The delivery of the training programme is the most visible part of the cycle but without the other elements of the cycle is likely to lack in quality (Department of Health, 2003).
Evaluation of training in the context of delivery of healthcare can focus on different levels of outcome. These are learners' reactions (satisfaction with training and views of the training experience), modification of learners attitudes or perceptions, acquisition of knowledge or skills, change in behaviour, changes in the organisation and delivery of care and benefits to clients (Barr et al., 2000).

The NHS trust where the trainee clinical psychologist was on placement provided specialist mental health services covering both urban and rural areas. A multi-disciplinary skills based training course had been developed to teach the early warning signs approach to relapse prevention for clients with psychosis (Birchwood et al., 2000). The Department of Health (2003) identifies implementation of learning as a difficulty following training. They report common problems as perceived inapplicability of methods to cases or work roles and lack of support or supervision. In order to minimise these problems, the training structure consisted of three teaching days and four supervision sessions. Also, staff were asked to identify a client with psychosis to work with on relapse prevention during the training. The evaluation was commissioned by the NHS trust's Practice Development Facilitator and was supervised by a clinical psychologist; both of whom were involved in teaching on the course and conducting the supervision sessions.
Aims and Hypotheses

The first aim was to evaluate learners' reactions and changes in self-ratings of knowledge, skills and perspectives in relapse prevention for psychosis following training. It was decided that evaluation of these aspects would inform the development of the course, which was planned to take place twice a year, and would be the most practical aspects to evaluate at this stage of the course development.

A second aim was to explore the success of the course structure in aiding implementation of learning. It was therefore decided to measure self-ratings of knowledge, skills and perspectives following the teaching days and following the supervision sessions as well as a baseline assessment. It was also agreed that it would be useful to conduct a focus group to explore participants' views on the course structure and implementation of learning. It was hoped that this would suggest whether a similar structure could be used to teach other topics.

Hypothesis 1: It was hypothesised that participants would show high levels of satisfaction with the teaching.

Hypothesis 2: It was hypothesised that there would be significant differences in self-ratings of knowledge, skills and perspectives made pre-teaching, post-teaching and post-supervision.
Method

Participants
Twelve mental health professionals, all of whom worked with clients with severe and enduring mental illness, attended a training course in relapse prevention in psychosis. Four participants did not attend the last training day and/or the last supervision session leaving a total sample of eight. The demographic and work environment data for the participants are presented in Table 1.

<table>
<thead>
<tr>
<th>Data type</th>
<th>Frequency (%)</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>8 (67%)</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>4 (33%)</td>
<td></td>
</tr>
<tr>
<td>Professional group:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mental Health Nurse</td>
<td>10 (83%)</td>
<td></td>
</tr>
<tr>
<td>Social Worker</td>
<td>2 (17%)</td>
<td></td>
</tr>
<tr>
<td>Number of years working with clients with severe and enduring mental illness</td>
<td></td>
<td>12.92 (9.25)</td>
</tr>
<tr>
<td>Number of clients on caseload</td>
<td></td>
<td>25.33 (17.49)</td>
</tr>
<tr>
<td>Percentage of caseload with severe mental illness</td>
<td></td>
<td>54 (31.59)</td>
</tr>
</tbody>
</table>

Description of the course
The training course involved three weekly teaching days followed by four fortnightly supervision group sessions. A timetable summarising the content and structure of the course can be found in appendix 1.

Design
The design of the evaluation was quasi-experimental and repeated measures. A baseline assessment was taken pre-teaching (immediately prior to the teaching), followed by an assessment post-teaching (at the end of the teaching), and a final assessment post-supervision (immediately following the last supervision session).
Measures/Data Collection


The participants' reactions to the relapse prevention training were assessed using the TARS (Appendix 2) a standardised rating scale as recommended by Bailey et al. (2003). The first six items assess the acceptability of the training, rated on a six point bipolar scale ranging from "strongly disagree" (score 1) to "strongly agree" (score 6). The next nine items measure effectiveness and are rated on a four point likert scale ranging from "not at all" (score zero) to "a great deal" (score 3). The score range was therefore 6 - 63, the higher the score the greater the endorsement of the training. Scores are reported in percentages in line with the standardised scoring system. TARS has good test-retest reliability (r=0.83) and internal consistency (0.99) as well as acceptable construct and concurrent validity (Milne et al. 2000). The scale has three further open questions asking for reactions to the course.

b) Self-rating scale of knowledge, skills and perspectives on relapse prevention (Appendix 3).

Items were developed by the trainee clinical psychologist from identified learning outcomes and reference to an article outlining the early warning signs approach to relapse prevention in psychosis (Birchwood et al. 2000).

i. Knowledge was assessed by six items scored on a five point likert scale from "very low" (score 1) to "very high" (score 5).

ii. Skills were assessed by six items on the same likert scale.

iii. Perspectives on relapse prevention were measured by level of agreement with four statements scored on a 5 point likert scale from "strongly disagree" (score 1) to "strongly agree" (score 5).

The scale was developed in consultation with a clinical psychologist and the final scale was shown to the Practice Development Facilitator; both of whom had experience in practising and teaching relapse prevention for psychosis. This therefore established some content validity for the scale. The scale was also inspected by a researcher for clarity and structure of the questions. Once the scale had been administered, coefficient alpha (see Table 2) was calculated for the
knowledge items, skills items and perspectives demonstrating good internal reliability for the knowledge and skill scales but not the perspective scale.

Table 2. Standardised item alpha coefficients for the different sections of the scale

<table>
<thead>
<tr>
<th>Items</th>
<th>Time 1</th>
<th>Time 2</th>
<th>Time 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>.88</td>
<td>.64</td>
<td>.87</td>
</tr>
<tr>
<td>Skills</td>
<td>.94</td>
<td>.82</td>
<td>.92</td>
</tr>
<tr>
<td>Perspectives</td>
<td>.68</td>
<td>.44</td>
<td>.23</td>
</tr>
</tbody>
</table>

c) Focus Group

A focus group guide was developed to facilitate discussion of the course structure and implementation of learning in the workplace (Appendix 4). Topics for the guide were generated from identified difficulties in implementation of learning (Department of Health, 2003) and from issues raised by the course trainers. Question topics included the integration of new skills, continuing to use skills, confidence in using skills and the structure of the course. Content validity was established using the same methods as the self-rating scale. It was recognised that it would not be possible, due to time and space limitations of the project, to analyse this data in depth. It was also decided that in the context of a needs led evaluation, an informal review of the discussion would be sufficient.

Procedure

Participants were required to have approval from their line managers to apply for the course. Participants received a letter about the evaluation enclosed with the first self-rating scale (Appendix 5). Participation was voluntary and confidentiality of the data was emphasised and ensured. Table 3 shows the timing and method of assessment of each evaluation topic. Measures were handed out by the course trainers pre-teaching and post-teaching and by the trainee clinical psychologist post-supervision. All participants who attended the last supervision session joined the focus group, which was moderated by the trainee clinical psychologist.
Table 3. Evaluation topics, instruments used and timing of assessment.

<table>
<thead>
<tr>
<th>Evaluation topic</th>
<th>Method of Data Collection</th>
<th>Assessment Point</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Pre-teaching</td>
</tr>
<tr>
<td>Perceived Knowledge</td>
<td>Self-rating scale</td>
<td>X</td>
</tr>
<tr>
<td>Perceived Skills</td>
<td>Self-rating scale</td>
<td>X</td>
</tr>
<tr>
<td>Perspectives</td>
<td>Self-rating scale</td>
<td>X</td>
</tr>
<tr>
<td>Participant’s reactions</td>
<td>TARS</td>
<td>X</td>
</tr>
<tr>
<td>Course structure and implementation of learning</td>
<td>Focus Group</td>
<td></td>
</tr>
</tbody>
</table>
Analysis and Results

Level of satisfaction with teaching
The first hypothesis that participants would demonstrate a high level of satisfaction with the course was supported. The acceptability (mean% 90.23; SD 8.31) and effectiveness (mean% 82.97; SD 10.79) of the teaching were rated highly on the TARS. Responses to the open ended questions are given in Appendix 6 and are grouped in themes. None of the comments were negative in content. There were some suggestions for slight changes to the content and style of teaching, for example, ‘more group exercises.’

Self rating of knowledge, skills and perspectives on relapse prevention
Non-parametric tests were used to analyse the self-rating scale results due to the small sample size. Friedman tests were conducted to evaluate differences in medians between pre-teaching, post-teaching and post-supervision scores. Post hoc comparisons were conducted using the Wilcoxin test. Type 1 errors across these comparisons at the .05 level were controlled for using the LSD procedure (Green & Salkind, 2003).

The second hypothesis that there would be significant differences in self-ratings of knowledge, skills and perspectives made pre-teaching, post-teaching and post-supervision was partially supported. The results for the knowledge and skill scales and the perspective items are summarised in Table 4. There were significant differences in median ratings between the three time points for both the knowledge and skills scales but not the perspective items. For the knowledge scale post hoc tests revealed the difference to be between the pre and post–teaching ratings, and the pre-teaching and post-supervision ratings. For the skills scale, the difference was between the pre-teaching and post-teaching ratings.

The results for the individual knowledge and skills items are shown in Tables 5 and 6 respectively to illustrate which aspects of perceived knowledge and skill differed in
rating over the three time points. Four of the knowledge items and two of the skills items showed a significance difference in median ratings over the three time points.
Table 4. Results of Friedman test and Wilcoxon post hoc tests for the knowledge and skill scales and the perspective items.

<table>
<thead>
<tr>
<th>Item summary</th>
<th>Pre-Teaching (Time 1) (n=12)</th>
<th>Post-Teaching (Time 2) (n=10)</th>
<th>Post-Supervision (Time3) (n=9)</th>
<th>( \chi^2 ) (n=8, df=2)</th>
<th>Post-hoc Comparisons Z (n=8, 2 tailed test)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Median</td>
<td>Mean(SD)</td>
<td>Median</td>
<td>Mean(SD)</td>
<td>Median</td>
</tr>
<tr>
<td>Knowledge scale</td>
<td>17</td>
<td>17.75(3.58)</td>
<td>22.5</td>
<td>22.88(2.42)</td>
<td>22</td>
</tr>
<tr>
<td>Skills scale</td>
<td>18</td>
<td>19.71(3.95)</td>
<td>23</td>
<td>22.57(2.94)</td>
<td>22</td>
</tr>
<tr>
<td>1. Insight is solely a measure of agreement with diagnosis (recoded).</td>
<td>4</td>
<td>3.58(1)</td>
<td>4</td>
<td>3.8(1.32)</td>
<td>4</td>
</tr>
<tr>
<td>2. Collaborative exploration of a client’s experience furthers the therapeutic relationship.</td>
<td>4</td>
<td>4.33(0.49)</td>
<td>5</td>
<td>4.8(0.44)</td>
<td>5</td>
</tr>
<tr>
<td>3. It is important that clients and practitioners learn together in relapse prevention work.</td>
<td>4.5</td>
<td>4.5(0.52)</td>
<td>5</td>
<td>4.6(0.52)</td>
<td>5</td>
</tr>
<tr>
<td>4. The client cannot be seen as an expert on their experience and values (recoded).</td>
<td>4</td>
<td>4.25(0.75)</td>
<td>4.5</td>
<td>4.5(0.53)</td>
<td>5</td>
</tr>
</tbody>
</table>

Note. * denotes a significant result (P<0.05), ** denotes a significant result (P<0.01)

Table 5. Results of Friedman test and Wilcoxon post hoc tests for the individual knowledge items

<table>
<thead>
<tr>
<th>Item summary</th>
<th>Pre-Teaching (Time 1) (n=12)</th>
<th>Post-Teaching (Time 2) (n=10)</th>
<th>Post-Supervision (Time3) (n=9)</th>
<th>( \chi^2 ) (n=8, df=2)</th>
<th>Post-hoc Comparisons Z (n=8, 2 tailed test)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Median</td>
<td>Mean(SD)</td>
<td>Median</td>
<td>Mean(SD)</td>
<td>Median</td>
</tr>
<tr>
<td>1. Process of relapse</td>
<td>3</td>
<td>3.08(0.67)</td>
<td>4</td>
<td>3.8(0.63)</td>
<td>4</td>
</tr>
<tr>
<td>2. Stress vulnerability model</td>
<td>3</td>
<td>3.17(0.94)</td>
<td>4</td>
<td>3.8(0.63)</td>
<td>3</td>
</tr>
<tr>
<td>3. Assessing prodromal symptoms</td>
<td>3</td>
<td>2.92(0.51)</td>
<td>4</td>
<td>3.9(0.32)</td>
<td>4</td>
</tr>
<tr>
<td>4. Constructing a relapse signature</td>
<td>2.5</td>
<td>2.5(0.8)</td>
<td>4</td>
<td>3.7(0.67)</td>
<td>4</td>
</tr>
<tr>
<td>5. Constructing a relapse prevention plan</td>
<td>2.5</td>
<td>2.58(0.67)</td>
<td>4</td>
<td>3.7(0.67)</td>
<td>4</td>
</tr>
<tr>
<td>6. Working with medication compliance</td>
<td>3</td>
<td>2.92(0.79)</td>
<td>4</td>
<td>3.8(0.42)</td>
<td>4</td>
</tr>
</tbody>
</table>
Table 6. Results of Friedman test and Wilcoxon post hoc tests for the individual skills items

<table>
<thead>
<tr>
<th>Item summary</th>
<th>Pre-Teaching (Time 1) (n=12)</th>
<th>Post-Teaching (Time 2) (n=10)</th>
<th>Post-Supervision (Time 3) (n=9)</th>
<th>$\chi^2$ (n=8, df=2)</th>
<th>Post-hoc Comparisons Z (n=8, two tailed test)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to:</td>
<td>Median Mean(SD)</td>
<td>Median Mean(SD)</td>
<td>Median Mean(SD)</td>
<td></td>
<td>Time1-Time2 Time2-Time3 Time3 Time1-Time3</td>
</tr>
<tr>
<td>1. use assessment for relapse prevention work as a basis for developing a relationship.</td>
<td>3 2.92(0.79) 4 3.67(0.5)</td>
<td>3 3.44(0.53) 3.85</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. help clients make a link between aspects of environment/behaviour and symptoms.</td>
<td>3.5 3.42(0.67) 4 3.9(0.57)</td>
<td>4 3.67(0.5) 4.33</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. recognise and develop a client’s awareness of the process of relapse.</td>
<td>3 3.08(0.67) 4 3.8(0.42)</td>
<td>4 3.56(0.53) 4.31</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. empower clients to increase control over the process of relapse.</td>
<td>3 3.17(0.72) 4 3.7(0.67)</td>
<td>4 3.67(0.71) 6.4* 2* 0 2*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. sustain good communication with family and friends to reduce the risk and impact of relapse</td>
<td>3 3.25(0.62) 3 3.5(0.71)</td>
<td>4 3.67(0.71) 6.5* -1.73 -1 -2*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. sustain good communication with staff and other professionals to reduce the risk and impact of relapse</td>
<td>3 3.33(0.49) 3.6 3.5(0.7)</td>
<td>4 3.67(0.71) 4.67</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. *denotes a significant result (P<0.05), ** denotes a significant result (P<0.01)
Participants views on structure of the course

Eight participants attended the focus group (see Appendix 7 for transcript) and were positive about the training. Table 7 shows a summary of discussion regarding the structure of the course. Although other topics such as integrating new skills and continuing to use skills were covered in the focus group, this aspect of the discussion is presented here as it was a key part of the evaluation. In summary, the structure of the course, particularly the inclusion of the supervision sessions, was very positively viewed by the participants and they felt that other topics could be taught in this way, for example self harm. Participants also felt that follow up supervision might be helpful following the training.

Table 7. A summary of discussion concerning the structure of the course.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub-theme</th>
<th>Quote</th>
<th>Speaker No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervision is key for learning.</td>
<td></td>
<td>&quot;I think having the supervision every few weeks to actually consolidate that learning is really key to it&quot;</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&quot;it's been very much key to learning about relapse prevention is having that supervision.&quot;</td>
<td>6</td>
</tr>
<tr>
<td>Excellent structure.</td>
<td></td>
<td>&quot;it's an excellent structure doing it like this it really is&quot;</td>
<td>3</td>
</tr>
<tr>
<td>Structure of Course</td>
<td>Other practice topics should be taught in this way</td>
<td>&quot;most of the practical skills should not be taught in any other way&quot;</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&quot;there should be more stuff like this churned out in this approach of teaching, I think it's very beneficial&quot;</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&quot;a follow up supervision group is a good idea&quot;</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Further supervision would be helpful</td>
<td>&quot;know that you've got something [supervision] to focus on to carry on doing the work&quot;</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&quot;it would be quite nice to know that that structure [supervision] was there so that you could use it if you needed to&quot;</td>
<td>7</td>
</tr>
</tbody>
</table>
Discussion

Summary of results
The first hypothesis that participants would show high levels of satisfaction with the course was supported. Ratings of acceptability and effectiveness of the teaching on the TARS were higher than those normally achieved on training courses (Milne et al., 2000). The high level of satisfaction was also evident in the focus group. In response to the open questions in TARS, some comments were made regarding suggested addition in content and slight changes in teaching method but no negative comments were made.

The second hypothesis that there would be significant differences in self-ratings of knowledge, skills and perspectives made pre-teaching, post-teaching and post-supervision was partially supported. Significant differences were found between the three time points on the knowledge scale, four of the knowledge items, the skills scale and two of the skills items.

The majority of significant changes were found during the teaching period (pre to post-teaching), with no significant changes found during the supervision period (post-teaching to post-supervision). A number of the items showed a slight drop in ratings between the post-teaching and post-supervision assessment points. A tentative explanation for this is that participants gained confidence in their skills and knowledge in relapse prevention immediately following the teaching, however once they were practising skills with clients in the work place, they felt less confident. In addition, the five point likert scale may not have been sensitive enough to detect change as the majority of items had a median rating of average at the pre-teaching stage.

A possible explanation that two skills items compared to four knowledge items showed a significant difference in rating over the three time points is that skills items were generally rated higher than knowledge items at the pre-teaching stage.
Therefore, contrasted with the knowledge items, they had a reduced potential to show change.

Analysis did not reveal significant changes in any of the perspective items. Inspection of the descriptive statistics demonstrate that the desired perspectives on relapse prevention, for example, agreement with the statement 'collaborative exploration of a client’s experience furthers the therapeutic relationship' were held by participants at the pre-teaching stage, therefore a ceiling effect was observed. It is possible that holding these perspectives attracted the participants to enrol on the course.

Another element of the evaluation was to explore the success of the course structure in aiding implementation of learning. Participants' views in the focus group were very positive regarding the course structure. Themes which arose in the group included supervision is key for learning, excellent structure and other practice topics should be taught in this way. Self-ratings of skills and knowledge did not increase during the supervision period, however, it could tentatively be suggested that without the supervision sessions self-ratings could have shown a significant decrease as participants applied skills and knowledge in the challenges of the workplace.

**Strengths and Limitations**

A strength of the study was the use of a standardised questionnaire to assess learners' reactions. Administering this on future courses would allow monitoring of learners' reactions as changes were made or could be used to compare different courses.

The focus group elicited interesting feedback as did the open ended questions in the TARS. Without the focus group, it could have been concluded that the supervision aspect was not necessary, however, this part of the training was highly valued by participants.

The small sample size meant that the study was underpowered to find anything other than a large effect. If the training was evaluated again several cohorts could be combined to increase sample size. This would be recommended if an evaluation was
carried out at a broader level, for example benefit to clients, as the course becomes more established.

An objective rating of knowledge, skills and perspectives may have had greater validity than the self-report scale used which is likely to have been sensitive to changes in confidence.

One difficulty in generalising the results is that ten out of the twelve participants were mental health nurses, the course may have been evaluated differently by other professional groups. It should also be noted that there is bias in that participants who did not attend the course at all three assessment points were not used in statistical analyses and those not present at the third assessment point did not participate in the focus group.

Summary of Recommendations
As a result of the evaluation, the following recommendations can be made for the future development of the training in relapse prevention in psychosis.

1) The structure of the training had good face validity. This structure should be considered for other practice related topics. Some participants felt they would benefit from further supervision. This should be considered, it may be that a regular ‘drop in’ session could be held for all cohorts who complete the training.

2) In terms of learners’ reactions, the training was very well received. Some changes and additions suggested in response to the open ended questions in the TARS (Appendix 6) and within the focus group (Appendix 7) should be considered.

3) It may be useful to review knowledge and skills items which did not show a significant change and investigate whether course content and supervision sufficiently addresses them.
4) It may be useful to consider developing an objective measure of skills, knowledge and perspectives on relapse prevention, particularly if the course is to be accredited.

The focus group was summarised in greater detail for the course trainers than was possible here. The evaluation was reported to be useful in terms of planning the next course and gaining support for other courses to use the same structure. Further details of feedback of the evaluation can be found in appendix 8.
References


Appendix 1: Timetable of Relapse Prevention for Psychosis Training Course
TIMETABLE (this is only an indication of content, subject to change)

Relapse Prevention in Psychosis

<table>
<thead>
<tr>
<th>1st December 2003</th>
<th>8th December</th>
<th>15th December</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.30-4.00</td>
<td>9.30-4.00</td>
<td>9.30-4.00</td>
</tr>
<tr>
<td>Introduction and discussion of participants' expectations and current work demands.</td>
<td>Process of assessment and engagement re-created in session, with strategy and decision making discussed at each point.</td>
<td>Medication management.</td>
</tr>
</tbody>
</table>

Lunch

The process of relapse.

Assessment approaches to explore illness experience and identify "relapse signature", e.g.:
- Lifelines
- Prodromal symptom prompts
- Symptom exploration and recording

Case Study

Exploration of a client from course participant's own caseload. (In supervision groups, Group A stay in Room 1, Group B Skills room, Post Grad Centre)

Insight and psychosis: formation and maintenance of working partnership

Case study: a patient with bipolar illness

Formation of a symptom management plan with action agreed for each stage of symptom development

Maintaining therapeutic partnership

Crisis planning

Monitoring

Involvement of multi-disciplinary team

<table>
<thead>
<tr>
<th>Supervision group</th>
<th>Supervision group</th>
<th>Supervision group</th>
<th>Supervision group</th>
</tr>
</thead>
<tbody>
<tr>
<td>12th January 2004</td>
<td>26th January</td>
<td>9th February</td>
<td>23rd February</td>
</tr>
<tr>
<td>2.00-4.00</td>
<td>2.00-4.00</td>
<td>2.00-4.00</td>
<td>2.00-4.00</td>
</tr>
</tbody>
</table>

Group A Room 1

Group A Room 1

Group A Room 1

Group A Room 1

Group B Rooms 4

Group B Rooms 4

Group B Seminar Rm

Group B Committee Room.
Appendix 2: Training Acceptability Rating Scale
TRAINING ACCEPTABILITY RATING SCALE (TARS)

Training Course: ................................................................................................................

Date: ..........................................................

Instructions: please rate your agreement with the following statements on this scale:

1  = strongly disagree
2  = moderately disagree
3  = slightly disagree
4  = slightly agree
5  = moderately agree
6  = strongly agree

CIRCLE YOUR LEVEL OF AGREEMENT

1. General acceptability:
   this approach would be appropriate for a variety of staff 1  2  3  4  5  6

2. Effectiveness:
   the training will be beneficial for the staff 1  2  3  4  5  6

3. Negative side-effects:
   the training will result in disruption or harm to clients 1  2  3  4  5  6

4. Appropriateness:
   Most staff would not accept that the training provided an appropriate approach to client care 1  2  3  4  5  6

5. Consistency:
   the training was consistent with common sense and good practice in helping staff to work effectively 1  2  3  4  5  6

6. Social validity:
   in an overall, general sense, most staff would approve of training in this method (eg would recommend it to others) 1  2  3  4  5  6
The next 12 questions focus on your impressions of the teaching process and outcomes, i.e., how competently you think the training was conducted, and whether it was helpful or not. For each question, please circle the statement that best expresses your opinion.

PLEASE CIRCLE ONE ANSWER:

7. Did the workshop improve your understanding?
   Not at all    a little    quite a lot    a great deal

8. Did the workshop help you to develop work-related skills?
   Not at all    a little    quite a lot    a great deal

9. Has the workshop made you more confident?
   Not at all    a little    quite a lot    a great deal

10. Do you expect to make use of what you learnt in the workshop in your workplace?
    Not at all    a little    quite a lot    a great deal

11. How competent were the workshop leaders?
    Not at all    a little    quite a lot    a great deal

12. In an overall, general sense, how satisfied are you with the workshop?
    Not at all    a little    quite a lot    a great deal

13. Did the workshop cover the topics it set out to cover?
    Not at all    a little    quite a lot    a great deal

14. Did the workshop leaders relate to the group effectively? (e.g., made you feel comfortable and understood)
    Not at all    a little    quite a lot    a great deal

15. Were the leaders motivating? (e.g., energetic, attentive and creative)
    Not at all    a little    quite a lot    a great deal

16. What was the most helpful part of the workshop for you personally?

......................................................................................................................................
......................................................................................................................................
17. What change, if any, would you recommend? (eg to the content or teaching)

18. Please make any other comments that you would like to offer.

D Milne
DM/bk/24.3.97

Appendix 3: Self Rating Scale of Knowledge, Skills and Perspectives in Relapse Prevention for Psychosis
**Personal Information***

1) Name:

2) Sex (Please circle): Male Female

3) Professional Group (Please circle):
   a) Clinical Psychologist
   b) Mental Health Nurse
   c) Occupational Therapist
   d) Psychiatrists
   e) Social Worker
   f) Support Worker
   g) Other (please specify): ________________________________

4) No of years working with people with severe and enduring mental illness:

5) Number of clients on current caseload:

6) Estimate of percentage of caseload with severe and enduring mental illness:

* only collected pre-teaching
Self-Rating of Current Knowledge, Skills and Perspective on Relapse Prevention

Perceived Need for Training in Relapse Prevention*

5. How would you rate your need for relapse prevention training?

- Very Low
- Low
- Average
- High
- Very High

Knowledge

The following questions ask for your ratings of your knowledge base of relapse prevention. Please circle the appropriate answers.

6. My knowledge about the process of relapse in people with mental health problems is:

- Very Low
- Low
- Average
- High
- Very High

7. My knowledge about stress vulnerability models in Schizophrenia and Bipolar Illness is:

- Very Low
- Low
- Average
- High
- Very High

8. My knowledge about methods of assessing the symptoms that precede a relapse (i.e. prodromal symptoms) is:

- Very Low
- Low
- Average
- High
- Very High

9. My knowledge about methods of constructing a relapse signature (i.e. an individualised outline of symptoms that precede a relapse) is:

- Very Low
- Low
- Average
- High
- Very High

10. My knowledge about methods of constructing a relapse prevention plan (i.e. an individualised plan for preventing relapse) is:

- Very Low
- Low
- Average
- High
- Very High

11. My knowledge about methods of working with medication compliance is:

- Very Low
- Low
- Average
- High
- Very High
Perspectives on Relapse Prevention

To what extent do you agree with the following statements:

12. Insight is solely a measure of agreement with diagnosis

13. Collaborative exploration of a client’s experience furthers the therapeutic relationship

14. It is important that clients and practitioners learn together in relapse prevention work

15. The client cannot be seen as an expert on their experience and values

Skills in Relapse Prevention

The following questions ask for your ratings of your current skills in carrying out relapse prevention work. Please circle the appropriate answers.

16. My ability to use assessment for relapse prevention work as a basis for developing a relationship is:

17. My ability to help clients make links between aspects of their environment/behaviour and symptoms is:

18. My ability to recognise and develop a client’s awareness of the process of relapse is:
19. My ability to empower clients to increase control over the process of relapse is:

Very Low  Low  Average  High  Very High

20. My ability to sustain good communication with family and friends to reduce the risk and impact of relapse is:

Very Low  Low  Average  High  Very High

21. My ability to sustain good communication with staff and other professionals to reduce the risk and impact of relapse is:

Very Low  Low  Average  High  Very High

Please check that you have answered all the questions.

THANK YOU VERY MUCH FOR COMPLETING THIS QUESTIONNAIRE

* only collected pre-teaching
Appendix 4: Focus Group Questioning Schedule
Focus Group Questions

Introduction

Welcome
Hello thanks for coming and taking the time to join this discussion group. My name is x and I’m a Trainee Clinical Psychologist on placement with the x. x asked me to conduct this discussion group to explore aspects of the relapse prevention training which together with the questionnaires which you’ve kindly completed will help with the continued development of the course.

The time allocated for the discussion is up to forty minutes, so we should definitely be finished by 2.30. Is everyone okay with this or does anybody need to leave before then? I’m tape recording the session because I don’t want to miss any of your comments. However, only I will be listening to the tape and no names will be included in the write up. The evaluation will also be written up as part of my course research requirements.

During the discussion please don’t feel you have to respond to me all of the time and feel free to have a conversation with one another about the questions. However, it would be helpful if people could speak one at a time and avoid side conversations. Both positive comments and ‘ideas for improvement’ will be welcomed!

The overview of the topic
I’m particularly interested in hearing about transferring learning from the course to the workplace. I have prepared some questions but it is likely that other areas will come up in the discussion which will be interesting to hear about.

Questions

Starting Question
- I wondered if we could start by going round the circle and introducing yourselves and saying how many of the teaching and supervision sessions you have been to.
Integrating new skills
- How have you found using new skills in relapse prevention with clients?
- How has the work been received by clients?
- Have there been any difficulties?

Continuing to use skills
- Do people think they will continue using the relapse prevention methods from the course?
- Are there barriers to continuing to use these skills?
- What will help you continue to do this type of relapse prevention work?

Confidence
- I’m interested to know how confident people feel in using the skills learnt on the course with clients?
- What would increase your confidence in using skills?

Structure of Course
- The idea of having supervision sessions following the training days was to help people transfer knowledge from the training days to the workplace. How successful do people feel that has been?
- Why successful?
- Could it have been more successful, if so, how?
- Would you like to see other practice topics taught in this way?
- If so, what?

Finishing Q
- Going back to your teams, how are you going to be perceived as someone who has got skills in this area and an interest in taking on clients for relapse prevention work?

Summary
Thank you for participating in this discussion, it has given me a lot of useful information to consider and feedback to the people running the course. If anybody is interested in receiving a short summary of the findings of the evaluation, please could you write your email address or postal address down on the front of the questionnaire sheet.
Appendix 5: A letter given to participants regarding the evaluation
Evaluation of Staff Training into Relapse Prevention

Dear Course Attendee,

I am a Trainee Clinical Psychologist currently on placement within x NHS Trust. During the placement I am required to conduct a service related research project and have chosen to evaluate this relapse prevention training. The results of this evaluation will be fed back to the course organisers and will assist continued development of the training course.

The evaluation will include three questionnaires to assess learning outcomes, the first of which will be given to you before training commences, the second at the end of the training days and the third after the supervision workshops. It is also planned that a discussion group will take place following the supervision workshops on 23rd February. Details about this group will be distributed at a later date, it will be approximately 45mins long.

I would be very grateful if you could complete all three questionnaires and attend the discussion group. The first questionnaire is attached and focuses on your current knowledge, skills and perspectives on relapse prevention. Your name is required on the front sheet to ensure that the three questionnaires you complete can be matched up. However, once questionnaires are completed the identifying information and the questionnaire will be separated and they will only be able to be linked up by me. Information provided is confidential and when written up will not be identifiable as your response.

If you have any questions or concerns, please do not hesitate to contact me.

Thank you very much for your help, I look forward to meeting you at the discussion group.

x
Trainee Clinical Psychologist
University of Surrey

On placement at:
x
Appendix 6: Responses to open ended questions on Training Acceptability

Rating Scale
1. What was the most helpful part of the workshop for you personally?

| Case studies | • Lifelines, personal examples  
| Style of teaching | • It was interactive – good humoured – participative – collaborative  
| Building on existing knowledge | • Confirming what I know and extending practical skills.  
| Other content | • Adding detail and understanding to approaches that I know vaguely – research info underpinning the approaches.  
| Other content and sharing practice | • Stress related models. Medication management.  
| Other content | • Reviewing literature, challenging accepted paradigms and identifying their aetiology, developing improved interventions, adding to the psi toolkit. Sharing practice.  
| Other content | • Pointing out times when approaches don’t work. Making me think about power relationships.  

No comment given 2 participants

2. What change, if any, would you recommend?

| Teaching Method | • Slightly more variation in teaching method, e.g. brainstorm, to sustain attention.  
| Content of Teaching | • More group exercises.  
| | • Reading list on the first day, websites for useful info to be provided.  
| Venue | • May be time permitting a bit more about CBT approaches to psychosis.  
| | • More direct formulation of practice examples akin to CBT models.  
| | • Rooms provided not the best of teaching environments.  
| | • Better choice of venue.  
| Can’t think of any | • Can’t think of any  

No comment given 2 participants

3. Please make any other comments you would like to offer.

| Good handouts | • Good handouts.  
| General positive comments | • To have further workshops and encourage others to attend.  
| | • An enjoyable three day course.  
| | • Enjoyable up to date refreshing.  
| Facilitated use of skills in workplace | • The course was presented in a way that enabled you to feel that skills could be used in the workplace.  

No comment given 5 participants.

NB: each bullet point within each question represents an individual participants response.
Appendix 7: Focus Group Transcript
Thank you for coming and taking the time to join this discussion group. My name's x and I'm a trainee clinical psychologist on placement with the X Team. x asked me to run this group to explore some aspects of the relapse prevention training so that together with the questionnaire they can use it to help them continue to develop the course. We've got until half two but if you need to leave earlier that's okay.

I'm tape recording the session because I don't want to miss any of your comments but only I will be listening to the tape and I won't include any names in the write up. I'm also writing up the evaluation as part of my course research requirements.

During the discussion please don't feel you have to respond to me all of the time but feel free to have a conversation between yourselves. However it would be helpful if just one person spoke at a time and avoided side conversations. Both positive comments and ideas for improvement will be welcomed.

I'm particularly interested in hearing about transferring learning from the course to the workplace. I've prepared some questions but it's likely that in the discussion other areas might come up which will be interesting to talk about.

I wondered if we could start by going round the circle and just saying your name and how many of the teaching and supervision sessions you've managed to get to. Do you want to start?

Speaker 1 I'm x. I think I've missed ... of the supervision sessions and I missed the second day of the teaching.

Speaker 2 I'm x and I missed the first two teaching session and I missed one of the supervisions which leaves three supervision groups I think.

Speaker 3 I'm x, I missed one supervision group.

Speaker 4 I'm x and I've been to all the training and I think I missed one of the supervision groups.

Speaker 5 I'm x and the same I attended all the training and I missed one supervision group.

Speaker 6 I'm x and I attended all the training sessions and all of the supervision groups (Laughter). You've got to get one.

Speaker 7 so you can answer all of the questions then.

Speaker 8 you're the only person who can answer reliably!

Speaker 7 I'm x, I did all of the training and I've missed one of the supervision sessions.

Speaker 8 I'm x, I missed a training and one supervision.
Moderator: Thank you. Just a general question to start with, how have people found using new skills in relapse prevention with clients? How's it gone?

Speaker 4: I found it was nice to come away, you go to training sessions and sometimes you sit there and listen and I didn't very often, I didn't actually use anything in my workplace. I found this gave me some practical stuff so that I could actually have a structured session with my client. I found it very easy just to start to use.

Speaker 1: I agree with that actually I think the practicality of it's been good.

Speaker 4: Yeah.

Speaker 1: and the ongoing supervision sessions so that you've got something every couple of weeks, so thinking about what I'm going to do in this particular session with the client. I've really enjoyed that structure to it but actually I think having the supervision every few weeks to actually consolidate that learning is really key to it. Because so often you finish training and you think 'oh that was great' and then you never talk about it.

Speaker 3: No, it's an excellent structure doing it like this it really is.

Speaker 8: It hasn't worked that well for me, hopefully because of the nature of the client, just I could have done with having a bit more time. I have really wanted to come to the supervision but I have not managed to do much in between times because of what's been going on. I found that the supervision sessions were coming a bit too quickly, I'd think 'oh my god, I haven't seen that person yet, we haven't done anything yet'. So it would have been more helpful for me if the supervision groups had been a bit more spaced out.

Speaker 7: Do you think that might be because you're part time, not being nasty, you don't have as much time..

Speaker 8: Yeah

Speaker 7: ..per week do you I suppose?

Speaker 5: I think being part time was also an issue for me in both in terms of the training days and in the supervision groups. It has been a huge impact of time commitment for me to do that. Also, I used a relapse prevention pack one (shows big folder with title 'early warning signs') which I managed to coincidentally to find as we went along. One that is produced by a different health authority where everything is kind of broken down into sheets that you could use. Now I'm not sure if I
would have had time to wade through all the articles and pick out all the stuff as we were advised to do if I hadn't been able to immediately access materials to use. (pause)

**Moderator** so that would be one thing which you’d want, maybe have a similar thing for this course

**Speaker 5** I think a pack like this should be given out as part of the training yeah it certainly helped me.

**Moderator** So some people have found the supervision sessions have helped transfer the learning from the course to the workplace and that’s what they were intending to do, so one way that they could have been more successful was maybe to have been more spaced out in your view.

**Speaker 8** It was only me.

**Moderator** Has anybody else got any ideas about how that transition could have been made more successful?

**Speaker 2** I can see how once a month may be a good idea in some cases but also if you are seeing someone weekly or fortnightly you need the fortnightly supervision to keep going (pause).

**Moderator** How have people found the work has been received by clients?

**Speaker 3** Very well, my client has quite enjoyed engaging in the work and she’s turned up for every appointment so I think that she has actually quite enjoyed it. It’s been a good opportunity for us as well, for our relationship as well.

**Speaker 7** Yes my client as you say has been very enthusiastic and taken it on board. I think I was very lucky, I have to say, in one way because he was just on the point of being discharged from the ward and I think he was actually very motivated to make sure he didn’t go back up there. But, as I was telling my group strangely he did go back of his own volition he actually recognised his relapse signature and asked to be readmitted as a preventative measure, so yeah he was very focused on learning from the experience.

**Speaker 4** I found that my client was quite dismissive of the idea at first I mean I knew she was going to be a bit of a challenge to do this work with. When we were using the cards she was like “I don’t think any of this is going to apply for me” and actually when she saw them she thought I do actually experience that. To see how many of the cards she actually experiences that was what triggered her to get motivated and to find out more about it. Since then it’s been quite successful to do the work.
Speaker 6  I think it would have worked very well with my client if she was not in a current disturbed state, as she is, because she is a very responsive and a very articulate lady. You know she expresses herself well but because she’s got so much going on in the background and obviously having to listen to the voices and all that she’s just so you know unwell in herself but I think we were able to use bits of it. I felt that she was responsive in that sort of timescale that we had together but because there’s just so much going on at the moment it doesn’t seem to be a good idea to use so much of it, having said that I think maybe a few months down the line when she’s more stable mentally then I could look at it again, yeah. (pause)

Moderator  Anyone else?

Speaker 3  I think doing the work from my point of view was quite interesting because the engagement was much better than I thought it would be. There was a lot more coherence than I expected. I think from the clients point of view I think he felt listened to and kind of guided through a fairly structured intervention in a way that I don’t think had happened very much in recent times.

Moderator  Has anyone experienced difficulties when using relapse prevention techniques?

Speaker 2  Well my client is extremely thought disordered and that makes it quite difficult to work with him but certainly the advice and help I have got in the groups has been very helpful so I haven’t specifically used those techniques from the teaching days but the supervision has been very useful.

Speaker 7  I think there is a point about targeting this work at the right place at the right time. I think people have to be reasonably well in order to be able to take on board what they need to do, and to be able to reflect back into their last period of illness and what was happening for them at a particular time. I think, as you say, if you are going to use relapse prevention you sometimes need to do the groundwork the client needs to be relatively well so that as and when they become unwell at least there is someone with a piece of paper you know: ‘Are you getting these symptoms?’ ‘What do you need to be doing if that’s happening?’

Moderator  Has anyone had difficulties integrating the work into their current work demands?

Speaker 5  I think it’s more labour intensive, I mean, doing the course, preparing the sessions before you go, preparing for supervision for it, you know it’s a far more labour intensive bit of work than the ordinary appointments would have been otherwise.
Speaker 7  I haven’t found that because I haven’t done any preparation (laughs).

Speaker 6  I think at the end of the day timescale will always be an issue here, because you try to incorporate that into your workload and it’s having to set that time specifically aside. Actually time management and having this as part of your intervention, it is useful, but obviously it can cause a lot of stress as well in terms of getting it all together.

Speaker 4  I think I found it quite useful because the client I was seeing she had two visits a week and there are three of us that cover those visits and sometimes you can get a bit lost in what you are doing. So it’s like you go out and have a chat and I found that I could use my hour with her for this work. I found it gave me, kind of like, a bit more of a purpose to do something with her that was actually structured and actually beneficial rather than just the usual visit like everybody else does. She has identified me as doing this relapse prevention work now and then she uses the other visit as a bit more casual kind of visit and I think it’s a good balance we’ve got.

Moderator Speaker 1 I saw you nodding when Speaker 4 was speaking have you had a similar experience?

Speaker 1  I suppose my thoughts I had about it really were that this is the stuff we should be having in our nurse training(murmurs of agreement ). This is integral stuff, these are basic interventions that we should be providing...it’s just cemented that belief really. The experience of going through this, a lot of it has given us a bit more hope and the clients. It is much much more prevention than cure really and I think that the legwork that is involved in getting here and to spend an hour studying just pales into insignificance in time down the line with that engagement with a client, the trust, you get to know them, the relapse signature..yeah.

Speaker 5  I think that’s very true actually it makes me think that it could very usefully be used on the ASW social work course training which is pretty awful basically. You know that something like this which is so basic and so important should be really integral to it.

Speaker 4  I find that being quite newly qualified, I came out of uni and I felt I didn’t really have any kind of like taught, you know, if you were to say to me ‘What kind of interventions do you use?’ I used to think (laughs) I used to sit there and think ‘oh’ (squirms). Now that I actually use something specific, you know, you learn all these little waffly kind of stuff and to actually have something which is really practical so that you can actually structure a session is quite motivating really.

Speaker 7  It’s exactly what it comes back to all these professional trainings like
psychiatric nursing training and sounds like social work training are all so formal and theoretical and all of the rest of it and to actually come out and do something revolutionary to actually listen (laughter) to what the patients are saying and what there feelings are about rather than what was written in the textbook I mean I don’t know how we can cope with that!

**Moderator** Do people think they will continue using the methods that they have learnt from the course?

**Speaker 4** I think because it is so easy to use you can adapt it and have a very short and intensive bit of work or you can have a longer bit. We have clients we work with for like a couple of years and I think you could use this and keep. I’ve identified in supervision sessions a lot of the clients I took on had had some really good relapse prevention work done in the past and then it was filed in the back of their notes, and maybe down into the basement you know in old files and maybe look at picking some of the work that other people have done up and reflecting back on it and extending the work. It just seems a shame that if you do a really good bit of work for it to be filed away never to be seen again. I just think that there’s a lot of work, especially in my team, there’s a lot of work been done and it’s just been forgotten about.

**Speaker 3** I went on x’s psychosocial intervention course, about five years ago now nearly, which I thought was amazing and I worked with the client Speaker 6’s seeing at the moment and in fact I didn’t really do a similar piece of work again till just recently partly because I think of not having the supervision available. Also it is time consuming but also because it is quite difficult and quite scary in some ways working with people who are quite psychotic. It really helps to have someone you can talk to who really knows what they are talking about and can really advise you. So I think I would find it difficult perhaps to do it without being assured that I had the right supervision really.

**Moderator** So that sounds maybe a barrier to continuing this...

**Speaker 3** Yes, I think it is to be honest.

**Speaker 6** I think the supervision aspect to it is quite key really (agreement by Speaker 3) because coming back to the supervision sessions and having the affirmation, and also just being directed and encouraged and advised as to where you are going, and if you are actually putting those practical skills into practice and you are doing the right thing. It is always useful to have that feedback and I think for me it’s been very much key to learning about relapse prevention is having that supervision.

**Speaker 2** In fact, the reason I missed the teaching sessions was because I simply didn’t have the time but I came to the supervision sessions particularly
because of my client that I was so worried about and I wasn't able to get sufficient supervision from my manager or from the case discussion group. I knew that having x to help would be really helpful, which it has been. So I think that it would be a problem doing it without supervision.

Speaker 1  I would say that I would continue to use it. (speaks quietly)

Moderator  That you would continue to use it?

Speaker 1  I used it prior to the course I suppose and, yeah, I will continue to offer it, it is an important intervention. I think it’s one of those things that’s just core teaching. But a follow up supervision group is a good idea maybe we could organise the time to do that between ourselves, see how that’s helpful.

Speaker 4  I think it would be nice to have like one

Speaker 1  Follow up

Speaker 4  Yeah so you could all meet again and know that you’ve got something to focus on to carry on doing the work.

Speaker 5  After the personality disorder course they set up a once a month supervision group. It would be quite nice to have that kind of thing because I’m not sure I’d always go but if I was struggling with a client at that point I’d feel a bit like ‘I can’t do this by myself’. So it would be quite nice to know that that structure was there so that you could use it if you needed to.

Moderator  So having a supervision session or some kind of follow up might be helpful, are there any other things which would help you to continue?

Speaker 6  Peer supervision is also good like Speaker 4 mentioned sort of meeting up once a month for peer supervision.

Speaker 4  I think somewhere to focus on if there was any new stuff come up, you know, new ways of working with relapse prevention to have a point where you could gather that information. You don’t always have time to flick through all the nursing journals or books and that kind of stuff but to have like a focus that where any new stuff did come up that somebody got hold of that, you know, that you could actually access that to keep up to date.

Speaker 6  Because that would certainly be useful in our professional development and in terms of looking at stuff that’s evidence based, so that’s quite key.

Moderator  Would people like to see other practice topics taught in a similar
way?

Speaker 1 Most of the practical skills should not be taught in any other way (agreement). In my own experience of college and other training courses I've had is that unless it's reflective you tend to go away and have days where you try to bring it back to your team. It might enhance your own practice in some way but I don't feel it benefits the whole team you work with and most of the clients that you see really. It seems very detached and stagnant, the research might be up to date, but it's then very hard to assimilate how or get the competence to put it into practice whereas here we've had all through really I feel to have had the teaching and come and share our experiences with colleagues with us we'll have the confidence to do it really. I think all teaching should be like that otherwise it's a waste of money really.

Speaker 8 It came up a bit earlier, when we were saying about how this should be like part of your training really, it came up the other day that we were on a team away day and we had a bit of someone talking about personality disorders and it just really hit me how I went through my training and I thought it was a really good training. Yet actually when I think about how hard and difficult the clients that we work with are and how little training we actually get, (laughter) even basic like, I do not know how to do like self harm minimisation kind of stuff. Do you know what I mean? I haven't actually been told about personality disorder I've picked it up along the way and I've got loads of clients and I've never actually been told how to do it you know it's like unbelievable. It just made me think how few practical clinical skills I've been given.

Speaker 4 Exactly yeah that's what

Speaker 8 Yeah I've picked up loads along the way and had different bits of training.

Speaker 4 Yeah

Speaker 8 But

Speaker 4 I think it was so focused on research that you just got given all these names and things and research papers and told to read it and you come out and it's actually not that practical to use in practice you know you come up with a basic understanding of the whole range of things but nothing actually you can grab hold of and actually use, I think you learn a lot of it in practice. They say your best learning is going to be when you actually start working and you know you either sink or swim type of thing and I think I did and I found that definitely you know and I think I've used, I hate to say it, very little of what I actually learnt at Uni. I've learnt most of it out in practice and coming on like this, I'd say this is probably the best thing I've learnt so far.
Speaker 5  There’s also a tendency especially on social work courses I think instead of just teaching you stuff to get you all to sit around in small groups and discuss things which I just find totally infuriating. Because if someone’s got something to tell you why don’t they just you know tell you and you can learn something.

Moderator  Are there any particular topics people would be interested in doing in a similar course.

Speaker 6  Certainly the suicidal intervention that would be very useful.

Speaker 3  And self harm whether that was done together or separately.

Speaker 6  Personality disorder as well.

Speaker 5  The suicidal intervention though I was thinking if you need to be working with someone who is actively suicidal that might be kind of quite limiting I mean we’ve all got psychotic clients but we haven’t all got ones that are actively suicidal have we?

Speaker 6  Self harming then

Speaker 5  Yes

Speaker 3  That would be good because I think we all work with people that self harm and we can sometimes feel at quite a loss with them.

Speaker 4  I think supervision is quite important when you are actually working with somebody who does self harm it can actually to be able to get together and actually discuss it I think it you know is quite beneficial.

Speaker 1  I’d like to be able to have access to similar to what you’ve seen on the THORN course, a psychosocial course with modules ....to have access to them in this sort of way.

Speaker 6  It’s an excellent idea yeah.

Speaker 1  ....the same but you know shorter.

Speaker 6  Yeah that would be good wouldn’t it!

Speaker 3  Yeah.
Speaker 1  Yeah, I know in x they have an inpatient one permanently run for new staff nurses that all of the staff nurses go through on the inpatient unit based on the psychosocial stuff (people exclaim). I know I thought wow that’s the kind of thing that’s very supportive in practice and it’s followed up and you know you value coming here.

Moderator  **What do other people think about that idea?**

Speaker 3  I think it is a really good idea. Because I think to take a year out to do the THORN course is

Speaker 1  Yeah

Speaker 3  you know difficult for most people and probably not as useful as doing it when you can integrate with your ongoing work.

Speaker 4  I think these short courses that they are all beneficial I mean finishing uni I didn’t want to see another essay for like the rest of my life. I just thought I’m not doing any more long term courses that involve any form of essay writing. I’m sick to the teeth of it. To actually come and do a short course that you know was very practical and very just you sit and listen and you know take your own notes and you know just go out and do it and then just reflect on it in like supervision rather than having do a whopping great big essay about it, and then you know maybe not use it, I think it was more beneficial.

Speaker 6  Yeah I agree that’s why

Speaker 4  Than doing any you know I’m not up for a long course at the moment.

Speaker 6  I think that a lot of us that have been on courses have certainly come back with that mindset because I’m looking to very much to go on a lot of skill based courses. I’m not looking at any masters or looking beyond like further study I just avoid it and I just feel it is useful to have a qualification at that time but how practical is it when you are trying to sort of use any of it in your practice areas. For me skills building or sort of learning new skills in terms of the clients we are having to treat you know it’s, to me it’s, more important than just sort of looking at more research work and doing anything further study yeah.

Moderator  **So going back to practical things in using the skills I’m interested to know how confident people feel in using the skills at this point at the end of the supervision sessions.**

Speaker 6  I think certainly having the knowledge that we’ve acquired in these last few weeks really hands on skills to give you that confidence ... and to practice what you’ve learnt. I feel that’s very much the case for me and it was useful to revisit relapse prevention because you know you hear about it but it’s actually formalising it and doing it properly it’s quite important.
Moderator  What do you feel would increase your confidence in using relapse prevention techniques?

Speaker 4  I think a pack, I would like to have it, you know, I started my session having to write all my own little cards and I thought to have a pack that had you know professional written cards and that kind of stuff. I think it would have looked a bit better than me turning up with my do it yourself DIY cards that (laughs) to have something given out that you could have

Speaker 5  Used

Speaker 4  You know I could have done it on the computer but actually to have a pack that started you off with some of the basic stuff.

Speaker 5  I think that is crucial as I was saying a bit earlier.

Speaker 4  Yeah, you were saying yeah

Speaker 5  but the pack that I was using is actually written for clients so actually what would be even better is for them to have a pack that you give to your client that you are working with and because I was photocopying for him and me and kind of going through each kind of bit together but also once you’ve got that material it means that in the usual pressures of work or whatever you might think well I’ll just take that bit out the pack

Speaker 4  Yeah

Speaker 5  Because that would be quite useful now whereas if you had to get your head round all your articles and materials and think well where should I start with this person or maybe not even get round it even. It just needs to be more accessible.

Speaker 8  It’s like anything else it’s just practice if you are seeing lots of different clients and doing it with lots of different people inevitably like anything it’s not going to work with everybody and you know but if you are doing it with people and you get positive results it gives you far more confidence to be doing it again and again and again. And you know there’s no doubt for a large proportion of people it could be beneficial.

Moderator  So going back to your teams how are you going to be perceived as someone who’s got skills in this area and an interest in taking on clients to do relapse prevention work

Speaker 8  I suppose we’re very fortunate in our team there are four of us sitting here from the same CMHC and there are others who are not here today who’ve already got an interest in it so and our manager is very keen on building up these kind of you know perhaps more for the family work
but certainly relapse prevention work and you know we’re very fortunate in our team to have ....

Speaker 5 I don’t see myself as somebody within the team with a real specialist knowledge than other people really because I think it’s part of everybody’s care plan the work. We have to look at relapse prevention because they are coming to our service because of health issues it’s always part of the equation obviously this is a focus on psychosis and that may or may not be part of your case load at any one time. But I didn’t particularly envisage that I was going to be seen as a person that would be seeing people for that reason really you know.

Moderator What do other people think?

Speaker 4 I think that in Assertive Outreach, you have a caseload and it’s not as easy to be, you know, I don’t think to have any other clients passed on to you kind of thing to do...but I think I’ve got enough to work with in my own caseload. I think by the time I’ve chugged through that lot I think you know it’d be... I think looking at my caseload I think all of the people on my caseload could benefit from some form of relapse prevention work and I aim to do it with all of them.

Speaker 8 I need to do a runner

Moderator Are there any other general comments that anyone wants to make before we finish.

Speaker 1 Only that I thoroughly enjoyed the course (General agreement).

Speaker 4 There should be more stuff like this churned out in this approach of teaching, I think it’s very beneficial.

Speaker 5 A really supporting experience because I think, I don’t know about the different professions, but as a social worker the quality of my clinical supervision for complex cases is perhaps not as thorough or not as supportive as we’ve had access to here so it’s been good.

Speaker 6 Lastly the facilitator was excellent and I think that also made a huge difference.

Moderator That’s good to hear. Well thanks for participating in this it has been really helpful and I am going to feedback what we have talked about here and also the information from the questionnaires to x and the other people involved in the course. Eventually I’ll have a summary which I’ll send out to those of you who are interested in that. Thanks very much.
Appendix 8: Feedback to Course Trainers
2nd August 2004

Dear

RE: Evaluation of Staff Training Programme in Relapse Prevention for Psychosis

Thank you for sending me a copy of your research project. I understand that I has also received a full copy of the project and that those who attended the course have received a summary of the findings.

We had a meeting last week to discuss how best to take forward work based learning courses. Your evaluation was discussed at the meeting. In particular, your recommendations were very helpful in getting us to focus on pertinent issues in modifying the relapse prevention module and in designing new work based learning modules. Clinicians at the meeting commented on how good it was to have such prompt and useful feedback from you.

Well done on getting such a good mark from the course.
Screening for depression in older stroke survivors: An initial assessment of the reliability and validity of the Brief Assessment Schedule Depression Cards and the Beck Depression Inventory-Fast Screen

July 2006

Year 3
Acknowledgements

I would like to express great thanks to everyone who contributed to my major research project.

I would especially like to thank the stroke survivors who gave up their time to participate and for their support and enthusiasm for the project. Special thanks also to the staff teams, particularly the lead nurses, at each of the rehabilitation units for their help and support. Particular thanks to Rhona McGurk and Dia Soilemezi for their assistance with data collection and to Dr Stuart Anderson for helping with access to participants and for his guidance and encouragement.

I would like to thank Dr Ian Kneebone, who made this project possible, and Dr Martin Carroll, my research supervisors for their guidance, encouragement and time. I would also like to thank my research tutor Dr Sue Thorpe for her comments on a draft of this project.

Financial support for this major research project, which forms part of an ongoing project, was provided by research and development funding from one of the NHS Trusts involved and I would like to thank them for this assistance.
## Contents

**Abstract**  
178

**Introduction**  
179

- Overview  
179
- Background Information and Definition of Terms  
179
- Depression in stroke survivors: Prevalence, impact and treatment  
182
- Screening for Depression: Guidelines and Psychometric Properties  
185
- Issues in the Assessment of Depression: Implications for Screening Measures  
190

**Depression in stroke survivors: Prevalence, impact and treatment**  
182

**Screening for Depression: Guidelines and Psychometric Properties**  
185

**Issues in the Assessment of Depression: Implications for Screening Measures**  
190

**Criteria for the Selection of Depression Screening Measures for Stroke Survivors**  
194

**Summary of Research on Depression Rating Scales for Screening for Depression after Stroke**  
195

**The Current Study**  
199

**Clinical Objective**  
202

**Research Objectives**  
202

**Method**  
204

- Design  
204
- Inclusion and Exclusion Criteria  
204
- Method of Recruitment  
204
- Measures  
205
- Ethical Approval  
207
- Procedure  
208
- Data Analysis  
209

**Results**  
212

- Overview  
212
- Analysis of Demographic and Clinical Characteristics  
212
- Descriptive Analysis of Distribution of Scores on the Depression Rating Scales  
215
- Research Objectives  
217

**Discussion**  
227

- Overview  
227
- Summary of Main Findings  
227
- Discussion of Findings  
228
- Limitations  
234
- Clinical Implications  
236
- Further Research  
237
- Conclusion  
238

**References**  
239
Appendices

Appendix 1  DSM-IV Criteria for Major and Minor Depression 253
Appendix 2  Study Information Sheet 256
Appendix 3  Participant Consent Form 262
Appendix 4  BASDEC Score Sheet and Example of Cards 265
Appendix 5  Beck Depression Inventory-Fast Screen for medical patients 269
Appendix 6  Hospital Anxiety and Depression Scale 271
Appendix 7  Background Information Form 275
Appendix 8  Consideration of Ethical Issues and Ethical and Research and Development Approval Letters 280
Appendix 9  Sample Size Estimation 291
Appendix 10  Full Descriptive Statistics for the Distribution of the Total Scores on the BASDEC, BDI-FS and HADS 293
Appendix 11  Summary of distributions of individual items on the BASDEC, BDI-FS and HADS for Non-depressed and Depressed participants 296
Appendix 12  Tables of Corrected Item-Total Correlations for Depression Rating Scales 300
Appendix 13  Calculations for Pre and Post-Screen Probabilities for Depression based on Likelihood Ratios 304

Tables

Table 1  Demographic characteristics of participants presented for the total sample and non-depressed and depressed (according to DSM-IV criteria) participants 213
Table 2  Distribution of scores on the depression rating scales for the total sample and non-depressed and depressed participants 216
Table 3  Internal consistency of the depression rating scales 218
Table 4  Classification of the results of the BASDEC compared to DSM-IV diagnosis 219
Table 5  Classification of the results of the BDI-FS compared to DSM-IV diagnosis 220
Table 6  Classification of the results of the HADS-Depression Scale compared to DSM-IV diagnosis 220
Table 7  Effectiveness of the BASDEC, the BDI-FS and the HADS-D compared with DSM-IV diagnosis 220
Table 8  Kendall’s tau-b correlations between the depression rating scales at initial assessment 224
Table 9  Comments on scale preference by participants 226

Figures

Figure 1  Percentage of participants expressing preference for depression rating scales 225
Abstract

Objective: To conduct an initial assessment of the reliability and validity of the Brief Assessment Schedule Depression Cards (BASDEC) and the Beck Depression Inventory-Fast Screen (BDI-FS) to screen for depression in older stroke survivors.

Design: A prospective correlational study between self-report measures of depression and a structured clinical diagnostic interview.

Setting: Four specialist rehabilitation units for older stroke survivors.

Participants: 37 stroke survivors (M = 77.8, SD = 6.65 years) who had experienced a stroke within the last three months (Median: 34 days, IQR: 27-58) and had minimal cognitive impairment and dysphasia.

Methods: Participants completed the BASDEC, BDI-FS, Hospital Anxiety and Depression Scale (HADS) and the Structured Clinical Interview for DSM-IV (SCID: criterion measure of depression).

Results: The BASDEC and BDI-FS demonstrated acceptable internal consistency and test-retest reliability. Significant associations were found between the BASDEC, BDI-FS and HADS, giving convergent evidence for their validity. Further evidence for the validity of the measures was suggested by comparison with the SCID diagnosis. Scores on all the measures were significantly higher in participants who were depressed than those who were not. The BASDEC (cut-off ≥ 7) was in excellent agreement with DSM-IV diagnosis and had high sensitivity and specificity. The BDI-FS (cut-off ≥ 4) was in moderate agreement with DSM-IV diagnosis and had low sensitivity and acceptable specificity.

Conclusions: The findings present initial evidence for the reliability and validity of the BASDEC and BDI-FS as screening measures for depression in older stroke survivors. Further evaluation of the BASDEC and BDI-FS is warranted in a larger group of stroke survivors.
Introduction

Overview
Depression is a common and distressing experience for stroke survivors and their families that is associated with poor outcome. Preliminary evidence shows that treatment can at least relieve the severity of depressive symptoms and improve independence post-stroke, yet depression following stroke remains under-recognised and under-treated (Rigler, 1999). In this context, recent guidelines have recommended that a key role for clinical psychologists is the assessment and intervention for depression following stroke, including routine screening (British Psychological Society (BPS), 2002; Department of Health, 2001). Given the varying nature of impairment following stroke, it is likely that a selection of screening measures will be needed to detect depression in different groups of stroke survivors. It is important that depression rating scales are validated for this use. The focus of this study is the initial assessment of the reliability and validity of two depression rating scales which demonstrate potential for use to screen for depression in older stroke survivors in an inpatient rehabilitation setting: the Brief Assessment Schedule Depression Cards (BASDEC: Adshead et al., 1992) and the Beck Depression Inventory-Fast Screen (BDI-FS: Beck et al., 2000).

Background Information and Definition of Terms

Stroke
‘Stroke’ is a lay term referring to a cerebrovascular accident, which has been defined by the World Health Organisation as ‘a rapidly developed clinical sign of a focal disturbance of cerebral function of presumed vascular origin and of more than 24 hours duration’ (Lishman, 1998, p. 375), or more simply, as ‘a sudden failure of the blood supply to a part of the brain’ (Bornstein, 1996, p. 215). The term ‘stroke’ is in common use in clinical settings and will be the term used in this research. The term ‘stroke survivor’ will be used to refer to someone who has had a stroke as recommended in the BPS (2002) document Psychological Services for Stroke Survivors and their Families.
An ischemic stroke (69%), resulting from the blockage of an artery supplying the brain, is the most common type followed by a haemorrhagic stroke (19%), which is caused by a burst blood vessel, whilst the remainder are of uncertain type (Wolfe et al., 2002).

Stroke: Incidence and Prevalence
The national incidence of people affected by a stroke each year is between 174 and 216 people in every 100,000 (Mant et al., 2004). The risk and incidence of stroke increases as people age, approximately 75 per cent of people who have a stroke are over retirement age (National Audit Office, 2005). Stroke costs the NHS over £2.8 billion in direct care annually. People who have had a stroke occupy 20 per cent of acute hospital beds and 25 per cent of long term beds (National Audit Office, 2005). The National Service Framework for Older People (Department of Health, 2001) introduced milestones, targets and actions for the management of stroke. The government has also recently announced an 18 month work programme to produce a ‘National Stroke Strategy’ to modernise service provision and deliver the newest treatments for stroke (Department Of Health, n.d.).

Effects of Stroke
Stroke is the largest single cause of severe disability and is the second leading cause of death in the United Kingdom (Department of Health, n.d.). Following a stroke, 20 to 30 per cent of people die within a month and half of stroke survivors are dependent on others for assistance with activities of daily living (National Audit Office, 2005). The effects of a stroke vary and can include physical, behavioural, cognitive difficulties and emotional changes. Stroke survivors can have problems with walking, movement, balance, vision, communication, cognition (e.g. memory or executive functioning) and mood. This can impact on an individual’s activities of daily living, such as dressing or managing personal hygiene as well as their social functioning. Factors contributing to the different effects include the severity of the brain lesion, the site of the lesion, the etiology and previous cerebrovascular disease (Bornstein, 1996).
Stroke Rehabilitation

Evidence has suggested that early, expert and intensive rehabilitation in a hospital unit specialising in stroke care improves the long term outcome for stroke survivors (e.g. Lincoln, 2000) and this has been advised as best practice for all stroke patients (Department of Health, 2001; Royal College of Physicians, 2004). In recognition of the psychological needs of stroke survivors, it is recommended that a clinical psychologist is part of a specialist multi-disciplinary rehabilitation team. Other members include a consultant physician, nurse specialist, physiotherapist, occupational therapist, speech and language therapist and dietician (Department of Health, 2001; Royal College of Physicians, 2004).

Depression

It is useful to consider the term ‘depression’ here. In lay language the term ‘depression’ is used to refer to a variety of mood states from a temporary sad mood to a severe illness. In clinical settings, the term depression refers to a broad diagnostic grouping, key to which are the symptoms of low mood and absence of positive affect accompanied by other emotional, cognitive, behavioural and physical symptoms (National Collaborating Centre for Mental Health, 2004). Symptoms can include difficulty concentrating or making decisions, low confidence, hopelessness, guilt, irritability, suicidal ideas, low energy, changes in appetite, weight or sleeping difficulties, poor concentration, feelings of guilt or worthlessness and suicidal ideation. There are two main diagnostic systems that are in current use for the categorisation of mental illness including depression. These are the Diagnostic and Statistical Manual IV (DSM-IV: American Psychiatric Association, APA, 1994) and the International Classification of Disease 10 (ICD-10: World Health Organisation, 1980). Under these systems ‘major depression is generally diagnosed when a persistent and unreactive low mood and an absence of positive affect are accompanied by a range of symptoms, the number and combination needed to make a diagnosis being operationally defined’ (National Collaborating Centre for Mental Health, 2004, p. 14).
Older People

The definition of 'older people' is culturally bound, however, the most frequent chronological age cut-off used in western psychological research and clinical practice is 65 (Britton & Woods, 1999).

Depression in stroke survivors: Prevalence, impact and treatment

Prevalence

Depression is the most common mood disorder following a stroke (Robinson, 2006). Other mood disorders can include anxiety disorder, bipolar disorder, apathy and pathological crying (Robinson, 1997). Gordon and Hibbard (1997) found that the reported prevalence of depression following stroke varied from 25 to 79 per cent in a review of research studies. Reasons for this wide variation include the use of different tools to measure depression, the use of different cut-offs on tools, studies reporting either incidence or prevalence, the use of different diagnostic categories and different settings. Inclusion and exclusion criteria also vary widely and therefore different patient characteristics are found across studies (Hackett et al., 2005; Turner Stokes & Hassan, 2002). In a recent review, Hackett et al. (2005) produced a pooled estimate of 33 per cent depression in all stroke survivors regardless of time since stroke (1 month, 1-6 months or over 6 months), or setting (community, hospital or rehabilitation unit). In rehabilitation settings, one to six months post-stroke, they found the pooled estimate of depression was slightly increased at 36 per cent.

Research has found that having a stroke increases the risk of depression but not necessarily more so than other disabling physical illnesses. House et al. (1991) found that the risk of depression following stroke was twice that in controls, this reached significance at six month follow up. A prospective, community-based study (Kase et al., 1998) investigated depression in stroke survivors over a twelve year period. When compared to controls, who were matched for age and sex, significantly more stroke survivors (30% versus 10%) were depressed at six months after stroke. Aben et al. (2003) found that the cumulative incidence of depression over one year in a group of stroke survivors and a group of myocardial infarction survivors was comparable. However they excluded participants with cognitive impairment and/or dysphasia which are significantly associated with depression following stroke (Robinson, 2006).
The increased risk of depression following stroke has been linked to the stroke affecting areas of the brain involved in mood (e.g. the effects of the brain lesion itself) and the reaction to the stroke as a stressful live event combined with the associated losses (Rickards, 2005). Studies investigating predictor variables for depression after stroke suggest that depression is likely to be the result of a complex mix of interacting pre- and post-stroke variables (e.g. Anderson et al., 1995).

**Impact**

In addition to the direct distress that depression elicits in stroke survivors and their families, it is also associated with poor rehabilitation outcome. Depression can impact considerably on a person's ability to engage with the early, intensive inpatient rehabilitation which is recommended as best practice following a stroke. Studies have shown that depression is related to: poorer outcome in functional status (e.g. Hermann et al., 1998; Pohjasvaara et al., 2001), reduced cognitive performance (e.g. Morris et al., 1992), physical disability (e.g. Dennis et al., 2000; Parikh et al., 1990), poorer language functioning (Parikh et al., 1990) and mortality (House et al., 2001; Morris et al., 1993).

Teasdale and Engberg (2001) compared published statistics of suicide for the whole of the Danish population between 1979 and 1993 and 11,409 stroke survivors. Consistent with the higher rate of depression reported following stroke, they found an approximately doubled risk of suicide.

Parikh et al. (1990) found that stroke survivors who had a diagnosis of depression during their acute hospitalisation were significantly more impaired, in physical activities and language functioning, at a two year follow-up. This was despite the fact that at the two year follow-up major depression had remitted in most patients and some non-depressed patients had developed depression. The two groups had not differed significantly between neurological diagnosis, lesion location and volume, impairment in activities of daily living, demographic variables, cognitive impairment and social functioning during their acute admission. They also found that the presence or absence of aphasia did not explain the slower rate of recovery among depressed
patients. This result would suggest that depression early following stroke can impact long term outcome, even when it resolves. This suggests that the early detection of depression after stroke is important to potentially reduce impact on rehabilitation.

It is very difficult to determine causality in most of the above outcome studies and may remain impossible in some cases (Turner-Stokes & Hassan, 2002). Complex models are clearly needed to study the associations by which stroke, depression and rehabilitation outcome are linked.

Treatment
A Cochrane review of treatment following stroke (Hackett et al., 2004) stated that ‘many, perhaps most, [stroke] patients do not receive effective treatment because their mood disorder is undiagnosed or inadequately treated’ (p.2). Based on evidence to date, it has been recommended that treatment should be readily available to stroke survivors with depression. The National Clinical Guidelines for Stroke (Royal College of Physicians, 2004) recommended that psychological therapy and/or anti-depressant medication should be provided to stroke survivors with persistent or more severe depression. Initially, those with minor depression should be managed by watchful waiting and if depression persists treatment should be provided including brief psychological intervention (NICE, 2004).

There is indirect evidence for the use of psychological therapy with stroke survivors who are depressed. Research has shown, for example, that cognitive behavioural therapy (CBT) is an effective treatment for depression in those with physical illnesses (e.g. Leibing et al., 1999) and in older people (e.g. Thompson, 1996). Furthermore, a study of cognitions in post-stroke depression found that participants with depression had significantly more negative cognitions and less positive cognitions than those who were not depressed. It was suggested that this provided support for the cognitive theory of depression and cognitive therapy in this client group (Nicholl et al., 2002).

There is a paucity of specific research investigating the treatment of depression in stroke survivors. The Cochrane systematic review (Hackett et al., 2004) found just two published randomised controlled trials of psychological therapy for depression.
following a stroke. Lincoln and Flannagan (2003) randomly allocated 118 stroke survivors (51% male, mean age: 66, SD = 13) to a CBT group, an attention placebo intervention or standard care. Following nine sessions of CBT, they found no significant difference between the groups in participants' mood, independence in activities of daily living, handicap or satisfaction with care. However, they acknowledged that a major limitation of the study was the small number of sessions. Towle et al. (1989) conducted a randomised controlled study of a social work intervention (including counselling participants and increasing communication and access to local services) for 44 depressed individuals (43% male, mean age = 70, SD = 9) approximately 12 months following their stroke compared to a no treatment group. They found no significant differences between the groups after 16 weeks.

As with psychological therapy, there is indirect evidence for the use of anti-depressants with stroke survivors from their effectiveness with older people who are depressed (e.g. Mittmann et al., 1997) and those who are physically ill (e.g. Gill & Hatcher, 2000). Seven randomised controlled trials of anti-depressant use with depression following stroke were identified in the Cochrane review (Hackett et al., 2005). Evidence demonstrated that the use of anti-depressants reduced depression severity in trials, although it was cautioned that another effect was an increase in anxiety. Preliminary evidence has shown that anti-depressant treatment can improve functional outcome (e.g. Robinson et al., 2000). Hackett et al. (2004) found that the duration of drug treatment was short, in four of the studies treatment duration ranged from four to six weeks. It has been recommended that anti-depressants are continued for at least six weeks in older people before it is decided that treatment has been ineffective (National Institute of Clinical Evidence : NICE, 2004). Turner-Stokes and Hassan (2002) suggested that the short timescale of drug trials and the small samples included may have reduced the chance of detecting functional outcome in other studies (e.g. Wiart et al., 2000).

Screening for Depression: Guidelines and Psychometric Properties
The first step in providing treatment for depression for a stroke survivor, with the potential to enhance rehabilitation outcome, is to recognise that they are depressed. To this end and given the high rate of depression among stroke survivors, routine
screening for depression has been recommended for this client group. Instruments selected as screening measures for depression following stroke need to demonstrate psychometric properties for their evidence based use.

Screening can be defined as: 'the systematic application of a test or inquiry, to identify individuals at sufficient risk of a specific disorder to warrant further investigation or direct preventive action, amongst persons who have not sought medical attention on account of symptoms of that disorder' (p.85, National Screening Committee, 1998 adapted by the National Collaborating Centre for Mental Health, 2004). Diagnostic tests on the other hand are used when the person is suspected of having the condition and the purpose is to confirm this or rule it out (Streiner, 2003).

Screening for depression following stroke fulfils the first two principles of screening outlined by Nielsen and Lang (1999) that: 'the disease or condition should be an important problem (morbidity and mortality)' (p.1326), and further, that 'the disease or condition should be common (prevalence and incidence)' (p.1326). The third principle is that 'the disease or condition should have a readily available and acceptable treatment.' (p. 1327). Guidelines for best practice have recommended that psychological therapy and anti-depressants should be readily available in all services. If both psychological therapy and anti-depressant medication are available it enables stroke survivors to choose the type of treatment most acceptable to them.

**Guidelines**

Several organisations have produced recommendations regarding screening for depression in stroke survivors. A major priority for implementation of the NICE (2004) guidelines for the management of depression in primary and secondary care was that screening should be undertaken in primary care and hospital settings for those in high risk groups including those with significant physical illness causing disability (p.5). The *National Clinical Guidelines for Stroke* (Royal College of Physicians, 2004) state that: 'patients should be screened for depression and anxiety within the first month of stroke, and their mood kept under review. In those patients who can respond to it, a standardised questionnaire may be used for screening, but any clinical diagnosis should be confirmed by clinical interview, during which the
interviewer should attempt to find whether there is suicidal thinking’ (p.54). The BPS (2002) recommended that a system of ensuring routine assessments for mood should be in place in each stroke service. They stated that mood should be regularly monitored during the early and continuing rehabilitation stage and that those screened as probably depressed should be assessed further.

In conjunction with recording information in case notes the use of depression screening measures, which require minimal training, by non-mental health professionals can facilitate referrals to clinical psychologists or other mental health professionals for further specialist assessment (Kneebone, 1999). It has been recommended that clinical psychologists are involved in the assessment and intervention of depression in stroke rehabilitation services (BPS, 2002; Department of Health, 2001).

**Psychometric Properties**

Screening measures should be easy to administer, acceptable to the client group and have established reliability and validity for their use (Neilsen & Lang, 1999). It is useful to consider the properties which screening measures should demonstrate to provide evidence for the reliability and validity of their use. Depression screening measures for use following stroke will need to demonstrate these properties for their evidence-based use.

Reliability refers to the consistency with which a test measures. Internal consistency is a way of assessing the inter-item reliability with the assumption that the items are equivalent in that they are measuring the same construct (Parker et al., 2002). Test-retest reliability refers to the consistency of a measure over time and is assessed by correlating scores from a set of participants at two separate time points (Kline, 2000).

Validity refers to ‘the degree to which evidence and theory support the interpretations of test scores entailed by the proposed uses of tests...The process of validation involves accumulating evidence to provide a sound scientific basis for the proposed score interpretations.’ (Joint Committee on Standards for Educational and Psychological Testing of the American Educational Research Association, the
The optimal method of evaluating the validity of screening measures is to investigate how they relate to a criterion measure, which is conducted independently and blind to the result of the screening measure. The 'gold standard' criterion measure for measuring depression and other mental illness is a structured clinical interview based on established diagnostic categories such as DSM-IV (e.g. Structured Clinical Interview for DSM-IV, First et al., 1997), although studies often use cut-offs on rating scales (Farmer et al., 2002). In real terms no diagnostic assessment is 100 per cent accurate, however, in a criterion design the 'gold standard' is assumed to be 100 per cent accurate (Warner, 2004). Typically in the assessment of depression, screening tests tend to be self-rating scales (e.g. Beck Depression Inventory-II, Beck et al., 1996) or simple observer or informant based checklists.

In order to evaluate how the screening measure compares with the 'gold standard', sensitivity, specificity and positive and negative predictive values and likelihood ratios should be calculated. Definitions for these terms are given below in Box 1 below and are also defined in terms of a two-by-two classification table.

A good screening measure will have high sensitivity, to minimise the number of people with a condition missed at the screening stage, and reasonable specificity. Sensitivity and specificity change in opposite directions as a cut-off (the cut-point which dichotomises a scale at which it is described that the condition is probably present or probably absent) changes. Cut-off scores are usually produced at the test development stage and then further refined for different client groups in subsequent research. A common method for this is Receiver Operating Characteristic Curve Analysis (Farmer et al., 2002), however this requires a substantial sample size. The specific values which are interpreted as acceptable sensitivity and specificity vary according to the clinical context. In a recent review of screening measures for depression and anxiety in stroke survivors, Bennett and Lincoln (2004) suggest that screening measures for this purpose should have sensitivity values of at least .80 and specificity of at least .60. These can be considered the minimum acceptable
requirements, as a specificity value of .60 would produce a high false positive rate of 40 per cent. The consequence of a high false positive rate could lead to further specialist assessment of depression for a number of people who did not require it with associated time costs.

Box 1. Definitions of sensitivity and specificity and their relation to a 2x2 classification table

<table>
<thead>
<tr>
<th>Criteria Measure</th>
<th>New Measure</th>
<th>Depressed</th>
<th>Non-Depressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depressed</td>
<td>a</td>
<td>b</td>
<td></td>
</tr>
<tr>
<td>Non-depressed</td>
<td>c</td>
<td>d</td>
<td></td>
</tr>
</tbody>
</table>

Sensitivity: 'proportion of true cases correctly identified' (Farmer et al., 2002) = a/a+c
Specificity: 'proportion of non cases correctly identified' (Farmer et al., 2002) = d/b+d
Positive Predictive Value: 'the proportion of patients identified as cases that actually are cases according to the criterion' (Farmer et al., 2002) = a/a+b
Negative Predictive Value: 'the proportion of patients identified as non-cases that are non-cases according to the criterion reference' (Farmer et al., 2002) = c/c+d
Positive Likelihood ratio LR+: 'indicates the increase in the odds favouring the condition given a positive test result' (Fritz and Wainner, 2001) = sensitivity/1-specificity
Negative Likelihood ratio LR-: 'indicates the change in odds favouring the condition given a negative test result' (Fritz & Wainner, 2001) = 1-sensitivity/specificity

Sensitivity and specificity values and likelihood ratios, which combine the former values, are not related to prevalence, that is, they should remain the same when used with a similar sample of people. Likelihood ratios are clinically very useful because they give a ratio that can be used to quantify shifts in the probability of someone having a condition once the screening test result is known (Fritz & Wainner, 2001).

Positive and negative predictive values are important to calculate as they vary according to the prevalence of the condition in the sample. Therefore, they give an idea of the tests performance at difference prevalence rates. If there is a low prevalence of depression in a sample of people (i.e. a low prevalence of true positives), the lower the proportion of truly depressed people will be among people who have screened positive for depression, therefore leading to a lower positive
predictive value. Similarly if there is a large prevalence of depression, there will be a small negative predictive value.

Issues in the Assessment of Depression: Implications for Screening Measures

As well as the need to demonstrate good psychometric properties, three factors which complicate the assessment of depression in stroke survivors have implications for the selection and use of screening measures with stroke survivors. These factors are the nature of depression in older people, the overlap between symptoms of stroke and symptoms of depression and the difficulty in self-report on account of cognitive and communication difficulties.

Depression in Older People

Three quarters of stroke survivors are above retirement age. There is some evidence to suggest that the clinical presentation of depression in older people is different from younger people (Lasser et al., 1998). A common clinical observation and research finding is that older people are less likely to report feeling sad or depressed than younger people (e.g. Gallo et al., 1999). The rate of anxiety is also higher among older people with depression than younger people with depression (Gottfries, 1998). Older people are also more likely to somatise their distress, through presentation with physical symptoms such as headaches, feeling tired, pain or feeling heavy in their body (e.g. Christensen et al. 1999, Katona et al., 1997). This further complicates assessment as older people are also more likely to have co-morbid physical illness with its own set of physical symptoms. Screening measures developed for use with older people such as the Geriatric Depression Scale (GDS: Brink et al., 1982) have tended not to include physical symptoms of depression as they may be non-specific and increase the chance of non-depressed people being mistakenly screened as depressed.

Research has shown that older people are less likely to seek help for symptoms of depression than younger people with depression (Allen et al., 1998; Zeitlin et al. 1997). Katona and Livingston (2000) suggested that the stigma of mental health problems is a major reason why depression is under-treated in older people. Some people are reluctant to admit symptoms which they find distressing or shameful.
There may also be an ageist assumption, among healthcare staff (and older people themselves), that depression is inevitable among older people, particularly those with co-morbid physical illness and/or who have experienced a stressful life event. This may mean that healthcare staff working with older stroke survivors may be less likely to consider referral or intervention for depression (Katona & Livingston, 2000). This emphasises the importance of depression screening for older stroke survivors who may be less likely to report depression or seek help.

**Confusing the Symptoms of Stroke with the Symptoms of Depression**

Stroke can produce symptoms which are part of the diagnostic criteria for depression, for example insomnia, fatigue and concentration difficulties may be symptoms due to cerebrovascular damage, due to depression or both. To complicate matters further in assessment in inpatient settings some symptoms may also be a result of the hospital environment such as reported insomnia, due to a noisy ward environment, or reduction in appetite, due to poor hospital food. Emotional lability, including tearfulness, which has been found in 18 per cent of stroke survivors two months post-stroke and is independent of post-stroke depression (Morris et al., 1993) may lead to observers presuming that patients are depressed. There is also an overlap of some of the diagnostic symptoms for apathy, which is common following stroke, and depression (Turner-Stokes & Hassan, 2002).

There is debate in the literature regarding the relative importance of somatic (e.g. insomnia and reduced appetite) and non-somatic symptoms in assessing depression in stroke survivors (Turner-Stokes & Hassan, 2002). Evidence suggests that DSM diagnostic criteria for depression (APA, 1994), which include somatic items do not produce significant numbers of false positives or false negatives of depression in stroke survivors. Paradiso et al. (1997) found a higher incidence of both psychological and somatic symptoms in a depressed rather than a non-depressed group of stroke survivors. Spalletta et al. (2005) found that eight out of the nine DSM-IV symptoms were significantly greater for stroke survivors with minor and major depression than those with none, aside from feelings of guilt. These results are partly confounded in that major and minor depression require a greater number of symptoms for diagnosis. Simon and von Korff (2005) also found that DSM-IV criteria did not require
significant modification for patients with medical comorbidity and cautioned against the assumption that high rates of depression in chronic medical illness were an artefact of measurement.

There is some agreement in the literature that DSM-IV criteria, elicited by a structured clinical interview, can be considered the ‘gold standard’ for diagnosing depression after stroke (e.g. Spalletta et al., 2005b, Robinson, 2006, de Coster et al., 2005, Turner-Stokes, personal communication, 2005). Hackett et al. (2005) reported that the majority of studies they reviewed in a prevalence study of depression following stroke, had used DSM criteria to define depression. The majority of studies of depression following stroke consider both major and minor depression, often collapsing the two groups for analysis (Williams, 2005). Minor depression is a research diagnostic criteria which requires the presence of fewer symptoms than major depression. The diagnostic criteria for DSM-IV symptoms for major and minor depression are summarised in Box 2 and the full diagnostic criteria are given in Appendix 1.

The somatic symptoms in the DSM-IV criteria can be considered carefully in an interview and symptoms are weighted so either low mood or loss of pleasure are required for diagnosis of major or minor depression. Self-report questionnaire items are not subject to such discrimination and items usually contribute equally to the total score indicating severity of depression. It follows that the inclusion of somatic items may lead to a number of false-positive screens for depression in stroke survivors. Stein et al. (1996) found that non-somatic symptoms of the Beck Depression Inventory (Beck et al., 1961) and the Hamilton Rating Scale for Depression (Hamilton, 1960) were the most accurate indicators of depression following stroke. In addition, somatic symptoms did not improve incremental validity for detecting depression. They concluded by recommending that depression screening measures for stroke survivors should be comprised primarily of non-somatic items.
<table>
<thead>
<tr>
<th>Major depression requires at least one of the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depressed mood</td>
</tr>
<tr>
<td>Loss of interest or pleasure</td>
</tr>
<tr>
<td>AND some of the following symptoms to give a total of at least five symptoms which have been present for at least two weeks and are a change from previous functioning:</td>
</tr>
<tr>
<td>Significant appetite/weight loss or gain</td>
</tr>
<tr>
<td>Sleep difficulties (Insomnia or hypersomnia)</td>
</tr>
<tr>
<td>Psychomotor agitation or retardation</td>
</tr>
<tr>
<td>Fatigue or loss of energy</td>
</tr>
<tr>
<td>Excessive guilt or feelings of worthlessness</td>
</tr>
<tr>
<td>Concentration difficulties or indecisiveness</td>
</tr>
<tr>
<td>Suicidal thoughts or plans</td>
</tr>
</tbody>
</table>

**Minor depression** requires that either loss of pleasure or low mood is present but only requires a total of two depressive symptoms that have persisted for a two week period.

**Self-report Difficulties**

Depression rating scales based on self-report and structured clinical interviews rely on an individual’s ability to describe how they are feeling. Communication difficulties such as dysphasia and cognitive changes can affect this ability following a stroke. Individuals with dysphasia may not be able to comprehend questions regarding mood state and/or express information about how they are feeling. Memory impairment may mean that a person is unable to recall details about their mood prior to the stroke or even in a different hour, day or week. Difficulties in working memory and speed of processing, for example, may impact the ability to consider different responses on a rating scale and choose the response which is most reflective of current mood.

Some researchers have indicated that a lack of awareness (anosognosia) may also compromise self-report assessment of mood (e.g. Spencer et al., 1997). However, whilst anosognosia is common for hemiplegia for example, there does not appear to be clear evidence regarding the presence of anosognosia of emotional difficulties. Starkstein et al. (1992) found that there was minimal difference between self-reported
depression between stroke survivors with non-, mild, and severe, anosognosia of physical symptoms.

Many stroke survivors find completing self-rating questionnaires problematic on account of communication difficulties or physical changes (Aben et al., 2002). It is common clinical practice in rehabilitation settings for stroke survivors to be given support in their completion. This introduces a further source of potential influence upon the assessment process.

Criteria for the Selection of Depression Screening Measures for Stroke Survivors

In addition to the need for screening measures for depression following stroke to demonstrate the psychometric properties detailed above to provide an evidence base for the reliability and validity of their use, the issues discussed suggest further criteria for the selection of screening measures for depression following stroke.

1) Different rating scales may be considered appropriate for:
   a) younger and older stroke survivors given the possibility of the different clinical presentation of depression in these two client groups; and
   b) those with minimal and more severe cognitive and communication difficulties.

2) Depression screening measures with no somatic items should be considered as they may minimise the number of false-positive screens for depression and therefore demonstrate relatively high specificity.

3) Depression screening measures should be quick to administer to lessen the impact of fatigue or concentration difficulties.

4) Depression rating scales should have simple response categories to reduce demand on memory.

5) In order to meet screening guidelines (e.g. Royal College of Physicians, 2004), it is important that screening measures can be used early after stroke and in hospital or rehabilitation settings.

6) Depression rating scales should be easy to administer by non-mental health professionals so they can be used regularly to monitor mood.
Summary of Research on Depression Rating Scales for Screening for Depression after Stroke

The psychometric properties of the following depression ratings scales have been investigated for the validity of their use as screening measures for depression following stroke. They will also be considered in terms of the specific criteria for post-stroke depression screening measures detailed above.

Observer Rated Scales

Observer rating scales of depression have been developed to address the difficulties in self-report assessment for some stroke survivors.

Bennett et al. (in press) assessed the reliability and validity of the Stroke Aphasic Depression Questionnaire Hospital version (SADQ-H10), this is a carer-rated scale of observable behaviours reflecting low mood (Sutcliffe & Lincoln, 1998). The Hospital Anxiety and Depression Scale (HADS: Zigmond & Snaith, 1983) was used as a criterion measure (cut-off > 8) which indicated depression in 20 per cent of the participants. Participants (N = 79, median age = 71.5, Inter Quartile Range (IQR) = 65 - 76) were assessed between two to four weeks post-stroke in an acute hospital setting. The Signs of Depression Scale (SODS, Hammond et al., 2000), a brief observer-rated scale designed for medically ill older patients in hospital, was also administered. They found that the SADQ-HIO had a relatively low reliability (α = .69) but a high sensitivity of 1 and an acceptable specificity of .78 (cut-off > 6). The SODS had lower sensitivity (.86) and low specificity (.62) and low internal reliability (α = .53).

Leeds et al. (2004) compared the SADQ-10 in 65 stroke survivors without significant dysphasia (mean age = 74, SD = 10.62) in a rehabilitation unit. Using the shortened version of the Geriatric Depression Scale (cut-off ≥ 5) as criterion, the SADQ-10 had low sensitivity (.70) and specificity (.77) but acceptable reliability (α > .75). They suggested that the reason the scale did not perform well in relation to the GDS was that it was detecting frustration, emotionalism and the physical impact of stroke rather than symptoms of depression (Leeds et al., 2004).
A limitation of the above studies is that cut-offs on depression rating scales were used as criterion measures rather than a structured clinical interview. It is acknowledged that this would not have been possible in the study by Bennett et al. (in press) due to the inclusion of participants with dysphasia. It could be argued that observer-rated depression scales, which can be used with the majority of stroke survivors, could be used for screening depression in all stroke survivors, as they address the difficulties with self-report and meet most of the criteria for selection of screening measures. However, they tend to rely on observable, more physical signs of depression which may reduce specificity. Furthermore, for those who can respond to self-report measures, self-report is arguably the most valid measure of depression. Finally, given the low sensitivity and specificity of the measure in the study by Leeds et al. (2004) in a group of stroke survivors with minimal cognitive impairment and dysphasia results would need to be interpreted with caution.

**Self-report Scales**

**Yale Question**

Watkins et al. (2001) investigated the validity of a single question 'Do you often feel sad or depressed?', with a response of 'yes' or 'no' to screen for depression in an acute hospital setting in 79 stroke survivors (median age: 75, range 70-79) between 7 and 14 days after stroke. They found that the single question had high sensitivity (.86, 95% CI: .75 -.97) and good specificity (.78, 95% CI: 0.65-0.91) using an interviewer-rated depression scale, the Montgomery Asperg Depression Rating Scale (MADRS: Montgomery & Asperg, 1979), as criterion (cut-off ≥ 6). Caution should be taken in interpreting these results as Hackett et al. (2005) found that studies which used the MADRS to measure depression found the highest rate of depression (41%, CI: 23-60%). The prevalence of depression in the Watkins et al. study was 54 per cent. A further study found the Yale Question to have a lower sensitivity of .68 and a specificity of .73 compared to DSM-IV criteria in a sample of neurological patients, 69 per cent of whom had suffered a stroke (Turner-Stokes et al., 2005). The Yale Question does meet many of the criteria for selection of depression screening measures and therefore could be considered where a very brief screen is needed which could then be followed up by a depression rating scale. However its low sensitivity
compared to DSM-IV criteria cautions against its use, furthermore, it is a double-barrelled question. Stroke survivors may be sad due to losses associated with their stroke but not necessarily depressed (Turner-Stokes et al., 2005).

*Hospital Anxiety and Depression Scale (Zigmond & Snaith, 1982)*

In a recent review of screening measures for depression and anxiety following stroke (Bennett & Lincoln, 2004) the HADS along with the General Health Questionnaire-12 (GHQ-12: Goldberg & Williams, 1988) were recommended as the best validated measures for stroke survivors without communication problems in rehabilitation settings. Aben et al. (2002) investigated the reliability and validity of the HADS in a sample of 171 patients (mean age: 68.5, SD: 11.6) one month following the stroke in a community setting. The HADS had low sensitivity (.73) and high specificity (.79) at an optimum cut-off (≥ 8). The criterion was DSM-IV diagnosis of major or minor depression assessed by the Structured Clinical Interview for DSM-IV (First et al., 1997). Johnson et al. (1995) found that in a sample of 91 stroke survivors, assessed four months after stroke in a community setting (median age 72, range 23-95), the HADS had acceptable sensitivity (.83) and low specificity (.44) at an optimum cut-off (≥ 5). The criterion was DSM-III criteria for major or minor depression as assessed by a structured clinical interview. O'Rourke et al. (1998) also investigated the HADS in a sample of 111 patients in the community, six months after stroke (median age = 68, range 18-90). They found it to have acceptable sensitivity (.80) and good specificity (.79) at an optimum cut-off (≥ 7). The criterion was DSM-IV criteria as assessed by structured clinical interview. The HADS meets some of the criteria for the selection of screening measures, for example, it was developed for medically ill patients and contains few physical symptoms of depression. However, the HADS has a complex response format, with different response categories for each question and places demands on memory. Research on the HADS has found that some items perform poorly in stroke survivors, for example, 'I feel that I am slowed down' and 'I can enjoy a good book, radio or television programme' (Johnson et al., 2000)

*General Health Questionnaire (Goldberg & Williams, 1988)*

The GHQ-12 was the second questionnaire recommended by Bennett and Lincoln for use with rehabilitation patients without communication difficulties. O'Rourke et al.
(1998), in the study detailed above, found the GHQ-30 had acceptable sensitivity (.80) and specificity (.76) at an optimum cut-off (≥ 9). Lincoln et al. (2003), investigated the GHQ-28 in a sample of 143 stroke survivors (mean age = 66, SD = 13.5), the majority of whom were seen in a community setting. They found that the GHQ-28 had good sensitivity (.81) and low but acceptable specificity (.68) at an optimum cut-off (≥ 12). Johnson et al. (1995) found that a much lower cut-off on this measure (≥ 6) gave a low sensitivity (.78) and high specificity (.81). Potential difficulties with the scale are firstly, that the shorter version (GHQ-12) has not been assessed in stroke survivors and the other versions contain a large number of items. Furthermore, the scale requires comparison to a usual state which may be confusing for participants early after stroke and places demands on memory.

*Beck Depression Inventory (Beck et al., 1961)*

The Beck Depression Inventory was recommended by Turner-Stokes and Hassan (2002) to screen for depression in stroke survivors in an integrated care pathway due to the fact that it is a very well developed instrument which has been extensively evaluated in the general population and shows sensitivity to change in stroke patients (House et al., 1991). Lincoln et al. (2003), in the study detailed above, found that a high sensitivity (.91) produced a low specificity (.56) at an optimum cut-off (≥ 16) with the condition that sensitivity was at least .80. One limitation of the study was that the majority of the gold standard interviews were not conducted blind to the results of the screening measures. This study found that agreement as measured by kappa between the BDI (cut-off > 10) and DSM-III-R diagnosis of major depression was very low (κ = .05). Aben et al. (2002), in the same sample of stroke survivors detailed above, found the measure had low sensitivity (.77) and low but acceptable specificity (.65) at an optimum cut-off (> 10). As well as the low specificity of the measure when sensitivity is acceptable, the BDI does not meet a number of the selection criteria for screening measures following stroke. It is lengthy to administer, contains a number of somatic symptoms of depression and has complex response categories which limit its use with stroke survivors.
Geriatric Depression Scale (GDS: Brink et al., 1982)
Agrell and Dehlin (1986) investigated the GDS in a group of 40 older stroke survivors in the community (4 months to 2.5 years following their stroke). They found a high sensitivity (.88) and low but acceptable specificity (.64) at a standard cut-off (≥ 10). Johnson et al. (1995), in the sample detailed above, found similar results to Agrell and Dehlin (1986) they found an acceptable sensitivity (.84) and low but acceptable specificity (.66) at a standard cut-off (≥ 10). This measure was developed for older people, does not include somatic items and has a simple ‘true’ or ‘false’ response format, therefore fitting some of the selection criteria. However, a number of questions, even in a short form of the measure, are clearly inappropriate for a hospital setting. For example: ‘do you prefer to stay at home rather than going out and doing new things?’ and ‘Have you dropped many of your activities and interests?’

Patient Health Questionnaire-9 (PHQ-9: Spitzer et al. 1999)
Williams et al. (2005), investigated the PHQ–9 which is based on DSM-IV criteria and compared it to DSM-IV criteria assessed by the SCID in participants between one and two months post-stroke (age data was not given). They found that the PHQ-9 had low sensitivity (.78, 95% C.I.: .71-.85) and high specificity (.96, 95% C.I.: .93-.99) when compared to the SCID. Unfortunately the SCID was not conducted blind to the results of the questionnaire and answers to the PHQ-9 influenced whether or not people were interviewed with the SCID leading to criterion bias which confounds the results. This measure looks potentially useful for screening for post-stroke depression, however given the limitations of this study, further research is necessary.

The Current Study
Depression is common after stroke and has a negative impact on outcome. However it remains under-recognised and under-treated. Therefore it is important to screen for depression to improve recognition and to facilitate referral for treatment with the potential to improve outcome. Screening measures need to demonstrate reliability and validity for the use to which they are put. Given issues in the assessment of depression following stroke, such as the nature of depression in older people, communication difficulties, cognitive changes and the overlap of symptoms of stroke and depression, it is also important that criteria for the selection of screening measures specific to
screening for depression after stroke are considered. A number of depression rating scales have been evaluated for their use to screen for depression following stroke. The scales vary in their psychometric properties and the degree to which they meet the criteria for selection of depression screening measures following stroke. Observer-rated scales are useful for screening for depression in stroke survivors with significant dysphasia or cognitive impairment. In those who can respond to them, self-report scales are recommended for screening for depression. The majority of studies have investigated the performance of measures in community or acute hospital settings, with few conducted in specialist inpatient rehabilitation settings. The investigation of self-report measures in inpatient rehabilitation settings could therefore benefit from further research. Therefore, it was chosen to evaluate two measures with clinical potential for use in this setting. Given the different clinical presentation of depression in older and younger stroke survivors it was decided to focus on the older age group. Finally, the need for a range of measures with high sensitivity and acceptable specificity for the clinician to consider in relation to an individual’s needs or a particular setting, means it is useful to consider two further depression rating scales, the BASDEC and the BDI-FS which show good potential for use as depression screening measures with stroke survivors.

The Brief Assessment Schedule for Depression Cards (BASDEC: Adshead et al., 1992) was considered to show good clinical potential for use with stroke survivors for the following reasons. It was developed specifically for use with older people in a hospital ward environment, therefore the questions and format are appropriate for use in this setting. It has a simple response format, statements relating to symptoms of depression are printed on cards and the respondent is required to put them in a pile marked ‘true’ or ‘false’. The BASDEC does not require a verbal or written response and could be used with stroke survivors with some expressive dysphasia. It has minimal demands of memory and is quick to administer. It can be administered by non-mental health professionals. A potential difficulty with the measure is the inclusion of three somatic symptoms, although these only make up 15 per cent of the items.
The BASDEC has performed well in groups of medically ill older people compared to diagnosis by structured clinical interview. Studies have found high sensitivity values (>.80) and very high specificity values (> .90) compared to structured clinical interviews (e.g. Loke et al., 1996; Yohannes et al., 2000) at the test developers recommended cut-off (≥ 7). The original study (Adshead et al., 1992) produced lower sensitivity (.71) and specificity values (.88) with 79 older medically ill inpatients. However, the criterion measure used was a clinician's diagnosis which was not based on a structured clinical interview for a diagnostic system. The BASDEC was identified as a scale which would benefit from research for use in stroke survivors by Bennett and Lincoln (2004).

The Beck Depression Inventory-Fast Screen for medical patients (BDI-FS: Beck et al., 2000) was considered to have clinical potential for use after stroke for several reasons. It consists of seven items taken from the Beck Depression Inventory-II (Beck et al., 1996) which were considered most appropriate to screen for depression in medical patients. Somatic items, such as tiredness and fatigue were removed to reduce the number of false positives. The scale is brief and quick to administer and benefits from being from the group of Beck depression measures which are arguably the most well developed screening measures for depression (Turner-Stokes & Hassan, 2002). One possible disadvantage for use with stroke survivors is that as with the main BDI, it has a complex response format with different response categories for each item which may load on memory.

The BDI-FS has been shown to have high sensitivity and specificity for identifying depression in older medically ill outpatients. Schienthal et al. (2001) found that a cut-off score of ≥ 4 had very high sensitivity (1.0) and high specificity (.84) compared to ICD-10 diagnostic criteria (World Health Organisation, 1980) It has recently been investigated and subsequently recommended as a screening measure for depression with another neurological population, people with Multiple Sclerosis (Benedict et al., 2003). Bennett and Lincoln (2004) suggested that the BDI-FS had good potential for use with stroke survivors and recommended that its use was researched.
Clinical Objective
The BASDEC and BDI-FS fit the majority of the specific criteria for selection of screening measures for depression following stroke and therefore it is suggested that they show good clinical potential for use with this client group. If either contributes to as good as or better detection of depression than screening measures which are currently recommended, their routine use within stroke services could be supported. This would facilitate referral for appropriate treatment with the potential to reduce distress and benefit rehabilitation outcome.

Research Objectives
The BASDEC and BDI-FS have clinical appeal as self-report screening measures for depression in stroke survivors. However, there have been no studies to date which have investigated their use including their psychometric properties with this client group. Both rating scales have been shown to have good sensitivity and specificity with older medical patients. In view of this, the overall aim of the current study was to conduct an initial assessment of the reliability and validity of the BASDEC and BDI-FS for screening for depression in older stroke survivors. In line with the optimal design for evaluating screening measures, the validity of the measures will be evaluated against DSM-IV criteria for depression, assessed by the Structured Clinical Interview for DSM-IV Axis 1 disorders (SCID: First et al., 1997). The performance of the measures will also be compared to the HADS which is previously recommended for this group. In view of the need for screening measures to be acceptable to participants, participants will be consulted as to whether they have a preference for any of the depression rating scales.

Specific research objectives are listed below:

Research Objective 1
To assess the reliability of the BASDEC and the BDI-FS by:

a) determining the internal consistency of the BASDEC and the BDI-FS

b) assessing the test-retest reliability of the BASDEC and the BDI-FS
Research Objective 2
To investigate the validity of the BASDEC and BDI-FS by:

a) assessing the accuracy of the BASDEC and BDI-FS at detecting whether someone is depressed or not compared to DSM-IV criteria as identified by the SCID.

b) exploring the relationship between the total scores on the BASDEC and BDI-FS with total scores on the HADS.

Research Objective 3
To explore whether participants have a preference for any of the depression rating scales and the types of reasons given for preference decisions.
Method

Design
A prospective correlational study between three depression rating scales and a structured clinical interview.

Inclusion and Exclusion Criteria
A convenience sample of 37 stroke survivors were recruited from four specialist inpatient rehabilitation services for stroke survivors\(^1\). Stroke survivors were included in the study if they had experienced a stroke within the last six months (not less than two weeks ago), were over 65 years of age, were medically stable and were capable of following the screening and interview procedures. Stroke survivors were excluded if they had cognitive impairment indicated by a score of less than 8 on the Abbreviated Mental Test (AMT: Hodkinson, 1972) or less than 24 on the Mini-Mental State Examination (MMSE: Folstein et al., 1975). Stroke survivors were also excluded if they had dysphasia to the extent that completion of the depression rating scales or the interview would be difficult. This was ascertained through the clinical opinion of the nurse in charge of the ward together with consultation with a speech and language therapist if required. Patients with a comorbid psychiatric disorder other than an affective disorder (e.g. a diagnosis of a psychotic disorder, dementia or a present psychotic episode) as identified in the medical notes were also excluded.

Method of Recruitment
During a six month period of data collection, medical notes were reviewed by a nominated member of each rehabilitation team to identify stroke survivors suitable for inclusion in the study. If suitable, the stroke survivor was initially asked by the nurse in charge of the ward if they would be willing to be approached to consider participating in a research study. The study was then explained, to those who were willing to be approached, by an assistant clinical psychologist using the study information sheet (Appendix 2). Following a period of at least 24 hours and the opportunity to ask questions about the study, the assistant clinical psychologist met

\(^1\) It was aimed to recruit a consecutive sample of participants entering the rehabilitation units. However due to service pressures at one site it was not possible to screen everyone for entry into the study.
with the stroke survivor again who signed a consent form (Appendix 3) if they wished to take part. Forty-five stroke survivors were screened as suitable for the study. Of these, two did not wish to be approached about the study (4%), a further two did not wish to take part having discussed the study (4%) and one stroke survivor had difficulties understanding the information about the study so was excluded as this caused concern about informed consent (2%). A further three stroke survivors who did consent were discharged unexpectedly before participation in the study (6.7%). Due to ethical constraints it was not possible to collate information about stroke survivors who did not wish to take part.

Measures

Brief Assessment Schedule Depression Cards (BASDEC: Adshead et al., 1992)
The BASDEC is a set of 19 large print cards (8.2 cm x 10.4 cm) each with a statement on it relating to a depressive symptom and two further cards one with ‘True’ written on it and one with ‘False’ written on it (see Appendix 4 for an example card and the score sheet detailing each statement). The ‘True’ and ‘False’ cards are placed in front of the respondent and the statement cards are then shown to the respondent one at a time and read aloud. The respondent is asked to place the statement card under either the ‘True’ or the ‘False’ card according to their current view. If a respondent has difficulty deciding which pile the card should be placed in, this can be scored as a ‘Don’t Know’ response. Each statement which is placed in the ‘True’ pile is scored one point, except ‘I have seriously considered suicide’ and ‘I have given up hope’ which are scored two points each. Each statement in the ‘False’ pile is scored zero and statements with a ‘Don’t Know’ response are scored half a point. The maximum possible score on the BASDEC is 21, the higher the score the greater the depressive symptomology. The cut-off point given by the test developers for depression is $> 7$. This means that respondents with a score of 7 or above are classified as depressed and those with a score of 6 or below are classified as non-depressed. This cut-off has proven to be valid in groups of medically ill older people and is therefore the cut-off used in the current study (Loke et al., 1996; Yohannes et al., 2000).
Beck Depression Inventory-Fast Screen for Medical Patients (BDI-FS: Beck et al., 2000)

The BDI-FS is a seven-item self-report depression rating scale (see Appendix 5) for detecting depression in medical inpatients. It is comprised of seven items from the 21 item Beck Depression Inventory-II (Beck et al., 1996). The seven items include items related to dysphoria, anhedonia, suicidal ideation, pessimism, past-failure, self-dislike and self-criticalness. The dysphoria and anhedonia items were included for their importance in the diagnosis of depression and the suicide item for its clinical importance. The other items had loaded high on a cognitive factor in factor analyses of BDI-II items. Each item is rated for the past two weeks on a four point likert scale ranging from zero to three. The maximum total score on the BDI-FS is 21, the higher the score the greater the depressive symptomology. A cut-off score from 3 to 5 for caseness was recommended by the test developers (Beck et al., 2000). Schienthal et al. (2001) found that for a group of medically ill older patients a cut-off of ≥ 4 was valid for screening purposes. Therefore this was used as the cut-off in the current study.

Hospital Anxiety and Depression Scale (HADS: Zigmond & Snaith, 1983)

The HADS is a 14 item self-report rating scale (see Appendix 6) divided into two subscales, one measuring anxiety (HADS-A, seven items) and the other depression (HADS-D, seven items). It was designed for use with hospitalised, medically ill patients. Each item is rated for the past week on a four point likert scale ranging from zero to three. The maximum total score on each sub-scale is 21. The higher the score on the depression sub-scale, the greater the depressive symptomology, similarly for the anxiety scale. Reliability and validity data are available for its use as a screening measure in stroke (e.g. Aben et al. 2002). The cut-off recommended by the test developers for possible clinical depression is ≥ 8 and is the cut-off used in the current study. This cut-off has been found to be valid for stroke survivors (Aben et al. 2002).


The SCID was used as the criterion or 'gold standard' method of assessing depression in the current study. It is a semi-structured interview for making the major DSM-IV
Axis I diagnoses. The non-patient edition refers to participants not being psychiatric patients, therefore it is suitable for medical inpatients. The research version of the SCID is designed so researchers can select the sections related to the relevant diagnoses for their study. The following sections were used in the current study: the interview commenced with the ‘Overview’ section which contains questions about the participants personal history, including past mental health, together with general questions regarding the participants situation in the past month including mood, physical health and social functioning. The flow of questions in this section is designed to aid the development of a rapport with the participant. The sections related to mood disorder were then included to ascertain whether participants met criteria for a DSM-IV diagnosis of major or minor depression (see Appendix 1 for diagnostic criteria). The diagnoses of current or past bipolar disorder were also considered. The screen for psychotic symptoms was also included.

Background Information Form (Appendix 7)

A background information form was completed for each participant. This included information about each participant such as age, gender, marital status, living circumstances, previous occupation, level of education, type and date of stroke, ethnicity, major diagnoses, current medication, cognitive test score (MMSE or AMT) and an activities of daily living test score (Barthel Activities of Daily Living Index Scores: BARTHEL, Mahoney & Barthel, 1965 or Functional Independence Measure: FIM, Hamilton & Granger, 1994). It was important to obtain detailed information about participants to aid inferences regarding the generalisability of findings (Streiner, 2003). In order to minimise study participation time for participants and the rehabilitation team, the assessments of cognitive functioning and activities of daily living in routine use were used. This explains the use of the two different measures of these abilities.

Ethical Approval

Ethical approval was sought using the Central Office of Research Ethics Committees (COREC) process which was introduced for all NHS research in April 2004. It was proposed that the study would be undertaken in three NHS trusts to provide a large enough pool of potential participants. Main REC approval was initially sought in
March 2005, following requested amendments and clarifications to the study, this was granted in June 2005. Site specific approval was subsequently gained from two further local research ethics committees in July 2005. Approval was also sought from the Research and Development committees of each NHS trust using the standardised application form introduced by COREC in May 2005. Final approval for the study was gained from all research and development committees in November 2005. Copies of approval letters and a summary of the consideration of ethical issues are included in Appendix 8.

Procedure

Once a participant had given informed consent, the background information form (Appendix 7) was completed by a nominated member of the clinical team by accessing the participants medical notes. The participant then completed the BDI-FS, BASDEC and HADS. The questions and responses were read aloud to each participant by an assistant clinical psychologist, the participant also had a copy of the depression rating scale in front of them. This method was chosen to ensure consistency of administration across participants. Some participants may have had difficulty reading questions themselves due to visual impairment, which is common following stroke. If possible, the participant completed the form themselves, or placed the BASDEC card. If not, due to physical impairment the assistant clinical psychologist completed this. The order of completion of the depression rating scales was counterbalanced to nullify order effects (Lucas, 1992). Following the completion of the depression rating scales, the participants were asked if they had preferred one of the depression rating scales over the others and if so to give a reason why.

The trainee clinical psychologist conducted the SCID interview with the participant within seven days of completion of the depression rating scales. The length of the interview ranged from half an hour to one hour. The trainee clinical psychologist had completed the recommended training for administration for the SCID (First et al., 1997). The trainee clinical psychologist conducted the SCID blind to the results of the depression rating scales and clinical information about the participant. The depression rating scales were administered before the SCID as this order is consistent with the clinical practice of initial screening with subsequent detailed assessment if the stroke
survivor is depressed. Following the SCID interview and seven to ten days following the initial completion of the depression rating scales, the participant completed the BDI-FS and the BASDEC again to investigate the test-retest reliability of these measures.

Each participant was asked whether they would like to receive a summary of the results of the study. It is planned to send a summary of the results to those who requested one in October 2006. The results of the research will be presented to each of the rehabilitation teams involved and they will also be sent a copy of the research report.

**Data Analysis**

Data were analysed using the Statistical Package for Social Sciences (SPSS Inc., Chicago, Illinois, USA) version 13.0. Confidence intervals were calculated using Confidence Interval Analysis Version 2.1.2 (Trevor Bryant, University of Southampton).

Participants with a SCID diagnosis of current major or minor depression were treated as one group for the analysis, i.e. participants with depression. This is consistent with previous studies of depression screening measures with stroke survivors (e.g. Johnson et al., 1995; Aben et al. 2002). It is important for depression screening measures to detect minor, as well as major, depression due to the association with poor outcome (e.g. Parikh et al., 1990).

The data from the depression rating scales provide data at ordinal level and all three scales were positively skewed, therefore non-parametric tests were used. Group comparisons between those identified as depressed and those identified as non-depressed according to DSM-IV criteria assessed by the SCID were conducted using Mann-Whitney U Test for ordinal level variables and Fishers Exact Test for categorical variables.
Reliability
To determine whether the scores on the BDI-FS, HADS and BASDEC were biased by errors, internal reliability as measured by Cronbach's Alpha was calculated for the BDI-FS and HADS and using Kuder-Richardson's 20 Formula for the BASDEC as it is based on dichotomous data. Test-retest reliability was assessed for the BASDEC and BDI-FS using Kendall's tau-b Correlation Coefficient due to the large number of tied ranks in the data. It has been argued that Kendall's tau-b is a better estimate of the correlation in the population (Arndt et al., 1999; Howell, 1997) and is therefore more appropriate than Spearman's when an estimation of the size of a relationship is of interest.

Validity
A test-criterion design was used to investigate the convergent evidence for the validity of the BASDEC and BDI-FS by calculating sensitivity, specificity, positive and negative predictive values and likelihood ratios (including their 95% confidence intervals) for above cut-off scores and DSM-IV diagnosis of depression assessed by the SCID considered as dichotomous variables.

Agreement between the BASDEC and BDI-FS and the SCID diagnosis was also determined using the Kappa statistic which corrects for chance agreement. Kappa values are widely interpreted using the criteria set by Landis and Koch (1977) who gave the following qualitative descriptions of levels of agreement: ≤ 0 = poor, 0 - .20 = slight, .21 - .40 = fair, .41 - .60 = moderate, .61 - .81 = substantial and .81 - 1 = almost perfect. A clinically significant level of agreement for the use of the BASDEC and/or BDI-FS as screening measures could be considered as more than .40 and ideally more than .60 (Sim & Wright, 2005).

The above values were also calculated for the HADS-D for comparison. The relationship between the total scores on the BASDEC, BDI-FS and HADS was evaluated using Kendall's tau-b correlation coefficient.
**Apriori Sample Size Calculation**

Methods of sample size calculations for non-parametric tests and investigating the accuracy of screening tests are less readily available than those for hypothesis testing of parametric data. However, an approximate sample size estimation, based on parametric statistics for investigating the relationship between the total scores on the BASDEC and BDI-FS and the HADS-D was 33\(^2\). To estimate sensitivity values to a good level of precision, a sample size of approximately 100 would be needed (see Appendix 9 for a more detailed explanation of sample size estimates). Therefore, in order to conduct an initial assessment of the reliability and validity measures, a minimum sample size of approximately 33 was considered, however it was aimed to recruit as many participants as possible in the data collection period, with a maximum number of 100.

\(^2\) This sample size is very approximate as it is based on parametric statistics.
Results

Overview
This section begins with a descriptive analysis of the demographic and clinical characteristics of the participants. A descriptive analysis of scores on the depression rating scales follows. The analysis relating to each of the research objectives will then be described and reported in turn.

Analysis of Demographic and Clinical Characteristics
Thirty-seven individuals participated in the study. The mean age of participants was 77.76 (SD = 6.65) and there were approximately equal numbers of male (N = 18) and female (N = 19) participants. The median time from stroke onset to the first administration of the depression rating scales was 34.5 days (IQR: 27 - 58, range = 16 - 93). A summary of the demographic characteristics of the depressed and non-depressed participants, grouped according to DSM-IV criteria assessed by the SCID, and the total group of participants is presented in Table 1.

Six participants (16%) met DSM-IV criteria as identified by the SCID for current major depression and three (8%) met criteria for current minor depression resulting in a total of nine participants (24%) who met criteria for depression. The remaining 28 participants (76%) did not meet criteria for depression. No participants met criteria for current or past bipolar disorder and no participants were excluded as a result of the psychotic screen.

The data were analysed to investigate whether the depressed and non-depressed participants differed in age or gender. Differences between the two groups on other demographic variables were not assessed as the number of categories resulted in some categories with no participants in the depressed group. The age of participants was similar in the depressed (M = 77.78, SE = 2.02) and non-depressed groups (M = 77.75, SE = 1.31) and an independent t-test confirmed there was no significant difference (t(35) = -.011, p = .991). There was no significant association between
whether someone was depressed and their gender (two-tailed Fishers Exact Test, \( p = .12 \)).

**Table 1. Demographic characteristics of participants presented for the total sample and non-depressed and depressed (according to DSM-IV criteria) participants**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Total sample</th>
<th>Non-depressed</th>
<th>Depressed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Female</td>
<td>19</td>
<td>48.65</td>
<td>12</td>
</tr>
<tr>
<td>Male</td>
<td>18</td>
<td>51.35</td>
<td>16</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>4</td>
<td>10.81</td>
<td>4</td>
</tr>
<tr>
<td>Married</td>
<td>18</td>
<td>48.65</td>
<td>14</td>
</tr>
<tr>
<td>Divorced</td>
<td>4</td>
<td>10.81</td>
<td>3</td>
</tr>
<tr>
<td>Widowed</td>
<td>8</td>
<td>21.62</td>
<td>4</td>
</tr>
<tr>
<td>Co-habiting</td>
<td>3</td>
<td>8.11</td>
<td>3</td>
</tr>
<tr>
<td>Pre-admission Living Arrangements</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Own Home</td>
<td>26</td>
<td>70.27</td>
<td>20</td>
</tr>
<tr>
<td>Own Flat</td>
<td>4</td>
<td>10.81</td>
<td>2</td>
</tr>
<tr>
<td>Own Bungalow</td>
<td>1</td>
<td>2.70</td>
<td>1</td>
</tr>
<tr>
<td>Warden Assisted</td>
<td>4</td>
<td>10.81</td>
<td>3</td>
</tr>
<tr>
<td>Nursing Home</td>
<td>2</td>
<td>5.41</td>
<td>2</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White British</td>
<td>36</td>
<td>97.3</td>
<td>27</td>
</tr>
<tr>
<td>White Irish</td>
<td>1</td>
<td>2.70</td>
<td>1</td>
</tr>
<tr>
<td>Social Class</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I Professional, etc. occupations</td>
<td>4</td>
<td>10.81</td>
<td>3</td>
</tr>
<tr>
<td>II Managerial and Technical occupations</td>
<td>13</td>
<td>35.14</td>
<td>12</td>
</tr>
<tr>
<td>III Skilled occupations - non-manual</td>
<td>9</td>
<td>24.32</td>
<td>7</td>
</tr>
<tr>
<td>Skilled occupations - manual</td>
<td>9</td>
<td>24.32</td>
<td>5</td>
</tr>
<tr>
<td>IV Partly skilled occupations</td>
<td>2</td>
<td>5.41</td>
<td>1</td>
</tr>
<tr>
<td>V Unskilled occupations</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Clinical Characteristics

Twenty-two participants had experienced a right hemisphere stroke (61.11%), whilst eleven had experienced a left hemisphere stroke (30.56%) and for three it was classified as other (e.g. bilateral, 8.33%). It is likely that the exclusion of stroke survivors with significant aphasia (frequently associated with damage to the left hemisphere) accounts, at least partly, for the greater number of participants with right hemisphere strokes. Five participants had suffered a previous stroke (13.51%) and two had suffered previous Transient Ischemic Attacks (5.41%), none of whom were depressed.

Participants' impairment in activities of daily living ranged from minimal to severe. Skills in activities of daily living was assessed using the Functional Independence Measure (physical) for 11 participants giving a median of 46 (IQR = 31 - 57, range = 19 - 69). Complete independence in activities assessed is indicated by a score of 91 and complete dependence by a score of 13. The Barthel Index was used to assess activities of daily living for a further 22 participants giving a median of 9 (IQR = 5 - 12.5, range = 0 - 19). Complete independence in activities on this measure is indicated by score of 20 and complete dependence by a score of 0.

Due to the exclusion criteria for cognitive impairment, there was a restricted range of scores on tests of cognitive impairment. The median score on the MMSE was 28 (N = 17, range = 24 - 30) and was 10 on the AMT (N = 17, range = 8 - 10).

Six participants (16%) had previous mental health difficulties as assessed by self-report in the SCID interview and/or documented in the medical notes. Two participants with current depression had experienced symptoms of depression in the past which retrospectively assessed did not meet criteria for a major depressive episode. One of these participants with current major depression had symptoms of depression in the six months leading up to their stroke which were assessed retrospectively and may have qualified for a diagnosis of minor depression. Of the

---

3 Data was missing for one person due to an incomplete background information sheet.
4 The FIM or Barthel was not completed for four participants.
5 The specific scores were not available for three participants due to incomplete background information sheets.
participants who were not depressed, two participants identified a previous major depressive episode in the SCID and two further participants had past alcohol abuse documented in their medical notes.

The median number of medications prescribed was 6 (range = 2 – 12). Three of the depressed participants (33.33%) were prescribed anti-depressants compared to five of the non-depressed participants (17.86%).

**Descriptive Analysis of Distribution of Scores on the Depression Rating Scales**

A summary of the distribution of the total scores on the depression rating scales is given in Table 2 for the total sample and for those who were non-depressed or depressed according to DSM-IV criteria. Low scores were common in the sample and the distributions for the total sample and non-depressed group were all significantly positively skewed aside from the anxiety scale in the non-depressed group. See Appendix 10 for a full description of the distributions.

The depression rating scales were dichotomised at their recommended cut-offs. The number of participants who screened positive for depression varied between the measures. The number of participants scoring above the cut-off for depression on the: BASDEC (≥ 7) was nine (24.32%), BDI-FS (≥ 4) was eleven (29.73%), and HADS-D (≥ 8) was thirteen (35.14%). The number of participants who scored above the cut-off on the HADS-A (≥ 8) was eight (21.62%).

Mann Whitney U Tests were used to investigate whether there was a significant difference in scores on the depression rating scales between depressed and non-depressed participants. Depressed participants scored significantly higher than non-depressed participants on the BASDEC (U = 28, p < .001, r = -0.58), the BDI-FS (U = 31.5, p < .001, r = -0.56), the HADS-D (U = 33, p < .001, r = -0.54) and the HADS-A (U = 29, p < .001, r = -0.57).
Table 2. Distribution of scores on the depression rating scales for the total sample and non-depressed and depressed participants

<table>
<thead>
<tr>
<th>Depression Rating Scale</th>
<th>Total Sample (N = 37)</th>
<th>Non-Depressed (N = 28)</th>
<th>Depressed (N = 9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASDEC (&gt; 7)</td>
<td>3</td>
<td>2-6.25</td>
<td>2</td>
</tr>
<tr>
<td>BDI-FS (&gt; 4)</td>
<td>2</td>
<td>0-4.5</td>
<td>1</td>
</tr>
<tr>
<td>HADS-D (&gt; 8)</td>
<td>5</td>
<td>1-9.5</td>
<td>3</td>
</tr>
<tr>
<td>HADS-A (&gt; 8)</td>
<td>4</td>
<td>1-7</td>
<td>2.5</td>
</tr>
<tr>
<td>HADS</td>
<td>8</td>
<td>3-18</td>
<td>6</td>
</tr>
</tbody>
</table>

Note. Med = Median; IQR = Interquartile Range; BASDEC = Brief Assessment Schedule Depression Cards; BDI-FS = Beck Depression Inventory-Fast Screen; HADS-D = Hospital Anxiety and Depression Scale - Depression Scale; HADS-A = Hospital Anxiety and Depression Scale - Anxiety Scale; HADS = Hospital Anxiety and Depression Scale.

Analysis of Individual Items

A summary of the distributions of individual items on the depression rating scales for the non-depressed and depressed groups is given in Appendix 11. This was inspected to identify which items were most and least frequently endorsed 'True' in the BASDEC by each group. The most frequently endorsed item by the non-depressed group was 'I’ve cried in the past month' (N = 14, 50%) and the least frequently endorsed items were ‘I’ve given up hope’, ‘I’m so lonely’ and ‘I’m not happy at all’ which were not endorsed by any of the non-depressed participants. The item most frequently endorsed as ‘true’ by the depressed group was ‘I am a nuisance to others being ill’ (N = 8, 88.89%) and the least frequently endorsed was ‘I’ve seriously considered suicide’ which was not indicated by any of the depressed participants.

It is also interesting to inspect the endorsement of ‘somatic’ items on the BASDEC. The results show that all three somatic items were endorsed by a higher percentage of the depressed group: ‘I have headaches’ was endorsed by five of the depressed group (55.56%) compared to two of the non-depressed group (7.14%), ‘I’m not sleeping well’ was endorsed by six of the depressed group (66.67%) and seven of the non-depressed group (25%) and ‘I seem to have lost my appetite’ was endorsed by five of the depressed group (55.56%) and four of the non-depressed group (14.29%).
The median scores for each item in the BDI-FS were inspected, scores ranged from zero to three, three indicating the most depression. The median response for all items was zero for the non-depressed group. For the depressed group, the anhedonia item had the highest median score of two. The lowest were suicidal ideation and past-failure which had median scores of zero.

The median scores for the HADS items were inspected, scores ranged from zero to three (most depression/anxiety). In the non-depressed group, the median score for each item was zero except for ‘I feel as if I am slowed down’ (depression item) and ‘I feel tense or wound up’ (anxiety item) which had median scores of one. For the depressed group, the median score for each item was one except for ‘I feel cheerful’ (depression item), ‘I feel as if I am slowed down’ (depression item) and ‘I can sit at ease and feel relaxed’ (anxiety item) which had median scores of two.

**Research Objective 1**

To assess the reliability of the BASDEC and the BDI-FS by:

**a) determining the internal consistency of the BASDEC and the BDI-FS**

The internal consistency of each depression rating scale was investigated by calculating Cronbach’s Alpha (α, N = 37) for the BDI-FS and HADS and by calculating the Kuder-Richardson Formula 20 for the BASDEC. Results are presented in Table 3. A value of α over .7 is considered to be acceptable (Field, 2005).

The corrected item-total correlations (this is the correlation of the item with the sum of the other items) for the items in each of the depression rating scales were inspected (see Appendix 12 for item-total correlation tables). It is recommended that corrected item-total correlations should be at least .2 and lower items should be discarded (Kline, 1986). Additional analyses of the internal consistency should then be conducted removing these items.

---

6 The Kuder Richardson Formula 20 was calculated for the BASDEC as it is measured using dichotomous ratings. It gives an identical answer to Cronbach’s Alpha coefficient.
Table 3. Internal consistency of the depression rating scales

<table>
<thead>
<tr>
<th></th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASDEC</td>
<td>.81a</td>
</tr>
<tr>
<td>BDI-FS</td>
<td>.75</td>
</tr>
<tr>
<td>HADS-D</td>
<td>.83</td>
</tr>
<tr>
<td>HADS-A</td>
<td>.84</td>
</tr>
<tr>
<td>HADS</td>
<td>.89</td>
</tr>
</tbody>
</table>

*Note. BASDEC = Brief Assessment Schedule Depression Cards; BDI-FS = Beck Depression Inventory-Fast Screen; HADS-D = Hospital Anxiety and Depression Scale – Depression Scale; HADS-A = Hospital Anxiety and Depression Scale – Anxiety Scale; HADS = Hospital Anxiety and Depression Scale.

This value was calculated using KR-20.

**BASDEC**

Three items had corrected item-total correlations below .2. These were: ‘I’ve cried in the past month’ (.08), ‘I’ve seriously considered suicide’ (-.185) and ‘I have regrets about my past life’ (.007). Removal of these three items would increase KR-20 to .85 for the BASDEC, a marginal increase of .4.

**BDI-FS**

The suicidal ideation item on the BDI-FS had a corrected item-total correlation of less than .2. Removal of this item would increase α to .77, a marginal increase of .2.

**HADS**

None of the items on the HADS-A or the HADS-D had corrected item-total correlations of less than .2.

**b) assessing the test-retest reliability of the BASDEC and the BDI-FS**

The relationship between the total scores from the first and second administration of the BASDEC and BDI-FS was analysed to investigate test-retest reliability. The median time between the first and second administrations of the BASDEC and BDI-FS was 7 days (IQR 7 - 7). Five participants were discharged before the second administration of the depression rating scales could take place, leaving a total of 32 participants for this analysis. The magnitude of the Kendall’s Tau-b correlation...
coefficient indicated acceptable test-retest reliability for the BASDEC ($r(32) = .70, p < .001$) and the BDI-FS ($r(32) = .64, p < .001$).

There are no well-established guidelines for interpreting test-retest reliability coefficients, however Kline (2000) suggests a minimum of .8, referring to trait tests such as ability tests. Depression rating scales measure state rather than trait variables, therefore a drop of .10 has been suggested as acceptable (Streiner & Norman, 1995). The above recommendations were likely to have been given for Pearson's correlations. As Kendall's Tau-b consistently produces lower values of correlation than Spearman's and Pearson's, the Kendall's Tau-b correlation coefficients were interpreted as demonstrating acceptable test-retest reliability for the BASDEC and BDI-FS.

Research Objective 2
To investigate the validity of the BASDEC and BDI-FS by:

a) assessing the accuracy of the BASDEC and BDI-FS at detecting whether someone is depressed or not compared to DSM-IV criteria as identified by the SCID.

The median number of days between the first administration of the depression rating scales and the interview was three (IQR: 1 - 4, range: 0 - 7). The depression rating scales were dichotomised at their recommended cut-offs. The classification of participants as depressed or not by each depression rating scale was then compared to the classification of participants as depressed or not by DSM-IV criteria, assessed by the SCID. The two-by-two tables for the dichotomised rating scales compared to DSM-IV diagnosis are presented in Tables 4 to 6.

<table>
<thead>
<tr>
<th>BASDEC ($\geq 7$)</th>
<th>Gold Standard (DSM-IV)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Depressed</td>
</tr>
<tr>
<td>Depressed</td>
<td>8</td>
</tr>
<tr>
<td>Not Depressed</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
</tr>
</tbody>
</table>

Note. BASDEC = Brief Assessment Schedule Depression Cards; DSM-IV = Diagnostic and Statistical Manual of Mental Disorders (4th edn.) (American Psychological Association, 1994).
Table 5. Classification of the results of the BDI-FS compared to DSM-IV diagnosis

<table>
<thead>
<tr>
<th>BDI-FS (≥ 4)</th>
<th>Gold Standard (DSM-IV)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Depressed</td>
<td>Not Depressed</td>
</tr>
<tr>
<td>Depressed</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Not Depressed</td>
<td>3</td>
<td>23</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>28</td>
</tr>
</tbody>
</table>

Note. BDI-FS = Beck Depression Inventory-Fast Screen; DSM-IV = Diagnostic and Statistical Manual of Mental Disorders (4th edn.) (American Psychological Association, 1994).

Table 6. Classification of the results of the HADS-D compared to DSM-IV diagnosis.

<table>
<thead>
<tr>
<th>HADS-D (≥ 8)</th>
<th>Gold Standard (DSM-IV)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Depressed</td>
<td>Not Depressed</td>
</tr>
<tr>
<td>Depressed</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Not Depressed</td>
<td>2</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>28</td>
</tr>
</tbody>
</table>

Note. HADS-D = Hospital Anxiety and Depression Scale – Depression; DSM-IV = Diagnostic and Statistical Manual of Mental Disorders (4th edn.) (American Psychological Association, 1994).

The sensitivity, specificity, positive and negative predictive values and likelihood ratios (including the 95% confidence intervals) for each screening measure compared to DSM-IV diagnosis together with the Kappa statistic for agreement are presented in Table 7. The performance of each of the depression rating scales will be considered in turn.

Table 7. Effectiveness of the BASDEC, the BDI-FS and the HADS-D compared with DSM-IV diagnosis

<table>
<thead>
<tr>
<th>Measurement</th>
<th>BASDEC (≥7)</th>
<th>BDI-FS (≥4)</th>
<th>HADS-D (≥8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity</td>
<td>.89 (.57 -.98)</td>
<td>.67 (.35-.88)</td>
<td>.78 (.45-.94)</td>
</tr>
<tr>
<td>Specificity</td>
<td>.96 (.82 -.99)</td>
<td>.82 (.64-.92)</td>
<td>.79 (.60 -.90)</td>
</tr>
<tr>
<td>Positive Predictive Value</td>
<td>.89 (.57 -.98)</td>
<td>.55 (.28-.79)</td>
<td>.54 (.29 -.77)</td>
</tr>
<tr>
<td>Negative Predictive Value</td>
<td>.96 (.82 -.99)</td>
<td>.88 (.71-.96)</td>
<td>.92 (.74 -.98)</td>
</tr>
<tr>
<td>Positive Likelihood Ratio</td>
<td>24.89 (4.86-141.63)</td>
<td>3.73 (1.47-9.18)</td>
<td>3.63 (1.62-8.02)</td>
</tr>
<tr>
<td>Negative Likelihood Ratio</td>
<td>0.12 (0.02-0.45)</td>
<td>0.41 (0.15-.82)</td>
<td>0.28 (0.08-.72)</td>
</tr>
<tr>
<td>Measure of Agreement (Cohen’s Kappa)</td>
<td>.85 (.66-1.05)</td>
<td>.45 (.12-.79)</td>
<td>.49 (.18-.80)</td>
</tr>
</tbody>
</table>

Note. BASDEC = Brief Assessment Schedule Depression Cards; BDI-FS = Beck Depression Inventory-Fast Screen; HADS-D = Hospital Anxiety and Depression Scale – Depression; DSM-IV = Diagnostic and Statistical Manual of Mental Disorders (4th edn.) (American Psychological Association, 1994).

BASDEC

The BASDEC (cut-off ≥ 7) performed well at detecting depression in this group of stroke survivors. Reference to Table 4 indicates that only two participants were
misclassified by the BASDEC (5.41%), giving one false-positive and one false-negative for depression. The sensitivity (proportion of depressed participants correctly identified) and positive predictive values (proportion of participants identified on the BASDEC as depressed who were depressed) were high. The precision of these estimates for the population as indicated by the width of the 95 per cent confidence intervals is low. The wide width of confidence intervals is likely to be due to the small number of depressed participants. The lower bound of the 95 per cent confidence interval indicates an unacceptable level of sensitivity and positive predictive value. The specificity (proportion of non-depressed participants correctly identified) and the negative predictive value (proportion of participants identified as non-depressed on the BASDEC who were actually non-depressed) were high and the precision of these results is good.

The positive likelihood ratio of 24.9 represents ‘a large shift in odds’ (Jaeschke et al., 1994) of a participant having depression if they are screened as depressed on the BASDEC. The negative likelihood ratio of 0.12 represents a ‘moderate shift in odds’ of the participant being depressed given a negative test result (Jaeschke et al., 1994). Likelihood ratios are clinically useful because based on a pre-screen probability of someone being depressed they indicate the post-screen probability based on a positive or negative screening test. This calculation is based on the relationship between odds and probability. If there is a pre-test probability of 33 per cent likely to depressed (based on the pooled estimate from Hackett et al., 2005), a positive likelihood ratio of 24.9 indicates that this probability would increase to 92 per cent given a positive result on the BASDEC. However, the 95 per cent confidence intervals around the positive likelihood ratio indicate that the true post-test probability of depression could lie between 64 and 99 per cent. The negative likelihood ratio of 0.12 indicates that a negative test result on the BASDEC would decrease the probability of someone being depressed from 33 per cent to 6 per cent. Taking into account the width of the 95 per cent confidence intervals means the true post-test probability could lie between 0.01 per cent to 18 per cent (see Appendix 13 for calculations).

There was an ‘almost perfect’ (Landis & Koch, 1977) level of agreement (κ = .85, prevalence index = .51, bias index = 0), between the classification of cases on the
BASDEC and the DSM-IV criteria. This finding is clinically significant as the 95 per cent confidence intervals suggest that the level of agreement is at least ‘substantial’ (over .60).

**BDI-FS**

Reference to Table 7 indicates that the BDI-FS (cut-off ≥ 4) misclassified eight participants (21.62%), giving five false-positives for depression and three false-negatives. Two of the participants diagnosed with major depression were screened as non-depressed by the BDI-FS. The sensitivity and positive predictive values were low in this group of stroke survivors, however the wide confidence intervals around the values means this estimate lacks precision for wider use. The specificity and negative predictive values were good. However, the estimates were less precise than those for the BASDEC, although the values and the 95 per cent confidence intervals were above the minimum criteria for specificity values (.60, Bennett & Lincoln, 2004).

The positive likelihood value of 3.73 can be classified as a ‘small but sometimes important shift in odds’ (Jaeschke et al., 1994). Given a pre-test probability of 33 per cent, this positive likelihood ratio indicates that being screened as depressed on the BDI-FS may increase the probability of a stroke survivor having depression to 65 per cent. However the 95 per cent confidence intervals suggest that the true post-test probability could lie between 42 per cent and 82 per cent. Given the negative likelihood ratio of 0.42, indicating ‘small but sometimes important shift in odds’ (Jaeschke et al., 1994), a negative test result would mean post-test probability was 17 per cent, although given the confidence intervals the true post-test probability could fall between 7.28 per cent and 34 per cent.

The BDI-FS was in ‘moderate’ (Landis & Koch, 1977) agreement with the DSM-IV diagnosis (k = .45, prevalence index = .46, bias index = .05). However, this result cannot be considered clinically significant due to the lower bound of the 95 per cent confidence interval falling below k = .40.
HADS-D
The HADS (cut-off ≥ 8) misclassified eight participants (21.62%), giving six false-positives and two false-negatives. Sensitivity and specificity values were moderate, the negative predictive value was relatively high and the positive predictive value relatively low. However, because of the small number of depressed participants and wide confidence intervals, the study is underpowered to draw conclusions about the sensitivity of the measure. The lower bound of the 95 per cent confidence interval for specificity is 0.60 which means that the measure gives just acceptable specificity.

The positive likelihood ratio of 3.63 can be classified as a 'small but sometimes important shift in odds' (Jaeschke et al., 1994) and the negative likelihood ratio of 0.28 can be classified as a 'small but sometimes important shift in odds' (Jaeschke et al., 1994). Given a pre-screen probability of 33 per cent, this positive likelihood ratio indicates that being screened as depressed on the HADS may increase the probability of the person having depression to 64 per cent. However, the 95 per cent confidence intervals suggest that the true post-test probability could lie between 44 per cent and 80 per cent. Given the negative likelihood ratio of 0.28, a negative test result would mean post-test probability was 12 per cent, although given the confidence intervals the true post-test probability could fall between 4 per cent and 35 per cent.

The HADS-D was in 'moderate' (Landis & Koch, 1977) agreement with SCID diagnosis (k = 0.45, prevalence index = 0.41, bias index = 0.11). However, this result cannot be considered clinically significant due to the lower bound of the confidence interval falling below k = .40.

Comparison between the Depression Rating Scales
The sensitivity, specificity, positive and negative predictive values, likelihood ratios and kappa values varied for each of the depression rating scales, however the 95 per cent confidence intervals overlap for each value. The study was underpowered to test differences between the majority of the values. The specificity values of the BASDEC and BDI-FS were compared to the HADS. There was no difference in specificity values between the BDI-FS and the HADS. A calculation of difference in proportions suggested that the BASDEC correctly identified 17.9 per cent more of the non-
depressed participants than the HADS (95 per cent confidence intervals for the difference: 1 to 36 per cent). A one-tailed McNemar's test indicated that this difference was significant (p = .03).

b) exploring the relationship between the total scores on the BASDEC and BDI-FS with total scores on the HADS.

One-tailed Kendall's tau-b correlations were used to investigate the relationships between all three depression rating scales and these are given in Table 8. One-tailed correlations were used as the rating scales are all constructed to measure depression and therefore positive correlations would be expected. All correlations were highly significant (p < .001) therefore they were significant even when a Bonferroni correction was applied to control for Type 1 error rate due to multiple correlations.

As mentioned above Kendall's tau-b tends to give a more modest size of correlation than Spearman's and Pearson's coefficients. Kendall's tau-b can be interpreted generally as the probability that a pair of observations will have the same ordering on both scales rescaled to range from -1.0 to 1.0. This interpretation is less clear when there are tied ranks in the data.

It is interesting to note that the BASDEC, BDI-FS and HADS-D were all highly significantly correlated with the HADS-A.

Table 8. Kendall's tau-b correlations between the depression rating scales at initial assessment.

<table>
<thead>
<tr>
<th>Scale</th>
<th>BDI-FS</th>
<th>BASDEC</th>
<th>HADS-D</th>
<th>HADS-A</th>
<th>HADS</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI-FS</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>BASDEC</td>
<td>.54</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>HADS-D</td>
<td>.42</td>
<td>.38</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>HADS-A</td>
<td>.48</td>
<td>.48</td>
<td>.51</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>HADS</td>
<td>.47</td>
<td>.48</td>
<td>.80</td>
<td>.76</td>
<td>-</td>
</tr>
</tbody>
</table>

Note. BASDEC = Brief Assessment Schedule Depression Cards; BDI-FS = Beck Depression Inventory-Fast Screen; HADS-D = Hospital Anxiety and Depression Scale – Depression; HADS-A = Hospital Anxiety and Depression Scale – Anxiety; HADS = Hospital Anxiety and Depression Scale. All correlations were significant at P < .001 level except the correlation between the BASDEC and the HADS-D where p = .001.
Research Objective 3
To explore whether participants have a preference for any of the depression rating scales and the types of reasons given for preference decisions.

Following the initial administration of the BADSEC, BDI-FS and the HADS, participants were asked ‘Did you have a preference for any of the questionnaires?’ If they did, they were asked to state which one and the reason. One participant was not asked these questions due to administrator error. Figure 1 displays a bar-chart showing the percentage of participants stating no preference, preference for the BASDEC, BDI-FS and HADS. It can be seen that just under half of the participants indicated that they had no preference for any of the depression rating scales whilst the rest of the participants were divided between the three other measures similarly.

Figure 1. Percentage of participants expressing preference for depression rating scales

The reasons given by participants for their preference of depression rating scale are given in Table 9 (following page). Responses were investigated for the type of reasons given for preference of the measures, these were broadly grouped into two themes: ease and content. Participants who preferred the BASDEC and the BDI-FS
referred to both ease and content for their preference decisions whilst those who preferred the HADS tended to refer to content.

Table 9. Comments on scale preference by participants

<table>
<thead>
<tr>
<th>Scale</th>
<th>Theme</th>
<th>Quote</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASDEC</td>
<td>CONTENT</td>
<td>“Didn’t like Q4 on BDI can’t get pleasure from things used to enjoy because of the stroke and q7 problematic time difficult to judge and questions too [?] printed. Also HADS question about looking forward to things”</td>
</tr>
<tr>
<td></td>
<td>CONTENT</td>
<td>“more down to earth and to the point”</td>
</tr>
<tr>
<td></td>
<td>EASE</td>
<td>“because I could participate”</td>
</tr>
<tr>
<td></td>
<td>EASE</td>
<td>“decision yes or no, rather than 4 answers to choose from”</td>
</tr>
<tr>
<td></td>
<td>EASE</td>
<td>“easier, true or false”</td>
</tr>
<tr>
<td></td>
<td>EASE</td>
<td>“easier for everybody”</td>
</tr>
<tr>
<td></td>
<td>CONTENT</td>
<td>“short sentences, to the point”</td>
</tr>
<tr>
<td></td>
<td>CONTENT</td>
<td>“definite questions, true reflection of my feelings”</td>
</tr>
<tr>
<td>BDI-FS</td>
<td>EASE</td>
<td>“easiest”</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>“no reason stated”</td>
</tr>
<tr>
<td></td>
<td>CONTENT</td>
<td>“more direct”</td>
</tr>
<tr>
<td></td>
<td>EASE</td>
<td>“simpler, covers everything in the HADS but shorter. HADS sometimes not clear”</td>
</tr>
<tr>
<td></td>
<td>EASE</td>
<td>“BDI quicker and easier to answer but Q1 does not have option of a little bit sad and Q4 some things she can’t do but she would still enjoy HADS Q2 not able to do things rather than not able to enjoy them Q about appearance take as much care as she is able to.”</td>
</tr>
<tr>
<td></td>
<td>CONTENT</td>
<td>“more positive choice of answers”</td>
</tr>
<tr>
<td>HADS</td>
<td>CONTENT</td>
<td>“more positive choice of answers”</td>
</tr>
<tr>
<td></td>
<td>CONTENT</td>
<td>“more in depth, more into it.”</td>
</tr>
<tr>
<td></td>
<td>CONTENT</td>
<td>“was the most positive, all are difficult to answer”</td>
</tr>
<tr>
<td></td>
<td>CONTENT</td>
<td>“list things out clearly - least helpful BDI-FS.”</td>
</tr>
<tr>
<td></td>
<td>CONTENT</td>
<td>“more things to think about (clarified with assistant talking about responses)”</td>
</tr>
<tr>
<td></td>
<td>CONTENT</td>
<td>“more things, more questions to help me understand”</td>
</tr>
</tbody>
</table>

Note: BASDEC = Brief Assessment Schedule Depression Cards; BDI-FS = Beck Depression Inventory-Fast Screen; HADS-D = Hospital Anxiety and Depression Scale – Depression Scale.
Discussion

Overview
The main findings of the study will be summarised and then discussed in relation to the research objectives and previous research. The limitations of the study and the clinical implications will then be discussed. Further research will be considered.

Summary of Main Findings
The current study is the first known investigation of the reliability and validity of the BASDEC and BDI-FS as screening measures for depression in older stroke survivors and provides preliminary evidence of their reliability and validity for this use. The main findings regarding the performance of the measures in the current cohort of older stroke survivors are presented.

The BASDEC and BDI-FS were reliable measures, as evidenced by acceptable internal consistency and test-retest reliability. The main method of assessing the evidence for the validity of the BASDEC and BDI-FS was comparison of the scales, dichotomised at the recommended cut-offs, with a criterion measure, a DSM-IV diagnosis of depression as assessed by the SCID. In this group of stroke survivors, the BASDEC had an 'almost perfect' level of agreement with DSM-IV diagnosis of depression whereas the BDI-FS was in 'moderate' agreement. The BASDEC performed well at identifying those with depression and those without depression (high sensitivity and specificity). A positive result on the BASDEC resulted in a 'large shift in odds' that the participants was depressed whilst a negative result led to a 'moderate shift in odds' that the participant was not depressed. The BDI-FS performed relatively well at identifying those who were not depressed, however, the BDI-FS screened three out of the nine depressed participants as non-depressed. A positive or negative screen result on the BDI-FS led to a 'small but possibly important shift in odds' that a participant was depressed or non-depressed respectively. Participants with depression scored significantly higher on the BASDEC and BDI-FS, as well as the HADS. This presents some evidence for their validity as depression screening measures.
A further method of investigating the validity of the BASDEC and BDI-FS was comparison with the HADS, which is currently recommended as a screening measure for this client group. The total scores on the BASDEC, BDI-FS and HADS-D were highly significantly associated, giving some convergent evidence of the validity as depression screening measures. Trends in the findings suggest that in this group of stroke survivors, the BASDEC performed best in relation to DSM-IV criteria whilst performance of the BDI-FS and HADS was moderate and comparable. The findings suggest that the BASDEC identified more of the non-depressed participants correctly than the HADS. There was no clear preference for one of the depression rating scales over the others and approximately half of the participants stated no preference for any of the depression rating scales. The reasons given for preference decisions varied between the scales.

Discussion of Findings
The main findings will be discussed in relation to the research objectives and previous research.

Reliability
The first research objective was to assess the reliability of the BASDEC and BDI-FS, the findings in this moderate sized sample of older stroke survivors with minimal cognitive and language impairment provide preliminary evidence of their reliability in this client group. Findings show that the internal consistency of the BASDEC and BDI-FS was acceptable in this group of older stroke survivors. It is useful to consider items which correlated poorly with the total score as this provides information for future possible refinement of scales. The BASDEC item ‘I’ve cried in the past month’ correlated poorly with the total score, it is possible that this could be due to the multiple explanations for tearfulness, particularly early following a stroke, other than depression. In addition to everyday reasons for tearfulness such as hearing some sad news, tearfulness could be expected as part of a reaction to sudden physical illness and can also occur as part of an adjustment reaction. Furthermore, emotional lability is common early after stroke (Morris et al., 1993). Inspection of item responses found that this item was the most frequently endorsed item on the BASDEC and furthermore
was endorsed by approximately half of the depressed and half of the non-depressed group of participants. This suggests that this item does not have good specificity at detecting depression. The BASDEC item 'I have regrets about my past life' was also poorly correlated with the sum of the other scores. The reasons for the poor performance of this item are less clear. In a clinical context the author has noted that this item can cause confusion for older people completing the scale who tend to question what severity of regret is intended. The suicidal ideation item on both the BASDEC and BDI-FS performed poorly, which is likely to be due to the low endorsement of the items by participants. Other studies have also found a low prevalence of suicidal ideation in their studies of stroke survivors (e.g. Williams et al., 2005).

Removal of scale items with very low corrected item-total correlations should be considered (Kline, 1986). However, the findings show that the removal of the poorly correlated items would increase the internal consistency by a marginal amount and furthermore it would be necessary to test the scales in a larger group of stroke survivors to ensure that findings had stabilised before this was considered. The clinical importance of items should also be considered before their removal. Studies of stroke survivors have shown that suicidal ideation is an important indicator of major depression (e.g. Williams et al., 2005) and that stroke survivors are at an approximately doubled risk of suicide (Teasdale & Endberg, 2001). O'Connell et al. (2004) reviewed developments in research on suicide in older people and as a result recommended that high risk subgroups including those with physical illnesses should be screened for suicidal ideation. They suggested that older people may be less likely to admit suicidal feelings unless they are asked directly. This suggests that the inclusion of items enquiring about suicidal ideation in screening measures of depression in stroke survivors is of clinical importance.

The BASDEC and BDI-FS showed acceptable test-retest reliability when re-administered after a median of seven days. Reliability is essential if a test is to be valid (Kline, 2000), therefore the acceptable internal consistency and test-retest reliability of these two depression rating scales formed a basis for the investigation of their validity.
The acceptable internal consistency of the HADS-D, HADS-A and HADS overall was consistent with previous studies which have investigated the HADS in stroke samples (e.g. Aben et al., 2002) and in other general and clinical populations (Bjelland et al., 2002) and justified the statistical comparison of the BASDEC and BDI-FS with the HADS.

Validity

The second research objective was to assess the validity of the BASDEC and BDI-FS as screening measures for depression following stroke in older stroke survivors. The main method of assessing the evidence for the validity of the BASDEC and BDI-FS was comparison of the scales, dichotomised at the recommended cut-offs, with a criterion measure, a DSM-IV diagnosis of depression as assessed by the SCID. The dichotomisation of the BASDEC and BDI-FS at the recommended cut-offs reflects how they may be used as screening measures in a clinical setting. A score above the threshold for depression on the scales would form part of a referral decision for further specialist assessment.

The depressed group of participants scored significantly higher on all of the depression rating scales giving some convergent evidence of the scales as measures of depression in this client group.

a) BASDEC

The BASDEC performed well at detecting depression in this group of older stroke survivors compared to the criterion measure. This provides some preliminary evidence to support its validity as a depression screening measure in this client group. The high sensitivity and specificity values of the BASDEC were similar to those found in other groups of medically ill older people (e.g. Loke et al., 1996; Yohannes et al., 2000) and are higher than those found in the original study (Adsheshed et al., 1992). However, due to the small number of depressed participants, the sensitivity, positive predictive value, likelihood ratios and kappa values lacked precision, therefore, the generalisability of these findings are limited. The precision estimates of the agreement of the BASDEC with DSM-IV diagnosis (kappa) included values in the ‘substantial’ to ‘almost perfect’ range which although wide, could still be interpreted
as clinically significant. The specificity and the negative predictive values of the BASDEC were high and relatively precise. Given that a problem identified in previous research evaluating depression rating scales for screening depression with stroke survivors was low specificity, this is a promising finding. However, it should be interpreted with caution given that the cut-off used may result in lower levels of sensitivity than was found in the current study in a larger group of depressed stroke survivors. This would mean that the optimum cut-off would need to be lower to enhance sensitivity which would produce lower specificity.

One possible disadvantage of the BASDEC identified prior to the study was the inclusion of three somatic items, it has been suggested that screening measures should not include somatic items to decrease the chance of false positives (Stein et al., 1996) However, the BASDEC was found to have high specificity, only one non-depressed participant was screened as depressed on the BASDEC. The three 'somatic' items ('I seem to have lost my appetite', 'I am not sleeping well' and 'I have headaches') were endorsed by a larger percentage of the depressed than the non-depressed participants. The results therefore indicate that in this group of stroke survivors the inclusion of somatic items did not result in a number of false positives. Interestingly, a recent study by Drayer et al. (2005) found that psychological symptoms of depression remained significant predictors of somatisation after controlling for age, gender and medical co-morbidities in a group of older patients. They concluded that rating scales emphasising somatic symptoms associated with depression may provide a more accurate measure of depression severity than those excluding such symptoms. It is possible that the inclusion of the somatic items in the BASDEC partially contributed to the good agreement with DSM-IV diagnosis.

b) BDI-FS

The validity of the BDI-FS as a screening measure for depression for older stroke survivors, was less well supported by the evidence, from comparison with the DSM-IV diagnosis of depression, than the BASDEC. At the recommended cut-off, the BDI-FS was in a 'moderate' level of agreement with DSM-IV diagnosis, however the lack of precision of this estimate means that this finding cannot be generalised as a clinically significant level of agreement. The lack of precision of the sensitivity and
positive predictive values and likelihood ratios limit their generalisability. However, the specificity value was good and precision estimates, although less precise than the BASDEC, suggest that this could be considered an acceptable level of specificity (Bennett & Lincoln, 2004). Interestingly, Lynne Turner-Stokes (personal communication), who has published research on depression following neurological injury including stroke, has investigated the use of the BDI-II with this client group and preliminary unpublished research has indicated that the set of items in the BDI-FS may not be the most efficient at detecting depression in this client group.

c) Comparison of the BASDEC, BDI-FS and HADS

The HADS-D was also compared to DSM-IV criteria to facilitate comparison of the psychometric properties of the BDI-FS and BASDEC to those of a screening measure in common use with this client group. The sensitivity and specificity values for the HADS-D were comparable with those found in two other studies (Aben et al., 2002; O'Rourke et al., 1998). It should be noted that a slightly lower cut-off (≥ 7) was used in the study by O'Rourke et al. (1998). The sensitivity, specificity, predictive values, likelihood ratios and kappa values for each of the depression rating scales compared to DSM-IV diagnosis varied, however the 95 per cent confidence intervals overlapped. The moderate sample size limited statistical comparisons between these properties for the depression rating scales. The BASDEC had higher specificity than the HADS in this group of stroke survivors but this finding would need to be replicated in a larger sample to be robust. Trends in the findings suggest that at the recommended cut-offs the BASDEC may perform favourably as a screening measure, compared to the HADS and the BDI-FS, at detecting depression in older stroke survivors.

The depression rating scales were strongly associated which can be interpreted as convergent evidence of their validity as screening measures for depression. The BASDEC and BDI-FS were strongly associated with the HADS-A as well as the HADS-D. The HADS-D and HADS-A were also strongly associated, a finding which is consistent with previous research. A review of research on the HADS found that correlations between the HADS-D and HADS-A in physically ill people varied from .40 to .64 (Bjelland et al., 2002). The strong association between the depression and
anxiety scales in the current study is not surprising. The co-morbidity of anxiety and depression is a well established finding in older people. For example, Katona et al. (1997) found that in a community study of 700 older people in a London borough, of those with a diagnosis of generalised anxiety disorder (GAD), 70 per cent also fulfilled the criteria for depression. Robinson et al. (2006) investigated the prevalence of GAD in their study of 357 patients with acute stroke and found that it was 22 per cent. They further found that 46 per cent of patients with GAD had major depression, if minor depression was also included this figure rose to 80 per cent.

However, the strong association between the depression and anxiety should be interpreted with some caution. There is some evidence to suggest that the HADS-A has limited validity as a screen for anxiety following stroke (e.g. Johnson et al. 1995). Further, the separation of the anxiety and depression scales in the HADS may not be valid in this population. Johnston et al. (2000) investigated the construct validation of the HADS in a sample of stroke survivors and found that early after stroke (one month post-discharge) satisfactory separation of anxiety and depression was only achieved by moving the item ‘worrying thoughts go through my mind’ and the item ‘I can sit at ease and feel relaxed’ to the depression subscale. In the current study ‘I can sit at ease and feel relaxed’ was rated highly by the depressed participants, with a median score of two, whereas it was only endorsed by one of the non-depressed participants. It is a possibility that this item, which refers to the general feeling in ones body may indicate somatisation of depression.

Participants' Views of Depression Rating Scales
An interesting aspect of the research was enquiring about participants’ preferences for the depression rating scales. Although it was not assessed formally, participants were generally positive about being asked for their views on the different rating scales. Screening measures should be acceptable to participants, however studies rarely assess participants’ views on different measures. No clear recommendations on the basis of the current study can be made for the use of one measure over the other in terms of participants’ preferences. It was interesting to note that some participants preferred the HADS due to the more detailed or complex questions. Some comments referred to specific questions on the HADS which the respondents had found...
problematic due to responses being influenced by the restrictions of physical symptoms following stroke. It would have been interesting to collect more data on specific questions which were problematic for participants.

Limitations

There were limitations of the current study which need to be identified. Given these limitations the findings should be interpreted with a degree of caution.

The main limitation of the study was the moderate sample size with a small number of participants with depression. This restricted the range of analyses which could be carried out on the data. For example it would have been useful to construct Receiver Operating Characteristic Curves to investigate whether the recommended cut-offs on the BASDEC and BDI-FS were the optimum cut-offs for this client group. The sample size also limits the generalisability of the findings due to the lack of precision of sensitivity, positive predictive value and likelihood ratios as a result of wide 95 per cent confidence intervals.

There was an encouraging level of interest in the current study from stroke survivors in the rehabilitation units and refusal rate was relatively low (8.9%). One reason that it was not possible to recruit a larger sample was the length of time involved in obtaining ethical and research and development approval across the three NHS trusts which shortened the period of time available for data collection. This approval process lasted approximately nine months. The current financial position of the NHS also led to beds being closed for older stroke survivors in two of the inpatient rehabilitation units which reduced the pool of potential participants. Pressures on staff time at a third site led to a selection bias in that only those referred to clinical psychology were screened for the study. One of the common reasons of referral to clinical psychology was due to concerns regarding cognitive impairment and it follows that these stroke survivors were less likely to meet criteria for the current study due to the exclusion criteria for cognitive impairment.

The prevalence of depression in the sample was at the lower end of the range given by Gordon and Hibbard (1997), it was also approximately 10 per cent lower than the
pooled estimate of 36 per cent for rehabilitation studies given by Hackett et al. (2005). There are a number of possible explanations for this. Firstly, it is possible that stroke survivors who were depressed were less likely to volunteer for the study. It was not possible to record information about stroke survivors who did not wish to participate due to ethical constraints. Furthermore, five participants who were not diagnosed with depression in the current study had been prescribed anti-depressants before entry into the study, it is possible that these participants may have been depressed if they had not been given treatment. Finally, participants with aphasia and cognitive impairment which are associated with depression following stroke were excluded (e.g. Robinson et al., 1986; Robinson, 2006; Spalletta & Caltagirone, 2003).

There is a possibility that completing the depression rating scales in the presence of a researcher introduced a bias into how symptoms were reported. Participants may have been concerned regarding the reporting of depression symptoms because of perceived stigma (Katona & Livingstone, 2000) and it is possible that if the depression rating scales had been left alone with the participant they may have completed them differently. It could be hypothesised that this may have resulted in higher depression scores on the rating scales. It was observed in the administration of the SCID interviews that participants had varied views regarding depression and the level of stigma associated with it.

The generalisability of the current findings is limited due to the small sample size and caution should also be employed in generalising the findings to groups of stroke survivors where there is a different prevalence of depression or who have different demographic or clinical characteristics. The current study investigated the BDI-FS and BASDEC in a rehabilitation setting, early following stroke with a group of older stroke survivors who had minimal cognitive and language difficulties, ethnic diversity was also limited. The findings of the current study should not be generalised to stroke survivors with moderate to severe cognitive impairment or dysphasia or younger stroke survivors where depression may present differently. Other studies have investigated depression screening measures for these groups (e.g. Bennett & Lincoln, in press). One of the reasons, the BASDEC and BDI-FS were considered was their suitableness for use in an inpatient population, however they could also be used in a
community setting (e.g. a GP surgery). Research suggests that depression screening measures for stroke survivors can perform differently in community and hospital settings (e.g. Johnson et al., 1995) so further research may be required before findings can be generalised.

**Clinical Implications**

This initial evaluation of the psychometric properties of the BASDEC was promising and if the findings are demonstrated in a larger group of stroke survivors, the BASDEC would prove a useful addition to the range of screening measures available for stroke survivors, particularly considering it has demonstrated these properties in an older cohort of stroke survivors in an inpatient rehabilitation setting. The BASDEC meets the majority of the clinical criteria for screening measures for stroke survivors: it has a simple response format, it is easy to administer with minimal training, it is quick to administer and has a low reliance on memory. It was developed for use with older people and is suitable for use in a hospital setting. The BASDEC has an advantage over other self-report measures as no verbal or written response is required which increases its potential to be used with participants with expressive dysphasia or physical impairments.

The evidence from the current study is not as strong for the BDI-FS as a screening measure for this client group, trends in the data suggested it was comparable with the HADS. Again further evaluation in a larger group of stroke survivors is needed before recommendations are made regarding its use. The BDI-FS is shorter than the HADS, although it has similar complex response categories and also (like the BASDEC) may be used when a routine screen for suicidal ideation in required. The BDI-FS may be preferable for use rather than the BASDEC when it is appropriate to leave a self-rating form with a client to complete.

Although not a novel finding of this research, the strong association between anxiety and depression in the sample suggests that participants who screen positive for depression should also be assessed for anxiety. Whilst there is little validity data for the HADS-A as a valid measure for anxiety post-stroke, the clinical impression when conducting the SCID interview was that several of the participants were experiencing
anxiety. The type of anxiety differed between participants, with some appearing to have a post-traumatic stress disorder, some with more generalised anxiety and some with specific fears such as a fear of falling.

**Further Research**

The main limitation of the current study was the moderate sample size and small number of stroke survivors with depression recruited in the study, which resulted in low precision of estimates of sensitivity, positive predictive value, positive likelihood ratio and kappa values. Given the preliminary evidence of the reliability and validity of the measures, further research is warranted in a larger group of participants. Based on these initial promising findings, it is intended, by the clinicians involved, to extend the study to continue the collection of data. A sample size based on increasing precision of the estimation of sensitivity of the BASDEC was calculated. This indicated that based on the sensitivity estimate from the current data analysis (.89) and the proportion of participants with depression recruited to date, data would need to be collected from a further 112 participants to reduce the confidence intervals to .79-.99. This larger sample size would also facilitate the construction of receiver operating characteristic curves to explore the most appropriate cut-offs for this client group and extend the statistical comparison of the measures to provide recommendations regarding their relative use. If the extended study proved the measures to be useful in this setting, further research in a more diverse group of stroke survivors could be recommended.

The Royal College of Physicians (2004) and the British Psychological Society (2002) advise that mood should be monitored regularly during rehabilitation. Further research is required to investigate whether the BASDEC and/or BDI-FS are responsive to change. If either were to prove responsive to change, this would increase their clinical utility.

The focus of this research was on depression rather than other mood disorders following stroke. However, further research is needed to investigate the reliability and validity of either existing or novel anxiety measures to use in conjunction with
depression measures following stroke. Previous research suggests that the HADS-A may not be suitable for this purpose (e.g. Johnston et al., 1995)

Conclusion
The prevalence of depression in stroke survivors is high and is associated with poor rehabilitation outcome. Screening for depression with all stroke survivors has been recommended to increase detection and treatment with potential to benefit rehabilitation outcome. Several issues complicate the assessment of depression in stroke survivors, criteria for the selection of screening measures to minimise the impact of these issues were considered. The current study was the first known investigation of the reliability and validity of the BASDEC and BDI-FS, two depression rating scales which fitted the majority of these criteria. Findings presented some initial evidence for the reliability and validity of the BASDEC and BDI-FS as screening measures for depression in a group of older stroke survivors with minimal cognitive impairment and dysphasia in an inpatient rehabilitation setting. Trends in the data suggested that the BASDEC may prove to have better criterion-related validity than the HADS, which is a currently recommended screening measure for this client group, or the BDI-FS. Further evaluation of the BASDEC and BDI-FS is warranted in a larger group of stroke survivors, prior to recommendations regarding use for routine screening in clinical practice.
References


Yohannes, A.M., Baldwin, R.C. & Connolly, M. (2000). Depression and anxiety in elderly outpatients with chronic obstructive pulmonary disease: prevalence and


Appendix 1: DSM-IV Criteria for Major and Minor Depression
DSM-IV Criteria for a Major Depressive Episode (APA, 1994)

A. Five (or more) of the following symptoms have been present during the same 2 week period and represent a change from previous functioning: at least one of the symptoms is either (1) depressed mood or (2) loss of interest or pleasure.

1. Depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g. feels sad or empty) or observation made by others (e.g. appears tearful).
2. Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observations made by others)
3. Significant weight loss when not dieting or weight gain (e.g. a change of more than 5% of body weight in a month), or decrease or increase in appetite nearly every day. Note: In children, consider failure to make expected weight gains.
4. Insomnia or hypersomnia nearly every day
5. Psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down)
6. Fatigue or loss of energy nearly every day
7. Feels of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick)
8. Diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others)
9. Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide

B. The symptoms do not meet criteria for a mixed episode

C. The symptoms cause clinical significant distress or impairment in social, occupational, or other important areas of functioning.

D. The symptoms are not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g. hypothyroidism)

E. The symptoms are not better accounted for by bereavement, i.e. after the loss of a loved one, the symptoms persist for longer than 2 months or are characterized by marked functional impairment, morbid preoccupation with worthlessness, suicidal ideation, psychotic symptoms, or psychomotor retardation.
DSM-IV Research Criteria for Minor Depressive Disorder (APA, 1994)

A. A mood disturbance defined as follows:
   (1) At least two (but less than five) of the following symptoms have been present during the same 2 week period and represent a change from previous functioning: at least one of the symptoms is either (a) or (b):
      (a) depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g. feels sad or empty) or observation made by others (e.g. appears tearful).
      (b) Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observations made by others).
   (c) Significant weight loss when not dieting or weight gain (e.g. a change of more than 5% of body weight in a month), or decrease or increase in appetite nearly every day. Note: In children, consider failure to make expected weight gains.
   (d) Insomnia or hypersomnia nearly every day
   (e) Psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down)
   (f) Fatigue or loss of energy nearly every day
   (g) Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick)
   (h) Diminished ability to think or concentrate
   (i) Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide
   (2) The symptoms cause clinical significant distress or impairment in social, occupational, or other important areas of functioning.
   (3) The symptoms are not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g. hypothyroidism).
   (4) The symptoms are not better accounted for by Bereavement (i.e. a normal reaction to the loss of a loved one)

B. There has never been a Major Depressive Episode and criteria are not met for Dysthymic Disorder.

C. There has never been a Manic Episode, Mixed Episode or Hypomanic Episode and criteria are not met for Cyclothymic Disorder. Note: This exclusion does not apply if all of the manic- mixed- or hypomanic-like episodes are substance or treatment induced.

D. The mood disturbance does not occur exclusively during Schizophrenia, Schizophreniform Disorder, Delusional Disorder or Psychothnic Disorder Not Otherwise Specified.
Appendix 2: Study Information Sheet
You are being invited to take part in a research study. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

**What is the purpose of the study?**

The purpose of the study is to find out which of three questionnaires is the best one to use to check whether people over 65 years of age have depression following a stroke. Lots of people experience depression after a stroke. As well as being distressing, depression has been shown to have a negative impact on rehabilitation after stroke. Therefore, if we can find a more accurate way of detecting depression, it may lead to appropriate treatment and improved outcome.

**Why have I been chosen?**

You have been invited to take part in this study because you have recently experienced a stroke, are aged over 65 and are in x, x, x or x hospital, the four hospitals involved in the study. We are hoping to include about 80 people in our study. You do not have to feel depressed
to be involved in the study, we wish to recruit people for the study regardless of whether they have depression or not.

Do I have to take part?
It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. A decision to withdraw at any time, or a decision not to take part, will not affect the standard of care you receive.

What will happen to me if I take part?
If you agree to take part in the study, you will be asked to answer three short questionnaires. The questions will be read aloud to you by an assistant psychologist who may not be involved in your care and may be someone who is not known to you. The questions will ask you about how you are feeling. This should take up to half an hour. You will then be asked which questionnaire you preferred completing.

You will then be interviewed about how you are feeling by a researcher, a Trainee Clinical Psychologist, using a standard set of questions. This Trainee Clinical Psychologist may not be involved in your care and may be someone who is not known to you. This will happen within a week after you were asked to complete the three questionnaires. This should take about 45 minutes.

Lastly, you will be asked to complete two of the questionnaires again 7 to 10 days after you completed them the first time. This should take about
15 minutes. The total time you will be involved in the study for is 90 minutes.

We will also ask if we can obtain background information from your hospital medical notes, this will be completed by the lead nurse. The trainee clinical psychologist will ask you for any background information which is incomplete in your medical notes as part of the interview. Information such as your age, marital status and type of stroke allows us to describe the people who have taken part in the study and also to see whether any of the factors are associated with depression after stroke. This information will not be identifiable as yours, your name will not be on the sheet.

A summary of the results of the questionnaires and interview will be given to the lead nurse on your ward/unit. If you are identified as likely to be depressed by the depression screening measures or interview, the lead nurse will be notified. The clinicians involved in your care can then discuss treatment referral with you, if appropriate. An anonymised copy of results will be kept for the research.

The questions in the study ask about how you are feeling. If you become upset at any stage in the study. We will ask if you would like to stop and restart if and when you are ready. If you have become upset during the study, the lead nurse will be informed with your permission. If we become worried about you or someone else's safety following the questions, the doctor responsible for your care will be informed immediately. We will tell you if this is going to happen.
Is the study confidential?
YES. Your name will be removed from the results sheets and demographic information kept by the researchers. However, if you do agree to take part, we will let the hospital doctors and nurses involved in your care know that you are a participant in the research. A summary of the results of the questions we ask you will also be recorded in your medical notes by the lead nurse. If we become concerned about your safety at any point during the study, a hospital doctor involved in your care will be told immediately afterwards.

What will happen to the results of the study?
The overall results of the study will be published in a report. This will be circulated to the teams working with people who have experienced stroke in x/x/x and x Hospitals and, if possible, published in a journal. All information that could be used to identify you will be removed. You will be asked if you wish to be informed of the results of the study. If you do, we will write to you about these once it is completed.

ALL DATA WILL BE TREATED IN ACCORDANCE WITH THE 1998 DATA PROTECTION ACT.

Who is organising the study?
The research is being co-ordinated by a Trainee Clinical Psychologist and psychologists working at the University of Surrey and x NHS Trust and x NHS Trust.

Who has reviewed the study?
The following ethics committees have reviewed the study and given their approval for the study to take place. These are: x Local Research Ethics
Committee, x Local Research Ethics Committee, x Local Research Ethics Committee, University of Surrey Ethics Committee, X Research Consortium, X NHS Trust Research and Development team and x Trust Research and Development team. The clinicians responsible for your care during your stay in hospital here have given their permission for you to be invited to take part.

**What should I do now?**

Think about whether you would like to take part in the study. Once you have decided whether you would like to be involved in the study, please tell the person who talked through this sheet with you know, or if they are not around, please tell the lead nurse. If you have any questions about this study now please ask the person who talked through this sheet with you. If they are unable to answer questions or if you wish, one of the following members of the research team can be contacted:

Anna Healey, Chief Investigator, Trainee Clinical Psychologist
Contact through assistant psychologist or lead nurse.

**Local Contacts:**

x, Clinical Psychologist, x and x Hospitals
Telephone Number: x.

x, Clinical Neuropsychologist, x Hospital
Telephone Number: x.

Thank you very much for taking time to read and consider this information. With all best wishes.
Appendix 3: Participant Consent Form
SCREENING FOR DEPRESSION AFTER STROKE IN OLDER PEOPLE:
RESEARCH CONSENT FORM Version 2

NAME OF CHIEF INVESTIGATOR: Anna Healey
ETHICS COMMITTEE APPLICATION NUMBER: 05/Q1909/26

1. I confirm that I have read and understand the Participant Information Sheet dated 31.05.05 (version 2) for the above study and have had the opportunity to ask questions.

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my medical care or legal rights being affected.

3. I understand that sections of my medical notes may be looked at by the lead nurse who does normally have access to my medical notes and are employed by x NHS Trust where it is relevant to my taking part in the research. I give permission for these individuals to have access to my records for the purposes of the research.

4. I understand that an assistant psychologist who may not be known to me and will not be involved in my routine care will complete questionnaires with me which ask about how I am feeling.

5. I understand that I will be interviewed by a Trainee Clinical Psychologist who may not be known to me and will not be involved in my care as part of the research.

Please mark box

[ ]

263
6. I agree to take part in the above study.

<table>
<thead>
<tr>
<th>Name of Patient</th>
<th>Date</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of person taking consent (if different from researcher)</td>
<td>Date</td>
<td>Signature</td>
</tr>
<tr>
<td>Researcher</td>
<td>Date</td>
<td>Signature</td>
</tr>
</tbody>
</table>

NB: One copy to be retained by patient. One copy to be placed in medical notes. One copy to be retained by researcher.
Appendix 4: BASDEC Score Sheet and Example of Cards
Brief Assessment Schedule Depression Cards Score Sheet

Instructions: The BASDEC system is designed to provide a simple method by which the clinician may identify the presence of an underlying depressive disorder.

To administer: (1) Remove TRUE and FALSE cards from pack and place on table.
(2) Arrange cards from “1” to “19”
(3) Hand the cards, one by one, to the patient (read question if necessary)
(4) Ask patient to place cards below appropriate response “TRUE/FALSE”
(5) Any cards, which cause confusion or doubt should be placed in a “DON’T KNOW” pile

To score: Each “TRUE” card has a value of one point, each “DON’T KNOW” card has a value of ½ point. Cards in the “FALSE” pile do not score. The exceptions to this are “I’ve given up hope” (Card 6) and “I’ve seriously considered suicide” (Card 7) which have values of TWO points if true and one point if “Don’t know”. Total the scores using SEVEN as the cut-off.

<table>
<thead>
<tr>
<th>BASDEC ITEM</th>
<th>PARTICIPANTS RESPONSE (Please Circle)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I feel anxious all the time</td>
<td>True 1 False 0 Don’t Know ½</td>
</tr>
<tr>
<td>2. I’ve felt very low lately</td>
<td>True 1 False 0 Don’t Know ½</td>
</tr>
<tr>
<td>3. I feel worse at the beginning of the day</td>
<td>True 1 False 0 Don’t Know ½</td>
</tr>
<tr>
<td>4. I feel life is hardly worth living</td>
<td>True 1 False 0 Don’t Know ½</td>
</tr>
<tr>
<td>5. I’ve cried in the last month</td>
<td>True 1 False 0 Don’t Know ½</td>
</tr>
<tr>
<td>6. I’ve given up hope</td>
<td>True 2 False 0 Don’t Know 1</td>
</tr>
<tr>
<td>7. I’ve seriously considered suicide</td>
<td>True 2 False 0 Don’t Know 1</td>
</tr>
<tr>
<td>8. I can’t recall feeling happy in the past month</td>
<td>True 1 False 0 Don’t Know ½</td>
</tr>
<tr>
<td>Question</td>
<td>True</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>9. I'm so lonely</td>
<td>True</td>
</tr>
<tr>
<td>10. I've lost interest in things</td>
<td>True</td>
</tr>
<tr>
<td>11. I'm too miserable to enjoy anything</td>
<td>True</td>
</tr>
<tr>
<td>12. I have regrets about my past life</td>
<td>True</td>
</tr>
<tr>
<td>13. I am a nuisance to others being ill</td>
<td>True</td>
</tr>
<tr>
<td>14. I've been depressed for weeks at a time in the past</td>
<td>True</td>
</tr>
<tr>
<td>15. I suffer headaches</td>
<td>True</td>
</tr>
<tr>
<td>16. I seem to have lost my appetite</td>
<td>True</td>
</tr>
<tr>
<td>17. I'm not sleeping well</td>
<td>True</td>
</tr>
<tr>
<td>18. I'm kept awake by worry and unhappy thoughts</td>
<td>True</td>
</tr>
<tr>
<td>19. I'm not happy at all.</td>
<td>True</td>
</tr>
</tbody>
</table>

**Total score:** 267
True

False

I've given up hope
Appendix 7: Background Information Form
Demographic and Background Information Sheet

Please complete the following demographic and background information with assistance from the participant’s medical notes once a participant has given their consent to be involved in the study.

Please state the participant's:

1. Date of Birth

2. Age:

3. Gender: Male □1 Female □2

4. Marital Status: Single □1 Married □2 Divorced □3 Widowed □4 Cohabiting □5 Not Stated □9

5. Pre-admission living arrangements: Own Home □1 Flat □2 Warden Assisted □3 Nursing Home □4 Not Stated □9
6. Ethnict Origin
(categories used by 2001 census):

<table>
<thead>
<tr>
<th>Category</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td></td>
</tr>
<tr>
<td>White British</td>
<td>1</td>
</tr>
<tr>
<td>White Irish</td>
<td>2</td>
</tr>
<tr>
<td>Any other White Background</td>
<td>3</td>
</tr>
<tr>
<td>Mixed</td>
<td></td>
</tr>
<tr>
<td>White &amp; Black Caribbean</td>
<td>4</td>
</tr>
<tr>
<td>White &amp; Black African</td>
<td>5</td>
</tr>
<tr>
<td>White &amp; Asian</td>
<td>6</td>
</tr>
<tr>
<td>Any Other Mixed Background</td>
<td>7</td>
</tr>
<tr>
<td>Asian or Asian British</td>
<td></td>
</tr>
<tr>
<td>Indian</td>
<td>8</td>
</tr>
<tr>
<td>Pakistani</td>
<td>9</td>
</tr>
<tr>
<td>Bangladeshi</td>
<td>10</td>
</tr>
<tr>
<td>Any other Asian Background</td>
<td>11</td>
</tr>
<tr>
<td>Black or Black British</td>
<td></td>
</tr>
<tr>
<td>Caribbean</td>
<td>12</td>
</tr>
<tr>
<td>African</td>
<td>13</td>
</tr>
<tr>
<td>Any other Black background</td>
<td>14</td>
</tr>
<tr>
<td>Chinese or other ethnic group</td>
<td></td>
</tr>
<tr>
<td>Chinese</td>
<td>15</td>
</tr>
<tr>
<td>Any other</td>
<td>16</td>
</tr>
</tbody>
</table>

7. Highest level of formal education achieved (years):

8. Previous occupation:
9. Please give the date of the participant’s stroke:

10. Please state the type of stroke (as fully as possible):

11. Has the participant had a stroke before? 
   Yes
   No
   Not known

   If yes, please state date/s if known: ____________________________

12. Please describe the participant’s past mental health problems (as documented in the medical notes):

13. Please describe any past and/or current significant physical illnesses that the participant has (please specify past or current):
14. Please list the participant’s current medications (name/ purpose). If antidepressant please give date commenced:

15. Please give the participant’s (if known):

   Functional Independence Measure Score
   - physical
   - social and cognitive

   And/or

   Barthel Activities of Daily Living Index Score

16. Please give the participant’s (if known):

   Mini Mental State Examination Score

   And/or

   Abbreviated Mental Test Score

END

Thank you for completing this.
Appendix 8: Consideration of Ethical Issues and Ethical and Research and Development Approval Letters
Consideration of Ethical Issues

There were a number of ethical issues involved in recruiting older stroke survivors in an inpatient setting. In order to address potential ethical issues, the following procedures were involved:

1. Participants were initially asked by a member of nursing staff if they would mind being approached about a research study before a member of the research staff approached them. Participants were then given at least 24 hours following meeting with a member of the research team to consider participation in the study and were given further opportunities to ask questions before signing the consent form.

2. Interviews and the administration of screening measures took place in a quiet room with no-one else present except the interviewer or the person administering the screening measures to maintain privacy and confidentiality.

3. The participant’s medical notes were not accessed by anyone who did not have access to their notes through routine clinical practice.

4. The interviewer and assistant clinical psychologist asked the nurse in charge of the ward to introduce them to the participant. The time to meet with the participant was booked in advance (usually several days) and the participant was also asked whether it was convenient for them to participate in the study at the time.

5. The interviewer and assistant clinical psychologist made every effort to ensure that interviews or meetings were booked which fitted in with the participant’s therapy schedule and ward routine.

6. Participants results were inserted into the medical notes

7. Suicidal ideation was reported immediately following the interview or depression screening measures to the responsible medical officer.
8. Anonymity of participants was maintained by giving the participant identification number which linked their research data. The form linking participants and identification numbers was kept in a locked place at each hospital and kept separate from data collected.

9. Participants were asked if they would like a summary of results. These will be sent to those who requested one following the completion of the study. The results of the study will also be fed back to all the services involved.

10. At the end of the interview the participant was asked whether anything they had discussed was worrying them in order to identify if any distress was present as a result of participation in the research.
Validity and Reliability of the Brief Assessment Schedule for Depression Cards and the Beck Depression Inventory-Fast Screen in screening for post-stroke depression in older people

Thank you for your letter dated 31 May 2005 responding to the Committee's comments on the above study. Many thanks to you and to ... making yourselves available for the Committee meeting on 14 June 2005 when your study was considered.

Confirmation of ethical opinion

The Committee was, as you know, most impressed with your response. I am pleased to confirm a favourable ethical opinion for the research on the basis described in the application form, protocol and supporting documentation as revised.

The favourable opinion applies to the research sites listed on the attached form. Confirmation of approval for other sites listed in the application will be issued as soon as local assessors have confirmed that they have no objection.

Conditions of approval

The favourable opinion is given provided that you comply with the conditions set out in the attached document. You are advised to study the conditions carefully. As you will see, the document is a standard one and some sections of it will clearly not apply to your study.
Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

<table>
<thead>
<tr>
<th>Document</th>
<th>Version</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application, Version 2</td>
<td>4.1</td>
<td>31 May 2005</td>
</tr>
<tr>
<td>Your CV</td>
<td></td>
<td>Undated</td>
</tr>
<tr>
<td>Protocol</td>
<td>2</td>
<td>31 May 2005</td>
</tr>
<tr>
<td>Covering Letter</td>
<td></td>
<td>22 March 2005</td>
</tr>
<tr>
<td>Peer Review</td>
<td></td>
<td>Undated</td>
</tr>
<tr>
<td>Compensation Arrangements</td>
<td>University Letter</td>
<td>January 2005</td>
</tr>
<tr>
<td>Compensation Arrangements</td>
<td>Zurich Municipal</td>
<td>20 August 2004</td>
</tr>
<tr>
<td>Copy of Questionnaire</td>
<td>Hospital Anxiety and Depression Scale (Protocol Appendix 1)</td>
<td>22 March 2005</td>
</tr>
<tr>
<td>Copy of Questionnaire</td>
<td>Beck Depression Inventory-Fast Screen (Protocol Appendix 3)</td>
<td>22 March 2005</td>
</tr>
<tr>
<td>Participant Information Sheet</td>
<td>Version 2 (Protocol Appendix 5)</td>
<td>31 May 2005</td>
</tr>
<tr>
<td>Participant Consent Form</td>
<td>Version 2 (Protocol Appendix 6)</td>
<td>31 May 2005</td>
</tr>
<tr>
<td>Response to Request for Further Information</td>
<td></td>
<td>31 May 2005</td>
</tr>
<tr>
<td>Other</td>
<td>Demographic Information Sheet (Protocol Appendix 7)</td>
<td>22 March 2005</td>
</tr>
<tr>
<td>Other</td>
<td>Letter to Consultants (Protocol Appendix 4)</td>
<td>21 March 2005</td>
</tr>
<tr>
<td>Other</td>
<td>BASDEC Cards and Procedure (Protocol Appendix 2)</td>
<td>22 March 2005</td>
</tr>
<tr>
<td>Other</td>
<td>Supervisor CV</td>
<td>Undated</td>
</tr>
</tbody>
</table>

Membership of the Committee

The members of the Ethics Committee who were present at the meeting are listed on the attached sheet.

Management approval

The study should not commence at any NHS site until the local Principal Investigator has obtained final management approval from the R&D Department for the relevant NHS care organisation.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

Yours sincerely,

Co-ordinator

Copy to:
Dear Ms Healey

ID: Validity and reliability of the Brief Assessment Schedule for Depression Cards and the Beck Depression Inventory - Fast Screen in screening for post-stroke depression in older people.

Further to my letter of the 28th July 2005, the Chairman on behalf of the RAMC has considered your response to the issue/s raised by the committee’s initial review. The documents considered were as follows:

*NHS REC form parts A and B (signed and dated 31/05/05)
*NHS REC form part C (signed and dated 20/06/05)
*NHS R&D form (signed and dated 20/06/05)
*Protocol (version 2 31/05/05)
*Lay summary (version 2 dated 06/06/05)
*LREC SSA approval letter (signed and dated 06/07/05)
*C.V. for (signed and dated 20/06/05)
*C.V. for (signed and dated 20/06/05)
*C.V. for Anna Healey (signed and dated 29/05/05)
*C.V. for (signed and dated 20/06/05)
*University of Surrey indemnity policy (valid to 31/07/05)
*Letter from Anna Healey re: response to the RAMC’s request for clarification (signed and dated 22/08/05)
*Research agreement between and the University of Surrey (signed and dated 21/11/05)
*Letter from re: honorary contract valid 08/08/05 to 28/02/06 (signed and dated 08/08/05)
*Letter from re: honorary contract extension valid 29/02/06 to 30/09/06 (signed and dated 27/10/05)

I am pleased to inform you that this study has now been approved by 'Chairman's action', and so may proceed. This approval is valid in the following Organisations:

* NHS Trust

Your RAMC approval is valid providing you comply with the conditions set out below:
1. You commence your research within one year of the date of this letter. If you do not begin your work within this time, you will be required to resubmit your application to the committee.
2. You notify the RAMC by contacting me, should you deviate or make any changes to the study protocol.
3. You alert the RAMC by contacting me, if significant developments occur as the study progresses, whether in relation to the safety of individuals or to scientific direction.
4. You complete and return the standard annual self-report study monitoring form when requested to do so at the end of each financial year. Failure to do this will result in the suspension of RAMC approval.
5. You comply fully with the Department of Health Research Governance Framework, and in particular
that you ensure that you are aware of and fully discharge your responsibilities in respect to Data Protection, Health and Safety, financial probity, ethics and scientific quality. You should refer in particular to Sections 3.5 and 3.6 of the Research Governance Framework.

Please contact the Office if you wish this approval to be extended to cover other Organisations; such an extension will usually be agreed on the same day. We also have reciprocal arrangements for recognition of Research Governance approval with some other NHS Organisations; such an extension can usually be arranged within five working days.

Please note that if your work involves NHS Trust, this approval means that you now have your Research Passport.

Good luck with your work.

Yours sincerely

Research Governance Assistant
11th July 2005

Ms Anna Healey
Trainee Clinical Psychologist
Department of Psychology
University of Surrey
Guildford
GU2 7XH

Dear Ms Healey

Ref Validity and reliability of the Brief Assessment Schedule for Depression Cards and the Beck Depression Inventory-Fast Screen in screening for post-stroke depression in older people. NHS REC ref: 05/Q1909/26

gives approval for the above mentioned study to proceed at

being the principal investigator.

This approval is subject to the following conditions:-

• The project is conducted in accordance with the protocol, the conditions set by the Research Ethics Committee (REC), Good Clinical Practice and with the guidance and procedures contained in the Research Governance Framework (Second Edition, 2005).
• The participant’s medical records are updated to reflect salient details eg. the fact of their participation, interventions.
• The PCT is notified immediately of any serious adverse events.
• The PCT is notified of any changes to the protocol.
• The PCT receives a copy of monitoring and completion reports required by the REC

If you require further information or advice, please contact the RG office, or We wish you success with your project.

Yours sincerely,
Dear

Re: Validity and reliability of the Brief Assessment Schedule for Depression Cards and the Beck Depression Inventory-Fast Screen in screening for post-stroke depression in older people. (REC Ref: 05/Q1999/26)

Thank you for submitting your study for an R&D review. I am very pleased to inform you that Director R&D has approved your study on behalf of the R&D Committee. I hope the study goes well.

With kind regards,

Yours sincerely,

Assistant Director R&D

07th September 2005
20 July 2005

Ms Anna Healey
Department of Psychology
School of Human Sciences

Dear Ms Healey

Screening for depression after stroke in older people (EC/2005/69/Psyche) – FAST TRACK

On behalf of the Ethics Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the submitted protocol and supporting documentation.

Date of confirmation of ethical opinion: 20 July 2005

The list of documents reviewed and approved by the Committee under its Fast Track procedure is as follows:

- **Document Type**: Application
  - Dated: 05/07/05
  - Received: 12/07/05

- **Document Type**: Summary
  - Received: 12/07/05

- **Document Type**: Insurance Letters and Proforma
  - Received: 12/07/05

- **Document Type**: Approval Letter from the LREC
  - Dated: 22/06/05
  - Received: 12/07/05

- **Document Type**: Research Protocol
  - Dated: 31/05/05
  - Received: 12/07/05

- **Document Type**: Appendix 1 – Hospital Anxiety and Depression Scale
  - Received: 12/07/05

- **Document Type**: Appendix 2 – Assessment Schedule for Depression Cards Instructions
  - Received: 12/07/05
This opinion is given on the understanding that you will comply with the University's Ethical Guidelines for Teaching and Research, and with the condition set out below.

- That, when available, you forward to me the Protocol Cover Sheet, fully signed by all investigators, to be placed on the Committee's records.

The Committee should be notified of any amendments to the protocol, any adverse reactions suffered by research participants, and if the study is terminated earlier than expected, with reasons.

I would be grateful if you would confirm, in writing, your acceptance of the condition above.

You are asked to note that a further submission to the Ethics Committee will be required in the event that the study is not completed within five years of the above date.

Please inform me when the research has been completed.

Yours sincerely

Secretary, University Ethics Committee
Registry

cc:
Appendix 9: Sample Size Estimation
Sample Size Estimation

Two types of sample size estimation were conducted for the project. Firstly, a sample size was calculated for estimating sensitivity and specificity to a pre-specified precision. This sample size relates to investigating the depression rating scales in relation to the criterion measure, DSM-IV diagnosis of depression as assessed by the SCID. The method described in Zhou et al. (2003) was followed. Based on an estimated sensitivity value of .90 (based on previous findings for the BASDEC and BDI-FS for older and medically ill patients e.g. Loke et al., 1996 and Schienthal et al., 2001) and the width of the confidence interval being .1 each side (e.g. .8 – 1.0), 35 depressed people would be required. As discussed above, the prevalence rate of depression varies widely in studies, however based on a pooled estimate of 36 per cent for rehabilitation settings (Hackett et al., 2005), an approximate sample size of 100 people would be required.

Secondly, the other comparison of interest was the relation between total scores on the BASDEC and BDI-FS compared to total scores on the HADS-D. Using the G-power programme (Erdfelder et al., 1996) based on a large effect size of 0.5, a power of 0.80 and an alpha value of 0.01 and one-tailed significance, 33 participants would be required to detect a highly significant correlation. The data was analysed using non-parametric statistics which reduces power, therefore this sample size is only a very approximate estimation.

To summarise the minimum number of participants required would be approximately 33 with the maximum being 100 for good precision of sensitivity values.
Appendix 10: Full Descriptive Statistics for the Distribution of the Total Scores on the BASDEC, BDI-FS and HADS
Table: Full descriptive statistics for the distribution of the total scores on the BASDEC, BDI-FS and HADS for the total Sample

<table>
<thead>
<tr>
<th></th>
<th>Total score on BASDEC Time</th>
<th>Total depression score HADS Time 1</th>
<th>Total anxiety score HADS Time 1</th>
<th>Total score for BDI-FS Time 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>Valid</td>
<td>37</td>
<td>37</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mean</td>
<td></td>
<td>4.0270</td>
<td>5.6486</td>
<td>4.4324</td>
</tr>
<tr>
<td>Std. Error of Mean</td>
<td></td>
<td>.59019</td>
<td>.76447</td>
<td>.65593</td>
</tr>
<tr>
<td>Median</td>
<td></td>
<td>3.0000</td>
<td>5.0000</td>
<td>4.0000</td>
</tr>
<tr>
<td>Mode</td>
<td></td>
<td>2.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td></td>
<td>3.59001</td>
<td>4.65007</td>
<td>3.98985</td>
</tr>
<tr>
<td>Skewness</td>
<td></td>
<td>1.132</td>
<td>.636</td>
<td>1.085</td>
</tr>
<tr>
<td>Std. Error of Skewness</td>
<td></td>
<td>.388</td>
<td>.388</td>
<td>.388</td>
</tr>
<tr>
<td>Kurtosis</td>
<td></td>
<td>.371</td>
<td>-.708</td>
<td>.987</td>
</tr>
<tr>
<td>Std. Error of Kurtosis</td>
<td></td>
<td>.759</td>
<td>.759</td>
<td>.759</td>
</tr>
<tr>
<td>Range</td>
<td></td>
<td>14.00</td>
<td>16.00</td>
<td>16.00</td>
</tr>
<tr>
<td>Minimum</td>
<td></td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Maximum</td>
<td></td>
<td>14.00</td>
<td>16.00</td>
<td>16.00</td>
</tr>
<tr>
<td>Percentiles</td>
<td></td>
<td>25</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>3.0000</td>
<td>5.0000</td>
<td>4.0000</td>
</tr>
<tr>
<td></td>
<td>75</td>
<td>6.2500</td>
<td>9.5000</td>
<td>7.0000</td>
</tr>
</tbody>
</table>
Table: Full descriptive statistics for the distribution of the total scores on the BASDEC, BDI-FS and HADS for non-depressed and depressed participants

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Total score on BASDEC</th>
<th>Total depression score HADS</th>
<th>Total anxiety score HADS</th>
<th>Total score for BDI-FS</th>
</tr>
</thead>
<tbody>
<tr>
<td>not depressed</td>
<td>N Valid</td>
<td>28</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>2.5357</td>
<td>4.1786</td>
<td>3.0000</td>
</tr>
<tr>
<td></td>
<td>Std. Error of Mean</td>
<td>.38139</td>
<td>.75602</td>
<td>.48002</td>
</tr>
<tr>
<td></td>
<td>Median</td>
<td>2.0000</td>
<td>3.0000</td>
<td>2.5000</td>
</tr>
<tr>
<td></td>
<td>Mode</td>
<td>2.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>Std. Deviation</td>
<td>2.01811</td>
<td>4.00950</td>
<td>2.62457</td>
</tr>
<tr>
<td></td>
<td>Variance</td>
<td>4.073</td>
<td>16.004</td>
<td>6.889</td>
</tr>
<tr>
<td></td>
<td>Skewness</td>
<td>1.917</td>
<td>1.152</td>
<td>.569</td>
</tr>
<tr>
<td></td>
<td>Std. Error of Skewness</td>
<td>.441</td>
<td>.441</td>
<td>.441</td>
</tr>
<tr>
<td></td>
<td>Kurtosis</td>
<td>6.084</td>
<td>.371</td>
<td>-1.949</td>
</tr>
<tr>
<td></td>
<td>Std. Error of Kurtosis</td>
<td>.858</td>
<td>.858</td>
<td>.858</td>
</tr>
<tr>
<td></td>
<td>Range</td>
<td>10.00</td>
<td>14.00</td>
<td>8.00</td>
</tr>
<tr>
<td></td>
<td>Minimum</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>Maximum</td>
<td>10.00</td>
<td>14.00</td>
<td>8.00</td>
</tr>
<tr>
<td></td>
<td>Percentiles</td>
<td>25</td>
<td>1.2500</td>
<td>1.0000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50</td>
<td>2.0000</td>
<td>3.0000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>75</td>
<td>3.0000</td>
<td>6.7500</td>
</tr>
<tr>
<td>depressed</td>
<td>N Valid</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Missing</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>8.6667</td>
<td>10.2222</td>
<td>8.8889</td>
</tr>
<tr>
<td></td>
<td>Std. Error of Mean</td>
<td>1.16667</td>
<td>1.16402</td>
<td>1.44765</td>
</tr>
<tr>
<td></td>
<td>Median</td>
<td>9.0000</td>
<td>10.0000</td>
<td>8.0000</td>
</tr>
<tr>
<td></td>
<td>Mode</td>
<td>9.00</td>
<td>9.00</td>
<td>8.00</td>
</tr>
<tr>
<td></td>
<td>Std. Deviation</td>
<td>3.50000</td>
<td>3.49005</td>
<td>4.34294</td>
</tr>
<tr>
<td></td>
<td>Variance</td>
<td>12.2500</td>
<td>12.1894</td>
<td>18.861</td>
</tr>
<tr>
<td></td>
<td>Skewness</td>
<td>-1.082</td>
<td>.464</td>
<td>.309</td>
</tr>
<tr>
<td></td>
<td>Std. Error of Skewness</td>
<td>.717</td>
<td>.717</td>
<td>.717</td>
</tr>
<tr>
<td></td>
<td>Kurtosis</td>
<td>3.112</td>
<td>-0.83</td>
<td>-1.727</td>
</tr>
<tr>
<td></td>
<td>Std. Error of Kurtosis</td>
<td>1.400</td>
<td>1.400</td>
<td>1.400</td>
</tr>
<tr>
<td></td>
<td>Range</td>
<td>13.00</td>
<td>11.00</td>
<td>13.00</td>
</tr>
<tr>
<td></td>
<td>Minimum</td>
<td>1.00</td>
<td>5.00</td>
<td>3.00</td>
</tr>
<tr>
<td></td>
<td>Maximum</td>
<td>14.00</td>
<td>16.00</td>
<td>16.00</td>
</tr>
<tr>
<td></td>
<td>Percentiles</td>
<td>25</td>
<td>7.5000</td>
<td>8.0000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50</td>
<td>9.0000</td>
<td>10.0000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>75</td>
<td>10.5000</td>
<td>13.0000</td>
</tr>
</tbody>
</table>

a. Multiple modes exist. The smallest value is shown.
Appendix 11: Summary of Distributions of Individual Items on the BASDEC, BDI-FS and HADS for Non-depressed and Depressed participants
Table. Number and percentage of true responses for each individual item on the BASDEC for the non-depressed and depressed participants, grouped according to DSM-IV criteria.

<table>
<thead>
<tr>
<th>Item</th>
<th>No. of True Responses (percentage)</th>
<th>Non-Dep</th>
<th>Depressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I feel anxious all the time</td>
<td>5 (17.9%)</td>
<td>6 (67%)</td>
<td></td>
</tr>
<tr>
<td>2. I've felt very low lately</td>
<td>7 (25%)</td>
<td>7 (78%)</td>
<td></td>
</tr>
<tr>
<td>3. I feel worse at the beginning of the day</td>
<td>3 (10.7%)</td>
<td>4 (44.4%)</td>
<td></td>
</tr>
<tr>
<td>4. I feel life is hardly worth living</td>
<td>2 (7.1%)</td>
<td>1 (11.1%)</td>
<td></td>
</tr>
<tr>
<td>5. I've cried in the last month</td>
<td>14 (50%)</td>
<td>5 (55.5%)</td>
<td></td>
</tr>
<tr>
<td>6. I've given up hope</td>
<td>0 (0%)</td>
<td>1 (11.1%)</td>
<td></td>
</tr>
<tr>
<td>7. I've seriously considered suicide</td>
<td>1 (3.6%)</td>
<td>0 (0%)</td>
<td></td>
</tr>
<tr>
<td>8. I can't recall feeling happy in the last month</td>
<td>3 (10.7%)</td>
<td>4 (44.4%)</td>
<td></td>
</tr>
<tr>
<td>9. I'm so lonely</td>
<td>0 (0%)</td>
<td>3 (33.3%)</td>
<td></td>
</tr>
<tr>
<td>10. I've lost interest in things</td>
<td>1 (3.6%)</td>
<td>5 (56%)</td>
<td></td>
</tr>
<tr>
<td>11. I'm too miserable to enjoy anything</td>
<td>1 (3.6%)</td>
<td>2 (22%)</td>
<td></td>
</tr>
<tr>
<td>12. I have regrets about my past life</td>
<td>5 (17.9%)</td>
<td>2 (22.2%)</td>
<td></td>
</tr>
<tr>
<td>13. I am a nuisance to others being ill</td>
<td>7 (25%)</td>
<td>8 (89%)</td>
<td></td>
</tr>
<tr>
<td>14. I've been depressed for weeks at a time in the past</td>
<td>5 (17.9%)</td>
<td>3 (33.3%)</td>
<td></td>
</tr>
<tr>
<td>15. I suffer headaches</td>
<td>2 (7.1%)</td>
<td>5 (55%)</td>
<td></td>
</tr>
<tr>
<td>16. I seem to have lost my appetite</td>
<td>4 (14.3%)</td>
<td>5 (55%)</td>
<td></td>
</tr>
<tr>
<td>17. I'm not sleeping well</td>
<td>7 (25%)</td>
<td>6 (67%)</td>
<td></td>
</tr>
<tr>
<td>18. I'm kept awake by worry and unhappy thoughts</td>
<td>1 (3.6%)</td>
<td>5 (55.6%)</td>
<td></td>
</tr>
<tr>
<td>19. I'm not happy at all</td>
<td>0 (0%)</td>
<td>5 (55.6%)</td>
<td></td>
</tr>
</tbody>
</table>
Table. Distribution of scores for individual items on the BDI-FS for non-depressed and depressed participants, grouped according to DSM-IV criteria.

<table>
<thead>
<tr>
<th>Item</th>
<th>Non-Depressed</th>
<th></th>
<th></th>
<th>Depressed</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Median</td>
<td>Mode</td>
<td>Mean</td>
<td>Median</td>
<td>Mode</td>
<td>Mean</td>
</tr>
<tr>
<td>Sadness</td>
<td>0</td>
<td>0</td>
<td>.18</td>
<td>1</td>
<td>1</td>
<td>1.33</td>
</tr>
<tr>
<td>Future</td>
<td>0</td>
<td>0</td>
<td>.43</td>
<td>1</td>
<td>0 + 1</td>
<td>.78</td>
</tr>
<tr>
<td>Failure</td>
<td>0</td>
<td>0</td>
<td>.21</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Anhedonia</td>
<td>0</td>
<td>0</td>
<td>.43</td>
<td>2</td>
<td>2</td>
<td>1.56</td>
</tr>
<tr>
<td>Confidence</td>
<td>0</td>
<td>0</td>
<td>.11</td>
<td>1</td>
<td>0</td>
<td>.78</td>
</tr>
<tr>
<td>Self-blame</td>
<td>0</td>
<td>0</td>
<td>.29</td>
<td>1</td>
<td>0 + 3</td>
<td>1.44</td>
</tr>
<tr>
<td>Suicidal Ideation</td>
<td>0</td>
<td>0</td>
<td>.04</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
### HADS

**Table:** Distribution of scores for individual items on the HADS for non-depressed and depressed participants, grouped according to DSM-IV criteria.

<table>
<thead>
<tr>
<th>Item</th>
<th>Non-Depressed</th>
<th></th>
<th></th>
<th>Depressed</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Median</td>
<td>Mode</td>
<td>Mean</td>
<td>Median</td>
<td>Mode</td>
<td>Mean</td>
</tr>
<tr>
<td><strong>Depression Items</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I still enjoy the things I used to enjoy</td>
<td>0</td>
<td>0</td>
<td>.68</td>
<td>1</td>
<td>1</td>
<td>1.33</td>
</tr>
<tr>
<td>I can laugh and see the funny side of</td>
<td>0</td>
<td>0</td>
<td>.21</td>
<td>1</td>
<td>0</td>
<td>0.78</td>
</tr>
<tr>
<td>things</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel cheerful</td>
<td>0</td>
<td>0</td>
<td>.18</td>
<td>2</td>
<td>2</td>
<td>1.89</td>
</tr>
<tr>
<td>I feel as If I am slowed down</td>
<td>1</td>
<td>1</td>
<td>1.64</td>
<td>2</td>
<td>2</td>
<td>2.11</td>
</tr>
<tr>
<td>I have lost interest in my appearance</td>
<td>0</td>
<td>0</td>
<td>.46</td>
<td>1</td>
<td>1</td>
<td>1.22</td>
</tr>
<tr>
<td>I look forward with enjoyment to</td>
<td>0</td>
<td>0</td>
<td>.46</td>
<td>1</td>
<td>0</td>
<td>1.33</td>
</tr>
<tr>
<td>things</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can enjoy a good book or radio or TV</td>
<td>0</td>
<td>0</td>
<td>.61</td>
<td>1</td>
<td>1+3</td>
<td>1.56</td>
</tr>
<tr>
<td>programme</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Anxiety Items</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel tense or wound up</td>
<td>1</td>
<td>1</td>
<td>.54</td>
<td>1</td>
<td>1</td>
<td>1.56</td>
</tr>
<tr>
<td>I get a sort of frightened feeling as if</td>
<td>0</td>
<td>0</td>
<td>.54</td>
<td>1</td>
<td>1</td>
<td>1.33</td>
</tr>
<tr>
<td>something awful is about to happen</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worrying thoughts go through my mind</td>
<td>0</td>
<td>0</td>
<td>.36</td>
<td>1</td>
<td>0+1</td>
<td>0.78</td>
</tr>
<tr>
<td>I can sit at ease and feel relaxed</td>
<td>0</td>
<td>0</td>
<td>.5</td>
<td>2</td>
<td>2</td>
<td>1.78</td>
</tr>
<tr>
<td>I get a sort of frightened feeling like</td>
<td>0</td>
<td>0</td>
<td>.25</td>
<td>1</td>
<td>0+1</td>
<td>1.11</td>
</tr>
<tr>
<td>'butterflies' in the stomach</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel restless as if I have to be on the</td>
<td>0</td>
<td>0</td>
<td>.57</td>
<td>1</td>
<td>0+1</td>
<td>1.11</td>
</tr>
<tr>
<td>move</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I get sudden feelings of panic</td>
<td>0</td>
<td>0</td>
<td>.25</td>
<td>1</td>
<td>0</td>
<td>1.22</td>
</tr>
</tbody>
</table>
Appendix 12: Tables of Corrected Item-Total Correlations for Depression

Rating Scales
### Corrected Item-Total Correlations for the BASDEC

<table>
<thead>
<tr>
<th>Item</th>
<th>Scale Mean if Item Deleted</th>
<th>Scale Variance if Item Deleted</th>
<th>Corrected Item-Total Correlation</th>
<th>Cronbach's Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel anxious all the time Time 1 bas</td>
<td>3.7297</td>
<td>10.842</td>
<td>.600</td>
<td>.785</td>
</tr>
<tr>
<td>I've felt very low lately Time 1 bas</td>
<td>3.6486</td>
<td>10.873</td>
<td>.547</td>
<td>.789</td>
</tr>
<tr>
<td>I feel worse at the beginning of the day Time 1 bas</td>
<td>3.8378</td>
<td>11.473</td>
<td>.468</td>
<td>.795</td>
</tr>
<tr>
<td>I feel life is hardly worth living Time 1 bas</td>
<td>3.9459</td>
<td>12.358</td>
<td>.233</td>
<td>.807</td>
</tr>
<tr>
<td>I've cried in the last month Time 1 bas</td>
<td>3.5135</td>
<td>12.340</td>
<td>.082</td>
<td>.822</td>
</tr>
<tr>
<td>I've given up hope Time 1 bas</td>
<td>3.9730</td>
<td>11.888</td>
<td>.393</td>
<td>.800</td>
</tr>
<tr>
<td>I've seriously considered suicide Time 1 bas</td>
<td>3.9730</td>
<td>13.221</td>
<td>-.185</td>
<td>.826</td>
</tr>
<tr>
<td>I can't recall feeling happy in the last month Time 1 bas</td>
<td>3.8378</td>
<td>11.445</td>
<td>.478</td>
<td>.794</td>
</tr>
<tr>
<td>I'm so lonely Time 1 bas</td>
<td>3.9459</td>
<td>11.747</td>
<td>.561</td>
<td>.794</td>
</tr>
<tr>
<td>I've lost interest in things Time 1 bas</td>
<td>3.8649</td>
<td>11.037</td>
<td>.689</td>
<td>.783</td>
</tr>
<tr>
<td>I'm too miserable to enjoy anything Time 1 bas</td>
<td>3.9459</td>
<td>12.136</td>
<td>.350</td>
<td>.802</td>
</tr>
<tr>
<td>I have regrets about my past life Time 1 bas</td>
<td>3.8378</td>
<td>12.751</td>
<td>-.007</td>
<td>.821</td>
</tr>
<tr>
<td>I am a nuisance to others being ill Time 1 bas</td>
<td>3.5811</td>
<td>11.465</td>
<td>.364</td>
<td>.802</td>
</tr>
<tr>
<td>I've been depressed for weeks at a time in the past Time 1 bas</td>
<td>3.8108</td>
<td>12.047</td>
<td>.230</td>
<td>.809</td>
</tr>
<tr>
<td>I suffer headaches Time 1 bas</td>
<td>3.8378</td>
<td>11.195</td>
<td>.578</td>
<td>.788</td>
</tr>
<tr>
<td>I seem to have lost my appetite Time 1 bas</td>
<td>3.7838</td>
<td>11.119</td>
<td>.545</td>
<td>.790</td>
</tr>
<tr>
<td>I'm not sleeping well Time 1 bas</td>
<td>3.6622</td>
<td>11.404</td>
<td>.386</td>
<td>.800</td>
</tr>
<tr>
<td>I'm kept awake by worry and unhappy thoughts Time 1 bas</td>
<td>3.8649</td>
<td>11.037</td>
<td>.689</td>
<td>.783</td>
</tr>
<tr>
<td>I'm not happy at all Time 1 bas</td>
<td>3.8919</td>
<td>11.738</td>
<td>.434</td>
<td>.798</td>
</tr>
</tbody>
</table>
## Corrected Item-Total Correlations for the BDI-FS

<table>
<thead>
<tr>
<th>Score for Item</th>
<th>Scale Mean if Item Deleted</th>
<th>Scale Variance if Item Deleted</th>
<th>Corrected Item-Total Correlation</th>
<th>Squared Multiple Correlation</th>
<th>Cronbach's Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1 on BDI-FS Time 1</td>
<td>2.5278</td>
<td>8.999</td>
<td>.691</td>
<td>.704</td>
<td>.667</td>
</tr>
<tr>
<td>Item 2 on BDI-FS Time 1</td>
<td>2.5000</td>
<td>10.714</td>
<td>.451</td>
<td>.396</td>
<td>.727</td>
</tr>
<tr>
<td>Item 3 on BDI-FS Time 1</td>
<td>2.5833</td>
<td>10.536</td>
<td>.339</td>
<td>.330</td>
<td>.757</td>
</tr>
<tr>
<td>Item 4 on BDI-FS Time 1</td>
<td>2.2778</td>
<td>8.378</td>
<td>.697</td>
<td>.813</td>
<td>.661</td>
</tr>
<tr>
<td>Item 5 on BDI-FS Time 1</td>
<td>2.7222</td>
<td>10.892</td>
<td>.639</td>
<td>.552</td>
<td>.704</td>
</tr>
<tr>
<td>Item 6 on BDI-FS Time 1</td>
<td>2.4167</td>
<td>9.793</td>
<td>.430</td>
<td>.313</td>
<td>.737</td>
</tr>
<tr>
<td>Item 7 on BDI-FS Time 1</td>
<td>2.9722</td>
<td>13.513</td>
<td>.048</td>
<td>.509</td>
<td>.774</td>
</tr>
</tbody>
</table>

## Corrected Item-Total Correlations for the HADS-Depression Scale

<table>
<thead>
<tr>
<th>Item</th>
<th>Scale Mean if Item Deleted</th>
<th>Scale Variance if Item Deleted</th>
<th>Corrected Item-Total Correlation</th>
<th>Squared Multiple Correlation</th>
<th>Cronbach's Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>I still enjoy the things I used to enjoy Time 1 hads</td>
<td>4.8649</td>
<td>16.731</td>
<td>.591</td>
<td>.398</td>
<td>.806</td>
</tr>
<tr>
<td>I can laugh and see the funny side of things Time 1 hads</td>
<td>5.3514</td>
<td>18.901</td>
<td>.522</td>
<td>.346</td>
<td>.818</td>
</tr>
<tr>
<td>I feel cheerful Time 1 hads</td>
<td>5.1081</td>
<td>17.210</td>
<td>.548</td>
<td>.405</td>
<td>.813</td>
</tr>
<tr>
<td>I feel as if I am slowed down Time 1 hads</td>
<td>3.9459</td>
<td>17.830</td>
<td>.446</td>
<td>.260</td>
<td>.830</td>
</tr>
<tr>
<td>I have lost interest in my appearance Time 1 hads</td>
<td>5.0541</td>
<td>17.719</td>
<td>.614</td>
<td>.489</td>
<td>.804</td>
</tr>
<tr>
<td>I look forward with enjoyment to things Time 1 hads</td>
<td>5.0270</td>
<td>16.583</td>
<td>.647</td>
<td>.569</td>
<td>.797</td>
</tr>
<tr>
<td>I can enjoy a good book or radio or TV programme Time 1 hads</td>
<td>4.8649</td>
<td>14.842</td>
<td>.718</td>
<td>.566</td>
<td>.783</td>
</tr>
</tbody>
</table>
### Corrected Item-Total Correlations for the HADS-Anxiety Scale

<table>
<thead>
<tr>
<th>Item</th>
<th>Scale Mean if Item Deleted</th>
<th>Scale Variance if Item Deleted</th>
<th>Corrected Item-Total Correlation</th>
<th>Squared Multiple Correlation</th>
<th>Cronbach's Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel tense or wound up Time 1 hads</td>
<td>3.6486</td>
<td>11.901</td>
<td>.626</td>
<td>.625</td>
<td>.807</td>
</tr>
<tr>
<td>I get a sort of frightened feeling as if something awful is about to happen Time 1 hads</td>
<td>3.7027</td>
<td>11.104</td>
<td>.666</td>
<td>.627</td>
<td>.800</td>
</tr>
<tr>
<td>Worrying thoughts go through my mind Time 1 hads</td>
<td>3.9730</td>
<td>13.027</td>
<td>.527</td>
<td>.474</td>
<td>.823</td>
</tr>
<tr>
<td>I can sit at ease and feel relaxed Time 1 hads</td>
<td>3.6216</td>
<td>11.575</td>
<td>.632</td>
<td>.599</td>
<td>.806</td>
</tr>
<tr>
<td>I get a sort of frightened feeling like 'butterflies' in the stomach Time 1 hads</td>
<td>3.9730</td>
<td>11.805</td>
<td>.669</td>
<td>.635</td>
<td>.801</td>
</tr>
<tr>
<td>I feel restless as if I have to be on the move Time 1 hads</td>
<td>3.7297</td>
<td>12.925</td>
<td>.400</td>
<td>.292</td>
<td>.842</td>
</tr>
<tr>
<td>I get sudden feelings of panic Time 1 hads</td>
<td>3.9459</td>
<td>11.775</td>
<td>.599</td>
<td>.654</td>
<td>.811</td>
</tr>
</tbody>
</table>
Appendix 13: Calculations for Pre and Post-Screen Probabilities for Depression based on Likelihood Ratios
Calculations for Pre and Post-test Probabilities for the BASDEC, BDI-FS and HADS

Odds = probability/(1-probability)
Probability = odds/(1+odds)
Post-test odds = pre-test odds x LR
Post-test probability = post-test odds/(1+post-test odds)

BASDEC

Based on 33% pooled estimate by Hackett et al. (2005)

Positive Likelihood Ratio

Exact Value
Pre-test probability = 0.33
Pre-test odds = 0.33/(1-0.33) = 0.49
Post-test odds = 0.49 x 24.89 = 12.2
Post-test probability = 12.2/(1+12.2) = 0.92

Lower-bound confidence interval
Pre-test probability = 0.33
Pre-test odds = 0.33/(1-0.33) = 0.49
Post-test odds = 0.49 x 4.86 = 2.38
Post-test probability = 2.38/(1+2.38) = 0.70

Upper-bound confidence interval
Pre-test probability = 0.33
Pre-test odds = 0.33/(1-0.33) = 0.49
Post-test odds = 0.49 x 141.63 = 69.40
Post-test probability = 69.40/(1+69.40) = 0.99

Negative Likelihood Ratio

Exact Value
Pre-test probability = 0.33
Pre-test odds = 0.33/(1-0.33) = 0.49
Post-test odds = 0.49 x 0.12 = 0.06
Post-test probability = 0.06/(1+0.06) = 0.06

Lower-bound confidence interval
Pre-test probability = 0.33
Pre-test odds = 0.33/(1-0.33) = 0.49
Post-test odds = 0.49 x 0.02 = 0.009
Post-test probability = 0.009/(1+0.009) = 0.01

Upper-bound confidence interval
Pre-test probability = 0.33
Pre-test odds = 0.33/(1-0.33) = 0.49
Post-test odds = 0.49 x 0.45 = 0.22
Post-test probability = 0.22/(1+0.22) = 0.18

BDI-FS

Positive Likelihood Ratio

Exact Value
Pre-test probability = 0.33
Pre-test odds = 0.33/(1-0.33) = 0.49
Post-test odds = 0.49 x 3.73 = 1.83
Post-test probability = 1.83/(1+1.83) = 0.65

Lower-bound confidence interval
Pre-test probability = 0.33
Pre-test odds = 0.33/(1-0.33) = 0.49
Post-test odds = 0.49 x 1.47 = 0.72
Post-test probability = 0.72/(1+0.72) = 0.42

Upper-bound confidence interval
Pre-test probability = 0.33
Pre-test odds = 0.33/(1-0.33) = 0.49
Post-test odds = 0.49 x 9.18 = 4.5
Post-test probability = 4.5/(1+4.5) = 0.82

Negative Likelihood Ratio

Exact Value
Pre-test probability = 0.33
Pre-test odds = 0.33/(1-0.33) = 0.49
Post-test odds = 0.49 x 0.41 = 0.20
Post-test probability = 0.20/(1+0.20) = 0.17

Lower-bound confidence interval
Pre-test probability = 0.33
Pre-test odds = 0.33/(1-0.33) = 0.49
Post-test odds = 0.49 x 0.15 = 0.07
Post-test probability = 0.07/(1+0.07) = 0.07

Upper-bound confidence interval
Pre-test probability = 0.33
Pre-test odds = 0.33/(1-0.33) = 0.49
Post-test odds = 0.49 x 0.82 = 0.40
Post-test probability = 0.40/(1+0.40) = 0.29
HADS

Positive Likelihood Ratio

**Exact Value**
Pre-test probability = 0.33
Pre-test odds = 0.33/(1-0.33) = 0.49
Post-test odds = 0.49 x 3.63 = 1.78
Post-test probability = 1.78/(1+1.78) = 0.64

**Lower-bound confidence interval**
Pre-test probability = 0.33
Pre-test odds = 0.33/(1-0.33) = 0.49
Post-test odds = 0.49 x 1.62 = 0.79
Post-test probability = 0.79/(1+0.79) = 0.44

**Upper-bound confidence interval**
Pre-test probability = 0.33
Pre-test odds = 0.33/(1-0.33) = 0.49
Post-test odds = 0.49 x 8.02 = 3.93
Post-test probability = 3.93/(1+3.93) = 0.80

Negative Likelihood Ratio

**Exact Value**
Pre-test probability = 0.33
Pre-test odds = 0.33/(1-0.33) = 0.49
Post-test odds = 0.49 x 0.28 = 0.14
Post-test probability = 0.14/(1+0.14) = 0.12

**Lower-bound confidence interval**
Pre-test probability = 0.33
Pre-test odds = 0.33/(1-0.33) = 0.49
Post-test odds = 0.49 x 0.08 = 0.04
Post-test probability = 0.04/(1+0.04) = 0.04

**Upper-bound confidence interval**
Pre-test probability = 0.33
Pre-test odds = 0.33/(1-0.33) = 0.49
Post-test odds = 0.49 x 0.72 = 0.35
Post-test probability = 0.35/(1+0.35) = 0.26