The effect of manipulating responsibility on probabilistic reasoning and decision-making in obsessional thinking

By
Chris Gillmore

VOLUME I

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Department of Psychology
School of Human Sciences
University of Surrey

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VOLUME I
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Introduction to the Portfolio

This portfolio contains all of the work completed to meet the requirements of the PsychD in Clinical Psychology.

Volume I

This volume is comprised of: the academic dossier (which contains the four essays), the clinical dossier (which contains summaries of all placements completed during training, and summaries of the five case reports completed); and the research dossier (which contains the Service Related Research Project, the Qualitative Research Project, the Major Research Project and the Research Logbook).

Volume II

This volume contains the clinical dossier in full. This includes the five case reports and all relevant placement documentation (placement contracts, logbooks, evaluation forms and correspondence). Due to the confidential nature of this material, Volume II will be held in the Psychology Department at the University of Surrey.

The portfolio aims to reflect the array of academic, research and clinical skills gained during the training, and the work within each volume is presented chronologically in order to show the development of these skills.
Contents

Acknowledgements 1

Part 1: Academic Dossier 2

Adult Mental Health Essay 3
  Main text 4
  References 23
People with Learning Disabilities Essay 27
  Main text 28
  References 46
Children and Families Essay 52
  Main text 53
  References 73
Working with Older People Essay 78
  Main text 79
  References 97

Part 2: Clinical Dossier 102

Introduction to the Clinical Dossier 103
Summary of placement experience 104
Case report summaries 109

Part 3: Research Dossier 131

Introduction to the Research Dossier 132
Service Related Research Project 133
  Abstract 134
  Acknowledgements 136
  Introduction 137
  Method 140
  Results 147
  Discussion 151
  References 154
  Appendices 159
<table>
<thead>
<tr>
<th>Title</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualitative Research Project</td>
<td>199</td>
</tr>
<tr>
<td>Abstract</td>
<td>200</td>
</tr>
<tr>
<td>Introduction</td>
<td>201</td>
</tr>
<tr>
<td>Method</td>
<td>203</td>
</tr>
<tr>
<td>Results</td>
<td>206</td>
</tr>
<tr>
<td>Discussion</td>
<td>211</td>
</tr>
<tr>
<td>References</td>
<td>217</td>
</tr>
<tr>
<td>Appendices</td>
<td>219</td>
</tr>
<tr>
<td>Major Research Project</td>
<td>261</td>
</tr>
<tr>
<td>Abstract</td>
<td>262</td>
</tr>
<tr>
<td>Introduction</td>
<td>264</td>
</tr>
<tr>
<td>Method</td>
<td>292</td>
</tr>
<tr>
<td>Results</td>
<td>306</td>
</tr>
<tr>
<td>Discussion</td>
<td>328</td>
</tr>
<tr>
<td>References</td>
<td>346</td>
</tr>
<tr>
<td>Appendices</td>
<td>354</td>
</tr>
<tr>
<td>Research Logbook</td>
<td>380</td>
</tr>
</tbody>
</table>
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PART 1:

ACADEMIC DOSSIER
Critically discuss the evidence base that people with borderline personality disorder can be treated effectively by general adult mental health services. What implications might this have for the provision of services?

Adult Mental Health Coursework Essay

Word Count = 4943

January 2003

Year I
Introduction

The treatment of people with borderline personality disorder (BPD) has received a lot of interest from researchers and personality disorder in general has received recent attention from the media and government in the UK. According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) the essence of BPD is described as 'a pervasive pattern of instability of interpersonal relationships, self-image, and affects, and marked impulsivity that begins by early adulthood and is present in a variety of contexts' (p.650).

Evaluated treatments of BPD have primarily involved psychodynamic psychotherapy (Bateman and Fonagy, 1999), dialectical behaviour therapy (Linehan, 1991) and psychopharmacological interventions (Grossman, 2002). The issue of treatment effectiveness in BPD is very important as people with this disorder are considered to be high users of health service resources (Chiesa et al., 2002) and present clinically with behaviours that are often difficult to treat (Linehan, 1995).

Outline and objectives

In order to evaluate whether people with borderline personality disorder (BPD) can be treated effectively by general adult mental health services, a number of steps have been taken. Firstly, the focus here is predominantly on the effectiveness of psychological therapies for BPD (although reference is made to psychopharmacological interventions) and the discussion has been split into two sections.

The first section starts with a definition of general adult mental health (AMH) services and is followed by a discussion of what constitutes satisfactory evidence. After this, the main studies comprising the evidence-base are discussed, followed by
issues regarding the nature of the studies and problems surrounding the definition of BPD. The second section extends from the first, discussing the implications of this evidence-base for service provision, in terms of government policy, the development of services, cost-effectiveness and future research needs. The conclusion is that at present the evidence-base for the treatment of BPD by general AMH services is poor and this has a number of implications for service provision.

**Reviewing the evidence base for the treatment of borderline personality disorder**

*Defining general adult mental health services*

Within this discussion, general adult mental health services are taken to mean psychological or psychiatric services which are provided either as inpatient or outpatient services through a community mental health team. Therefore general AMH services would primarily be administered through community care, and this definition is consistent with descriptions in the literature (Chiesa et al., 2002; Bateman & Fonagy, 1999). In contrast, a therapeutic service such as The Cassel Hospital, in Richmond, UK (Chiesa et al., 1996) is an example of specialist tertiary services and hence are not part of the community care approach to treatment found in general AMH services.

*What constitutes evidence?*

Williams and Garner (2002) state that when making decisions about treatment efficacy, the type of evidence considered to be acceptable by the evidence-based medicine movement, are randomised controlled trials (RCT) or meta-analyses. Table 1 presents the different types of evidence, presented in a hierarchical format.
Table 1: Hierarchy of the power of evidence for treatments adapted from Sackett et al. (1997; cited in Tyrer, 2002).

<table>
<thead>
<tr>
<th>Level of evidence*</th>
<th>Description of the type of study</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Systematic review of a number of RCTs (data are combined)</td>
</tr>
<tr>
<td>2</td>
<td>Single RCTs</td>
</tr>
<tr>
<td>3</td>
<td>Quasi-randomised studies</td>
</tr>
<tr>
<td>4</td>
<td>Non-experimental descriptive studies</td>
</tr>
<tr>
<td>5</td>
<td>Expert opinion</td>
</tr>
</tbody>
</table>

*Where 1 = the best level of evidence

Wessely (2001) considers RCTs to be the best means of determining whether a treatment does more good than harm and a well-constructed RCT is considered to be a high level of evidence to support a treatment, as it is least likely to be contaminated by bias. Therefore the first section of this discussion will consider evidence from RCTs completed with people with borderline personality disorder.

Evidence from the APA guidelines

The logical starting point for a discussion of the evidence-base, would seem to be the recent set of practice guidelines for the treatment of BPD published by the American Psychiatric Association (APA, 2001). The APA guidelines systematically review the existing published literature reporting on treatment of BPD (up until December 1998). Using this literature review as their evidence-base, the authors
produce a number of recommendations to guide mental health professionals when
delivering clinical interventions for people with BPD (APA, 2001).

The first set of evidence they cite is on the efficacy of psychodynamic
psychotherapy. The main piece of evidence is the randomised controlled trial by
Bateman and Fonagy (1999), where patients with BPD were either treated in a partial
hospitalization program or by general psychiatric care (equivalent to general adult
mental health services). Bateman and Fonagy found that patients treated in the partial
hospitalization program showed significant improvement over the control group on
symptomatic and clinical measures. The APA guidelines also cite a follow-up to this
study, (Bateman & Fonagy, 2001) which showed that the partial hospitalization
program continued to improve on the measures at an 18-month follow-up, when
compared to the control group. Therefore this would suggest that treatment via
general adult mental health services, would not be the most efficacious means of
treating people with BPD.

Dialectical behaviour therapy (DBT; Linehan, 1993) was also reviewed in the
guidelines and they pay particular attention to the RCT by Linehan et al. (1991). This
study compared DBT with a control condition involving ‘treatment as usual’ in the
community. They found that the patients who received DBT had lower rates of
parasuicide, were more committed to individual therapy and needed less inpatient
admissions. However a follow-up of this study (Linehan et al., 1993; cited in the
APA guidelines, 2001) produced mixed results showing a regression on the rates of
parasuicide in the DBT group, but a maintenance of the lower rate of inpatient
admissions in comparison with the control group.

The APA guidelines conclude that DBT may be effective for BPD but
replication of the studies are needed. With respect to whether this treatment can be
provided effectively by general adult mental health services, it would appear that it can, as Linehan et al. (1991) provided the treatment on an outpatient basis for one year, which included weekly sessions of individual and group therapy.

In addition, the APA guidelines report on other studies of psychodynamic psychotherapy and DBT. However the samples in these studies were often small and contained methodological problems, for example, they were not randomised or had no control group (APA, 2001), hence their contribution to the evidence-base is diminished.

The APA guidelines state that pharmacological interventions can be effective for specifically targeted symptoms, for example, by using low doses of neuroleptic medication to manage global symptoms of BPD during acute periods. However, Grossman (2002) notes that in the USA there are no registered medications specifically for the treatment of BPD or its core features. Overall, evidence for their efficacy is limited (Tyrer, 2002).

The guidelines recommend that the primary treatment for BPD should be psychotherapy in conjunction with pharmacotherapy targeted at specific symptoms, which they endorse with ‘substantial clinical confidence’ (p.4) and this view is supported by Grossman (2002). However, Tyrer (2002) states that there are no controlled trials to support this assertion and at present there is no evidence to support the validity of this recommendation.

In addition to the studies reported by the APA guidelines, a literature review revealed a further randomised controlled study, by Turner (2000) which compared DBT with a client-centred therapy control condition. It found that the DBT group improved more than the control group on most of their measures of self-harm, suicide
attempts and the number of days in hospital. However, the study had a very small number of patients (n=24).

Evaluation of the evidence-base

Paris (2002a) and McGlashan (2002) believe that the APA guidelines have many positive aspects, such as their organisation and completeness. Unfortunately, the positive aspects seem to end there as the guidelines have received substantial criticism and appear controversial (Paris, 2002a; Sanderson et al., 2002; McGlashan, 2002; Tyrer, 2002).

The main criticism of the APA guidelines is that the recommendations they make for treatment are questionable, simply because there is a very limited evidence-base upon which these recommendations were made (Paris, 2002b). Tyrer (2002) stated that the authors of the guidelines have ‘combined a small degree of evidence with a large raft of expert opinion and gone a bridge too far’ (p.117). Conclusions by Paris (2002a) and McGlashan (2002) are similar, emphasising that caution must be taken when making decisions about treatment based on the evidence currently available. Sanderson et al. (2002) are more critical, stating that the guidelines are ‘seriously flawed’ (p.128) and that they contain errors and omissions. They raise the concern that clinicians may make treatment decisions that are ineffective or harmful if they follow these guidelines. Further to this, they suggest that the evidence is biased towards psychodynamic psychotherapy, where in fact they believe that there is greater evidence for the efficacy of DBT (Sanderson et al.).

In addition to the above criticisms, throughout the evidence cited in the guidelines and also in the RCT by Turner (2000) there are very small samples (Tyrer, 2002). This is problematic as it makes it difficult to generalise results from these
studies. Tyrer (2002) indicates that a RCT should preferably have 200 people per treatment condition. Clearly all of the studies available for the efficacy of treatments for BPD are well short of that standard.

However, despite these criticisms, psychodynamic psychotherapy and DBT have reported significant clinical benefits throughout the literature and there are a number of single case studies demonstrating clinical benefits (e.g. Ryle & Beard, 1993).

Evidence for treatment effectiveness within general AMH services

Overall, there is very limited evidence available from the RCTs, that BPD can be effectively treated in any context at present and it appears that the APA are extrapolating what they believe to be evidence of effective treatment too widely from the limited data available. Therefore, evidence that general AMH services can effectively treat BPD must also be limited. However, the studies of DBT suggest that it might lend itself to the treatment of BPD in general AMH services, more effectively than psychodynamic psychotherapy based on the evidence reviewed so far.

In addition, according to Sanderson et al., and Paris (2002), there is greater evidence for the efficacy of DBT than there is for psychodynamic psychotherapy and the one RCT study published since the APA guidelines adds a limited amount of support to that conclusion. Bateman and Fonagy (2000) point out though that the long-term outcomes from DBT to date have been disappointing.

It can be seen therefore that the evidence-base for treatment of BPD in general AMH services is very poor, involving small sample sizes and numerous methodological problems that make it difficult to determine exactly which
components of the treatments are producing the clinical benefits (Tyrer, 2002; APA, 2001).

**Replication of studies**

However, there are further problems with the evidence-base. According to Rustin (2001), after a discovery occurs in science, the credibility of this discovery is achieved through replication and the subsequent accumulation of data. This has not occurred here as there has not been an accumulation of studies demonstrating the effectiveness of treatments of BPD in either general AMH settings or specialist hospitals. Rustin says that replication may in theory be considered unnecessary if a study is sufficiently well designed, because the additional empirical information will add little to the evidence-base. However, there have been numerous methodological criticisms made of the existing evidence for BPD treatment, so this argument would not apply anyway.

This issue of replication appears to be particularly salient to the current studies, as Tyrer (2002) has observed that the majority of the research has been completed by a small number of researchers. The lack of replication by other research groups means that it is not possible to be certain that these findings will generalise if other clinicians complete the treatment programmes. In fact, Tyrer claims that the personalities and skill of the researchers (e.g. Marsha Linehan and Anthony Bateman) may possibly be important components in the success of the treatments, which is why replication is vital for generalization of the findings to be possible.

Finally, with regard to replication, Barker et al. (1994) state that randomisation is a chance process and will therefore produce unusual distributions sometimes.
Again, repetition of studies is necessary therefore to ensure that the clinical treatment is indeed effective.

_Efficacy versus effectiveness_

Therefore, the situation so far is that there is limited support at present in the evidence-base for the effective treatment of BPD by general AMH services, which is compounded by a lack of replication of these studies. However, it is important to note the difference between efficacy and effectiveness too, as Richardson (2001) states that efficacy relates to formal controlled trials, using a defined treatment on a specified sample of patients. Effectiveness on the other hand, is whether the treatments being tested are able to bring about the same clinical benefits with 'everyday patients and therapists' (p.163). Clearly these two concepts have important differences.

Randomised controlled trials of efficacy, according to Wessely (2001), are the best way to determine if a treatment does more harm than good, because the random assignment of patients across treatment conditions prevents the results from being confounded by 'prognosis and responsiveness to treatment' (p.52). Therefore it attempts to minimise the chance of factors that are outside of the manipulated variables in the RCT, from influencing the results. Considering the fact that there is an estimated suicide completion rate of about 8-10% in people with BPD and self-harm is a common symptom (APA, 2001), it is obviously important that the treatment does more good than harm.

Richardson comments that efficacy studies may lack generalizability as the patients may be atypical of everyday patients (due to inclusion or exclusion criteria for the study) and the manner in which therapy is delivered (e.g. increased monitoring or higher standards of therapeutic practice). Hence the findings in RCTs may have high
internal validity, but may not be generalizable to everyday therapeutic practice (Richardson, 2001).

Further to this, Richardson comments that RCTs often lack follow-up data which reduces their clinical relevance. With regard to psychodynamic psychotherapy and DBT, these criticisms are all relevant although some subsequent follow-up studies have been completed. In terms of the evidence-base therefore, the best studies currently available are RCTs and these are determining efficacy rather than effectiveness. Therefore this discrepancy poses another problem for the notion that BPD can be treated effectively by general AMH services.

Conflicting opinion about the definition of BPD

Interestingly, the criticisms about the APA guidelines and their conclusions on treatment efficacy presented earlier did not address the definition of BPD. Bell (2002) observed that there is a discrepancy over the conceptual model of BPD according to the DSM-IV, citing alternative models proposed by Ryle (1997) and Linehan (1993) but they have yet to be tested empirically.

The most commonly used criteria for BPD come from the DSM-IV (Linehan, 1993). However, the World Health Organisation (ICD-10) also provide a set of criteria for the ‘borderline type of emotionally unstable personality disorders’, but Bell (2002) comments that there is less empirical support for this definition and it is less widely used. Bell expresses dissatisfaction with DSM-IV and ICD-10, as the criteria are not based on a sound conceptualisation of the disorder, being vague, and lacking in logic and consistency.

An interesting observation by Grossman (2002) is that there are potentially 126 clinical presentations that are possible using the DSM-IV criteria, which
illustrates the lack of homogeneity within this diagnosis. In fact, Bell (2002) notes that two people with BPD may only share one of the nine criteria in common and be experiencing very different problems. Therefore within studies of BPD, it is possible that the patients may vary considerably despite falling neatly into DSM-IV criteria and clinicians may also under or over-diagnose depending on their experience (Bell, 2002). These factors will make it difficult to be certain about which symptoms of BPD are benefiting from the treatments and whether it will generalize to patients with other symptoms.

Also, Bell notes that there is a high degree of overlap between BPD and other personality disorder symptoms, to the extent that some people may be eligible for a number of personality disorder diagnoses. In addition, there is a high degree of co-morbidity with other disorders such as depression and this lack of specificity is so extensive that the entire validity of BPD as a coherent diagnosis has been questioned (APA, 2001; Bell, 2002).

Overall, this is a problem for research into BPD, as at its most fundamental level, researchers and clinicians cannot agree on a definition and there is a large variation in the ways that people with BPD present clinically. This brings into question the validity of a diagnosis of BPD and in turn the validity of studies using a definition that is not based on a sound conceptualisation (Bell, 2002). This suggests that the evidence-base for the treatment of BPD in general AMH services may not only be limited, it may also be deeply flawed.

Summary

It is easy to be solely critical about the evidence-base for effectively treating people with BPD in general AMH services. This discussion has identified that the
evidence-base is presently very limited, with a number of problems regarding generalization, methodology and issues of definition. However, there has been a lot of progress with the treatment of BPD and there are successful outcomes in case studies and uncontrolled studies that add weight to this. It is important not to dismiss these studies, but within a critical appraisal of the evidence base, their importance has to be put into perspective.

Therefore it is important to note that the evidence from case studies and clinical opinions represents the lower forms of evidence in treatment effectiveness (see Table 1). Considering that there is a serious risk of self-harm and suicide amongst people with BPD, it seems particularly important that substantial and methodologically sound randomised controlled trials are conducted to determine which treatments are the most effective. In summary, the evidence-base that people with BPD can be treated effectively by general AMH services is currently very limited.

**Implications for the provision of services**

**Government policy**

From the first section it has been shown that the evidence-base demonstrating that patients with BPD can be treated effectively in general AMH services is very limited. Regarding implications of this, Rustin (2001) states that professionals in the health services are now required to justify their work with empirical evidence. Therefore an obvious first implication is that mental health professionals will have difficulty justifying any choice of therapy for BPD, as the current state of the empirical data is ‘painfully limited’ (p.130, Paris, 2002). Therefore, it is questionable
whether service providers could justify providing psychodynamic psychotherapy or DBT for patients with BPD based on the presently available evidence.

This raises issues for the application of clinical governance (NHS Executive, 1998), which states that the provision of services should be consistent and use the most effective treatments. At present it is not possible to determine what the most effective treatment is, as the evidence is too limited and there has been minimal replication of studies.

Secondly, in terms of consistency of care, there have been a number of different treatments administered, some within general adult mental health services and some within specialist tertiary services. It is quite likely that treatment regimes for patients with BPD vary across the UK and not all NHS trusts may have access to specialist tertiary services. The implication of this, is that service providers, through the process of clinical governance, may be expected to contribute to the development and delivery of consistent and effective treatments.

Presently, service providers are not in a position to be able to decide on which treatment modality has the best evidence and whether it can be effectively administered through general AMH services. In the absence of this information it seems vital that further research is commissioned and service providers may need to contribute to this process (for example through setting up new services and evaluating them, or supporting their staff to participate in studies of treatment effectiveness conducted in their region). This research will probably involve complicated studies, necessitating co-ordinated efforts between university departments and NHS clinicians working together over a period of time.

It would seem sensible for the National Institute for Clinical Excellence to become involved in establishing what is the best treatment for patients with BPD.
However, they would be likely to encounter the same problem that the American Psychiatric Association (2001) have encountered with their practice guidelines, which is that the evidence-base for effectiveness remains very limited (Paris, 2002).

**Development of DBT within services**

The slightly larger quantity of evidence for DBT over psychodynamic psychotherapy (Sanderson et al., 2002; Paris, 2002) cautiously suggests that it may be a viable therapeutic technique for general AMH services, particularly as it is a manualised treatment and has been delivered in outpatient settings. However, this has a number of implications for service provision. Firstly, the treatment is one-year in length, may include several therapists, and involves several hours of therapeutic contact between the therapist and the client each week (during individual and group therapy, and via phone support; Linehan, 1995). Clearly this is quite time intensive compared to other psychotherapeutic techniques and will place increased pressure on the clinical psychologist’s time. Realistically it may be necessary for services to recruit additional staff if they wish to develop such a service, but this will increase costs and there is a widely recognised shortage of psychologists within the UK at present.

Secondly, clinical psychologists are probably the best qualified to deliver this therapy as it is an extension of cognitive-behaviour therapy (Linehan, 1993). However, at present trainee clinical psychologists may not receive any in-depth training in DBT as it would be difficult to include a complete treatment experience within their doctoral training. This means that at present training will need to be completed post-qualification and hence service providers will need to arrange and fund this experience. Additionally, the clinical psychologist trained in DBT will need
to access supervision from a more experienced practitioner, which may prove problematic.

Linehan (2000) mentions that there is a tendency to overprotect graduate psychology students in America from people with BPD which has led to a shortfall of training and experience amongst the people best equipped to research this area. Additionally she mentions that many psychologists may avoid working with this client group because of their own lack of training. It seems quite likely that the same situation is occurring amongst clinical psychologists and training courses within the UK. The implication of these points, is that it will be difficult to expand the provision of DBT without substantial investment in terms of time and money. Equally though, increasing the provision of analytic psychotherapy would also be likely to raise costs through the recruitment or re-training of staff, and the longer session time required to complete the therapy. However, in the long-term, these gains may be retrieved through savings on health care costs in other areas (Hall et al., 2001).

Cost-effectiveness

The findings from the evidence-base have important implications for cost-effectiveness. Chiesa et al. (2002) conducted a prospective study of health-care costs acquired by patients with BPD (3 groups) treated in a hospital-based program (one year specialist inpatient treatment), a step-down program (6 months specialist inpatient treatment followed by 18 months outpatient therapy) and a general psychiatric program (treatment as usual through the community mental health team). The results showed that both of the specialist inpatient treatments were more cost-effective than treatment managed under general psychiatric care. This finding is also partly supported by Bateman and Fonagy (1999) who suggest that partial
hospitalization (similar to the step-down program in structure) may be a cheaper method of treatment than specialist inpatient tertiary care and general psychiatric care.

There are several methodological problems however with the study by Chiesa et al. For example, it is a small sample, there is no random allocation to conditions, the samples were treated in diverse geographical areas and their main measure of health care use did not present any data on its reliability and validity (Chiesa et al., 2002). Therefore their findings may not be an accurate reflection of the health care usage of people with BPD.

Despite these problems, this study raises an important implication, because it suggests that treating people with BPD using either DBT or psychodynamic psychotherapy through general adult mental health services is likely to result in a higher utilization of health resources, costing more money. Therefore, there may be pressure from service providers to develop treatments that involve hospitalization as a way of cutting costs. Considering that the evidence base is broadly equivocal at present regarding treatments in general AMH services and specialist hospitals, currently service providers may be inclined to choose the latter option to treat people with BPD. However, this would appear to be contrary to the government’s decision to base treatment in the community wherever possible and avoid placing people in long-stay institutions.

Areas missing from the evidence base

An issue which appears conspicuously absent from the literature reviewed here is that of service-user involvement in the choice and development of services, which the Department of Health emphasise in ‘Shifting the Balance of Power’ (2002). This has implications for the provision of services, as the literature seems to focus
exclusively on the evidence base for the various therapies. However, patient preference may be at odds with the evidence base. In time, services may need to include service-user opinions and preferences for treatment, regardless of the view from the empirical evidence.

Also, ethnicity and cultural issues are not explored in the studies of treatment effectiveness, which limits their applicability further. These issues would appear to be important considering that difficulties with interpersonal relationships and self-image are central features of BPD. However, no evidence has been identified from the literature that indicates that psychodynamic psychotherapy or DBT for people with BPD are effective across different cultures, yet the disorder appears to be ubiquitous (APA, 2001).

Difficulties acquiring resources

Pilgrim (2002) states that most general psychiatrists avoid patients with personality disorder and may in fact use the diagnosis as a reason for refusing a service to some people. The conclusions here regarding the state of evidence indicates that this occurrence is hardly likely to change in the near future. Considering that the psychiatric profession as a whole is generally considered to be very influential within services, it may prove difficult to acquire resources for the development and expansion of treatment for BPD (Chiesa et al., 2002), without evidence to support it. In addition, Ryle and Beard (1993) note that some people with BPD have been considered to be untreatable. Therefore an evidence-base revealing that this client group can be effectively treated, might suddenly increase the demand for services from these patients.
Further research

For service provision to effectively treat patients with BPD, then research is urgently needed in a number of areas. For example, clarification of the conceptual model is clearly important, particularly when considering Ryle’s (1997) argument that an understanding of the multiple self-states model in BPD is necessary to prevent collusion and reinforcement of behaviours that can occur through supportive therapy and may render the therapy ineffective or potentially harmful. Therefore, it is possible that current practices to support people with BPD are actually contributing to the problem. However, without an investigation of the cognitive analytic therapy model proposed by Ryle (1997), it will not be possible to determine this. It seems clear that for service providers to make sound judgements about how their services can provide effective treatment, then further research is urgently needed.

Conclusion

The current evidence-base has been reviewed and found a limited number of studies that meet the highest standards of evidence required to demonstrate treatment effectiveness, specifically RCTs (according to Wessely, 2001; Tyrer, 2002). These studies have been shown to have methodological problems which confound interpretation of the results and there has been no satisfactory replication of the studies, hence further research is essential (Tyrer, 2002; McGlashan, 2002). In addition, the RCTs investigated the efficacy of the treatments and it has been seen that this is not the same thing as effectiveness. Finally, a number of problems regarding the definition and conceptualisation of BPD were identified, indicating that the whole evidence-base may be built on an unstable and possible inaccurate foundation.
Therefore, within general AMH services, there is insufficient satisfactory evidence to indicate that BPD can be effectively treated in this domain. It should be noted however that the evidence for treating BPD in specialist services is no better either. If anything, the data is slightly more robust for outpatient DBT treatments (which could be administered in a general AMH setting; Sanderson et al., 2002), than it is for partial hospitalization programmes involving specialist services.

Investigating the implications of this for service provision reveals that providers may find it difficult to justify treatments for BPD, which is a requirement of clinical governance. Further to this, it is not clear whether the treatment of people with BPD should best be delivered in specialist services or in general AMH services, raising dilemmas over the planning and delivery of care. It also seems apparent that development of psychotherapy services within general AMH services may have substantial resource issues, as there is some evidence that it is more costly to treat patients in this domain.

To conclude, at present the evidence base that people with borderline personality disorder can be treated effectively by general adult mental health services is poor, and this has implications for the provision of services with regard to cost-effectiveness, clinical governance, service development and the use of resources.
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Describe and discuss some of the issues involved in assessing consent in people with learning disabilities

People with Learning Disabilities Coursework Essay

Word Count = 4957

August 2003

Year I
Introduction

Informed consent has been defined as “the opportunity to give personal permission for a procedure, activity or programme that affects one’s life” (Harris, 2003, p.4). Therefore when someone gives consent, they are making a decision to allow something to happen that influences their life, and for this decision to comprise meaningful consent, it must have been informed, voluntary and competent (Wong et al., 1999; Rosenfeld, 1998). Thus, informed consent relates fundamentally to the concept of self-determination, where a person has control over their life and destiny (Wehmeyer and Bolding, 2001), and in England no one is able to give consent on behalf of another capable adult (Turner et al., 1999).

Informed consent is an important issue for people with learning disabilities, because by definition they have impaired intellectual functioning, which may therefore affect their ability to give informed consent or make decisions (Murphy and Clare, 2003). Petrila (2003) describes informed consent as a central legal and ethical principle in health care and it may also be a legal requirement, with the acquisition of it being good practice for a clinician (Department of Health, 2001a), if not explicitly required by a profession.

For example, the code of conduct for clinical psychologists requires that any investigation or intervention should usually only be administered with the valid consent of the individuals involved (British Psychological Society, 2000). They also emphasise that psychologists should be aware of and maintain the rights of people whose capacity might be reduced (e.g. people with a learning disability or the elderly).

Further to these requirements for consent, social and government policies such as normalisation (Nirje, 1980), the five accomplishments (O’Brien, 1987) and the Department of Health (DoH, 2001b) white paper ‘Valuing People’ have emphasised
People with Learning Disabilities Coursework Essay

the importance of increasing choice as a basic human right in the lives of people with learning disabilities.

As described above, informed consent is an important concept, but due to the complexity of this area, this discussion has focused on treatment and explores some of the issues involved in assessing consent to treatment in adults with learning disabilities. As the discussion unfolds, it will become apparent that there are a variety of issues relevant to the assessment of consent and Arscott (1997, p.17) has observed that "establishing the capacity of individuals to give their consent for treatment has not proved easy, crossing the boundaries of psychology, ethics, law and medicine".

The discussion starts with when consent should be assessed and goes on to explore who lacks capacity, what capacity comprises and how it can be assessed. Following this, various issues are explored relating to cognitive abilities, concomitant issues, social and environmental factors, matters of diversity and difference and existing assessment tools. The discussion concludes that the assessment of consent is complex, requiring the assessor to complete a broad, detailed and individual investigation of capacity to consent.

Why is this issue important?

Treece et al. (1999) state that having the autonomy to make choices based on your preferences and values is an important factor in achieving satisfaction with life. Worthington (2002) follows this by identifying that the main reason for obtaining informed consent is to maintain and strengthen the concept of patient autonomy. Despite this, the Department for Constitutional Affairs (2003a) state that many people considered to lack capacity, are incorrectly deemed unable to make any decisions, hence they may be disempowered and excluded from expressing their choices.
Although the concept of informed consent has gained increased awareness, Turner et al. (1999) observed widespread misunderstanding about the law regarding consent to treatment amongst clinicians. Murphy and Clare (1995) identified that clinicians are increasingly being asked to assess consent, therefore the first issue is that it is important for clinicians to be aware of the laws and barriers relevant to consent and know the circumstances under which treatment can continue in the absence of informed consent (e.g. acting under ‘best interests’, Department for Constitutional Affairs, 2003b).

*When does consent need to be assessed?*

In the new Draft Mental Incapacity Bill, “a person must be assumed to have capacity unless it is established that he lacks capacity” and any steps which may help a person to make a decision should be taken (Department for Constitutional Affairs, 2003b, p.2; 2003a). In addition, it should never be assumed that because a person has a learning disability they are not capable of giving consent (Department of Health, 2001c).

Gelsthorpe (1998) states that being without capacity to make a decision, means that there is a disability or disorder of the mind or brain that results in a temporary or permanent impairment in mental functioning. As mentioned above, people with learning disabilities by definition have an intellectual impairment, hence they may lack the capability to give consent.

The Division of Clinical Psychology recommend that informed consent should be gained before starting any assessment or intervention and again acquired prior to any new steps in a programme or before a change of focus. Therefore, consent is a continuing process and should not be considered a single event in someone’s
People with Learning Disabilities Coursework Essay

treatment (Department of Health, 2001a; Murphy and Clare, 2003). Therefore, the clinician working with a person with a learning disability needs to decide whether an assessment of the individual's ability to give informed consent needs to be undertaken. As there is a continued need for informed consent, it may be in both party's interests to establish the particular needs of the individual they are working with from the outset, so that the client can be supported to give informed consent at each new step.

Approaches to assessing capacity

So far it has been established that people with learning disabilities may be at increased risk of difficulties in consenting and that consent should be an ongoing process. From the literature there are three main assessment approaches (the diagnostic or status approach, the outcome approach, and the functional approach), each of which have implications for the clinician (Wong et al., 1999).

Diagnostic or status approach

Using this approach, assessing capacity to consent is achieved by seeing whether the person belongs to a specific population. Therefore, decision-making ability is evaluated in relation to a characteristic such as a psychiatric diagnosis or a person's age (Wong et al., 1999). This approach has been widely criticised however, as it assumes that populations are homogenous and the demands of different decisions are equivalent (Wong et al., 1999). Also there is no empirical support and it has not been used in case law (Murphy & Clare, 1995). Rosenfeld (1998) notes that health professionals are unlikely to overlook the possibility of impaired decision-making in their clients who have learning disabilities. Therefore, it is better to assess the
conditions necessary to produce consent than to make a generalisation from a person’s diagnosis (Van Staden and Krüger, 2003). Also, Curran and Hollins (1994) state that simply having a learning disability does not mean a person is incapable of decision-making. One use of this approach though could be to alert a health professional to the need for a full assessment of capacity to consent (Murphy and Clare, 1997).

**Outcome approach**

In contrast, this approach assesses decision-making competence by examining the importance of the treatment to the person’s health and well-being. If the treatment is declined, the clinician will make a judgement as to how reasonable they feel this decision is by relating it to the consequences of not having the treatment (Arscott, 1997). Therefore it is the consequence of the decision-making process that is used to determine whether someone has the capacity to consent (Wong *et al.*, 1999). This approach has proved controversial as it has not been used in case law and it may contravene the Human Rights Act 1998 (Murphy and Clare, 1997; 2003). Further to this, Rosenfeld (1998) suggests that a person’s decision-making is only likely to be questioned when they refuse a treatment and Arscott (1997) believes that a person may be deemed unable to consent because they disagree with the clinician’s view, which undermines their rights.

**Functional approach**

Whilst the previous methods have been criticised, the functional approach is increasingly being considered the most appropriate and empowering means of assessing consent (Murphy & Clare, 1997). This method considers capacity to consent in terms of the person’s ability to understand and evaluate the relevant
information, and make a voluntary choice (Murphy & Clare, 1997). This approach is flexible, accepting that a person may be able to make a decision in one context but not another and allows a person with capacity to make what might be considered an unusual decision, which contrasts with the outcome approach (Murphy & Clare, 1997).

The specific requirements of the functional approach have been debated by various authors, but Murphy and Clare (2003) state that agreement is emerging about the abilities that are necessary to be capable of consenting. These comprise the abilities to: communicate a choice; understand relevant material, retain this information; comprehend the significance of this material; and be able to rationally use it to make a decision. People who are unable to complete this process would not be deemed capable of consenting (Department of Health, 2001c) and this is consistent with government policy (DoH, 2001c; Department for Constitutional Affairs, 2003).

Exploring these criteria further, Wong et al. (1999) note that the ability to communicate is not a sufficient determinant of capacity to consent, yet it is an important part of the process. The Department of Health (2001a) also observe that a clinician may need to be amenable to non-verbal communication, such as an arm being offered to accept a blood test. With respect to understanding information relevant to the treatment, Wong et al. state that consent to treatment only requires a broad understanding of the material and without this information it is doubtful as to whether a person can give informed consent (Arscott, 2000).

The standard of being able to retain relevant information is considered controversial as there is no clarification of how long it should be retained for, or the form in which it should be recalled (Wong et al., 1999). The ability to rationally manipulate information is also controversial, as a rational decision may be deemed to
be that which coincides with the view of the professional (Gelsthorpe, 1995). This may therefore be a covert form of the outcome approach and therefore a rational decision should be considered as a thought process stemming from the individual’s belief systems, however irrational it may appear (Wong et al., 1999).

The final criterion also has problems, as it requires the person to be aware that they have some form of disorder or illness (Wong et al.). This may be particularly problematic if the person has a psychiatric disorder, which can affect the person’s insight (Van Staden & Krüger, 2003; Murphy & Clare, 1997).

Although Murphy and Clare (2003) state that there is emerging agreement, this review of the literature has found variation in the number of components in the functional approach, ranging from three (Department of Health, 2001a; 2001c), four (Arscott, 1997; Department for Constitutional Affairs, 2003), five (Murphy and Clare, 2003; Wong et al., 1999) and seven (Harris, 2003). However, the content within these criteria are broadly similar, with some researchers appearing to separate some of the components to create a more explicit description of the choice-making abilities required. Harris (2003) reports a problem with these criteria though, as they do not reflect the way ordinary decisions are made. In addition, the functional approach does not accommodate other social and environmental factors that may be influential as it focuses on cognitive capacity (Harris). Finally, this approach means that capacity to consent will need to be re-assessed for different contexts as capacity can vary (Murphy & Clare, 1997) and Wong et al. (1999) report that it can be time-consuming, standards may differ across legal boundaries and the threshold of capacity has not been elucidated.

In summary, the functional approach is the preferred means of assessing capacity to consent in people with learning disabilities, as it reflects the interaction
People with Learning Disabilities Coursework Essay

between a person's abilities and the particular consent context (Murphy & Clare, 2003). It still presents problems though, as each of these issues will need to be carefully reviewed when an assessment of consent is being carried out which means that the assessor has a lot to consider. The main difficulty however, is where the threshold for consent is set and this is the focus of the next section.

Establishing a threshold

The issue of establishing the threshold between being able or unable to consent is considered crucial (Wong et al., 1999). It is important because at present research has not managed to determine the standards needed to be able to consent to treatment (Arscott, 1997). The implications of setting too high a standard are serious, as the person may be deemed unable to consent when under less demanding standards they could (Morris et al., 1993). Conversely, Morris et al. note that whilst setting lower standards for capacity may increase self-determination, it may put the person at risk by allowing them to make a decision they are not ready for. Therefore setting an appropriate threshold is important to protect people's autonomy and to guard against inappropriate decisions from a person who does not have the capacity to consent (Rosenfeld, 1998).

As described above, the threshold is likely to vary across people and across consent contexts, but people with learning disabilities should not be judged against more rigorous criteria than the general population (Arscott, 2000). Wong et al. believe that it is a major challenge to identify a threshold that is neither too high (reducing autonomy) nor too low (making people vulnerable). Therefore, as Rosenfeld (1998) states, it may fall to the clinician to decide whether a person has capacity following an assessment, therefore they need to carefully consider all the
factors to reach a balanced decision on whether the individual can consent. It appears that the functional approach should be adopted to assess consent, but people with learning disabilities may have individual characteristics that affect ability to consent and these will now be explored.

**Issues related to cognitive factors**

Wong *et al*. (1999) believe that capacity is fundamentally important in the process of consent to treatment, but as mentioned earlier, people with learning disabilities have an impairment in their intellectual functioning (Murphy and Clare, 2003). However, intellectual ability has not been found to be useful at predicting whether a person with a learning disability has the capacity to consent even when using well developed tools (Murphy & Clare, 1995; 2003). Despite this, Murphy & Clare (2003) believe that general information from an intellectual assessment may provide a useful starting point for exploring more specific abilities such as memory, communication and problem-solving.

In particular, Arscott *et al*. (1999) identified that research has found that people with learning disabilities may have deficits in their verbal, memory and problem-solving abilities, along with difficulties abstracting from examples and processing complex information. The effects of this were recorded by Morris *et al*. (1993), who found that deficits in memory, comprehension and reasoning made it more difficult for the person to produce a rational decision. Finally, it is worth noting that many people with learning disabilities receive prescribed medication, some of which can have an impact on cognitive functioning (Kon, 1995).
Concomitant factors

As well as the issues discussed above, people with learning disabilities may also have concomitant problems that can impair decision-making, such as dementia, schizophrenia or depression (Murphy & Clare, 1997). The effect of such a problem is described by Van Staden and Krüger (2003), as mental health problems (e.g. psychosis) can erode a person's insight into their illness, hence they may decline a treatment because they do not understand the need for it. In this case, they assert that the patient's decision cannot be considered informed consent. Certain transient factors such as disorientation or tiredness may also impair the ability to consent (Chahal and Morris, 2000a) and simply 'feeling lousy' may make a decision about consent more demanding (O’Neill, 2003).

Finally, Murphy and Clare (2003) suggest that shame, guilt and low self-esteem may affect a person's ability to make decisions and these feelings may be connected to social disadvantages such as poverty, limited employment, isolation or abuse. Some of these social factors will be discussed in more detail next, but it seems clear that the clinician's investigation of capacity to consent must be broad enough to cover concomitant problems otherwise the assessment may be invalid.

Social, emotional and environmental factors

Acquiescence

Acquiescence is a phenomenon which is common amongst people with learning disabilities (Murphy & Clare, 1997) and refers to the person being likely to respond 'yes' to a 'yes/no' question (Arscott, 1997). Murphy and Clare state that acquiescence is likely to occur because the person hasn't understood the question asked, they have been misled (suggestibility), or they comply because they are
intimidated by the situation. It may also occur because the person has a desire to please the interviewer (social desirability), however, complicated sentence structures, difficult or ambiguous questions, or the absence of an opinion in the person may also lead to acquiescence (Finlay & Lyons, 2002).

This is clearly an important issue because the occurrence of acquiescence when discussing consent to treatment may invalidate any decisions that are reached. Therefore, if acquiescence occurs whilst the person does not comprehend the nature of the treatment, it does not represent consent (DoH, 2001a).

The influence of environmental factors

The role of the environment is also important for the person with a learning disability, as they may have few opportunities to make choices and exercise autonomy (Hillery et al., 1998). Although Jenkinson (1999) notes that living in the community has provided more opportunity for making choices, Wehmeyer and Bolding (2002) found that living in group homes (which is common within this client group) may limit the opportunities to exercise choice, and the chances they do have are likely to be less than the general population (Stalker & Harris, 1998). Therefore the composition of the service may inhibit choice-making more than the abilities of the individual (Stalker & Harris).

The importance of this is explained by Curran and Hollins (1994), as a person who has had scant opportunities to make choices in their life is likely to find it extremely challenging to make a significant decision about their health. They believe that a person needs to practice and learn from their own mistakes to become proficient at choice-making.
Further to this, Stalker and Harris discuss the notion of learned helplessness in relation to making choices. Essentially learned helplessness is where a person fails to perceive a relationship between their actions and the events that happen to them, which may lead to the development of beliefs that they cannot influence the outcomes of situations, leading the person to become passive and unwilling to express choices (Harris, 2003).

This has been studied by Jenkinson (1999), who separated young people with learning disabilities in to low and high learned helplessness using a self-report measure. She found that people with lower learned helplessness achieved significantly higher decision-making scores, supporting the idea that a lack of autonomy can reduce decision-making ability. However, the method of dividing people into high/low learned helplessness was based on a median split and the mean score of the high group was actually in the middle of the possible range on this measure, so it may be that this group were not really high in learned helplessness. As the groups were significantly different the results might be a conservative estimation of the impairment in decision-making.

Jenkinson concluded from this that capacity to make a decision involves more than simply understanding the information, alternatives and risks. In addition, she believes that a person with these experiences will need support and practice before being able to make a decision to consent to a treatment. The implication for the clinician is that they will need to consider the nature of the environment the person lives in and if this appears to be suppressing their ability to make choices, then they may need to organise opportunities for the person to practice before they can complete an assessment of ability to consent (Jenkinson, 1999).
Influences from professionals, carers or services

The Department of Health (2001c) and the Division of Clinical Psychology (1995) advise that the clinician should be aware of the possible power imbalance between the client and the staff working with them. The attitude, views and beliefs of the assessor may affect the assessment, hence clinicians need to be aware of this and make use of a structured approach to minimise any chance of bias (DoH, 2001c; Wong et al., 1999). Curran and Hollins (1994) identity that carers or staff may overrule the choice of the person with a learning disability, believing that the decision may be outside of their capabilities. Also, Arscott (1997) stated that a lack of opportunities to practice choice-making may make the person feel unable to refuse the advice of a person they feel to be in a more powerful position. As indicated above, clearly these issues need to be accounted for by clinicians when assessing consent.

Issues of diversity and difference

Although this area does not appear to have been explicitly addressed in the literature, issues relating to diversity and difference are becoming increasingly important in the NHS and published literature. Nadirshaw (1997) describes a 'colour-blind' approach to provision where everyone receives the same service. This means that people with learning disabilities from more diverse backgrounds may not be accounted for. In addition, Nadirshaw notes that there may be language barriers (for example when communicating with an Asian client) and they may also have experienced deprived and isolated social environments, the effects of which have already been discussed. It is important that clinicians respect fully informed decisions which are made according to particular religious beliefs or values, even if they appear to be irrational (DoH, 2001a). However, the clinician does need to keep an open mind
with respect to the latter statement, as Muramoto (1998) suggested that some religions may exert substantial pressure on people to conform to their beliefs (e.g. Jehovah's Witnesses and blood refusal) which may invalidate the voluntary requirement of informed consent.

**Measures of consent**

So far, issues to do with the approach to assessment, individual and environmental factors have been identified in the assessment of consent. The discussion will now turn to the published measures that clinicians can use to assess consent. Arscott (1997) observed that the existing tests of capacity to consent have adopted the functional approach to assessment and she noted that although there are a number of published tests, only one has been specifically adapted for people with learning disabilities (and this was developed for research purposes). However, Arscott was talking specifically about treatment and there are other tests of consent, for example, the Consent Screening Interview for community residential placements (Lindsey & Luckasson, 1991).

The measure Arscott describes is the Ability to Consent Questionnaire (ACQ: Morris *et al.*, 1993) which uses the three criteria of consent being voluntary, informed and competent as the basis of the measure. The measure incorporated three vignettes (a restrictive behavioural intervention, psychotropic medication and surgery) which included a description of the underlying problem, the proposed treatment, the possible alternatives and the risks and benefits. The vignettes were read to three groups of 15 participants (people without learning disabilities; people with a mild learning disability; and people with a moderate learning disability). Following this, five questions were used to probe the understanding of each participant and their responses
were rated to determine whether the person had the capability to consent or not. The
results showed that the people without learning disabilities were all deemed capable of
consenting, but only one person with a moderate learning disability and six of the
fifteen people with a mild learning disability were deemed able to consent. However,
not all of the decisions amongst the raters were unanimous, suggesting that the
measure may not be entirely reliable for assessing capacity to consent.

Whilst this has proved a useful attempt at assessing capacity to consent to
treatment, Arscott (1999) commented that their criteria were very strict and could be
relaxed to match the current standard of English law, which only requires a person to
have a general understanding of the relevant material. In a subsequent study, Arscott
et al. (1999) adapted the ACQ by simplifying the information presented and taking
into account the particular difficulties people with learning disabilities face when they
make a decision (they simplified the sentence structure and wording; included
supporting line drawings; and wrote the vignettes in the third person involving
fictitious characters). The participants were asked to respond to five questions,
indicating what decision they thought the character in the vignette should make.
Finally, they included measures of language and memory ability in their battery
(Arscott et al., 1999).

They found that 65% of the participants could give an informed opinion
regarding all of the aspects of capacity to consent on at least one of the vignettes and
the surgical vignette seemed to be easiest for people. Therefore, 35% were deemed
not to have capacity to consent on any of the vignettes and it appeared that those
questions relating to rights, alternatives and the impact of a choice were the hardest to
respond to. They found that verbal and memory ability could be important factors in a
person's capacity to consent to treatment, but stated that information about these areas should not be used in place of a full assessment of capacity to consent.

Arscott et al. concluded that the ACQ could be used as a tool to identify areas where a person may need further help in order to assist clinicians to make a judgement about an individual's ability to consent to treatment. Thus, they proposed that a full assessment might include IQ, memory and language ability tests, to determine at what level information needs to be presented in order to achieve informed consent. Therefore the ACQ cannot assess a person's ability to consent per se, but it can identify problematic areas for a person.

Murphy and Clare (2003) criticise the vignette approach however, as the situations are hypothetical and may be partially or completely irrelevant to the individual. Of further note is the fact that Arscott et al. admit that they had a small sample and it was not possible to validate the measure against another test of capacity to consent, as none exist for people with learning disabilities. This point about the quality of the empirical support will be explored further below, but it is apparent that existing measures of consent to treatment have limitations and a full assessment of consent will be complex and time-consuming.

The evidence base

Both of the measures described contained small sample sizes, but there are other issues with the evidence base. The bulk of the published literature on consent to treatment (and consent more generally) comprises reviews or discussions of the theoretical, ethical and philosophical aspects of consent. There is a paucity of empirical studies to support the theoretical concepts and the studies that do exist do not employ robust methodologies, such as a randomised controlled trial, which
Wessely (2001) believes to be the gold standard of research. Arscott (1997) concludes that more research is necessary if clinicians are to be able to base their practice on a solid evidence base, unfortunately the conclusion of this review of the literature is that the evidence base is very limited at present.

**Summary of the issues involved in assessing consent**

A large number of issues have been described relating to the assessment of consent in people with learning disabilities, ranging from theoretical approaches to assessment, to specific issues relating to the person and their environment. The view from the research literature is that the assessment of consent has been found to be difficult and there is no firm agreement yet on how capacity should be determined or what the standards necessary to be able to consent to treatment should be (Murphy & Clare, 1997; Arscott, 1997).

This discussion has noted that the opportunity to make choices may sometimes be absent from people’s lives, hence the clinician may need to evaluate whether the client can express a choice. Hillery *et al.* (1998) recommended incorporating training in decision-making into people’s care plans, or for less able clients a supported decision-making model may be helpful (The Roeher Institute, 1996; cited in Fisher, 2003). This model involves the person being supported by a trusted family member, friend or carer, to help them consider the relevant information and then jointly reach a decision.

It has also been shown that cognitive factors (e.g. language and memory) can affect a person’s ability to consent, hence specialist multidisciplinary assessment may be necessary to help with issues like communication difficulties (Chahal and Morris,
2000b; DoH, 2001c). Also, acquiescence and concomitant mental health problems can affect a person’s ability to consent.

Finally, the clinician may affect the process of assessing consent through a perceived power difference from the client or an incomplete consideration of the relevant issues. The main conclusion therefore, is that as there are a large number of potential issues, any assessment of consent needs to be broad and comprehensive, to ensure that the clinician bases their assessment of consent on information from all the relevant areas of the individual’s life. If this is achieved, then the clinician’s judgement about whether the person can consent to a treatment or not should hopefully be correct.

Finally, despite a good awareness in the published literature of the various issues, assessment tools for people with learning disabilities are scarce, issues of diversity and difference have not been attended to and the evidence base to accompany this area needs to be expanded.
References


What developmental and psychological theories could explain Asperger’s syndrome and what implications do these have for assessment and intervention.
**Introduction**

Asperger’s syndrome has been recognised as one of the most important diagnostic categories in psychiatry (Gillberg, 2002). Because of this, it is important to understand the potential causes of this syndrome and how this may affect assessment and intervention. The discussion starts by considering definition issues, followed by the psychological explanations for Asperger’s syndrome and then genetic and biological factors that may be important. The implications of these explanations are then considered for assessment and intervention and issues relating to the quality of the evidence-base and diversity and difference are presented throughout. The discussion is then concluded, noting that psychological explanations alone do not appear to be sufficient to explain Asperger’s syndrome and a combination of genetic factors and brain damage seem a more convincing aetiological explanation.

**What is Asperger’s syndrome?**

Asperger’s syndrome is considered to be an autistic spectrum disorder (Gillberg, 2002) and a pervasive developmental disorder, due to disruption across many domains in the child’s development (Willemsen-Swinkels & Buitelaar, 2002). Gillberg (2002) states that the autistic spectrum includes all of the disorders that have impairments in two of the following three areas: reciprocal social interaction; reciprocal verbal and non-verbal communication; and imagination and behaviour.

Therefore, at the centre of Asperger’s syndrome (and autism), the individual presents with social communication deficits (Blacher et al., 2003), but in Asperger’s syndrome early language skills are typically preserved (Rinehart et al., 2002). If both of the conditions can be diagnosed then autism takes precedence (Volkmar et al., 2000).
With respect to the prevalence of Asperger's syndrome, about 3-4 children in every 1000 develop the full disorder before the age of ten and the gender ratio is approximately three to six boys to each girl (Gillberg, 2002). The current state of knowledge indicates that autism appears to occur with a similar prevalence across families from all ethnic and cultural backgrounds (Department of Health and Human Services, 2002; cited in Brown and Rogers, 2003).

**Is Asperger's syndrome distinct from autism?**

The published literature reveals uncertainty as to whether disorders on the autistic spectrum are separate, overlapping or identical (Gillberg, 1998). Specifically, there is a substantial amount of debate as to whether Asperger’s syndrome is a separate disorder from autism, and in particular, high-functioning autism (Leekam et al., 2000).

A number of authors (e.g. Leekam et al., 2000; Miller & Ozonoff, 2000; Willemsen-Swinkels & Buitelaar, 2002; Gillberg, 1998) suggest that there is little evidence to consider Asperger’s syndrome as distinct from autism and Szatmari (1998) believes that there is little clinical benefit in separating them. The situation is confused by the fact that the diagnostic systems are considered to be unsatisfactory and there are at least four commonly used definitions of Asperger’s syndrome (Leekam et al., 2000; Gillberg, 2002).

Definitions and boundaries in Asperger's syndrome are important issues because at present there is no medical test which can unequivocally diagnose autistic spectrum disorders (Blacher et al., 2003; Willems-Swinkels & Buitelaar, 2002). Currently, definitions are based on behavioural descriptions which will naturally involve some unreliability (Willemsen-Swinkels & Buitelaar, 2002). This is
problematic because behaviours commonly observed in autism (such as stereotypies) have been found in non-autistic individuals (Willemsen-Swinkels & Buitelaar, 2002). If the behaviours are not specific to autism, then this raises problems for the specificity of aetiological factors in Asperger’s syndrome.

Contrary to other researchers, Rinehart et al. (2002) believe that it is too early to rule out the possibility that autism and Asperger’s are clinically and neurobiologically distinct. However, the dominant opinion from the literature is that autism and Asperger’s syndrome are more similar than dissimilar, and any differences in aetiological terms are relatively small and of uncertain clinical importance (Miller & Ozonoff, 2000; Willemsen-Swinkels & Buitelaar (2002). Therefore, Szatmari (1991) concludes that autism and Asperger’s syndrome are likely to be different expressions of the same core disorder which share a common aetiology. With this in mind, the discussion will now turn to the potential causes of Asperger’s syndrome.

Causes of Asperger’s syndrome

From the outset it is worth establishing that so far research has not managed to determine the causes of Asperger’s syndrome (Gillberg, 2002). However there have been a number of theories to date, including psychological, neurobiological and genetic explanations.

Psychological

The literature identifies four main areas that cognitive psychology and neuropsychology have contributed to the aetiology of Asperger’s syndrome, which are mentalising abilities, executive functions, central coherence and procedural learning (Gillberg, 2002).
Theory of Mind (mentalising)

Mentalising, or theory of mind, was originally observed by Baron-Cohen et al. (1985) and corresponds to the ability to imagine other people’s thoughts and attribute mental states to them (also described as empathy) and there are different levels in mentalising. The early research on low level theory of mind found this ability to be impaired in people with autism and Asperger’s syndrome (Baron-Cohen et al., 1985). Another study found that some people with autism can achieve low-level theory of mind, but were impaired for higher levels and therefore more complex theory of mind tasks (Baron-Cohen, 1989).

A study by Bowler (1992) investigated theory of mind specifically in people with Asperger’s syndrome and found that they could complete the mentalising task as well as ‘normal’ controls. Bowler (1992) concluded that people with autism do not lack a theory of mind as such, rather they demonstrate an inability to apply it.

Recently, Kaland et al. (2002) investigated the ability of children and adolescents with Asperger’s syndrome to infer physical versus mental states on an advanced test of theory of mind. They found that the more able people with Asperger’s syndrome could attribute mental states, although they did it in a different way to normally developing children, suggesting a different cognitive style.

Gillberg (2002) believes that many of the social communication problems found in Asperger’s syndrome can be explained by deficits in mentalising ability. For example, Tager-Flusberg et al. (2001) state that a person who fails to appreciate that others have ‘mental states’ would undoubtedly have problems interacting with others and understanding the nature and purpose of communication. Bailey et al. (1996) state that the utility of the theory of mind hypothesis, resides in its ability to explain
Children and Families Coursework Essay

two of the central symptoms of autism (reciprocation in social relations and communication problems) through a single mechanism.

However, the specificity of this deficit within Asperger’s is problematic, because several studies have found problems with theory of mind ability in a number of other conditions, therefore not just autistic spectrum disorders (Gillberg, 2002). Also, theory of mind does not account for the whole picture because the social deficits that are characteristic of autism, appear at a stage in development that occurs before ‘normally’ developing children can demonstrate theory of mind abilities (Rinehart et al., 2002). Therefore, it does not appear that theory of mind can fully explain Asperger’s syndrome or autism.

Central coherence

Another psychological theory involves the notion of ‘weak central coherence’, where a person with Asperger’s syndrome focuses attention on the details of a situation (local, part-oriented processing) and fails to capture the ‘whole picture’ (holistic processing: Tager-Flusberg et al., 2001; Gillberg, 2002). Therefore, an individual’s lack of social skills or emotional processing in a situation could be the product of difficulties integrating affective and cognitive components, so that they have attended to the parts, but failed to capture the ‘whole’ (Blacher et al., 2003).

A problem with central coherence however, is that the evidence for the deficit is conflicting, with some studies finding severe problems and others only minor deviations from the norm, or none at all (Gillberg, 2002). In a recent study on central coherence, Mottron et al. (2003) used a number of measures of hierarchical processing and did not find differences between high-functioning adolescents with autism and ‘normal’ functioning peers. They concluded that the weak central coherence theory
Executive functioning

Executive functioning includes the skills required to prepare for and execute complex behaviours (Goodlin-Jones and Solomon, 2003). A dysfunction in this ability would include difficulties in executive control over information processing and the regulation of behaviour, and could potentially explain repetitive, rigid behaviours and difficulties engaging in reciprocal social interactions (Tager-Flusberg et al., 2001). Individuals with Asperger’s syndrome have substantial problems with executive functions and this may account for the functional impairments shown on a day-to-day basis (Gillberg, 2002).

However, Tager-Flusberg et al. (2001) state that although executive function deficits may be present, they do not drive the core social communication difficulties that are present in autism and Asperger’s syndrome. Also, like theory of mind, it is not clear how specific problems with executive functioning are to Asperger’s syndrome, because many other childhood disorders can feature these deficits (Willemsen-Swinkels & Buitelaar, 2002; Gillberg, 2002).

Procedural learning

The fourth psychological theory was suggested by Gillberg (2002), observing that individuals with Asperger syndrome have problems learning procedures. This is closely related to automatisation, where learning becomes more automatised after a period of training and retrieved in an automatic way whenever it is required. Gillberg (2002) believes that this ability can be severely impaired in Asperger syndrome, but
he does not provide any details of empirical support for this observation. Consequently it is difficult to be certain of the value of this theory in explaining Asperger's syndrome.

Summary of the four psychological theories

According to Gillberg (2002), none of the psychological impairments are mutually exclusive and people with Asperger's syndrome may have some or all of them. It can be seen that all four theories contribute valuable information to the understanding of Asperger's syndrome. However, Bailey et al. (1996) note that a major problem for cognitive deficits as a causal factor, is that they do not explain why language impairment and delay should be products of theory of mind or executive function deficits. They conclude that several specific cognitive deficits may be needed to explain the constellation of symptoms found in autism and Asperger's syndrome.

Therefore, it would appear that psychological theories cannot explain the aetiology of Asperger's syndrome, but they do appear to be able to account for some of the specific symptoms and deficits that are demonstrated. Accordingly, the discussion will now turn to some developmental theories that may be able to explain the aetiology of Asperger's syndrome.

Developmental factors

There are a number of factors related to developmental processes that appear to be important in the genesis of Asperger's syndrome which include genetics and organic brain damage.
Genetic

According to Gillberg (1998), there is general agreement that in the majority of cases of Asperger’s syndrome there is probably a genetic disorder or abnormality. The evidence for a genetic basis for Asperger’s syndrome comes from several sources. Firstly, there is strong evidence for the role of genetics in autism, as the chance of giving birth to a second autistic child is 60 to 150 times the population base rate and there is a higher concordance of autism in identical twins compared to non-identical twins, according to epidemiological studies (Willemsen-Swinkels & Buitelaar, 2002). Secondly, symptoms of autism are often present in the close relatives of the individual with autism (Rinehart et al., 2002). Further to this Gillberg (1998) observed that the relatives of children with Asperger’s syndrome had more ‘Asperger’s-like’ symptoms than the relatives of children with autism had ‘autistic-like’ symptoms. Therefore this evidence leads to the conclusion that genetic factors play an important part in the aetiology of Asperger’s syndrome.

Despite a lot of research into genetic factors in Asperger’s syndrome, it is not yet clear as to how they operate (Gillberg, 2002). It is possible that in some cases both parents carry the same defective gene (autosomal recessive genes), or one parent contributes one gene (autosomal dominant gene), or there could be the involvement of specific chromosomal disorders such as XYY syndrome (Gillberg, 2002). However, Gillberg believes that the majority of cases are caused by polygenic inheritance, where a number of genes act together to produce Asperger’s syndrome.

Looking at the gender difference in prevalence, where Asperger’s occurs more commonly in men than women, there is no clear genetic explanation, but Gillberg (2002) believes there is some limited evidence that males may naturally be closer to the ‘Asperger type personality’ than women. Therefore, he suggests that males will
require a smaller genetic contribution, or less brain damage, to trigger Asperger’s syndrome than females, hence possibly explaining the increased prevalence in males (Gillberg, 2002).

**Biological factors/brain damage**

Ozonoff and Rogers (2003) and Gillberg (2002) state that Asperger syndrome and autism involve organic brain damage, with some studies showing a significant incidence of brain damage occurring to the foetus, during birth or in the first few years of life. However, it is unclear as to whether the brain damage is the cause of the syndrome, the product of a genetic factor, or related to another medical disorder associated with Asperger’s syndrome (Gillberg, 2002).

Some researchers believe that genetic factors are a precondition for Asperger’s syndrome, which will then only be manifested clinically following additional brain damage (Gillberg, 2002). A problem however, is that the brain is relatively plastic during infancy and it will be difficult to precisely specify the impact of any brain damage (Volkmar et al., 2000).

The essential deficits found in Asperger’s syndrome may be caused by damage or structural differences in the frontal lobes and cerebellar regions, with people with Asperger’s syndrome having less gray matter than controls (Gillberg, 2002; McAlonan et al., 2002). Problems with executive functioning and mentalising abilities could be explained by damage in these areas as well (Gillberg, 2002). Blacher et al. (2003), note that researchers have found higher concentrations of certain metabolites in the prefrontal lobes and abnormalities in the minicolumnar organization of some regions in the right hemisphere. Willemsen-Swinkels & Buitelaar (2002)
reported that similar functional and structural brain abnormalities have been observed in the post-mortems of people with autism.

Baron-Cohen et al. (2000) suggested that deficits in the amygdala may be related to abnormalities in autism. Using functional magnetic resonance imaging, they found that patients with autism or Asperger’s syndrome did not show brain activity in the amygdala region when completing mentalising tasks, but people without autism did show activity in this area. They concluded that the amygdala might be one of several areas that is damaged in autism.

*Psychosocial factors*

According to Gillberg (2002) there is no evidence that psychosocial factors cause Asperger’s syndrome, although a person’s social circumstances could lead to biological hazards (e.g. the use of alcohol during a pregnancy could trigger foetal brain damage). The majority of children with Asperger’s syndrome however, appear to develop in conditions similar to those of ‘normally functioning’ children (Gillberg, 2002).

*Other potential causes*

Although it has not been specifically mentioned in conjunction with Asperger’s syndrome, there has been a high level of public and media interest into the possibility of the Measles, Mumps and Rubella Vaccine (MMR) being linked to the onset of autism. However, the Department of Health website (December 2003) states that “the latest scientific evidence shows no link between MMR and long-term problems such as autism”. On this basis it would appear that the causes of autism and asperger’s lie elsewhere, however this issue continues to provoke heated debate.
Summary of developmental factors

With respect to aetiological factors, it is not clear what causes Asperger syndrome (Gillberg, 2002), but the role of genetics appears to be the most significant (Bailey et al., 1996). Additionally, there are clear structural and functional brain abnormalities that may be responsible for Asperger's syndrome in conjunction with underlying genetic factors (Ozonoff & Rogers, 2003). The impact of social and environmental factors seems to be minimal in causing the syndrome, but Gillberg (2002) believes that they may be very important in terms of outcome.

To what extent can Asperger's syndrome be explained?

The psychological theories do not appear to be able to explain the full clinical picture of Asperger's syndrome, but they do address certain aspects of it, in particular the specific difficulties that this client group face. It appears that the psychological deficits are in fact the product of potential underlying genetic and organic abnormalities. Therefore, genetic factors in conjunction with possible brain damage, seem more promising in terms of being able to explain the aetiology of the syndrome, but more investigation is necessary as the precise mechanisms involved are not yet known.

However, there are problems with explaining Asperger's syndrome due to a lack of consensus over definitions and frequently reported methodological issues amongst the studies that make it difficult to compare results or be confident of the conclusions. In addition, considering that autism has been shown to be ubiquitous across cultures, the evidence base for the effects of culture in autism is very limited and many studies do not include culture as a variable or recruit participants from diverse groups (Mary, 1990; cited in Brown and Rogers, 2003). Therefore, the
generalisability of the results across cultures is questionable. With these issues in mind, the discussion will now turn to the implications for assessment and treatment.

**Implications for assessment**

The complex and diverse explanations presented for Asperger's syndrome have a number of implications for assessment of the individual, which will now be explored.

**The process of assessment**

What is clear from an examination of potential explanations for Asperger's syndrome, is that a wide range of areas are involved (e.g. genetics, neurology, neuropsychology, etc.). This means that a variety of professional disciplines will need to be involved in the assessment of Asperger's syndrome and it may need to be very comprehensive. Klin et al. (2000) state that the assessment should be completed in a multidisciplinary team that has knowledge of the core developmental and symptomatological features, and can then translate these into an individualised treatment plan.

To complete an assessment, Gillberg (2002) states that a medical doctor with training in autism spectrum disorders should complete a thorough early developmental history and a comprehensive physical and psychiatric examination, paying attention to any symptoms of medical conditions that are associated with autistic spectrum disorders. Hansen and Hagerman (2003) comment that it will be necessary to investigate any potential traumas or infections that occurred during the lead up to and around the time of the birth, as these could be important to understand in the context of the individual's disorder. Diagnosis may also be complicated by the presence of
comorbid problems of which there are many associated with Asperger’s syndrome (Gillberg, 2002).

Goodlin-Jones and Solomon (2003) state that the psychological evaluation of a child with autism should include: intellectual ability; problem-solving and learning style; neuropsychological strengths and weaknesses; adaptive behaviour; family systems and needs; social, communication and behavioural problems. Because of the heterogeneity of symptoms and their potential causes, it is also recommended that this assessment process is multidisciplinary (Goodlin-Jones and Solomon, 2003). However, they also state that comprehensive neuropsychological examination should only be completed when there are unexplained discrepancies in the person’s performance or behaviour. Also the individual may have specific communication difficulties that may need to be compensated for (e.g. responding to open-ended questions: Gillberg, 2002).

The implication therefore, is that assessment needs to be broad and comprehensive to capture all of the important factors that have been implicated in the aetiology of Asperger’s syndrome.

Measurement issues

In order to advance knowledge and improve assessment and diagnosis, Willemsen-Swinkels & Buitelaar (2002) propose that biological and psychological markers need to be identified. At present there are no indicators in the first years of life that can ‘flag up’ the possibility of Asperger’s syndrome or be part of a screening assessment (Gillberg, 2002). The implication of this is that without an early assessment it will not be possible to plan an appropriate early intervention package.
Often, Asperger’s is not diagnosed until the child reaches school age (Gillberg, 2002) which means that intervention is substantially delayed.

Given the complexity of the possible explanations of Asperger’s syndrome that have been described, it will be necessarily for professionals and service providers to keep abreast of new developments, otherwise appropriate diagnosis may be missed and vital services may not be provided to families that need them (Klin & Volkmar, 2003).

Measures

Howlin (2000) states that the absence of assessment instruments for Asperger syndrome is a problem for researchers and clinicians, and there are no measures which have been designed and suitably standardised for this client group. Howlin observed that the absence of suitable measures inhibits the establishment of agreed diagnostic criteria, and the absence of diagnostic criteria inhibits the creation of diagnostic measures. Considering that the theoretical explanations for Asperger’s syndrome are complex and multi-faceted, the development of a robust, reliable and valid measure is clearly a priority. Without this, clinicians may not be accurate in their assessments and may fail to plan the most appropriate treatment for an individual.

There are standardised assessments for autism, however most of these require specific training before a person is able to administer it in a reliable and valid way and they can also be time-consuming to administer (Gillberg, 2002).

Issues of diversity and difference in assessment

In relation to diversity, Brown and Rogers (2003) note that autism occurs in all ethnic and cultural groups, so clinicians should be prepared to assess and intervene
with a diverse range of social and cultural characteristics, bearing in mind that
behaviour is socially defined. There may be differences in the presentation of
symptoms between men and women, however, this has not yet been properly
documented through the use of large epidemiological studies (Gillberg, 2002).
Gillberg did observe however that girls do not often have the special interests found in
boys, however, they may be fixated on social routines or other people in a way which
is not always obvious. Finally, the measures that currently exist for Asperger’s
syndrome and autism, have not been designed to record factors related to cultural
diversity (Brown & Rogers, 2003).

Implications for intervention

In the first section, genetic, biological and psychological explanations for
Asperger’s syndrome were discussed. Whilst the complete picture is still not clear,
genetic factors and brain abnormalities are at the forefront of these explanations. At
present there are no known interventions that will have any effect on these core
impairments of Asperger syndrome or autism (Blackshaw et al., 2001). Gillberg
(2002) states that people with Asperger’s syndrome do not need treatment in the
traditional sense for their disorder but the problems they continue to face on a day-to-
day basis may require professional help. However, at present, any interventions that
are conducted will be targeting the behavioural manifestations of the disorder and not
the core symptoms (Blackshaw et al., 2001).

Clinical heterogeneity

The first implication for treatment is linked to the problems found in the
diagnostic criteria, because the symptom presentations in Asperger’s syndrome show
a marked clinical heterogeneity and may include a constellation of problems that vary from one person to the next (Willemsen-Swinkels & Buitelaar, 2002; Gillberg, 2002). The implication therefore, is that no single method of intervention is likely to be effective for all people with Asperger's syndrome (Willemsen-Swinkels & Buitelaar, 2002).

The pervasiveness of Asperger's syndrome

The second implication relates to the fact that Asperger's is a pervasive developmental disorder and the majority of researchers in the field seem to agree that the fundamental components of social, communication and behavioural/imagination problems are likely to persist throughout their life in some form or another (Gillberg, 2002). Because of the severe and pervasive disruption to 'normal' functioning that this disorder can produce, early and intensive intervention is vital, may need to continue in some manner into adulthood and should involve the parents in the process (Goodlin-Jones and Solomon, 2003; Willemsen-Swinkels & Buitelaar, 2002; Blacher et al., 2003). However, as indicated above, it is difficult to confidently diagnose Asperger's syndrome before the child reaches school age, so very early intervention may not always be possible (Gillberg, 2002).

Although the evidence base is limited, research has shown that despite the pervasive difficulties that are apparent, children on the autistic spectrum can improve a great deal with treatments such as early behavioural and language work, medication, training in social skills and interventions based in schools (Safran et al., 2003; Ozonoff & Rogers, 2003; Blacher et al., 2003). Therefore this will have implications for parents, carers and professionals, because the pervasive nature of the disorder will
require significant investments in terms of time and expense (for the parents and also for service providers).

**Intervention strategies**

Because of the genetic and biological explanations for Asperger’s syndrome and autism, there is not at present (or soon likely to be) a cure for Asperger’s or autism. Ozonoff and Rogers (2003) state that autism has been considered a hopeless diagnosis and this could have a tremendous impact on parents and families by generating a sense of hopelessness. This perception needs to be challenged as there is evidence that early intervention in autism can substantially improve outcomes for the child (Ozonoff and Rogers, 2003). However, Willemsen-Swinkels & Buitelaar (2002) observe that certain treatments for autism have been promoted with great enthusiasm but may contain methodological problems which reduces their value.

Due to the fact that the explanations for Asperger’s syndrome described earlier are not amenable to change the implication is that treatment must focus on other areas. Gillberg (2002) believes that changing people’s attitudes towards the disorder is the single most important intervention to improve the quality of life of the person and create acceptance of the person’s difference (e.g. at school). Kunce and Mesibov (1998) state that it is important to modify the classroom environment to make it predictable for the person and communication should be clear, simple and straightforward (Gillberg, 2002).

**Behavioural intervention**

There is an implication that intervention in Asperger’s syndrome focuses on the behavioural manifestations and Attwood (2003) proposed that specific
interventions related to friendship skills should be implemented at different
developmental stages. He gives guidance on what should be occurring at each stage
and makes suggestions for interventions. Attwood also suggests some modifications
for Cognitive Behaviour Therapy to allow for the individual profile of people with
Asperger syndrome. This focuses on the use of cognitive restructuring to change
distorted or erroneous beliefs, stress management and greater use of visual material
and resources (rather than verbal) to help with self-reflection (Attwood, 2003).

**Pharmacological treatment**

The causes of Asperger’s syndrome have implications for the use of
pharmaceutical interventions. Willemsen-Swinkels & Buitelaar (2002) stridently state
that there is no place for drug treatment in autism as the neurochemical basis is at
present unknown. However, at a pragmatic level, medication can be used in a
palliative manner to alleviate some of the maladaptive symptoms such as aggressive,
anxiety and hyperactivity (Willemsen-Swinkels & Buitelaar, 2002; Gillberg, 2002).

**Implications relating to diversity**

As discussed above, early intervention focusing on infant behaviour and
language has been shown to be important. However, Brown and Rogers (2003) note
that in some families emphasising these areas may be culturally inappropriate. As
well as achieving early intervention it is suggested that intervention will need to be
intensive and long-term. However, Brown and Rogers (2003) also observe that
research has found people from minority groups have a reduced availability and
access to needed services, and this may be even more pronounced in rural areas or
away from major universities, research centres or specialist clinics. Therefore, if
cultural factors influence the availability of interventions and services, then this will have a further effect on the outcome for the person with Asperger's syndrome from a diverse culture.

Evidence base

It has been identified that there is a need to intervene in Asperger's using psychological and educational methods. However, Szatmari (1991) reported that there were no empirical studies looking at the effectiveness of treatment for children with Asperger's syndrome and the situation does not appear to have substantially improved a decade later. With respect to psychological therapies, Attwood (2003) concludes that there is very little knowledge about their use in Asperger's syndrome and no systematic research into the efficacy or effectiveness of CBT.

Also, Brown and Rogers (2003) discuss efficacy versus effectiveness, where carefully controlled trials might show the efficacy of an intervention, but actually transferring this to a real-life situation and achieving the same success (effectiveness) is a different thing. They state that the evidence base for Asperger's syndrome and autism does not include studies of effectiveness of treatments.

Conclusions

During this discussion it has been shown that there are a number of psychological theories that can explain aspects of Asperger's syndrome, but they do not appear to be able to provide a full aetiological account. Research has shown the involvement of a substantial genetic component and in conjunction with organic brain damage this may explain the characteristic deficits shown by people with this disorder, but further elucidation is required.
The implications for assessment are that the complex aetiology of Asperger's syndrome requires a comprehensive assessment which may be time-consuming, multidisciplinary and expensive for service providers. It is clear that clinicians also need to keep up to date with current research, find suitable assessments and consider cultural issues. With respect to intervention, the implications are that intervention will focus on the behavioural manifestations of the syndrome rather than the core aspects and need to be started early and intensively. It is also apparent that treatment will need to be individually planned, continue into adulthood and may include behavioural, environmental and pharmacological components.

Finally, the evidence base has been examined and a number of issues reported relating to methodology, sample sizes and generalisability of results, and it appears that the literature has not properly accounted for issues of diversity and difference.
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Critically evaluate the contribution of CBT to helping with problems of anxiety and depression in older people.

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Introduction

The aim of this essay is to examine the contribution of cognitive-behaviour therapy (CBT) in helping with problems of anxiety and depression in older people. But why is this question important? There are a number of reasons. First of all, anxiety and depression are two of the most commonly occurring mental health problems in older people (Kogan et al., 2000; Landreville and Gervais, 1997). Karel and Hinrichsen (2000) report that depression causes suffering, increased use of health services and may lead to suicide. Equally, Wetherell et al. (2003) state that anxiety can lead to increased disability, reductions in well-being and inappropriate usage of health services. Therefore, effective treatments for anxiety and depression are clearly necessary.

Second, CBT is one of a number of treatments for anxiety and depression in older people, prominent among which are pharmacological treatments. These are frequently used but can have adverse side-effects, which may be more likely in older people due to age-related changes in the effects of medication (Wetherell et al. 2003; Gorenstein et al., 1999; Sheikh & Cassidy, 2000). Therefore, safe alternatives to pharmacological treatments are necessary and CBT has already been shown to be effective in younger adults (Gorenstein et al. 1999). Additionally, Zeiss and Breckenridge (1997) report that older people generally have positive attitudes towards psychological therapies and may prefer them to medication.

Third, CBT was originally created for younger adults, therefore the application of it with older people requires examination of their therapeutic needs (Secker et al., 2004). Clinical psychologists are required to administer interventions that are proven to be effective (Mace & Moorey, 2001), therefore it is imperative that the quality of the evidence-base is evaluated.
Against this background, the aim here is to first establish the current state of the evidence-base and then critically evaluate it. Following this, a broader look at the contribution of CBT will be considered and its strengths and weaknesses discussed. Finally, conclusions will be drawn about the contribution of CBT in helping with anxiety and depression in older people.

**Background to the discussion**

CBT is in fact a constellation of therapeutic techniques (Moloney and Kelly, 2004), which originate from behaviour therapy and cognitive therapy (Wilkinson, 2002). Recipients of CBT commonly present with anxiety and depression, and from a theoretical point of view, CBT theory postulates that emotional problems stem from faulty information processing, with negative thoughts underlying these difficult emotions, which in turn are perpetuated by consequent patterns of behaviour (Wilkinson, 2002). CBT treats these disorders by using cognitive and behavioural techniques to change patterns of thinking and behaving (Gatz et al., 1998). With regard to older people, Kogan et al. (2000) state that 65 years is the point at which old age begins, however, the research literature frequently includes adults as young as 55 in samples of ‘older people’.

**Evidence for the effectiveness of CBT**

Stanley and Novy (2000) state that recent research has started to establish the value of psychological therapies for older people, particularly CBT, and Randomised Controlled Trials (RCTs) have been dubbed the ‘gold standard’ of research methodology (Wessely, 2001). In an RCT, patients are randomly allocated to conditions to ensure that potential confounding variables are distributed between the
groups (Wessely, 2001). Meta-analysis is considered to be the highest level of evidence available for determining the efficacy of a treatment (Lam and Kennedy, 2004). Essentially it is a statistical technique which combines the results of a number of studies (e.g. RCTs) to provide more discriminating findings (Mace & Moorey, 2001).

Therefore the best evidence available for treatment efficacy should be RCTs or meta-analyses. With this in mind, to evaluate the evidence-base for CBT, all pertinent studies need to be reviewed and their findings aggregated. Fortunately, for anxiety and depression this work has already been completed and the following sections present the conclusions from the most recent reviews and subsequent publications.

**Depression**

There have been a number of reviews and meta-analyses of the evidence base for CBT in the treatment of depression in older people. Recent reviews of the literature (Bartels et al., 2002; Karel and Hinrichsen, 2000; Pinquart and Sørensen, 2001) concluded that, overall, cognitive behavioural therapies are effective treatments for depression in older people and have the most empirical support. Further to this, they state that CBT is an effective and lasting treatment for a large proportion of relatively healthy, community-residing older people (Karel & Hinrichsen, 2000).

Gatz et al. (1998) used criteria developed by the Division of Clinical Psychology of the American Psychological Association and concluded that cognitive-behavioural therapies “are probably efficacious treatments for depressed community-residing older adults who are cognitively intact, have minimal co-morbid psychopathology and are not suicidal” (Gatz et al., 1998, p.13). The authors acknowledge this is a tentative conclusion due to a lack of evidence demonstrating
superiority to psychological placebo conditions and inconsistent findings on superiority to other treatments (Gatz et al., 1998).

Another review, this time by Laidlaw (2001) concluded that cognitive therapy is undoubtedly an effective treatment procedure for depression in older people. However, they also concluded that it is too early to determine whether cognitive therapy is superior to other treatments (Laidlaw, 2001).

In addition, there is evidence demonstrating the value of CBT in treating depression with younger adults (Roth & Fonagy, 1996). Zeiss and Breckenridge (1997) conclude that the symptomology, course, and probability of recurrence do not present differently in younger and older people with depression. Accordingly, it is not believed that there would be radically different results between these groups as an artefact of their age difference (Zeiss and Steffen, 1996), lending further support to the value of CBT in treating depressed older people.

Therefore, there is a body of evidence summarised in reviews that conclude that CBT is an effective treatment for depression in later life (e.g. Bartels et al., 2002; Laidlaw, 2001; Karel & Hinrichsen, 2000). However, the contribution has not been found to be superior to other available treatments. On the basis of these reviews it would seem simple to conclude that CBT makes a significant contribution, however there are a number of factors which will be considered after the evidence-base for anxiety is reviewed.

**Anxiety**

With regards to the evidence base for CBT and anxiety in older people, there has not been as much interest from researchers as there has been for depression. The best place to start would appear to be the recent meta-analysis of nonpharmacological
anxiety treatments by Nordhus and Pallesen (2003) which appears to be the only meta-analytic review available. As well as relevant published research their study included unpublished research reports by prominent researchers in the area to avoid 'publication bias' (the tendency to publish only significant findings: Gilbody et al., 2000, cited in Nordhus & Pallesen, 2003). Participants were a minimum of 55 years and the grand mean was 69.5 years and there were more females in the studies (76.7%). The treatments in the studies were dominated by CBT and the results showed that psychosocial interventions produced significant post-treatment improvements in self-reported and diagnosed anxiety in older patients. Unfortunately it was not possible to conclude whether any particular treatment was more effective, however, the majority of the studies used cognitive-behavioural techniques. Nordhus and Pallesen (2003) concluded that there is optimism for the psychological treatment of anxiety in the elderly and they found that group treatment was as effective as individual treatment.

However it is difficult to say whether CBT is specifically helpful in treating anxiety from this review, because their analysis considers all psychosocial treatments together. As most of the studies used variations of CBT, it was not possible to separate CBT from other therapeutic approaches (e.g. personal construct therapy) due to small numbers of the other treatments. Further to this, the CBT procedures varied from study to study (e.g. CBT, Imaginal exposure, Relaxation, etc), so it is not clear which aspects are most helpful. Nordhus and Pallesen (2003) also comment that many of the studies did not use diagnostic systems to categorise anxiety, making it unclear whether it was the therapeutic effects or the severity of the anxiety that was more influential to treatment outcomes. Finally, their review considers anxiety as a
whole and does not conclude whether treatments are more effective for a particular variant of anxiety (e.g. GAD, Panic Disorder, etc).

There have been two further studies since the review by Nordhus and Pallesen, the first by Wetherell et al. (2003) which found that the treatment of Generalised Anxiety Disorder (GAD) in older people using CBT was superior to a Waiting List condition. However there was less evidence for the efficacy of CBT over a credible comparison intervention (Wetherell et al., 2003). A second study, this time by Stanley et al. (2003) revealed significant improvements in worry, anxiety, depression and quality of life relative to the control condition in older people with GAD. They found that most gains were maintained or enhanced after a year, although patients did not return to normative functioning.

These two studies addressed some of the problems identified in the review by Nordhus and Pallesen (2003) and provide evidence that CBT is a valuable treatment for GAD. Overall, the conclusions from the literature indicate that CBT is the only psychosocial intervention with a significant evidence-base to support its use in the treatment of anxiety in older adults (Bartels et al., 2002; Stanley & Novy, 2000; Sheikh & Cassidy, 2000). There is a general consensus however, that research is lacking and more studies are necessary to be certain of CBT’s contribution to helping with anxiety and depression in older people (Bartels et al., 2002; Sheikh & Cassidy, 2000).

Critical evaluation of the evidence-bases for depression and anxiety

So far, it appears that there is evidence for the effectiveness of CBT for depression in older people, but there is a lack of evidence at present with respect to
anxiety, although the limited findings suggest it is effective. However, criticisms of the evidence-base have been frequently identified. For example, Laidlaw (2001) comments that some reviews should be treated with caution due to having too broad a definition of cognitive therapy. Further to this, the reviews appear to use CBT, Cognitive-behavioural therapies and Cognitive Therapy interchangeably so it is not always clear which is which. Laidlaw (2001) also states that superiority of CBT over other treatments has not been established due to a paucity of robust research studies.

_Diversity in research samples_

There has been little research using samples that are rich in people from diverse ethnic or cultural backgrounds, so the majority of research is based on White older adults (Zeiss & Steffen, 1996). Karel and Hinrichsen (2000) note that many participants in the research studies are reasonably healthy, well-educated, White and community-based adults in their 60s and 70s. Therefore they state that therapists may have difficulty adjusting their techniques from the research studies to their typical patients. For example, their patients may have disabilities, cognitive deficits, abusive histories or personality disorders, all of which are likely to have been excluded from research studies. Further to this, Karel and Hinrichsen (2000) note that the samples are often quite healthy, which is at odds with the fact that those who are physically ill are more at risk of depression. Therefore, in research samples that lack diversity, the results may not generalise to patients who are male, in poor health, have non-European ethnic origins, have limited education, or are socially and economically deprived (Wetherell et al. 2003).

Laidlaw (2001) found that ‘younger’ samples of older people benefited more from CBT than the oldest patients, and Karel and Hinrichsen (2000) observe that few
studies have included patients over 80 years old. Consequently, little is known about this 'older' range of older people (Zeiss & Steffen, 1996). Also, there is inconsistency amongst studies, with some categorising people over 55 years as 'older people' and Gatz et al. (1998) state that some RCTs using treatment manuals do not synchronise with the realities of clinical practice.

Stanley (2003) concludes that the efficacy and effectiveness of CBT will need to be determined using a broader range of older people who receive treatment in settings akin to everyday life. The lack of diversity in research samples is a shortcoming of the evidence-base and limits our understanding of the contribution CBT makes in treating anxiety and depression. Accordingly, we can only conclude that CBT is helpful for a section of older people with these problems.

Issues related to assessment

Another issue is the similarity of anxiety and depression amongst younger and older people. Gatz et al. (1998) cite research suggesting there are differences between these two groups in their clinical presentations. Kogan et al. (2000) note that there is evidence that older people may experience anxiety in a different way to younger adults. Further to this, a person who is 65 may be very different to a person who is 90 years old (Kogan et al., 2000). Additionally, older people often have other physical health problems which may give rise to exaggerated scores on the somatic items in anxiety questionnaires (Kogan et al., 2000; Sheikh & Cassidy, 2000). The validity of current self-report assessment instruments for anxiety in older people has been questioned (Sheikh & Cassidy, 2000; Kogan et al., 2000), as there have been limited studies with this population and the studies that do exist have methodological flaws.
(e.g. small and homogenous samples). They conclude that using self-report measures may result in diagnoses that are invalid (Kogan et al., 2000).

On the other hand, some self-report depression scales have demonstrated reliability and validity in discriminating depressed and non-depressed older people (Karel & Hinrichsen, 2000). But Steuer et al. (1984; cited in Laidlaw, 2001) suggests that patients can be taught how to correctly answer the Beck Depression Inventory (Beck et al., 1961) during therapy, hence statistical difference in scores may not reflect genuine clinical improvement.

Consequently, the value of the evidence-base for CBT in older people may be diminished, due to fundamental uncertainties over the nature of anxiety in older people, the ability of current measures to record clinical outcomes, and the inattention by researchers to the potential diversity of anxiety symptoms between younger and older people, and within the older population alone (Kogan et al., 2000). However, concerns are less prominent for depression, although there is concern that CBT could influence self-reports of patients.

Specific types of anxiety

The evidence base for treatment of anxiety types has not been systematically explored in a review to date and the use of CBT with social phobia, specific phobia and obsessive-compulsive disorder (OCD), have not been adequately researched in the literature to determine whether it is effective with older people (Sheikh & Cassidy, 2000; Carmin et al., 1999). However, in relation to OCD, Carmin et al. (1999) point out that no other psychological intervention has been shown to be effective and there are complications associated with medications that make non-pharmacological interventions attractive.
Mode of delivery

The evidence regarding the delivery of CBT is mixed, as some studies found no difference between individual and group formats (Nordhus & Pallesen, 2003; Areán & Miranda, 1996) and others favour individual administration. Karel and Hinrichsen (2000) state that individual or group CBT is shown as efficacious in the research literature for community-dwelling, healthy older people. However, Pinquart and Sörensen (2001) and Engels and Vermey (1997) found individual interventions more effective than group interventions, which may reflect the fact that individual therapy was more likely to customise the intervention to the specific needs of the patient. However, this is confounded somewhat by the fact that the group interventions used some of the less effective forms of therapy (Pinquart & Sörensen, 2001).

Also, most studies occur in research centres away from the normal environments of most older people, hence the findings may not generalise to the everyday realities of clinical practice (Zeiss & Steffen, 1996). In addition, Zeiss and Steffen (1996) note that some cognitive-behaviour therapists may simplify the therapy or ignore some crucial elements, removing it further from the manualised treatments typical of research considered to be methodologically sound (Gatz et al., 1998).

Co-morbidity with other health problems

Another important issue for the elderly is that of co-morbid problems accompanying their anxiety or depression. For example, disabled older adults are at highest risk for depression (Karel & Hinrichsen, 2000) and research has shown that medical illnesses increase with age (Kogan et al., 2000). Also, psychological problems can raise a person’s vulnerability to physical illness, and in turn, physical
illness can create psychological symptoms (Kogan et al., 2000). Medical co-morbidity can also complicate assessment and treatment of anxiety (Sheikh & Cassidy, 2000) and depression (Karel & Hinrichsen, 2000).

Clearly this is important as Zeiss and Steffen (1996) note that patients with co-morbid problems are common in reality, but are excluded from research samples reducing the ability to generalise findings to all older people. Therefore, the evidence-base is further limited, by its inability to represent the diversity of older people who may have co-morbid physical health problems.

Does CBT need to be adapted for older people?

According to Laidlaw (2001), the question of whether CBT needs to be adapted for older people is an important one. A number of researchers believe that the fundamentals of CBT are the same whether you are working with younger or older patients (Zeiss & Steffen, 1996; Laidlaw, 2001; Carmin et al., 1999). However, there is a body of opinion that states that adaptations will be necessary for older people (e.g. Sheikh & Cassidy, 2000). For example, Karel and Hinrichsen (2000) recommend adaptations for health, sensory or cognitive difficulties, and family involvement. They also believe that patients may need more education about the process of CBT (e.g. to overcome perceived stigma and to explain the collaborative nature of CBT), the pace may need to be slower, and visual or memory aids may be required (Karel & Hinrichsen, 2000).

Zeiss and Steffen (1996) list a number of adaptations to make CBT with the elderly more effective. These can be summarised by the mnemonic MICKS: Multi-modal training; Inter-disciplinary awareness of problems and treatments; Clearer
presentation of ideas; Knowledge of strengths and challenges within the elderly; Slower pace of therapy.

This issue is important in terms of the evidence-base, because if adaptations are necessary, then the standard administrations of CBT in the research will be invalid and extrapolating effectiveness from research on younger populations will not be possible. However, Woods (2003) concludes that there is no reason why adaptations should be necessary based on some arbitrary age (e.g. 65 years) and chronological age is unlikely to be an effective indicator of the need for adaptations (Zeiss & Steffen, 1996). It has been noted that the older population are a diverse group, therefore CBT is likely to be effective for some people without any adaptations (Laidlaw, 2001; Zeiss & Steffen, 1996). However, CBT may need to adapted for some older people due to their particular strengths, deficits, social and historical context, and physical health problems (Knight, 1999). However, Zeiss and Breckenridge (1997) note that despite these adaptations being commonly described in research, there is no empirical evidence to support them.

Is evidence-based practice achievable?

A more fundamental question to the evidence-base is regarding the value and realism of adopting evidence-based practice. For example, Gatz et al. (1998) note that the ‘pure’ interventions typical of research reviews exclude people with dual diagnoses and follow strict protocols which are not typical of the experience of patients outside of these research settings. Additionally, Sechrest et al. (1996; cited in Gatz et al. 1998) comment that outcome measures are often poor indicators of the personal experience of clients, which returns us to the issue of whether self-report measures are reliable and valid.
Marzillier (2004) takes a more extreme position arguing that evidence-based psychotherapy is a myth. He states that there is a huge overlap between symptoms in different illnesses that prevent valid and reliable definitions, and hence prevent generalisation of research findings. Marzillier emphasises the diversity of people, who may have issues related to their personality, emotional experiences, social circumstances, or lifestyle, and questions the value of clustering this varied group of people together in terms of their symptoms. Finally, Marzillier (2004) concludes that the better the research is, the less useful it will be to therapists.

However, the criticism that research such as RCTs do not reflect reality is not new, and Wessely (2001) counters this argument by stating that it is not a problem with the RCT methodology, but the way researchers conduct them, as they do not perform trials that are sufficiently large and pragmatic. Laidlaw (2001) concludes that therapists are required to provide the best treatment for their older patients and at present the RCT is the best guide available, despite its shortcomings.

So what can we conclude from the evidence?

For older people, CBT has been found to be helpful and effective in treating depression. It is also believed to be effective for anxiety, but there is less empirical support at present. Issues related to diversity limit who we can say will be helped, to older people who are predominantly: White, reasonably healthy, in the ‘younger’ range, without co-morbid physical health problems and without adapting the CBT procedures. Consequently, less is known about CBT’s contribution to older people from different ethnic and cultural backgrounds, and the ‘older’ range of older people. There is also a fundamental uncertainty about the nature of anxiety and depression in older people that raises a significant challenge to the validity of the evidence-base. In
addition there is also scant information about how CBT helps the various forms of anxiety and which specific components of CBT are more or less effective.

Another problem is that mixed anxiety and depression disorder, although not an official classification, is commonly encountered by clinicians (Sheikh & Cassidy, 2000). However no studies have been identified that examine the effectiveness of CBT with this clinical presentation in older people, despite it being relatively common. Despite these criticisms, Zeiss and Steffen (1996) urge a sense of perspective as no other therapy approach has yet generalised findings of effectiveness across wider settings and populations.

A broader view of the helpfulness of CBT

In terms of helping with anxiety and depression, the evidence-base for CBT is obviously of great importance. However, the helpfulness of CBT for older people can be considered more broadly. For example, CBT has a positive outlook with respect to treating older people, as an underlying assumption is that learning occurs throughout life and that anyone can change (Karel & Hinrichsen, 2000). This is in contrast to the position of some therapeutic approaches on treating the elderly (Zeiss & Steffen, 1996). Also, Moloney and Kelly (2004) note that one of the strengths of CBT is that it is seen as evolving from a scientific body of knowledge.

CBT is also flexible in its administration, hence it can be applied in ways that allow formulation of problems to account for the individuality of older people (Laidlaw, 2001). Further to this, the formulation is shared between the therapist and patient, and includes physical and psychological symptoms (Wilkinson, 2002). In addition, Zeiss and Steffen (1996) state that using the biopsychosocial model in CBT
allows for an inclusive conceptualisation of problems and increases opportunities for multi-disciplinary collaboration in the patient’s care.

There are also a number of factors specific to CBT that are of benefit to older people according to Zeiss and Steffen (1996). They believe that the collaborative nature appeals to older people, there are opportunities for the therapist to convey respect for the client, it is non-pathologising, the person does not need to be particularly able to think in a psychological manner, it can be applied in any setting, and many components of CBT can be recorded on paper which may help people with memory difficulties (Zeiss & Steffen, 1996; Secker et al., 2004).

Landreville and Gervais (1997) suggested that the structured and time-limited nature can be advantageous in certain settings (e.g. inpatient wards) and carers can be taught how to apply certain techniques. It is also possible to include family members in the process (Zeiss & Steffen, 1996) and this may be of benefit to older people from diverse cultures which are ‘collectivist’ in nature, as responsibility would be shared amongst the family in these cultures (Owusu-Bempah, 2002).

CBT is also useful for raising the older person’s sense of self-efficacy, as they can quickly learn that they can effect changes in their feelings and behaviour (Karel & Hinrichsen, 2000). Secker et al. (2004) observe that the goal driven nature of CBT is useful to guide therapy and is helpful for evaluating and demonstrating progress. Finally, from the therapist’s point of view, there are an increasing number of treatment manuals available to guide them (Zeiss & Steffen, 1996).

Overall then, it can be seen that beyond the robustness of the evidence-base, there are a number of other ways it which CBT can be considered to be helpful to older people with anxiety or depression. However, there are some drawbacks which will be considered next.
Problems with CBT for older people

Considering diversity issues first, Moloney and Kelly (2004) believe that CBT may only prove to be effective for those in more privileged socio-economic conditions and attempting to alleviate the distress of those in deprived areas through modification of their thoughts and behaviours may be unrealistic and inappropriate. From my own clinical experience of working in an area of high social and economic deprivation, with a client group Madsen (1999) would describe as “multi-stressed”, the application of CBT would possibly seem bizarre to clients who have problems of unemployment, poverty, social exclusion and poor literacy (Moloney and Kelly, 2004; Zeiss & Steffen, 1996), and demonstrate a failure on my part to understand the reality of their situation.

Further to this, Moloney and Kelly (2004) write that the self-abnegating language typical of Westerners with depression may not be typical of other cultural groups and that the process of examining our own thoughts and feelings that is vital in CBT may often be inaccurate and misleading. Cultural norms may also adversely influence the process of CBT according to Carmin et al. (1999) and they note that some older people may be reluctant to reveal some types of thoughts, especially to a much younger therapist. Additionally, Laidlaw et al. (2003) identify that people from minority ethnic and cultural backgrounds encounter barriers to therapy, such as transport problems, discomfort with therapists from a different background to themselves, and problem’s expressing themselves in a second language.

With respect to the application of CBT, Secker et al. (2004) advise omitting cognitive strategies when there is clear cognitive impairment, which clearly suggests that only the behavioural components of CBT will be effective. Also, Secker et al.
believe that the collaborative process in CBT may be reminiscent of a teacher-student relationship and may therefore feel patronising to the older person.

These issues present a challenge to CBT, but some will be issues for all therapies. In addition, the absence of research on diverse ethnic and cultural groups means that the validity of some of these criticisms is yet to be established. Overall, CBT specifically contributes a number of positive factors to helping older people and these appear to outweigh the negatives. However, the practicality of using CBT with people in adverse or negative life circumstances (Moloney & Kelly, 2004) may render CBT an inappropriate choice in some settings and clinicians need to consider this.

Conclusions

The literature available to evaluate the contribution of CBT in helping with anxiety and depression in older adults is confusing and problematic. There are a number of reviews and even reviews of reviews! The literature is frequently contradictory and I gained the impression (rightly or wrongly) that there is a unspoken battle between advocates of pharmacological and non-pharmacological interventions. The frequent use of pharmacological interventions for these problems, with their potential for side effects, means that alternative treatments are necessary (Wetherell et al., 2003).

As seen above, the evidence-base indicates that CBT can make a significant contribution to treating depression in older people, and is probably effective for anxiety although there is a lack of empirical support for this at present (Bartels et al., 2002). However, this discussion has identified that the research samples do not reflect the diverse backgrounds and presentations of older people, there are fundamental problems with definitions, it is unclear which components of CBT are effective and
the evidence for treating specific types of anxiety has not been documented. It has also been shown that factors intrinsic to CBT can be specifically beneficial to older people, however the contribution may be less helpful for people living in adverse socio-economic conditions.

To summarise, Laidlaw et al. (2003) state that the evidence supporting the contribution of CBT to helping with anxiety and depression in older adults is at an early stage, but it appears to be an appropriate and valuable treatment, and an important and less invasive alternative to pharmacological interventions (Stanley et al. 2003; Areán and Miranda, 1996).
References


PART 2:

CLINICAL DOSSIER

Identifying details in this section have been changed to preserve anonymity.
Introduction to the Clinical Dossier

The Clinical Dossier contains summaries of the clinical experience gained during four core placements and two specialist placements. There are six placement summaries and five case report summaries, which have been anonymised to preserve confidentiality. Full versions of the case reports (including references and appendices) and placement documentation (contracts, evaluation forms, log books and example correspondence) are found in Volume II of this portfolio. Due to the confidential nature of this material, Volume II is held in the Department of Psychology at the University of Surrey.
Summary of clinical placements

The names of supervisors and Trust details have been omitted to maintain confidentiality. Full details of placements can be found in Volume II of this portfolio.

July 2005

Years I to III
Summary of clinical placements

Adult Mental Health Placement Summary

Dates: October 2002 – March 2003
Setting: Split between two Community Mental Health Teams
Main models: Cognitive-behavioural therapy, psychodynamic psychotherapy, systemic therapy, neuropsychological assessment
Clinical experience: I worked clinically with 12 clients, both independently and with my supervisor. The clients ranged from 21 to 59 years of age and were from a range of backgrounds. I conducted cognitive-behavioural interventions with individuals presenting with a range of difficulties, including depression, anxiety, PTSD, psychosis, anger management and assertiveness. I also completed several neuropsychology assessments.
Other experience: I attended MDT reviews, a liaison meeting between the CMHT and CAMHS, referral meetings, a community visit with an Occupational Therapist, Psychology Department meetings, CBT supervision group and visited a secure inpatient ward.
Research: I collected data for my SRRP during this placement

People with Learning Disabilities Placement Summary

Dates: April 2003 – September 2003
Setting: Community Team for Learning Disabilities
Main models: Behavioural, Cognitive-behaviour therapy, Systemic therapy, Psychodynamic psychotherapy.
Clinical experience: I worked clinically with 20 clients, whose ages ranged from 3 to 58 years and came from a range of cultural and ethnic backgrounds. I completed individual work and also joint work with my supervisor, a challenging behaviour therapist and a nurse. Interventions included behavioural and systemic therapy for individuals and families, with difficulties including challenging behaviour, sleeping difficulties, anxiety, depression, memory problems and emotional awareness. I facilitated a group based on cognitive-behavioural principles for clients with emotional awareness difficulties. I also completed several neuropsychological assessments.
Other experience: I gave advice to a Service-User Involvement group on ways of including people with learning disabilities, trained staff in applied relaxation techniques, trained staff on theories of challenging behaviour, gave a presentation to the CT-LD on Informed Consent, attended a range of meetings (including Clinical Governance, Clinical Direction, Workforce Planning, Referral meetings), and visited a range of local services.

Children and Families Placement Summary

Dates: October 2003 – March 2004
Setting: Multi-Agency Service for complex cases
Main models: Social constructionist/systemic, solution-focused therapy, humanistic
Clinical experience: I worked clinically with 12 clients, both independently and with my supervisors or other members of the team, for clients with high levels of social and economic deprivation. I worked directly with children as well as with parents, foster-carers and professionals using systemic, solution-focused and behavioural interventions. The presenting difficulties included behaviour problems, emotional abuse, physical abuse, sexual abuse, neglect, domestic violence, and social communication disorders. I also jointly worked on a risk assessment with a schedule one offender and completed direct observation of clients at home and in school.
Other experience: Presented to the multi-agency service on vicarious traumatization and also to Tier III Psychologists (jointly with another trainee). Revised the team’s Suicide Risk Policy, maintained and updated their resources library, attended weekly case consultations, attended MDT child protection reviews, and attended training events on domestic violence, child protection and body dysmorphic disorder.

Working with Older People Placement Summary

Dates: April 2004 – September 2004
Setting: Community Mental Health Centre
Main models: Psychoanalytic psychotherapy, cognitive-behaviour therapy, life-span, personality-guided psychotherapy.
Summary of clinical placements

Clinical experience: Clinical work was completed with nine inpatient and community clients with difficulties including depression, anxiety, psychosis, jealousy, emotional and physical abuse, bereavement and dementia. The clinical work involved short-term psychoanalytic psychotherapy, cognitive-behaviour therapy and neuropsychological assessment. Received joint supervision with a third year trainee.

Other experience: Completed a psychodynamic observation, attended local services, attended referral meetings, and attended training on the Single Assessment Process, Dementia Care, and Diogenes syndrome.

Neuropsychology Specialist Placement Summary

Dates: October 2004 – March 2005

Setting: Neuropsychology Department in a Neurological Centre

Main models: Neuropsychological assessment and rehabilitation.

Clinical experience: I had clinical contact with 18 clients, both independently and observing my supervisors. The clients ranged from 23 to 78 years old and came from a range of cultural and ethnic backgrounds. Neuropsychological assessments were completed for clients reporting neuropsychological deficits and associated problems of sleep apnoea, diabetes, cardiovascular problems, head injury, chronic obstructive pulmonary disease, multiple cavernomas, HIV-1 and mental health issues. Neuropsychological rehabilitation was completed with two community clients, one with executive function deficits following a head injury and the other with memory and planning difficulties following a sub-arachnoid haemorrhage.

Other experience: Visited CT and MRI scanning departments, the Royal Hospital for Neurodisability and an Inpatient Rehabilitation Centre. Attended training on post-concussional syndrome, neuropsychological testing for cerebrospinal fluid taps, headache, myasthenia. Attended the British Neuropsychological Society Conference.
Substance Misuse Placement Summary (only until July 2005 so far)

**Dates:** April 2005 – September 2005

**Setting:** Split-post between Inpatient units for drug and alcohol problems, Drug Treatment and Testing Order Team, and a Community Dual Diagnosis Team.

**Main models:** Cognitive-behaviour therapy, neuropsychological assessment

**Clinical experience:** I had clinical contact with 37 clients on this placement, either individually, in groups, or with my supervisors or other team members. I have used cognitive-behaviour therapy and motivational interviewing techniques for a range of addictions and co-morbid mental health problems in the clients. The placement provided experience of inpatient settings, community work and the probation service. I also facilitated groups on memory and executive functioning for 12 inpatients receiving treatment for alcohol. I completed one neuropsychology assessment. There has been a rich diversity of ethnic, cultural, social and economic conditions in this placement.

**Other experience:** Attended psychology team meetings and clinical meetings. Visited a range of local services (e.g. Drug & Alcohol teams, Methadone maintenance clinic, a residential service, a drop-in service). Attended a training day on stress and burnout and half a day on multi-family therapy.
Case report summaries

The names of supervisors and Trust details have been omitted to maintain confidentiality. Full versions of the reports are in Volume II of this portfolio.

July 2005

Years I to III
Adult Mental Health Case Report Summary

Cognitive-behavioural treatment of a 41-year-old man presenting with agoraphobia

Referral

James was a 41-year old White (British) man, with a history of agoraphobia and panic attacks. He had previously received cognitive behaviour therapy (CBT) but continued to avoid certain situations and was experiencing low mood.

Assessment

The assessment included a clinical interview, self-report measures and a review of his file. He presented with an informed view of his difficulties believing that he had agoraphobia and panic attacks which were triggered by certain thoughts or situations. During a panic attack he would become intensely anxious, experiencing dizziness, sweating and a racing heart. James said that he had fainted 12 times up until he was 14-years-old. Consequently, when he experienced a panic attack (typically in open spaces or places with no refuge) he was convinced he would faint. Unusually, after one panic incident his blood pressure was recorded and found to be very low. He identified thoughts connected to these situations such as “I’m going to faint” or “I’d better be careful”.

Relevant factors from his childhood included a move to India involving separation from a sibling and a traumatic near-drowning incident. His relationship with his father lacked affection and he described his mother as anxious and overprotective. James was a director of a company and found this stressful.

Using self-report measures he revealed mild anxiety on the Beck Anxiety Inventory (Beck et al., 1988) and he scored moderately on the Beck Depression
Case report summaries

Inventory (Beck et al., 1996). The Fear Questionnaire (Marks & Mathews, 1979) and Mobility Inventory for Agoraphobia (Chambless et al., 1985) revealed that he avoided open or enclosed spaces, bridges, auditoriums and walking on the street.

Formulation and treatment plan

James' difficulties were conceptualised and treated using the cognitive model of panic proposed by Clark (1989) and Wells (1997), where a triggering stimulus (e.g. an open space) would be perceived as a threat. This threat would make James apprehensive and elicit bodily sensations (such as breathlessness). If these bodily sensations were then catastrophically misinterpreted (e.g. “I'm going to faint”) then this would raise anxiety and apprehension, eliciting further bodily symptoms and leading to a spiral of panic. James also avoided situations that he believed would cause him to panic, and engaged in safety behaviours (e.g. staying near refuges) which served to maintain his feelings of anxiety. He would also look for the onset of physical symptoms (selective attention) which may have lowered his threshold for these symptoms and made it more likely he would misinterpret them (Wells, 1997). In addition to this, near-drowning incidents have been linked to vulnerability to panic attacks in later life (Silove & Manicavasagar, 1993) as has separation anxiety (e.g. due to poor parental attachment) by Vukšić-Mihaljević et al. (1998). His low mood was formulated as stemming from his inability to control his panic attacks.

Some of his childhood experiences of fainting seemed to be associated with situations where he was anxious and had an elevated state of physiological arousal. However, after one incident of panic his blood pressure was very low which would not be expected. Therefore an alternative explanation was considered during the intervention, where James might be showing the diphasic response pattern seen in
blood-injury phobia (Öst et al., 1984), where blood pressure and heart rate initially increase, then suddenly drop, causing the person to faint.

Accordingly, a treatment plan was devised which included cognitive and behavioural components which have been found to be effective in treating agoraphobia and panic (Roth & Fonagy, 1996).

**Intervention**

James was (re-) socialised to the CBT model (Beck et al., 1979) and given relevant information sheets. Homework tasks were used in order to consolidate skills outside of the therapy session (Clark, 1989). These included behavioural activation to help James engage in more pleasurable activities which might increase his feelings of satisfaction and reduce stress. A graded exposure programme (Butler, 1989) for open spaces was devised in collaboration with James, enabling him to confront anxiety provoking situations in a structured way. Three behavioural experiments were devised in order to test James’ beliefs about fainting and explore whether a diphasic response pattern might be occurring. Firstly, James triggered panic symptoms by exercising vigorously and then engaged in progressive relaxation (Öst, 1987). Secondly he exercised vigorously and used Öst & Sterner’s (1987) applied tension technique (which counters the diphasic response pattern). Thirdly, a hyperventilation provocation task was completed (Wells, 1997) and the results of all three experiments were compared by James. Finally verbal reattribution was used to modify his beliefs and work on relapse prevention was completed (Wells, 1997).
Outcome

Due to being very busy and a hernia operation, James cancelled several sessions which interrupted the work and made the relapse prevention component very brief. He found prioritising pleasurable activities in his schedule very difficult. On the graded exposure, he reached the penultimate stage in the hierarchy by the end of our sessions and he learned that his anxiety quickly decreased in previously feared situations. The behavioural experiments revealed that applied tension made James feel worse, whereas progressive relaxation made him feel better, which discounted the possibility of a diphasic response pattern. However he still believed he would faint, but the hyperventilation task made James realise that overbreathing could trigger his symptoms and he described this as a revelation. Repeating the measures revealed that the Beck Anxiety Inventory was fairly consistent but the Beck Depression Inventory showed a marked decrease which James related to feeling more in control of his symptoms. The Mobility Inventory showed a decrease in the situations that James avoided.

Conclusions

The intervention process confirmed the formulation of James’ difficulties in terms of the cognitive model of panic and discounted the possibility of a diphasic response pattern. Overall, the intervention was successful at reducing his symptoms and he found aspects of it as a revelation. However conflicting commitments led to less progress being made than was hoped for.

References

Please refer to Volume II of this portfolio.
People with Learning Disabilities Case Report Summary

A group intervention using cognitive-behavioural principles to raise emotional awareness in adults with learning disabilities

Referral

The Community Team for Learning Disabilities (CT-LD) had planned to facilitate a time-limited group for people with learning disabilities who were having difficulty understanding and regulating their emotions, using cognitive-behaviour therapy (CBT) principles. Referrals were sought from local services, CT-LD practitioners and the psychology waiting list.

Assessment

Referrals for ten clients were received who had problems with anger management, anxiety, loss, sadness and depression. Joint assessments were carried out by the facilitators and they also served as a means of building a therapeutic relationship (pregroup affiliation: Fletcher & Duffy, 1994). A battery of measures was used in the assessments, adapted from Whittington and Alexander (2001), Robbins and Hall (2003), and Dagnan and Chadwick (1997). The assessment served to identify clients that were suitable for the group and would also be used as outcome measures.

From these assessments, six clients were identified as suitable for the group, and were able to access automatic thoughts, were aware of different emotions, and would be able to use the cognitive model. The six clients were all White (British) and ranged in age from 17 to 58 years. There were three males and three females. All participants were motivated to attend and there appeared to be potential for
cohesiveness within the group members (Yalom, 1995). The four remaining referrals were excluded on the basis of their choice, or communication difficulties, or an inability to get to the venue (Salmon & Abell, 1996). A semi-structured carer interview was also completed by phone.

**Formulation and treatment plan**

Robbins and Hall (2003) state that problems with emotional awareness may lead to difficulties such as inappropriate reactions in social situations or other behaviours perceived as ‘challenging’ by carers (Arthur, 1999). The six group members had all presented with emotional difficulties, or challenging behaviours that were connected to emotions that they were struggling to understand and manage in an appropriate way. The problems they were facing can be explained in terms of Ellis’ (1977; cited in Beck, 1979) model, where an Activating Event is cognitively mediated by Intervening Beliefs that lead to an Emotional Consequence. It has been found that problems understanding and communicating about emotions may make it hard for people to cope when facing difficult times (Whittington & Alexander, 2001).

Four of the group members found it difficult to understand and recognise their emotions and subsequently found themselves in difficulty due to inadequate means of coping with these feelings. The remaining two had similar difficulties understanding their emotions, but in their case this manifested as frustration and anger, which resulted in problems within their residential services and social networks.

Accordingly a group based on CBT principles was planned, as research has shown that group interventions for people with learning disabilities can be an effective therapeutic approach and particularly helpful for teaching the identification and expression of emotions (Fletcher and Duffy, 1994; Salmon & Abell, 1996).
Additionally, there is evidence that cognitive-behaviour therapy can be effective in group situations (Whittington & Alexander, 2001; Robbins & Hall, 2003). A parallel carer session was also run to help with the generalization of skills (Robbins & Hall, 2003).

**Intervention**

An eight-week, closed group, was run with the initial components being mainly psychoeducational and then more participative in the later sessions. The content was based on Whittington and Alexander (2001) and Robbins and Hall (2003), and focused on recognition and understanding of emotions, connecting events to emotions, and ways of coping with strong feelings. This was delivered within a CBT framework using the theoretical model proposed by Ellis (1977; cited in Beck, 1979). Action techniques were used to raise collaboration and participation (Salmon & Abell, 1996), such as pictures (Fletcher & Duffy, 1994), video material (Robbins & Hall, 2003) and problem-solving (Hawton & Kirk, 1989). The parallel carer’s session explained some of the issues covered in the group and explored how they could support the group members on a day-to-day basis.

**Outcome**

Five of the members attended the group regularly and were administered follow-up assessments. There were small but positive improvements on the measures, suggesting that emotional awareness increased as a result of attendance at the group. For example there appeared to be a richer understanding of emotions and how events and thoughts can influence them. It was also noted that participation increased
Case report summaries

towards the end of the group and the group members were able to use the cognitive model and relate it to their lives during the sessions.

With respect to the process, the group members took ownership of the group, actively supporting each other, and were keen for the group to continue suggesting that it was attractive to them which implies a sense of cohesion which is important for group therapy (Fletcher & Duffy, 1994; Yalom, 1995). Follow-up carer interviews were not particularly informative as they found it difficult to identify changes in the participants, although one carer reported a group member as talking about their feelings more.

Conclusions

The group members were keen to attend a similar group in the future, suggesting that the process of attending had been beneficial. There were some positive quantitative changes on the outcome measures and verbal reports of satisfaction with its content. However, the measures may not have been sensitive enough to fully detect changes in the group members, and the carer interview may benefit from being revised.

References

Please refer to Volume II of this portfolio.
Children and Families Case Report Summary

Solution-focused therapy with a family with two young children and a single mother with mental health issues, presenting with child protection concerns

Referral

The family were referred to a multi-agency service (MAS) specialising in complex cases. The children, James (five-years-old) and Harry (two-years-old), had been taken into care following Police charges for abandonment by their mother (Gina) and neglect by their father (Lester) after a crisis in their relationship. The referral requested help rehabilitating the children to their mother’s care.

Assessment

The assessment included clinical interviews with Gina, her social worker, and a review of her file. Gina presented as being emotionally unstable and this appeared to be impacting on her parenting ability. She believed her difficulties in caring for her children were related to her childhood. Gina was born in England to Maltese parents and had a disrupted childhood, being raised at times by her father, her grandparents and an aunt. Gina described her grandparents as cruel, terrifying and physical abusive. Although she could not recall specific sexual abuse she felt certain that something had happened. She was also physically and emotionally abused by her father and stepmother.

Gina felt vulnerable, inadequate and “like a young girl” during confrontations with people. She also described having flashbacks of her childhood, out of body experiences and a numbness and lack of pleasure during sex. Apart from the incident of neglect, the children appeared well and healthy. However Gina found it difficult to
set boundaries and expressed uncertainty about how to appropriately parent the children. Gina also experienced strong feelings of anger, depression and anxiety (in social situations).

Using solution-focused assessment techniques such as the Miracle Question and scaling questions (Weiner-Davis et al., 1987; de Shazer, 1988), Gina was able to identify what life would be like if her problems went away. She rated herself at a ‘6’ in terms of how bad her problems were and ‘1’ for anger (1=worst, 10=best). A risk assessment was completed which did not indicate any risk of harm to herself or the children, but she was given information on relevant support agencies in case her feelings of low mood increased.

**Formulation and treatment plan**

As Gina had prolonged childhood exposure to physical, emotional and possibly sexual abuse, it would appear that the difficulties she experienced as an adult were connected to her childhood. She met the criteria for chronic post-traumatic stress disorder (Diagnostic and Statistical Manual of Mental Disorders—Fourth Edition, 1994), as she re-experienced events, avoided stimuli associated with the trauma and showed increased arousal. When Gina become angry or anxious she appeared to dissociate and this was often in response to situations that were reminiscent of her abuse. She also experienced anxiety and depression, and by her own admission showed some symptoms of borderline personality disorder. It appeared that her childhood experiences had prevented her from learning appropriate parenting skills and she feared she may harm her children by parenting inappropriately. Despite this, the professionals involved believed Gina could parent appropriately.
Gina’s mental health difficulties were impacting on her parenting ability and subsequently affecting the welfare of her children (Smith, 2004). Solution-focused therapy (de Shazer, 1988) has been found to be effective with a range of problems (Ginerich & Eisengart, 2000). This approach would allow a focus on Gina’s strengths and resources to overcome difficulties, rather than using the unconscious defences of her childhood. Therefore the treatment plan included educating Gina about her symptoms, providing an opportunity to talk about her childhood in a safe way (Dolan, 1991), focusing on exceptions to the problems, and using multi-disciplinary meetings to set goals and review progress.

**Intervention**

There were 12 individual therapy sessions, each of which were an hour long and included a break to reflect on the work. After the break, feedback was offered to Gina which included ‘compliments’ related to strengths, resources or exceptions (de Shazer, 1988). Gina was given information about post-traumatic stress and dissociation. An important discovery was that Gina realised that she would become angry or dissociate when she felt powerless or out of control. To tackle the dissociation, Gina was shown how to reconnect to the present (Dolan, 1991). Discussions about her childhood followed guidelines by Dolan (1991) so that Gina did not feel overwhelmed. Throughout the sessions, a focus was placed on identifying her strengths, resources and exceptions to the problems which enabled her to develop an appropriate plan in order to protect her children if a future crisis occurred. Some behavioural advice was given to help her parent her children and Gina was lent a copy of the book “Try and make me” to assist with this (Levy & O’Hanlan, 2002).
**Outcome**

An effective therapeutic relationship was crucial as Gina was anxious about the process. By the fifth session Gina rated herself at 10 (perfectly calm) in terms of her anxiety about the sessions (she started at 7). Gina found the information about her difficulties helpful and normalising. Simply understanding her symptoms and what might trigger her anger and dissociation helped her to remain calmer in previously difficult situations. She also made progress on all of the goals identified from the Miracle Question and she felt more stable and secure by the end of our work, which was corroborated by the social worker’s experience of Gina. Her anger improved substantially to a ‘9’ by the end. However, she experienced some setbacks as she was arrested for driving whilst disqualified and was diagnosed with Behcets syndrome. Despite this, she felt the therapy had helped her to cope more effectively and towards the end of the work she was rehabilitated with her children.

**Conclusions**

Gina and her family made substantial progress, however, as there were outstanding issues her treatment was continued by another member of the MAS. The use of solution-focused therapy proved effective at developing Gina’s strengths and resources in order to help her overcome her difficulties.

**References**

Please refer to Volume II of this portfolio.
Case report summaries

Working with Older People Case Report Summary

*Extended assessment of an 80-year-old woman presenting with anxiety and possible cognitive deterioration*

**Referral**

Molly was an 80-year-old White (British) woman who was referred by her community psychiatric nurse (CPN) for an assessment of her anxiety and panic attacks.

**Assessment**

The initial assessment comprised a clinical interview using the psychology department assessment form and a review of her file. Molly described having negative thoughts about having a blackout when she was out, and frequently experienced giddy turns when she stood up which she thought might be connected to her vertigo. However she did not have as many giddy turns when she attended the Day Hospital. She had a fall in 2003 which Molly felt was the start of her loss of confidence.

Molly described her childhood as very good although she said she wasn’t very good at school and left at 14 without any qualifications. After school she had various jobs as shop assistants until she retired at the age of 58. She said she had a good relationship with her parents. There was a suggestion that her parents may have had anxiety. Molly was married for over 50 years until her husband died of cancer in 1997. She missed him a lot and felt that things would be different if she had someone in the house. In 2003 her sister died whom she was very close to and at present she was visited by her only son once a week.
The most significant factor from her medical history appeared to be her Ménière’s disease which is a progressive condition that can involve unpredictable attacks of giddiness, nausea and hearing problems (Osborne, 2004). On several occasions she had become giddy and blacked out. In 2001 she blacked out at the top of the stairs and fell, suffering a closed dislocation of the cervical spine and a fracture of the pubis. She stayed in hospital for several months and she now copes with her Ménière’s by standing up slowly and avoiding sudden movements. She declined to have a CT scan in 2001.

**Formulation and action plan**

The initial assessment revealed that Molly was experiencing pervasive physical health problems that had an impact on her functioning. Therefore the reduction in her confidence and anxiety about leaving home appeared to be a product of her difficulty in managing the symptoms of Ménière’s disease. The cognitive model of anxiety (Clark, 1989) can explain Molly’s situation as her interpretation of events as dangerous was leading her to feel anxious. However, her negative thoughts were realistic interpretations of her situation due to her Ménière’s disease (Moorey, 1996) and not distorted thought patterns as described by Beck (1963).

Further to the cognitive factors described above was the fact that Molly appeared to have difficulty with her memory during the assessment. Difficulties with memory can be a symptom of dementia or other brain disorders (Green, 2000). Therefore it was possible that Molly was experiencing the onset of cognitive deterioration which has a prevalence of about 30% in 80-year-olds and is more common in women (Ritchie & Lovestone, 2002). Therefore it was important to
complete further assessment to explore this possibility and an extended assessment was planned.

**Extended assessment**

The following assessments were used to explore her cognitive functioning:

- The Middlesex Elderly Assessment of Mental State (MEAMS: Golding, 1989) was used as a screening measure for gross impairment in the major cognitive domains.
- The Wechsler Test of Adult Reading (WTAR: Wechsler, 2001) was used to estimate Molly’s pre-morbid level of intellectual functioning.
- The Wechsler Adult Intelligence Scale – Third Edition (WAIS-III: Wechsler, 1997) provided a summary of Molly’s cognitive functioning across a number of domains.
- The Rivermead Behavioural Memory Test (RBMT: Wilson *et al.*, 1985) is an ecologically valid measure of everyday memory ability.

**Outcome**

Molly’s performance on the MEAMS fell in the borderline range indicating that further assessment would be beneficial, although she was slightly anxious and this may have influenced her performance. From the WTAR, Molly had a predicted full-scale IQ in the extremely low to average range. Using the WAIS-III, her actual full-scale IQ was in the low average to average range which is slightly higher and a more reliable test than the WTAR. Therefore there was no evidence of a global deterioration in her cognitive abilities. On the WAIS-III there was a marked discrepancy between her verbal and non-verbal abilities, however this may have been
influenced by her limited education and may not therefore be a deterioration in her abilities (Kaufman & Lichtenberger, 1994). On the RBMT, she performed above the average level expected for an 80-year-old, hence her everyday memory appeared to be good.

Conclusions and recommendations

The extended assessment indicated that Molly was not showing any signs of cognitive deterioration other than that of normal aging (Stuart-Hamilton, 1999). Therefore the original formulation still stands, as her difficulties in leaving home appear to be connected to her physical health problems rather than cognitive deterioration. From the extended assessment, it was apparent that Molly’s verbal abilities were not the strongest part of her cognitive profile. Therefore it is likely that therapy focusing on verbal strategies may not be best suited to Molly. Accordingly, as a result of the assessment it was recommended that attempts to help Molly should focus on enhancing her strengths rather than trying to work with areas of deficit. In particular it was recommended that practical support to help her access community facilities and become less isolated would be the most effective way of helping her to regain her confidence.

References

Please refer to Volume II of this portfolio.
Neuropsychology Case Report Summary

Neuropsychological assessment of a 34-year-old woman presenting with HIV-1

Referral

Joan was a right-handed, 34-year-old White (British) woman diagnosed with HIV-1. At the time of referral she had been admitted to hospital with severe depression with psychotic symptoms and a neuropsychology assessment was requested to inform her diagnosis and management.

Assessment

From the referral information and a literature review an assessment was planned. This included a clinical interview (corroborated by her sister) and neuropsychological testing. On presentation, Joan described problems with her memory, for example she would forget conversations and people she had met. Her memory for more remote events appeared preserved. She believed these difficulties had followed her depression the previous year, which appeared to be triggered by a period of stress and she remained in hospital for five months.

Joan described school as “horrible” and it was not clear whether she passed any formal qualifications. Following school she had a number of cleaning and catering jobs. She contracted HIV-1 from an ex-partner and following her diagnosis ten years ago she did not pursue any treatment for it. Her present relationship produced a son (he did not have HIV-1) and a daughter who tragically died from leukaemia in 1998. There were two other losses for Joan as her mother and grandmother died in subsequent years and she felt that she had never grieved properly.
Following her admission to hospital last year, she had a CT scan which revealed cortical atrophy. A subsequent MRI scan revealed extensive white matter change in both cerebral hemispheres, with predominant involvement of the frontal lobes extending back to the parietal lobes. It was concluded that these changes were consistent with HIV-1 encephalitis or progressive multifocal leukoencephalopathy.

Joan was not aware of her CD4 count, but had started a combination antiretroviral medication for her HIV-1, and fluoxetine and olanzapine for her mental health needs. There was no history of neurological illness within her family. A psychiatry report indicated that Joan was cognitively impaired as she scored below the 25th percentile on the Mini-Mental State Examination (Folstein et al., 1975). It also indicated that she was unsafe to carry out some activities of daily living (e.g. driving). Joan consumed about 15-18 units of alcohol per week.

**Hypothesis**

It was hypothesised that Joan would show impairment in her cognitive functioning consistent with HIV-1 infection and the white matter changes found in her MRI scan.

**Neuropsychological testing**

A comprehensive battery of tests was planned using recommendations from Butters et al. (1990). The assessments were completed over two sessions. The main domains assessed were memory, psychomotor skills, reaction time, motor functions and executive functioning, which have been found to be affected in HIV-1 (Snyder & Nussbaum, 1998). The tests were drawn from a range of neuropsychological instruments.
Case report summaries

Presentation/behaviour during the assessment

There were no signs of tremor, unsteadiness or abnormalities in her gait, although she was noticeably slow. She appeared somewhat careless during some of the tasks and was a little impulsive and anxious at times.

Neuropsychological test findings

The assessment results were compared to Joan’s pre-morbid cognitive functioning and normative data on the tests. Joan’s pre-morbid level of cognitive functioning matched her educational and occupational history and was in the low average to average range. Assessing her current intellectual ability revealed similar results and indicated that her global cognitive abilities had not deteriorated. With respect to memory she showed impairment in both her verbal and non-verbal memory for both immediate and delayed recall. However she performed well on tasks of auditory working memory, and verbal and non-verbal learning.

Her executive functioning showed mixed results, as she had difficulty with her attention on some tasks but not others. She found tasks of divided attention particularly difficult and showed impairment on letter fluency, but not category fluency which suggested that her semantic knowledge was preserved. There were mixed results in her speed of information processing and motor abilities, but no overall indication of impairment. Joan showed no impairment on tests of visuospatial ability and her scores on the Hospital Anxiety and Depression scale (Zigmond & Snaith, 1983) were both low.
Conclusions and recommendations

From her clinical history there was no reason to suspect that Joan had atypical hemispheric lateralization of function and there was no incidence of head trauma or neurological disease. Joan’s cognitive functioning was generally in line with her estimated pre-morbid cognitive functioning, with the exception of the impairment found in her verbal and non-verbal memory and some of the executive functioning tests (divided attention).

Therefore, the test findings were consistent with the white matter changes found in her MRI scan, as the impairment in executive functioning is associated with the frontal lobes and the impairment in her memory corresponds to bilateral damage to her temporal lobes. It did not appear that mental health issues were influencing her performance as her self-reported anxiety and depression were low.

In terms of diagnosis, Joan met the criteria for a diagnosis of probable minor cognitive/motor disorder (American Academy of Neurology, 1991), as she had acquired deficits in two neuropsychological domains for longer than one month and it was influencing her day-to-day functioning. The cause of her brain lesions was unclear following the assessment, as they could have been a product of HIV-1 or an opportunistic infection (progressive multifocal leukoencephalopathy). Overall, the lesions appeared to be having a mild influence over her day-to-day functioning.

In terms of recommendations, it was suggested to Joan that she use her learning ability to help her with day-to-day difficulties with her memory, as repetition improved her retention of information. It was also suggested that she clarify with the psychiatry department why they had told her she couldn’t drive, as there was no gross deficit identified within this assessment that would prevent her from driving or
working. Finally, it was recommended to Joan that she reduce her alcohol intake as this can suppress the immune system (Kelleher, 2004).

References

Please refer to Volume II of this portfolio.
PART 3:

RESEARCH DOSSIER
Introduction to the Research Dossier

The research dossier contains the Service Related Research Project (submitted in Year I), the Qualitative Research Project (submitted in Year II), the Major Research Project (submitted in Year III) and the Research Logbook. Some details have been changed to maintain the anonymity of those involved.
A survey of service-user satisfaction in a crisis service

Service Related Research Project

Word Count = 2977

June 2003

Year I
Abstract

Introduction

Consumer satisfaction has become increasingly important as a means of evaluating services (Hutchings and Pope, 1998), however completing studies can be problematic (Stallard & Chadwick 1991). Despite this, consulting service-users is a key feature of clinical governance (Murray et al., 2002) and it has also been emphasised in recent government policy (Department of Health, 2002).

Aim

The aim was to design a questionnaire to assess service-user satisfaction within a crisis service, drawing on appropriate literature to make it as valid and reliable as possible.

Method

A questionnaire was designed in consultation with staff members, service-users, the research literature and the aims and objectives of the crisis service. The questionnaire was administered to 21 service-users immediately after they used the crisis service.

Results

The general level of satisfaction with the crisis service was high, with 85% of the service-users reporting they were satisfied with it. Satisfaction with specific aspects was lower and acceptable satisfaction levels were found in relation to the service’s aims and objectives. Content analysis of some open-ended questions
revealed that people were satisfied with the crisis service environment but were less satisfied with their interaction with the staff.

**Discussion**

The results of this survey were found to be similar to previously published studies and some reasons for the variation in satisfaction scores are explored. Suggestions for future research and the need for the survey to be repeated and acted upon are discussed.
Acknowledgements

This research would not have been possible without the help of a number of people. Firstly, I am grateful to the staff working at the crisis service for helping with the development of the questionnaire and then subsequently administering it. Also, I am grateful to Rethink, who supported this process by setting up the focus group. More specifically, I would like to thank Adrian Morton, Mick Finlay, Victoria Cooper-Roberts, Betty Loveland, Dermot Hennessy, Vicky Sutton and Sophie Mooney for their support at various times. Finally, I would like to thank the service-users for taking the time to help out with this research.
Introduction

Clinical governance is a framework implemented by the UK government to improve and maintain standards of care within the NHS (Gillen and Taylor, 2002). It also aims to create an environment where evidence-based practice underpins the work of health professionals. Murray et al. (2002) observe that clinical governance contains seven components, with audit and service-user involvement being two that are important in this study.

Clinical Audit

The aim of clinical audit is to improve healthcare (Aveline and Watson, 2001). It has been defined as a methodical and critical analysis of the quality of services and a means of service evaluation (Department of Health, 1989). Crombie, Davies, Abraham and Florey set out the audit cycle (as cited in Cape, 1995) which involves establishing standards for a service, comparing them with actual practice, implementing change if standards are not met and then repeating the audit process.

Service-user consultation

Hutchings and Pope (1998) have recognised that consumer satisfaction has become increasingly important in service evaluation. They state that satisfaction surveys are straightforward to complete and meet government demands for eliciting and acting on service-user views (Department of Health, 1998; 2002). Gelsthorpe (2001) believes that user involvement is crucial and satisfaction should be regularly assessed (Stallard & Chadwick, 1991).
Reports of consumer satisfaction surveys have become increasingly prevalent, covering a range of NHS services and examining the most effective methodologies. They are a means of monitoring service quality over time, however, satisfaction may not be directly indicative of quality of care (Cape, 1991) as patients may be grateful for whatever service they receive (Stallard, 1996).

General levels of satisfaction with mental health services, using a variety of methodologies, are commonly reported at 90% or more, although satisfaction with specific aspects of a service are slightly lower but rarely below 80% (Stallard, 1996). Stallard notes that there has been a tendency towards validating good practice rather than identifying areas of dissatisfaction and important matters of validity are rarely considered (Hutchings & Pope, 1998).

**Issues in consultation**

Collecting service-user views can be problematic. Staff may feel they are constantly being scrutinised, may fear that evaluation results will be used against them and consider that the survey has not captured important facets of their work (Barker et al., 1994). Jeffery et al. (1997) found that more vocal service-users may be discredited as unrepresentative of their peers (e.g. they have “an axe to grind”) and their comments discounted on account of their mental illness. However, Trivedi and Wykes (2002) believe that their views should be taken seriously as they are formed through their experiences of the service and Torrens and Harris (1996) found that service-users knew what they wanted. A further problem is that there may be disagreement between the issues considered important by service-users, staff members and mental health researchers, hence all parties should be consulted (Powell et al., 1996).
Methodological issues

In a discussion of some of the difficulties with satisfaction surveys, Stallard and Chadwick (1991) report that studies can be inundated with sampling bias, acquiescence, reactivity, social desirability and confused terminology. They also state that evaluation tools need to be clearly focused, otherwise it will not be possible to identify which aspects are unsatisfactory. Despite the potential difficulties outlined above, Stallard and Chadwick (p.3) believe that these risks can be reduced by ‘involving consumers in the construction of questionnaires, blanket survey techniques, random sampling, and the use of data gatherers separate from service providers.”

Aims and objectives

The current research, a service-user satisfaction survey, evolved from an audit of clinical governance procedures within a crisis service. The crisis service is a supportive environment, offering assessment, intervention and respite during an acute mental health crisis. Thus the aim of this project was to design a reliable and valid questionnaire to collect service-user views, administer this to a sample of service-users and relate the results to the standards set in the crisis services’ operational policy.
Method

Design

The design of the satisfaction survey was a non-randomised, one-group posttest-only design (Barker et al., 1994). The participants completed a specially designed questionnaire containing fixed-choice and open-ended questions (see Appendix 1).

Setting

The questionnaires were administered at the crisis service, which is a small, community-based, out-of-hours service for up to six adults experiencing an acute mental health crisis. The service-users could phone or be referred by a professional and request a brief period of respite. If the service-user phoned, the qualified staff would visit them to complete an assessment and bring the person to the crisis service for the night if appropriate.

Participants

The data were collected between 14th March and 21st April 2003 and 27 people used the service, of which 15 were male and 12 female. Of these, 20 people responded, one of whom participated twice making a total of 21 questionnaires. This is a response rate of 74% which is better than the commonly reported rate of 50-60% (Stallard, 1996). The respondents' ages were requested in age bands to maintain their anonymity and the mode was 31-40 years, all of the participants being over 20 years.
Materials

A significant part of this research involved designing the questionnaire. To ensure that it had content validity, three sources of items for the questionnaire were consulted: the crisis service staff, the service-users and the research literature.

Content validity

Staff consultation

As suggested by Powell et al. (1996), a letter was sent out to all of the crisis service staff, asking them to list the questions that they felt needed to be addressed by the survey. Thirteen out of 38 people replied and the issues they generated are included in Appendix 2. In addition to raising validity, staff consultation was felt to be important to create a sense of investment in the process to help its administration, and avoid potential negative reactions to the results (Barker et al., 1994).

Service-user consultation

Fitzpatrick (1991) recommended eliciting service-user opinions at an early stage and focus groups have been advocated as a means of achieving this (Powell et al., 1996; Ebrahim, 1999; Jeffery et al., 1997; Tilbrook, 1997). Accordingly, a focus group was arranged through a charity organisation operating a drop-in centre for people with severe mental illness. Of the seven people that attended, all but one had used the crisis service before.

The focus group lasted for 90 minutes and the audit co-ordinator acted as a co-facilitator. The members were assured that the discussion was confidential and the aim of the research was explained to them, stating that they did not have to participate if they did not want to. One question was asked: “What questions do you think it is
important to ask in a service-user satisfaction survey of the crisis service?”. Once an
issue was raised, the facilitators developed it into an item for the questionnaire, which
was then either approved by the participants or reworded with their help (see
Appendix 3).

Operational policy

To help with the selection of questions, the operational policy aims and
objectives were consulted (see Table 1).

### Table 1: Operational policy links

<table>
<thead>
<tr>
<th>Crisis Service Operational Policy Aims and Objectives</th>
<th>Links to the Satisfaction Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong> The Crisis Service is an out of hour’s ‘open referral’ provision that compliments the daytime mental health services. This will ensure the provision of a 24hr access to mental health services for clients in crisis.</td>
<td>Questions on how easy it was to contact and access the crisis service.</td>
</tr>
<tr>
<td><strong>2</strong> The service aims to engage clients who are experiencing a level of psychological distress where their mental state indicates the need for supportive interventions.</td>
<td>Questions relating to how it easy it was to talk and interact with the staff team.</td>
</tr>
<tr>
<td><strong>3</strong> To provide immediate assessment and intervention, either to resolve the difficulty or to alleviate the situation until more appropriate care is available.</td>
<td>Questions relating to action taken by the staff team and their understanding of the crisis.</td>
</tr>
<tr>
<td><strong>4</strong> To promote continuity of care through effective communication and collaboration with other services.</td>
<td>This aim relates to experiences following contact with the crisis service, therefore outside the scope of this survey.</td>
</tr>
<tr>
<td><strong>5</strong> To ensure that clients are involved, as far as possible, in the planning and provision of their care.</td>
<td>Questions relating to the service-users’ expectations of the service and how involved they were.</td>
</tr>
<tr>
<td><strong>6</strong> To monitor and review service delivery at regular intervals to ensure the provision of the service is in keeping with national local policy guidelines, initiatives and developments.</td>
<td>The audit addresses this aim.</td>
</tr>
</tbody>
</table>

Literature search

In addition to consulting staff and service-users, a literature search was
conducted. A number of articles were identified (see Table 2), the majority of which supported questions developed from the staff, focus group and operational policy.
Table 2: Research identifying relevant themes

<table>
<thead>
<tr>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Arscott et al. (1997)</td>
</tr>
<tr>
<td>2 Campbell (1996)</td>
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<tr>
<td>3 Cantley (1990)</td>
</tr>
<tr>
<td>4 Larsen et al. (1979)</td>
</tr>
<tr>
<td>5 Murray &amp; Hewitt (1996)</td>
</tr>
<tr>
<td>6 Powell et al. (1996)</td>
</tr>
<tr>
<td>7 Sexton (1992)</td>
</tr>
<tr>
<td>8 Stallard (1996)</td>
</tr>
<tr>
<td>9 The Mental Health Foundation (2002) – [&quot;TMHF&quot;]</td>
</tr>
<tr>
<td>10 Tilbrook (1997)</td>
</tr>
</tbody>
</table>

**Question selection**

Questions from the four sources were listed and overlaps were identified. From this a matrix was constructed that included all of the questions elicited from the focus group. Alongside this was noted whether the theme of the question was also supported by the staff members, the research literature and the operational policy aims and objectives (see Appendix 4). In total there were 36 questions, four of which were not included in the final questionnaire to reduce its length. Table 3 shows the items grouped into logical domains.

Table 3: Question domains

<table>
<thead>
<tr>
<th>Domain</th>
<th>Example Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessing the crisis service</td>
<td>&quot;How many times did you call before you got through?&quot;</td>
</tr>
<tr>
<td>About visiting the crisis service</td>
<td>&quot;Did you feel comfortable in the crisis service?&quot;</td>
</tr>
<tr>
<td>Your experience of the crisis service</td>
<td>&quot;Now that you have used the crisis service, do you feel that you understand the services it can offer people?&quot;</td>
</tr>
<tr>
<td>Your interaction with the staff team</td>
<td>&quot;Were you made to feel welcome at the crisis service?&quot;</td>
</tr>
<tr>
<td>Action taken to help you</td>
<td>&quot;Were you satisfied with the action taken to resolve your problem/crisis?&quot;</td>
</tr>
<tr>
<td>Your general feelings about the crisis service</td>
<td>To what extent has the crisis service met you current needs?&quot;</td>
</tr>
</tbody>
</table>
**Final refinement**

Fitzpatrick (1991) notes that research has not found any differences between direct questions about satisfaction and indirect ones which infer satisfaction, hence a mixture were used to investigate satisfaction with different aspects of the service. Also, three options were used on the questions (except where the information was factual) to increase reliability (Fitzpatrick). Another point by Fitzpatrick is that episode specific questionnaires should more accurately reflect user experience and can reveal areas of dissatisfaction (Hutchings & Pope, 1998). The questionnaire was specific to the service-users' current stay and was completed immediately prior to them leaving so their recall of the experience should be accurate.

Four open-ended questions were included, as this can reduce the under-reporting of dissatisfaction found in fixed-choice questions and allow the service-user to indicate areas they feel are important and need attention (Firth & Bucknall, 2002; Arscott et al., 1997; Stallard, 1996; Cape, 1991). The order of responses in the fixed-choice items was also varied to reduce response acquiescence (Fitzpatrick, 1991). Finally, the questionnaire was made anonymous, as Justice and McBee (1978) observed that participants may fear that their service will be withdrawn if they do not express satisfaction.

Four of the questions were slightly adapted from the Client Satisfaction Questionnaire (CSQ-8), but retained their overall content (Larsen et al., 1979). These were included as they have been found to be effective and reliable (Larsen et al., 1979; Attkisson & Zwick, 1982). See Table 4 for examples.
Table 4: Example questions

<table>
<thead>
<tr>
<th>No.</th>
<th>Question examples</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>Do you feel that the staff understood your problem/crisis?</td>
<td>Yes Partly Not really</td>
</tr>
<tr>
<td>19</td>
<td>Do you believe that the staff care about your well-being?</td>
<td>Not really A little bit A lot</td>
</tr>
<tr>
<td>26</td>
<td>To what extent has the crisis service met your current needs?</td>
<td>Almost all of my needs have been met Most of my needs have been met Only a few of my needs have been met None of my needs have been met</td>
</tr>
<tr>
<td>27</td>
<td>In an overall, general sense, how satisfied are you with the service you received?</td>
<td>Very Satisfied Mostly Satisfied Indifferent or mildly satisfied Quite dissatisfied</td>
</tr>
<tr>
<td>30</td>
<td>Could you say what the staff do well?</td>
<td>An example of one of the four open-ended questions included. This provided an opportunity to identify positive aspects of the service to balance against the negative.</td>
</tr>
</tbody>
</table>

Pilot Study

A draft of the questionnaire was given to the audit co-ordinator and a clinical psychologist to check the item wordings. Some minor alterations were made and a Flesch Analysis was conducted (see Table 5).

Table 5: Readability statistics

<table>
<thead>
<tr>
<th></th>
<th>Flesch score</th>
<th>Flesch-Kincaid Grade level</th>
<th>Equivalent educational reading age</th>
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<tbody>
<tr>
<td>Information sheet</td>
<td>72.0</td>
<td>7.4</td>
<td>12-13 year old</td>
</tr>
<tr>
<td>Questionnaire</td>
<td>87.8</td>
<td>3.8</td>
<td>8-9 year old</td>
</tr>
</tbody>
</table>

145
The questionnaire was piloted on a male service-user who consented to take part. He identified no problems, hence the questionnaire was deemed satisfactory to administer to a larger sample.

**Procedure**

The questionnaire was offered to all individuals using the crisis service during a six-week period. Detailed instructions were given to the crisis service staff, asking them to offer each service-user the questionnaire approximately half an hour before they departed. An instruction sheet explained the questionnaire’s purpose, stating that the questionnaire was anonymous and that it was their choice to complete it or not.

Once completed, they placed the questionnaire in an attached envelope and posted it into a sealed box, located in the service-user’s lounge. Similarly, if a person chose not to participate, they were asked to indicate this and post the questionnaire so that the staff would not know whether they had completed it. The questionnaires were collected on a weekly basis.
Results

From the 21 completed questionnaires, one person’s fixed-choice question responses were excluded due to the majority of the items being missed, but their responses to the open-ended questions were included in the qualitative analysis.

Descriptive statistics

The percentage frequency of responses for each fixed-choice question are presented in Appendix 5. Single items were combined to produce domains of questions, corresponding to the sections of the questionnaire (as described earlier). Table 6 contains the results and Appendix 6 contains a more detailed breakdown of how the scoring was calculated. The open-ended items, three questions that provided information and one that did not fit into the domains were treated separately (Questions: 1, 2, 13, 24).

Table 6: Grouped satisfaction scores

<table>
<thead>
<tr>
<th>Theme of the domain</th>
<th>Corresponding item numbers</th>
<th>Dissatisfied percentages*</th>
<th>Satisfied percentages*</th>
<th>Missing data/ not applicable†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessing the crisis service</td>
<td>3, 4, 5, 6</td>
<td>45%</td>
<td>55%</td>
<td>42 of 80 possible responses (44.7%)</td>
</tr>
<tr>
<td>Visiting the crisis service</td>
<td>7, 8, 9, 10, 11</td>
<td>16%</td>
<td>84%</td>
<td>3 of 100 possible responses (3%)</td>
</tr>
<tr>
<td>Interaction with the staff</td>
<td>14, 15, 16, 17, 18, 19</td>
<td>37%</td>
<td>63%</td>
<td>1 of 120 possible responses (0.8%)</td>
</tr>
<tr>
<td>Action taken to help you</td>
<td>20, 21, 22, 23,</td>
<td>37.5%</td>
<td>62.5%</td>
<td>16 of 80 possible responses (20%)</td>
</tr>
<tr>
<td>General satisfaction</td>
<td>26, 27, 28, 29</td>
<td>15%</td>
<td>85%</td>
<td>7 of 80 possible responses (9%)</td>
</tr>
</tbody>
</table>

* These percentages have been calculated with the missing data excluded.
† This column includes both the frequency of missing data (due to no response from the participant) and if a question was not applicable (for example, a person could not express satisfaction with an intervention, if they did not receive any form of intervention during their stay).
The results show that the participants were at least 55% satisfied across all of the domains. The highest domain was general satisfaction reaching 85% and the lowest level of satisfaction corresponded to accessing the crisis service.

The majority of the questions reported that the service was satisfactory, but over 80% of the sample expressed high satisfaction with the level of personal privacy and being made to feel welcome. However, there were some less positive findings, with almost a third wanting more contact with the staff and only 40% feeling that they could talk to the staff whenever they wanted to.

Also, 60% of the participants were unclear about what services were actually offered and one person said that they probably wouldn't use the service again if they needed help. Finally, a lack of consistency is implied by the finding that two-thirds of respondents who had used the crisis service before said that they had experienced differences in the ways that staff teams in the service had worked with them.

Comparison with operational policy aims

As described earlier, five of the six operational aims could be evaluated from the survey. Table 7 reports the satisfaction levels from the questions that correspond to the operational policy aims.
Table 7: Satisfaction relating to operational aims

<table>
<thead>
<tr>
<th>Summary of the aim/objective</th>
<th>Corresponding item numbers†</th>
<th>Percentage satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  24-hour crisis service</td>
<td>3, 4, 6, 7, 14, 15</td>
<td>67%</td>
</tr>
<tr>
<td>2  Will engage clients in</td>
<td>4, 6, 16, 17, 19, 22, 28, 29</td>
<td>77%</td>
</tr>
<tr>
<td>psychological distress</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3  Provide immediate help to</td>
<td>5, 9, 17, 20, 21, 26, 27, 29</td>
<td>68%</td>
</tr>
<tr>
<td>resolve the situation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5  Involve clients in</td>
<td>11, 13, 23</td>
<td>60%</td>
</tr>
<tr>
<td>delivery of their care</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

† Percentage satisfaction was calculated from the total number of satisfied and dissatisfied responses from each of the relevant questions. Missing data was excluded and the guidance in Appendix 10 was followed.

Satisfaction relating to the operational policy aims and objectives is mixed, with a relatively low level of satisfaction (60%) for ‘involvement in the delivery of care’. ‘Access to the service’ and ‘help given to resolve the crisis’ were more respectable, but only ‘engagement by the service’ produced a majority of satisfied responses.

**Qualitative analysis**

Content analysis is a technique used to make inferences about text (Weber, 1990). It was used to interpret the four open-ended questions, but as there were a small number of comments (see Appendix 7), the analysis was descriptive rather than interpretive. Analysis of the data was also completed by another trainee clinical psychologist, however the first set of codes did not produce a satisfactory level of reliability. After they were revised, five specific codes were established covering three broad themes (see Appendix 8). The inter-rater reliability was repeated, producing an excellent level of reliability using Cohen’s Kappa, K = 0.95 (Robson, 1993; see Appendix 9 and 10). Table 8 contains a frequency count for the revised codes.
Table 8: Content Analysis codings for the open-ended questions

<table>
<thead>
<tr>
<th>Coding Frame</th>
<th>Codings</th>
<th>Frequency of codings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suggestion to improve the service</td>
<td>A) A comment which makes a precise suggestion for how the service could be improved.</td>
<td>7</td>
</tr>
<tr>
<td>Contact with the staff</td>
<td>B) This includes positive comments relating to any form of interaction (talking or otherwise) between the staff and the clients.</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>C) Negative comments made about interactions with the staff or clients, which could be talking or other contact between them.</td>
<td>14</td>
</tr>
<tr>
<td>The service and its environment</td>
<td>D) Positive comment about the service, which may be a specific part of the service or a more general comment about it.</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>E) A negative comment about specific parts of the service or more general aspects.</td>
<td>3</td>
</tr>
</tbody>
</table>

Total number of coded items | 57 |

The content analysis showed that positive comments relating to interactions with the staff were the most common (e.g. the staff were “friendly” or “caring”). However there were also a number of negative comments about the staff, most of which were related to them being “busy” or “unapproachable”. There were few negative comments about the crisis service environment, with the majority being positive and a number of people expressed thanks for the service. In addition, there were seven suggestions for how to improve the service (see Table 9).

Table 9: Suggestions for improvement

<table>
<thead>
<tr>
<th>Number</th>
<th>Service-user suggestions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Staff for phone duty only</td>
</tr>
<tr>
<td>2</td>
<td>A small dishwasher could be installed</td>
</tr>
<tr>
<td>3</td>
<td>Pudding to eat after supper</td>
</tr>
<tr>
<td>4</td>
<td>Change the mattresses</td>
</tr>
<tr>
<td>5</td>
<td>Change the length of stay</td>
</tr>
<tr>
<td>6</td>
<td>Have a doctor in the house</td>
</tr>
<tr>
<td>7</td>
<td>More constructive activity between staff and clients</td>
</tr>
</tbody>
</table>
Discussion

The satisfaction levels in this study reflect those commonly found in the literature. The general satisfaction domain score of 85% fits the expectations reported by Fitzpatrick (1991) and the more specific nature of the other domains may explain why they produced lower satisfaction (Fitzpatrick). In relation to the operational policy aims the results were mixed, but the crisis service achieved a high level of satisfaction with respect to engaging the service-users.

Whilst the high level of general satisfaction is encouraging, caution is necessary as it may be an inflation of what people actually feel. McGeorge (1994) suggests that social desirability, the Hawthorn effect (the fact that the service is expressing concern) and cognitive consistency theory (a need to justify the decision to attend the service), may lead the person to produce favourable responses as they feel that this is more acceptable.

Service-users may also report satisfaction due to fear that the service will be withdrawn or withheld in the future if they do not, and making the questionnaire anonymous may not be enough to allay their concerns (Justice & McBee, 1978). In addition, Arscott et al. (1997) state that responses may be more positive if the service holds power over an individual and people may feel undermined and uncomfortable about their hopes of recovery if they criticise a major source of support in their lives.

These factors could have inflated satisfaction ratings, but this is balanced somewhat by the fact that the participants were relatively young, which has been associated with increased dissatisfaction (Fitzpatrick, 1991; McGeorge, 1994). Therefore, although there is no particular reason to doubt the reliability and validity of
the findings, previous research indicates that satisfaction scores could be more positive than people’s actual feelings.

**Methodological issues**

Whilst there are a number of factors that may have influenced satisfaction within the sample, there are also issues related to the methodology. First, the focus group participants all attended a drop-in service, hence they may not have been representative of all crisis service clients. However, their questions were very consistent with those of the staff and research literature so this would not appear to be a problem.

Secondly, on the questionnaire, the middle fixed-choice response option was rarely neutral, being biased positively or negatively. Therefore some questions may have been more likely to elicit dissatisfaction and vice versa. Also, this study has only surveyed people in contact with the crisis service, hence they may be different from those who choose not to attend (Fitzpatrick, 1991). This is problematic as those who do not use the service may choose to avoid it because they are dissatisfied with it and this should be investigated in the future. Therefore, interviewing a random sample of people who have and haven’t used the service may be beneficial.

**Further work**

To see whether the process of quality assurance has been maintained or improved, it will be necessary to repeat the audit (Stallard, 1996). Service-user consultation should not be a one-off and the service should show a commitment to acting on the feedback and suggestions identified in the results (Rea & Rea, 2000; Stallard, 1996). Future repetitions of this work should also attempt to include service-
users more, for example, using service-users as interviewers has been found to elicit views that may otherwise not have been revealed (Simpson & House, 2002). Finally, the survey should be extended to include carers, relatives and referrers, as their opinions are also important (Stallard, 1996).

Conclusions

In summary, this study has recorded service-user satisfaction with a crisis service, using a questionnaire that appears to be reliable and valid. The results are consistent with other research, and relating them to the service's key objectives reveals acceptable levels of satisfaction. Overall, the survey reflects positively on the crisis service, whilst identifying some areas for improvement.
References


The Mental Health Foundation and The Sainsbury Centre for Mental Health (2002). *Being there in a crisis: A report of the learning from eight mental health crisis services*. London: The Mental Health Foundation.


Appendix 1: The service-user satisfaction survey questionnaire

Note that text in the questions has been changed to preserve the anonymity of the organisation within this study (e.g. the service is referred to as the “Crisis Service”) and some details have been blacked out.
The aim of this survey: The aim of this survey is to use a questionnaire to see how satisfied you have been with this visit to the crisis service. This will help me to find out what is good about it and which areas can be improved.

The questionnaire: The questionnaire was created with the help of Service-Users and Staff from the crisis service. There are 32 questions, covering different parts of the crisis service. The questionnaire should take about 10 minutes to complete and people are being asked to do this during March and April.

Your choice and anonymity: This is an ANONYMOUS survey
I would be very grateful if you could take the time to complete this questionnaire, but it is important to remember that you do not have to take part. If you do agree to take part, the survey is anonymous and I would request that you do not put your name anywhere on the questionnaire. Once the questionnaire is completed, please put it into the attached envelope and seal it. Then post the envelope into the box marked “Crisis Service Satisfaction Survey”, which is in the music/middle room.

What happens to the questionnaires: I will collect the sealed envelopes each week but I will not show them to the Crisis Service staff. Therefore they will not know what you have said. This is important, as some people may worry that if they answer negatively it will affect whether they can return to the crisis service. Once all the questionnaires have been filled in, I will analyse the results and provide a summary of the findings. Again, no one will be able to be identify you in the results, as the questionnaires are anonymous.

Filling in the questionnaires: If you are happy to continue, please fill in the details at the bottom. We will value your honest and fair responses. However, if you do not wish to complete it, then indicate this by ticking the box below. Next, place the questionnaire in the envelope, seal it, and place in the box marked “Crisis Service Satisfaction Survey”. This way the staff will not know whether you have completed it or not. If you have any questions or concerns about this survey, please contact me at the address below.

Thanks for your help,  
(Trainee Clinical Psychologist), CMHT, [Redacted]

If you do not wish to take part, please tick this box Please place the questionnaire in the envelope and post it in the box

Or, If you would like to help us with this survey, please indicate your age and carry on with the questions:

Your age: 20 & under 21-30 31-40 41-50 51-60 61 & over
## Service-user Satisfaction Survey of the Crisis Service

1. Have you filled in this questionnaire before? (It's ok to complete it more than once)
   - No
   - Yes
   Please tick the appropriate box

### Accessing the crisis service:

2. How did you access the crisis service?
   - I phoned them myself
   - I was referred by someone
   Go to Question 3  
   Skip to Question 6

3. How many times did you call before you got through?
   - Once
   - Twice
   - Three or more

4. Was it easy to talk to the staff on the phone?
   - Yes it was easy
   - It was ok
   - I found it difficult

5. When you phoned, were you given options or alternative ideas for help?
   - No options
   - One option
   - Several options

6. Was it easy for you to ask to come to the crisis service?
   - Yes it was easy
   - No I found it hard
   - I didn't ask to come

### About visiting the crisis service:

7. Was it easy to travel to the crisis service?
   - Yes it was easy
   - It was ok
   - No it was difficult

8. Did you feel comfortable in the crisis service?
   - Very
   - It was ok
   - Not really

9. Did you feel safe?
   - All of the time
   - Some of the time
   - Not at all

10. Was there somewhere you could go to be on your own (and have some privacy)?
    - Not at all
    - Some of the time
    - Any time I wanted
### Your experience of the crisis service:

11. Was your experience of the crisis service different to what you were told it would be like?  
   - Yes  
   - No

12. Could you say how it was different to what you expected?

13. Now that you have used the crisis service, do you feel that you understand the services it can offer to people?  
   - Completely  
   - Partly  
   - Not sure

### Your interaction with the staff team:

14. Did you get enough one-to-one contact from the staff?  
   - I would have liked more  
   - It was about right  
   - It was too much

15. Did you feel that you could go and talk to the staff whenever you wanted to?  
   - Not really  
   - Some of the time  
   - Whenever I wanted to

16. Were you made to feel welcome at the crisis service?  
   - Very welcome  
   - A little welcome  
   - Not very welcome

17. Do you feel that the staff understood your problem / crisis?  
   - Yes completely  
   - Partly  
   - Not really

18. Do you believe that the staff care about your well-being?  
   - Not really  
   - A little bit  
   - A lot

19. Did the staff speak to you in a polite and respectful manner?  
   - All of the time  
   - Some of the time  
   - Not at all
20. Was any action taken to resolve your problem / crisis?  
   Yes □  No □

21. Were you satisfied with the action taken to resolve your problem / crisis?  
   Completely satisfied □  Partly satisfied □  Not at all satisfied □

22. How satisfied are you with the amount of help you received?  
   Quite dissatisfied □  Indifferent or mildly dissatisfied □  Mostly satisfied □  Very satisfied □

23. Whilst at the crisis service, were you involved in the decisions made about your care?  
   Completely involved □  Partly involved □  Not at all involved □

24. Have you stayed at the crisis service before?  
   Yes □  No □
   Proceed to Question 25  Skip to Question 26

25. When you have used the crisis service, have you found that different staff teams have worked with you in different ways?  
   Yes they were different □  They were much the same □

26. To what extent has the crisis service met your current needs?  
   Almost all of my needs have been met □  Most of my needs have been met □  Only a few of my needs have been met □  None of my needs have been met □

27. In an overall, general sense, how satisfied are you with the service you received?  
   Very satisfied □  Mostly satisfied □  Indifferent or mildly dissatisfied □  Quite dissatisfied □
28 If you were to seek help again, would you come back to the crisis service?

No, definitely not  
No, I don't think so  
Yes, I think so  
Yes, definitely

29 If a friend were in need of similar help, would you recommend the crisis service to him/her?

No, definitely not  
No, I don't think so  
Yes, I think so  
Yes, definitely

Some final questions:

30 Could you say what the staff do well?

31 If you could change two things about the crisis service, what would they be?

1).

2).

32 Are there any other comments you would like to make?

Thank you for completing the questionnaire

Please put it in the attached envelope, seal it, and post it into the box marked “Crisis Service Satisfaction Survey”
Appendix 2: Issues identified by the staff for the survey
Issues identified by the staff for the survey

1. How does stay at crisis service help deal with crisis?
2. Were you engaged in therapeutic interaction?
3. Is there effective communication between staff at shift change?
4. Information on staff attitudes
5. Was initial telephone contact supportive and what approach on the phone is helpful and how long did response take?
6. Have they noticed a difference in teams approach?
7. Did you feel safe there?
8. Could you approach staff?
9. Was there privacy?
10. Decoration, comfort, cleanliness ok?
11. Did staff give enough support?
12. Did you know all you needed when you left in the morning?
13. Any other things you’d like from crisis service?
14. Did it help?
15. Do you prefer to be segregated by gender?
16. What would you have done without crisis service?
17. What do staff do well?
18. Were you involved in your care?
19. Was immediate crisis addressed?
20. Were alternatives suggested?
21. How much time spent as individual or group with staff?
22. What information should crisis service hold on clients that would be useful for them?
Appendix 3: Issues identified by the focus group for the survey
Issues identified by the focus group for the survey

1. What's the definition of a crisis?
2. Who decides it is a crisis?
3. Did staff give enough support?
4. Did you feel you could go and talk to staff?
5. Why could you not talk to staff?
6. Did you feel you were interrupting the staff?
7. Experience of service, different to what it was like?
8. Did staff understand your situation and how distressed you were?
9. Did you feel that you were treated with respect?
10. Do you believe the staff actually care?
11. Did you feel staff were professional when they were working with you?
12. Do you feel the staff have actually helped you?
13. Did you benefit from staff input?
14. Did you feel comfortable in the crisis service?
15. Was there somewhere you could go to have privacy?
16. Did you feel safe?
17. Did you get enough one-to-one contact from staff?
18. Was it easy to talk on the phone?
19. Was it easy to ask to come to the crisis service?
20. Were you made to feel welcome?
21. What the weirdest thing that has been suggested to you by the staff?
22. Were you given options on the phone?
23. Do you feel you understand what the crisis service does?
24. Did you feel your situation was followed up?
25. Was it easy to get to the crisis service?
26. Did you get a different response from different staff?
Appendix 4: Questionnaire Matrix

Detailing whether the question theme was elicited by the service-users, staff or literature, and which operational policy aims/objectives they link to
List of the Questionnaire items, where they originated from, and which aims/objectives they match in the Crisis Service Operational Policy

<table>
<thead>
<tr>
<th>No.</th>
<th>Questionnaire Items</th>
<th>Source of the items for the questionnaire (Columns indicate which source generated each question)</th>
<th>Operational policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Have you filled in this questionnaire before? (It’s ok to complete it more than once)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>How did you access the crisis service?</td>
<td>-</td>
<td>Murray &amp; Hewitt (1996); Cantley (1990)</td>
</tr>
<tr>
<td>3</td>
<td>How many times did you call before you got through?</td>
<td>Yes</td>
<td>Murray &amp; Hewitt (1996); Campbell (1996); Cantley (1990)</td>
</tr>
<tr>
<td>4</td>
<td>Was it easy to talk to the staff on the phone?</td>
<td>Yes</td>
<td>Powell, Single &amp; Lloyd (1996)</td>
</tr>
<tr>
<td>5</td>
<td>When you phoned, were you given some options or alternative ideas for help?</td>
<td>Yes</td>
<td>TMHF (2002); Arscott et al (1997)</td>
</tr>
<tr>
<td>6</td>
<td>Was it easy for you to ask to come to the crisis service?</td>
<td>Yes</td>
<td>Murray &amp; Hewitt (1996); Campbell (1996)</td>
</tr>
<tr>
<td>7</td>
<td>Was it easy to travel to the crisis service?</td>
<td>Yes</td>
<td>TMHF (2002); Arscott et al (1997); Murray &amp; Hewitt (1996)</td>
</tr>
<tr>
<td>8</td>
<td>Did you feel comfortable in the crisis service?</td>
<td>Yes</td>
<td>TMHF (2002); Murray &amp; Hewitt (1996); Arscott et al (1997); Cantley (1990); Stallard (1996)</td>
</tr>
<tr>
<td>9</td>
<td>Did you feel safe?</td>
<td>Yes</td>
<td>Arscott et al (1997); Cantley (1990)</td>
</tr>
<tr>
<td>10</td>
<td>Was there somewhere you could go to be on your own (and have some privacy)?</td>
<td>Yes</td>
<td>Stallard (1996)</td>
</tr>
<tr>
<td></td>
<td>- Could you sleep during the night?</td>
<td>No</td>
<td>-</td>
</tr>
<tr>
<td>11</td>
<td>Was your experience of the crisis service different to what you were told it would be like?</td>
<td>Yes</td>
<td>Larsen et al (1979); Cantley (1990)</td>
</tr>
<tr>
<td>12</td>
<td>Could you say how it was different to what you expected</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>13</td>
<td>Now that you have used the crisis service, do you feel that you understand the services it can offer to people?</td>
<td>Yes</td>
<td>TMHF (2002); Powell, Single &amp; Lloyd (1996); Cantley (1990)</td>
</tr>
<tr>
<td>No.</td>
<td>Question</td>
<td>Yes/No</td>
<td>Reference</td>
</tr>
<tr>
<td>-----</td>
<td>--------------------------------------------------------------------------</td>
<td>--------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>14</td>
<td>Did you get enough one-to-one contact from the staff?</td>
<td>Yes/Yes</td>
<td>TMHF (2002); Tilbrook (1997); Sexton (1992); Arscott et al (1997); Murray &amp; Hewitt (1996); Cantley (1990)</td>
</tr>
<tr>
<td>15</td>
<td>Did you feel that you could go and talk to the staff whenever you wanted to?</td>
<td>Yes</td>
<td>Campbell (1996); Powell, Single &amp; Lloyd (1996); Cantley (1990)</td>
</tr>
<tr>
<td>16</td>
<td>Were you made to feel welcome at the crisis service?</td>
<td>Yes</td>
<td>Arscott et al (1997)</td>
</tr>
<tr>
<td>17</td>
<td>Do you feel that the staff understood your problem / crisis?</td>
<td>Yes</td>
<td>TMHF (2002); Tilbrook (1997)</td>
</tr>
<tr>
<td></td>
<td>Did you feel that the staff understood how distressed you were?</td>
<td>Yes</td>
<td>TMHF (2002); Tilbrook (1997)</td>
</tr>
<tr>
<td>18</td>
<td>Do you believe that the staff care about your well-being?</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Did the staff speak to you in a polite and respectful manner</td>
<td>Yes</td>
<td>TMHF (2002); Arscott et al (1997); Campbell (1996)</td>
</tr>
<tr>
<td></td>
<td>Did the staff act in a professional manner when they were working with you?</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Was any action taken to resolve your problem / crisis?</td>
<td>Yes</td>
<td>TMHF (2002); Tilbrook (1997); Sexton (1992); Arscott et al (1997)</td>
</tr>
<tr>
<td>21</td>
<td>Were you satisfied with the action taken to resolve your problem / crisis?</td>
<td></td>
<td>Larsen et al (1979)</td>
</tr>
<tr>
<td>22</td>
<td>If you were to seek help again, would you come back to the crisis service?</td>
<td></td>
<td>Larsen et al (1979)</td>
</tr>
<tr>
<td>23</td>
<td>Whilst at the crisis service, were you involved in the decisions made about your care?</td>
<td>Yes</td>
<td>Tilbrook (1997); Campbell (1996)</td>
</tr>
<tr>
<td>24</td>
<td>Have you stayed at the crisis service before?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>When you have used the crisis service, have you found that different staff teams have worked with you in different ways?</td>
<td>Yes</td>
<td>Tilbrook (1997); Cantley (1990)</td>
</tr>
<tr>
<td>26</td>
<td>To what extent has the crisis service met your needs?</td>
<td></td>
<td>Larsen et al (1979)</td>
</tr>
<tr>
<td>27</td>
<td>In an overall, general sense, how satisfied are you with the service you received?</td>
<td>Yes</td>
<td>Larsen et al (1979)</td>
</tr>
</tbody>
</table>
## List of the Questionnaire items, where they originated from, and which aims/objectives they match in the Crisis Service Operational Policy

<table>
<thead>
<tr>
<th>Q</th>
<th>Question</th>
<th>Yes</th>
<th>2</th>
<th>Larsen et al (1979)</th>
<th>2, 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>28</td>
<td>If you were to seek help again, would you come back to the crisis service?</td>
<td>Yes</td>
<td>-</td>
<td>Larsen et al (1979)</td>
<td>2</td>
</tr>
<tr>
<td>29</td>
<td>If a friend were in need of similar help, would you recommend the crisis service to him/her?</td>
<td>-</td>
<td>Yes</td>
<td>Larsen et al (1979)</td>
<td>2, 3</td>
</tr>
<tr>
<td>30</td>
<td>Could you say what the staff do well?</td>
<td>-</td>
<td>Yes</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>31</td>
<td>If you could change two things about the crisis service, what would they be?</td>
<td>-</td>
<td>-</td>
<td>Sexton (1992)</td>
<td>-</td>
</tr>
<tr>
<td>32</td>
<td>Are there any other comments you would like to make?</td>
<td>-</td>
<td>-</td>
<td>Larsen et al (1979)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>What would you have done if the crisis service wasn’t here?</td>
<td>-</td>
<td>-</td>
<td>Sexton (1992), Arscott et al (1997)</td>
<td>-</td>
</tr>
</tbody>
</table>
Appendix 5: Tables showing the percentage frequency of responses for each question
Results of the questions as percentages

**A  If you do not wish to take part, please tick this box**

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree to take part</td>
<td>20</td>
<td>100%</td>
</tr>
<tr>
<td>Opt out</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>20</td>
<td>100%</td>
</tr>
</tbody>
</table>

**B  Your age:**

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 &amp; under</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>21-30</td>
<td>6</td>
<td>30%</td>
</tr>
<tr>
<td>31-40</td>
<td>8</td>
<td>40%</td>
</tr>
<tr>
<td>41-50</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>51-60</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>61 &amp; over</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>Missing data</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>20</td>
<td>100%</td>
</tr>
</tbody>
</table>

**1  Have you filled in this questionnaire before?**

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>19</td>
<td>95%</td>
</tr>
<tr>
<td>Yes</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>20</td>
<td>100%</td>
</tr>
</tbody>
</table>

**2  How did you access the safe house?**

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phoned</td>
<td>7</td>
<td>35%</td>
</tr>
<tr>
<td>Referred</td>
<td>12</td>
<td>60%</td>
</tr>
<tr>
<td>Missing data</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>20</td>
<td>100%</td>
</tr>
</tbody>
</table>

**3  How many times did you call before you got through?**

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once</td>
<td>6</td>
<td>30%</td>
</tr>
<tr>
<td>Twice</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>Three or more</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Not applicable</td>
<td>13</td>
<td>65%</td>
</tr>
<tr>
<td>Missing data</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>20</td>
<td>100%</td>
</tr>
</tbody>
</table>

**4  Was it easy to talk to the staff on the phone?**

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes it was easy</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>It was ok</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>It was difficult</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>Not applicable</td>
<td>13</td>
<td>65%</td>
</tr>
<tr>
<td>Missing data</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>20</td>
<td>100%</td>
</tr>
</tbody>
</table>
### 5. When you phoned, were you given options or alternative ideas for help?

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Several</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>One</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>No options</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>Not applicable</td>
<td>13</td>
<td>65%</td>
</tr>
<tr>
<td>Missing data</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

### 6. Was it easy to ask to come to the Safe House?

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes it was easy</td>
<td>7</td>
<td>35%</td>
</tr>
<tr>
<td>No it was hard</td>
<td>4</td>
<td>20%</td>
</tr>
<tr>
<td>I didn’t ask to come</td>
<td>8</td>
<td>40%</td>
</tr>
<tr>
<td>Missing data</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

### 7. Was it easy to travel to the Safe House?

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes it was easy</td>
<td>12</td>
<td>60%</td>
</tr>
<tr>
<td>It was ok</td>
<td>6</td>
<td>30%</td>
</tr>
<tr>
<td>No it was difficult</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>Missing data</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

### 8. Did you feel comfortable in the Safe House?

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very</td>
<td>10</td>
<td>50%</td>
</tr>
<tr>
<td>It was ok</td>
<td>9</td>
<td>50%</td>
</tr>
<tr>
<td>Not really</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>Missing data</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

### 9. Did you feel safe?

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>All of the time</td>
<td>13</td>
<td>65%</td>
</tr>
<tr>
<td>Some of the time</td>
<td>7</td>
<td>35%</td>
</tr>
<tr>
<td>Not at all</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Missing data</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
10. *Was there somewhere you could go to be on your own (and have some privacy)?*

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any time I wanted</td>
<td>16</td>
<td>80%</td>
</tr>
<tr>
<td>Some of the time</td>
<td>4</td>
<td>20%</td>
</tr>
<tr>
<td>Not at all</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Missing data</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

11. *Was your experience of the Safe House different to what you were told it would be like?*

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>15</td>
<td>75%</td>
</tr>
<tr>
<td>Yes</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>Missing data</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

13. *Now that you have used the Safe House, do you feel that you understand the services it can offer to people?*

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completely</td>
<td>9</td>
<td>45%</td>
</tr>
<tr>
<td>Partly</td>
<td>8</td>
<td>40%</td>
</tr>
<tr>
<td>Not sure</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>Missing data</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

14. *Did you get enough one-to-one contact from the staff?*

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>It was about right</td>
<td>13</td>
<td>65%</td>
</tr>
<tr>
<td>I would have liked more</td>
<td>6</td>
<td>30%</td>
</tr>
<tr>
<td>It was too much</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>Missing data</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

15. *Did you feel that you could go and talk to the staff whenever you wanted to?*

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whenever I wanted to</td>
<td>8</td>
<td>40%</td>
</tr>
<tr>
<td>Some of the time</td>
<td>9</td>
<td>45%</td>
</tr>
<tr>
<td>Not really</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>Missing data</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
### 16. Were you made to feel welcome at the Safe House?

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very welcome</td>
<td>17</td>
<td>85%</td>
</tr>
<tr>
<td>A little welcome</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>Not very welcome</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Missing data</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

### 17. Do you feel that the staff understood your problem/crisis?

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes completely</td>
<td>7</td>
<td>35%</td>
</tr>
<tr>
<td>Partly</td>
<td>7</td>
<td>35%</td>
</tr>
<tr>
<td>Not really</td>
<td>5</td>
<td>25%</td>
</tr>
<tr>
<td>Missing data</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

### 18. Do you believe that the staff care about your well-being?

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A lot</td>
<td>12</td>
<td>60%</td>
</tr>
<tr>
<td>A little bit</td>
<td>5</td>
<td>25%</td>
</tr>
<tr>
<td>Not really</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>Missing data</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

### 19. Did the staff speak to you in a polite and respectful manner?

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>All of the time</td>
<td>15</td>
<td>75%</td>
</tr>
<tr>
<td>Some of the time</td>
<td>5</td>
<td>25%</td>
</tr>
<tr>
<td>Not at all</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Missing data</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

### 20. Was any action taken to resolve your problem/crisis?

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>9</td>
<td>45%</td>
</tr>
<tr>
<td>No</td>
<td>9</td>
<td>45%</td>
</tr>
<tr>
<td>Missing data</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

### 21. Were you satisfied with the action taken to resolve your problem/crisis?

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completely satisfied</td>
<td>6</td>
<td>30%</td>
</tr>
<tr>
<td>Partly satisfied</td>
<td>6</td>
<td>30%</td>
</tr>
<tr>
<td>Not at all satisfied</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>Not applicable</td>
<td>4</td>
<td>20%</td>
</tr>
<tr>
<td>Missing data</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
### 22 How satisfied are you with the amount of help you received?

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very satisfied</td>
<td>9</td>
<td>45%</td>
</tr>
<tr>
<td>Mostly satisfied</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>Indifferent or mildly satisfied</td>
<td>4</td>
<td>20%</td>
</tr>
<tr>
<td>Quite dissatisfied</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>Missing data</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>20</td>
<td>100%</td>
</tr>
</tbody>
</table>

### 23 Whilst at the Safe House, were you involved in the decisions made about your care?

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completely involved</td>
<td>7</td>
<td>35%</td>
</tr>
<tr>
<td>Partly involved</td>
<td>4</td>
<td>20%</td>
</tr>
<tr>
<td>Not at all involved</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>Not applicable</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>Missing data</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>20</td>
<td>100%</td>
</tr>
</tbody>
</table>

### 24 Have you stayed at the Safe House before?

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>13</td>
<td>65%</td>
</tr>
<tr>
<td>No</td>
<td>5</td>
<td>25%</td>
</tr>
<tr>
<td>Missing data</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>20</td>
<td>100%</td>
</tr>
</tbody>
</table>

### 25 When you have used the Safe House, have you found that different staff teams have worked with you in different ways?

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>They were much the same</td>
<td>4</td>
<td>20%</td>
</tr>
<tr>
<td>Yes they were different</td>
<td>8</td>
<td>40%</td>
</tr>
<tr>
<td>Not applicable</td>
<td>5</td>
<td>25%</td>
</tr>
<tr>
<td>Missing data</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>20</td>
<td>100%</td>
</tr>
</tbody>
</table>

### 26 To what extent has the Safe House met your current needs?

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almost all of my current needs have been met</td>
<td>5</td>
<td>25%</td>
</tr>
<tr>
<td>Most of my needs have been met</td>
<td>5</td>
<td>25%</td>
</tr>
<tr>
<td>Only a few of my needs have been met</td>
<td>5</td>
<td>25%</td>
</tr>
<tr>
<td>None of my needs have been met</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Missing data</td>
<td>5</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>20</td>
<td>100%</td>
</tr>
</tbody>
</table>
### 27 In an overall, general sense, how satisfied are you with the service you received?

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very satisfied</td>
<td>8</td>
<td>40%</td>
</tr>
<tr>
<td>Mostly satisfied</td>
<td>7</td>
<td>35%</td>
</tr>
<tr>
<td>Indifferent or mildly satisfied</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>Quite dissatisfied</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>Missing data</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

### 28 If you were to seek help again, would you come back to the safe house?

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes definitely</td>
<td>6</td>
<td>30%</td>
</tr>
<tr>
<td>Yes I think so</td>
<td>12</td>
<td>60%</td>
</tr>
<tr>
<td>No I don't think so</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>No definitely not</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Missing data</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

### 29 If a friend were in need of similar help, would you recommend the Safe House to him/her?

<table>
<thead>
<tr>
<th>Answer options</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes definitely</td>
<td>10</td>
<td>50%</td>
</tr>
<tr>
<td>Yes I think so</td>
<td>9</td>
<td>45%</td>
</tr>
<tr>
<td>No I don't think so</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>No definitely not</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Missing data</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
Appendix 6: Detailed breakdown of how the percentages were calculated for the analysis
Calculations

To calculate the percentages for the domains, the responses were split into either ‘satisfactory’ or ‘dissatisfactory’ for each of the included items from the questionnaire. Each item had a maximum of 20 respondents from the sample, so if there were 4 items corresponding to a domain, then there would be a maximum possible of 80 responses for that domain. Once the frequency of responses was calculated, the number of ‘missing’ or ‘not applicable’ responses was totalled and subtracted from the number of possible responses. The percentage satisfaction/dissatisfaction was then calculated using the actual number of responses (i.e. minus the missing data).

Deciding on whether the ‘middle option’ tended towards satisfaction or dissatisfaction has been mainly based on a value judgement. For example, in question 9 (which was to do with feeling safe), only a response of “All the time” was considered as satisfactory. Wherever possible, the operational policy was consulted to determine what standards the service had set, to help determine whether the middle option should represent a satisfied or dissatisfied response.

Accessing the crisis service

Question 3: if the service-user had to call more than once this was considered unsatisfactory as the clients were in crisis and may be at risk. Therefore only the response “Once” was classed as satisfactory, the other two were classed dissatisfactory.

Question 4: “Yes it was easy” and “It was ok” were classed as satisfactory.

Question 5: “Several” and “One” were classed as satisfactory.

Question 6: “Yes it was easy” was classed as satisfactory.

Visiting the crisis service

Question 7: “Yes it was easy” and “It was ok” were classed as satisfactory.

Question 8: “Very” and “It was ok” were classed as satisfactory.

Question 9: “Some of the time” and “Not at all” were classed as dissatisfactory.

Question 10: “Some of the time” and “Not at all” were classed as dissatisfactory.

Question 11: “No” was classed as satisfactory, “Yes” as dissatisfactory.

Interaction with the staff

Question 14: “I would have liked more” and “It was too much” were classed as dissatisfactory.

Question 15: “Some of the time” and “Not really” were classed as dissatisfactory.
Question 16: “Very welcome” and “A little welcome” were classed as satisfactory.

Question 17: “Partly” and “Not really” were classed as dissatisfactory.

Question 18: “A little bit” and “Not really” were classed as dissatisfactory.

Question 19: “Some of the time” and “Not at all” were classed as dissatisfactory.

Action taken to help you

Question 20: “Yes” was classed as satisfactory, “No” as dissatisfactory.

Question 21: “Completely satisfied” and “Partly satisfied” were classed as satisfactory.

Question 22: “Very satisfied” and “Mostly satisfied” were classed as satisfactory.

Question 23: “Partly involved” and “Not at all involved” were classed as dissatisfactory.

General satisfaction

Question 26: “Almost all of my current needs have been met” and “Most of my needs have been met” were classed as satisfactory.

Question 27: “Very satisfied” and “Mostly satisfied” were classed as satisfactory.

Question 28: “Yes definitely” and “Yes I think so” were classed as satisfactory.

Question 29: “Yes definitely” and “Yes I think so” were classed as satisfactory.

Other questions

Question 13: “Partly” and “Not sure” were classed as dissatisfactory.
Appendix 7: Responses from the open-ended questions
**Responses to open ended questions**

*NC = No comment (made by respondent)*

<table>
<thead>
<tr>
<th>Respondent</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>NC</td>
</tr>
<tr>
<td>2</td>
<td>NC</td>
</tr>
<tr>
<td>3</td>
<td>NC</td>
</tr>
<tr>
<td>4</td>
<td>NC</td>
</tr>
<tr>
<td>5</td>
<td>NC</td>
</tr>
<tr>
<td>6</td>
<td><em>Before my Gender operation sometimes I was not excepted as a woman which caused me stress</em></td>
</tr>
<tr>
<td>7</td>
<td>NC</td>
</tr>
<tr>
<td>8</td>
<td><em>A feeling of being wanted and reassurance from kind friendly staff</em></td>
</tr>
<tr>
<td>9</td>
<td>NC</td>
</tr>
<tr>
<td>10</td>
<td>NC</td>
</tr>
<tr>
<td>11</td>
<td>NC</td>
</tr>
<tr>
<td>12</td>
<td>NC</td>
</tr>
<tr>
<td>13</td>
<td><em>It was very quiet. If you wanted to talk you could and did not get followed</em></td>
</tr>
<tr>
<td>14</td>
<td>NC</td>
</tr>
<tr>
<td>15</td>
<td><em>Very pleasant and welcoming place to be</em></td>
</tr>
<tr>
<td>16</td>
<td>NC</td>
</tr>
<tr>
<td>17</td>
<td>NC</td>
</tr>
<tr>
<td>18</td>
<td><em>Better than expected</em></td>
</tr>
<tr>
<td>19</td>
<td>NC</td>
</tr>
<tr>
<td>20</td>
<td>NC</td>
</tr>
<tr>
<td>21</td>
<td>[Client wrote name in the box]</td>
</tr>
<tr>
<td>Respondent</td>
<td>Comment</td>
</tr>
<tr>
<td>------------</td>
<td>---------</td>
</tr>
<tr>
<td>1</td>
<td>Pay you attention and monitor your progress</td>
</tr>
<tr>
<td>2</td>
<td>Care</td>
</tr>
<tr>
<td>3</td>
<td>Reassuring</td>
</tr>
<tr>
<td>4</td>
<td>Friendly, listen</td>
</tr>
<tr>
<td>5</td>
<td>They listen and understand</td>
</tr>
<tr>
<td>6</td>
<td>Make sure you are safe</td>
</tr>
<tr>
<td>7</td>
<td>The staff always make sure you have something to eat and drink. They try to help you settle in and feel comfortable</td>
</tr>
<tr>
<td>8</td>
<td>The staff welcome us all with little smile. Offer a cup of tea, allow you to get yourself sorted. Give advise which I trust, As I feel that they really care</td>
</tr>
<tr>
<td>9</td>
<td>Answer phone politely. Listened to what I was trying to say and summarise points</td>
</tr>
<tr>
<td>10</td>
<td>NC</td>
</tr>
<tr>
<td>11</td>
<td>NC</td>
</tr>
<tr>
<td>12</td>
<td>Listen</td>
</tr>
<tr>
<td>13</td>
<td>Yes they sit with you and ask if you want to talk if you say no thanks they say we are here for you</td>
</tr>
<tr>
<td>14</td>
<td>NC</td>
</tr>
<tr>
<td>15</td>
<td>Make me feel very welcome. They give good advice and spend as much time with me as I need. Very polite. The night staff are also very helpful. Kenny and Chris.</td>
</tr>
<tr>
<td>16</td>
<td>? [Client put a question mark only]</td>
</tr>
<tr>
<td>17</td>
<td>Listen</td>
</tr>
<tr>
<td>18</td>
<td>They make you feel very welcome. If you do want to talk they only advise you, not tell you what to do. They make you feel very calm and cater for all your needs. It has a totally relaxed and safe environment.</td>
</tr>
<tr>
<td>19</td>
<td>Interact, laugh</td>
</tr>
<tr>
<td>20</td>
<td>Some staff are nice but some staff are horrerball</td>
</tr>
<tr>
<td>21</td>
<td>The staff here tonight look after [client’s name] very well and they do not complain about smoking roal ups</td>
</tr>
<tr>
<td></td>
<td>If you could change two things about the Safe House, what would they be?</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>
| 1 | A). The temperature of the rooms is far too hot and stuffy, not enough ventilation throughout the house  
B). More interaction between staff and clients please. Do not like the fact the staff sit and watch the TV a lot! |
| 2 | NC |
| 3 | NC |
| 4 | A). More staff  
B). Staff for phone duty only as when you just start talking to them they have to rush off, to a phone call |
| 5 | NC |
| 6 | A). That don't meet many Gender change ladies, some nurses in the past did not treat me as a lady and did not want to. That caused me stress.  
B). NC |
| 7 | A). Depending on who is on duty. Phoning I sometimes feel that I am a nuisance from attitude of staff.  
B). I have sometimes been the only client in at the w/end and have been ignored by the staff for most of the day. |
| 8 | A). A small dishwasher could be installed at reasonable price. Plumbing in can be done by K.D.  
B). Any pudding to eat after the supper? |
| 9 | A). Sorry, can't really think of anything. It's ok here, but it's really boring.  
B). NC |
| 10 | NC |
| 11 | NC |
| 12 | A). Staff to have more time |
| 13 | A). Nothing really it was ok |
| 14 | NC |
| 15 | NC |
| 16 | ? [Client put a question mark only] |
| 17 | NC |
| 18 | A). The only thing I can fault is the cleanliness of the bathrooms. But I think that is down to the cleaners not the carers.  
A). Mattresses  
B). Length of stay |
| 19 | A). Change some staff  
B). Have a doctor in the house |
<p>| 20 | NC |</p>
<table>
<thead>
<tr>
<th>Respondent</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yes – more constructive activity between staff and clients. Watching TV is not always the answer for clients in my opinion.</td>
</tr>
<tr>
<td>2</td>
<td>NC</td>
</tr>
<tr>
<td>3</td>
<td>Thankyou</td>
</tr>
<tr>
<td>4</td>
<td>Thank goodness for the service</td>
</tr>
<tr>
<td>5</td>
<td>NC</td>
</tr>
<tr>
<td>6</td>
<td>Nurses should have more understanding of my condition</td>
</tr>
<tr>
<td>7</td>
<td>Especially during the day at w/ends, the staff seem to congregate in the non-smoking lounge, and I tend not to feel comfortable to disturb them if I need to talk, I find it very intimidating to have to go into a room full of people to ask for help.</td>
</tr>
<tr>
<td>8</td>
<td>At this point I’m happy you saved my life. One more hour of my symptoms and I’d been a goner. Thanks for everything. under sedation.</td>
</tr>
<tr>
<td>9</td>
<td>NC</td>
</tr>
<tr>
<td>10</td>
<td>NC</td>
</tr>
<tr>
<td>11</td>
<td>NC</td>
</tr>
<tr>
<td>12</td>
<td>All the staff are very friendly</td>
</tr>
<tr>
<td>13</td>
<td>I felt safe in</td>
</tr>
<tr>
<td>14</td>
<td>NC</td>
</tr>
<tr>
<td>15</td>
<td>Sometimes the staff separate themselves a bit. [?] which is fine if they don’t smoke but could make more of an effort</td>
</tr>
<tr>
<td>16</td>
<td>NC</td>
</tr>
<tr>
<td>17</td>
<td>NC</td>
</tr>
<tr>
<td>18</td>
<td>It is such a relief to know that there is somewhere I can “escape” to in times of crisis. I don’t think I could have coped without it when I have needed it. Its like home from home and a fantastic facility provided</td>
</tr>
<tr>
<td>19</td>
<td>No thankyou!</td>
</tr>
<tr>
<td>20</td>
<td>I don’t get treted like a human the starth help some people like human</td>
</tr>
<tr>
<td>21</td>
<td>NC</td>
</tr>
</tbody>
</table>
Appendix 8: Description of the coding frames for the content analysis of the open-ended questions
Revised Content Analysis codings for the open-ended questions

<table>
<thead>
<tr>
<th>Coding Frame</th>
<th>Codings</th>
</tr>
</thead>
</table>
| 1 Suggestion to improve the service | A) A comment which makes a precise suggestion for how the service could be improved.  
  - E.g. "provide a video recorder", "change the mattresses", "have a doctor on site".  
  - Would not include comments such as "there wasn't a microwave", as this merely observes a deficit in the service but does not specify how it could be improved. Don't include comments related to general contact with staff e.g. "more contact with staff" – this would be code 3. |
| 2 Contact with the staff | B) This includes positive comments relating to any form of interaction (talking or otherwise) between the staff and the clients.  
  - E.g. "they are caring and friendly", or "the staff welcome you", "you could talk if you wanted to".  
  - "they give you a cup of tea", "feeling wanted", "look after you", "make you feel safe".  
  - Can include client to client contact.  
  C) Negative comments made about interactions with the staff or clients, which could be talking or other contact between them.  
  - E.g. "staff were hard to approach", "too busy", "made me feel a nuisance", "staff didn't understand".  
  - "Staff should have more time", "the staff were rude", "not respecting me", "there weren't enough staff".  
  - Can include client to client contact. |
| 3 The service and its environment | D) Positive comment about the service, which may be a specific part of the service or a more general comment about it.  
  - E.g. "it was warm", "nice", "comfortable", "safe", "peaceful", "quiet", "better than I thought" (general).  
  - "It was ok", "it was acceptable", "alright", "expression of thanks".  
  - The beds were very comfortable (specific).  
  E) A negative comment about specific parts of the service or more general aspects.  
  - E.g. "it was too small", "boring", "nothing to do", "draughty", "too hot" (general).  
  - "The bathroom was dirty" (specific). |
Appendix 9: Instructions for the Inter-rater reliability and text from the open-ended questions
Inter-rater reliability

The numbered statements are comments produced by different participants within a satisfaction survey. There are four sets of comments, that relate to four open-ended questions.

For each of the four questions, please read each service-user’s response and select one code from the previous page that describes it. Only put one code for each statement (a statement corresponds to a cell in the table). Not all of the service-users responded, hence the number of responses per question varies.

<table>
<thead>
<tr>
<th>Service-user</th>
<th>Comment</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Before my Gender operation sometimes I was not excepted as a woman which caused me stress</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>A feeling of being wanted and reassurance from kind friendly staff</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>It was very quiet.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>If you wanted to talk you could and did not get followed</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Very pleasant and welcoming place to be</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Better than expected</td>
<td></td>
</tr>
<tr>
<td>Service-user</td>
<td>Comment</td>
<td>Code</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>1</td>
<td>Pay you attention and monitor your progress</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Care</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Reassuring</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Friendly, listen</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>They listen and understand</td>
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</tr>
<tr>
<td>6</td>
<td>Make sure you are safe</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>The staff always make sure you have something to eat and drink.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>They try to help you settle in and feel comfortable</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>The staff welcome us all with little smile.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Offer a cup of tea, allow you to get yourself sorted.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Give advise which I trust, As I feel that they really care</td>
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<tr>
<td>9</td>
<td>Answer phone politely. Listened to what I was trying to say and summarise points</td>
<td></td>
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<tr>
<td>12</td>
<td>Listen</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Yes they sit with you and ask if you want to talk if you say no thanks</td>
<td></td>
</tr>
<tr>
<td></td>
<td>they say we are here for you</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Make me feel very welcome. They give good advice and spend as much time with me as I need. Very polite. The night staff are also very helpful.</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Listen</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>They make you feel very welcome. If you do want to talk they only advise you, not tell you what to do. They make you feel very calm and cater for all your needs.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>It has a totally relaxed and safe environment.</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Interact, laugh</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Some staff are nice</td>
<td></td>
</tr>
<tr>
<td></td>
<td>but some staff are horrerball</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>The staff here tonight look after [client’s name] very well and they do not complain about smoking roal ups</td>
<td></td>
</tr>
<tr>
<td>Service-user</td>
<td>Comment</td>
<td>Code</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>1</td>
<td>The temperature of the rooms is far too hot and stuffy, not enough ventilation throughout the house</td>
<td></td>
</tr>
<tr>
<td></td>
<td>More interaction between staff and clients please. Do not like the fact the staff sit and watch the TV a lot!</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>More staff</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Staff for phone duty only</td>
<td></td>
</tr>
<tr>
<td></td>
<td>as when you just start talking to them they have to rush off, to a phone call</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>That don’t meet many Gender change ladies, some nurses in the past did not treat me as a lady and did not want to. That caused me stress.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Depending on who is on duty. Phoning I sometimes feel that I am a nuisance from attitude of staff.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I have sometimes been the only client in at the w/end and have been ignored by the staff for most of the day.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>A small dishwasher could be installed at reasonable price. Plumbing in can be done by K.D.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Any pudding to eat after the supper?</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Sorry, can’t really think of anything. It’s ok here, but it’s really boring.</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Staff to have more time</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Nothing really it was ok</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>The only thing I can fault is the cleanliness of the bathrooms. But I think that is down to the cleaners not the carers.</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Mattresses</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Length of stay</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Change some staff</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Have a doctor in the house</td>
<td></td>
</tr>
<tr>
<td>Service-user</td>
<td>Comment</td>
<td>Code</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>1</td>
<td>Yes – more constructive activity between staff and clients. Watching TV is not always the answer for clients in my opinion.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Thankyou</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Thank goodness for the service</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Nurses should have more understanding of my condition</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Especially during the day at w/ends, the staff seem to congregate in the non-smoking lounge, and I tend not to feel comfortable to disturb them if I need to talk, I find it very intimidating to have to go into a room full of people to ask for help.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>At this point I’m happy you saved my life. One more hour of my symptoms and I’d been a goner. Thanks for everything. under sedation.</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>All the staff are very friendly</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>I felt safe in</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Sometimes the staff seperate themselves a bit. [?] which is fine if they don’t smoke but could make more of an effort</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>It is such a relief to know that there is somewhere I can “escape” to in times of crisis. I don’t think I could have coped without it when I have needed it. Its like home from home and a fantastic facility provided</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>No thankyou!</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>I don’t get treted like a human the starth help some people like human</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 10: Confusion matrix and calculations for the inter-rater reliability (Robson, 1993)
## Confusion matrix

<table>
<thead>
<tr>
<th>Observer I</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>6</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>B</td>
<td>0</td>
<td>20</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>C</td>
<td>0</td>
<td>0</td>
<td>14</td>
<td>0</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>D</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>12</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>E</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>6</td>
<td>21</td>
<td>15</td>
<td>12</td>
<td>3</td>
<td>57</td>
</tr>
</tbody>
</table>

**Proportion of agreement:**

\[
P_0 = \frac{\text{number of agreements}}{\text{(number of agreements} + \text{number of disagreements})} = \frac{55}{57} = 0.96 \text{ (96%)}
\]

**Proportion expected by chance:**

\[
P_c = (P_{1A} \times P_{2A}) + (P_{1B} \times P_{2B}) + (P_{1C} \times P_{2C}) + (P_{1D} \times P_{2D}) + (P_{1E} \times P_{2E})
\]

\[
= (0.11 \times 0.12) + (0.37 \times 0.35) + (0.26 \times 0.25) + (0.21 \times 0.23) + (0.05 \times 0.05)
\]

\[
= 0.2585
\]

**Cohen's Kappa:**

\[
K = \frac{P_0 - P_c}{1 - P_c} = \frac{0.96 - 0.2585}{1 - 0.2585} = \frac{0.7015}{0.7415} = 0.95
\]
Appendix 11: Feedback to the Crisis Service

The results of the service-user satisfaction survey will be formally presented to the crisis service staff on August 6th 2003 at their Team Leader’s Meeting. The letter on the following page is an acknowledgement from the service for the research.
Dear [Name],

I am writing to convey our thanks to you for your input into our Service Users project. I am sure your research data will be of great value to us, and we look forward to your presentation of it to our Team Management Meeting.

Yours sincerely,

[Name]

CMHC Co-ordinator.
More than the score: The role of football in everyday emotional expression

Word Count = 3420

June 2004

Year II
Abstract

Objectives
This study explored the perspectives of committed football supporters in relation to the emotions experienced and expressed during matches.

Method
Five in-depth interviews were conducted with supporters of a number of clubs from the English League. Interviews were transcribed and analysed, using interpretative phenomenological analysis, in order to explore recurrent themes reflecting football supporters' views about the utility of the football context to facilitate the experience of emotions and emotional expression.

Results
Results from the study suggested that participants experienced intense emotions connected to football that served a number of emotional functions. The ability of football to serve such functions appeared to be dependent on the perceived safety that the football context provided and was connected to concepts of social identity and enhanced self-esteem. A number of strategies appeared to be employed to sustain emotional well-being.

Conclusions
The results were discussed in the light of current theories of football and provide an alternative account for continuing football support that may have therapeutic value in the clinical setting.
Qualitative Research Project

Introduction

There has been a great deal of interest in what drives football fans to support their team, with a number of theories originating from psychology, sociology and anthropology (Sloan, 1979). An obvious motivator is that football is a source of entertainment and Sloan argues that the attraction comes from the aesthetic qualities and the value of sport in shaping character and providing lessons on life (Pavli, 1998). An alternative theory comes from the work of Elias and Dunning (1986; Dunning, 1999) identifying that football fans may seek emotional excitement that may be missing from everyday life. Another theory linked to emotion is that watching football can be cathartic for the supporter. Sloan (1979) notes that early research has suggested that watching aggressive acts will subsequently reduce feelings of aggression in the observer. However, more recent findings have found the opposite effect, with an increase in aggressive acts (Sloan, 1979).

Other motivators for supporting football relate to themes of identity. Cialdini, Borden, Thorne, Walker, Freeman and Sloan (1976) identify a tendency to ‘bask in reflected glory’ where fans associate themselves with the positive aspects of their teams as a means to increase self-esteem. Allied to this, Jones (2000) suggests that supporting a particular team provides a strong sense of social identity which influences the person’s thoughts, feelings and behaviour. In addition, Sandy Wolfson (personal communication, 8th March 2004) has identified other psychological benefits of being a fan which include social interaction, tension regulation and intellectual challenge.
There are, therefore, a number of explanations for why football fans continue to support their team. Walton, Coyle and Lyons (in press) and Pavli (1998) found an alternative function of football whereby its specific, rule-governed context permitted male fans to express emotion. Therefore, a further function of football is that it may provide a context for the safe expression of emotion. Following on from this, the aim of this research was to explore the potential utility of football as a vehicle for emotional expression.

As the research question was broad and essentially exploratory, it was decided that a qualitative methodology, specifically interpretative phenomenological analysis (IPA: Smith, 1996), would be most appropriate. This is because IPA aims to reflect the views of the participants and create a dialogue with their thoughts and intentions using a ‘realist’ epistemology. IPA was felt to be relevant to this research on the premise that fans think and reflect about their experiences of football.
Method

*How the idea was conceived*

The topic was identified by one of the research team with a personal interest in football. Fellow researchers identified themselves as having an interest in the topic and the ways in which emotion is felt and expressed at football matches. In addition, some researchers self-identified as football fans.

*How the schedule was constructed*

An interview schedule (see appendix 1) was constructed from a review of the literature and questions that interested or puzzled the researchers during their discussions. The schedule consisted of structured contextual questions and semi-structured questions. A timeline (see appendix 2) was also incorporated into the schedule to help identify when certain events happened during the respondents’ time as a football fan, and to facilitate their recall of surrounding circumstances in their lives at that time. The semi-structured questions afforded the respondents the opportunity to expand on their emotional experience of being a football fan in five major areas (Table 1):

**Table 1: Areas explored in the interview schedule**

<table>
<thead>
<tr>
<th>No.</th>
<th>Areas of exploration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Emotions felt</td>
</tr>
<tr>
<td>2</td>
<td>Emotions expressed</td>
</tr>
<tr>
<td>3</td>
<td>Concurrent life events</td>
</tr>
<tr>
<td>4</td>
<td>Exploring the expression of emotions at football and outside football</td>
</tr>
<tr>
<td>5</td>
<td>The psychological effects of being a football fan</td>
</tr>
</tbody>
</table>
Selection of respondents

Respondents were gathered from associates of the researchers. Criteria for inclusion in the study were that participants described themselves as being long-term and committed football fans. Demographic details of the respondents are presented in Table 2 below.

Table 2: Demographic details of the participants

<table>
<thead>
<tr>
<th>Demographic Category</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>4</td>
</tr>
<tr>
<td>Female</td>
<td>1</td>
</tr>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>22-39 years</td>
</tr>
<tr>
<td>Mean</td>
<td>32.2 years</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
</tr>
<tr>
<td>White British</td>
<td>4</td>
</tr>
<tr>
<td>Black British</td>
<td>1</td>
</tr>
<tr>
<td>Level of education</td>
<td></td>
</tr>
<tr>
<td>M.A./M.Sc.</td>
<td>2</td>
</tr>
<tr>
<td>B.A.</td>
<td>1</td>
</tr>
<tr>
<td>G.C.S.E.</td>
<td>2</td>
</tr>
<tr>
<td>Years as a football fan</td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>15-33 years</td>
</tr>
<tr>
<td>Mean</td>
<td>22.6 years</td>
</tr>
</tbody>
</table>

Conducting the interview

Written consent was gained from each of the participants before the interviews commenced (see appendix 3). All interviews were conducted in a location convenient to the participant and lasted between forty-five minutes to an hour.
After the data had been collected, copies of the transcripts of each interview were distributed to all members of the research team for an initial reading (see appendix 4 for an example transcript). The researchers met as a group to analyse one of the scripts to ensure that as much as possible they adopted a uniform approach to the analysis of the data. Each researcher then carried out a preliminary analysis of their own interview transcript by noting down in the left-hand margin anything that was of interest or significance. The team then met in order to contribute any additional comments or observations about each other’s transcripts. This entailed going through and discussing each transcript in turn thus giving a richer interpretation of the material. The researchers then agreed to analyse their own transcripts further and to identify the major themes emerging from the material. At a subsequent meeting they were able to identify a number of themes and subsidiary themes. The relevant parts of each transcript, according to these themes, were then collated in readiness for reporting the results.

**Reflection**

Members of the team reflected individually on their experience of the research process (see appendix 5). In addition, towards completion of the project, the researchers met as a group and reflected together on their experience of conducting the research as a team (see appendix 6).
Results

Themes derived from the analysis are shown in Table 3. In view of limited space, the team decided to focus on the first five of the listed themes, as these appeared to afford the most interesting and evocative insights into the emotional world of the football fan.

Table 3: Identified themes and sub categories

<table>
<thead>
<tr>
<th>No.</th>
<th>Theme and sub category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Phenomenology of emotion</td>
</tr>
<tr>
<td></td>
<td>a) Intensity</td>
</tr>
<tr>
<td></td>
<td>b) Duration</td>
</tr>
<tr>
<td></td>
<td>c) Fluctuation</td>
</tr>
<tr>
<td>2</td>
<td>Emotional function of football</td>
</tr>
<tr>
<td></td>
<td>a) Escape</td>
</tr>
<tr>
<td></td>
<td>b) Unsafe not to express</td>
</tr>
<tr>
<td></td>
<td>c) Therapeutic</td>
</tr>
<tr>
<td></td>
<td>i) Release</td>
</tr>
<tr>
<td></td>
<td>ii) Catharsis</td>
</tr>
<tr>
<td>3</td>
<td>Safety</td>
</tr>
<tr>
<td></td>
<td>a) The football environment</td>
</tr>
<tr>
<td></td>
<td>b) Impact of difference</td>
</tr>
<tr>
<td>4</td>
<td>Sustaining emotional well-being</td>
</tr>
<tr>
<td></td>
<td>a) Expecting the worst</td>
</tr>
<tr>
<td></td>
<td>b) Moving the goalposts</td>
</tr>
<tr>
<td>5</td>
<td>Wider effects on well-being</td>
</tr>
<tr>
<td></td>
<td>a) Belonging</td>
</tr>
<tr>
<td></td>
<td>b) Basking in reflected glory</td>
</tr>
<tr>
<td></td>
<td>c) A learning experience</td>
</tr>
<tr>
<td>6</td>
<td>Pride and shame</td>
</tr>
<tr>
<td>7</td>
<td>Loyalty</td>
</tr>
<tr>
<td>8</td>
<td>Football mirroring life</td>
</tr>
<tr>
<td>9</td>
<td>Team identity and fans’ identity</td>
</tr>
<tr>
<td>10</td>
<td>Quality of the narrative</td>
</tr>
</tbody>
</table>
Phenomenology of Emotions

Participants described that emotions experienced in a football context were more intense than in everyday life, describing how “emotions become elemental... it’s absolute highs and lows” (Annette, line 525). Emotions ranged from the “sheer, sheer exhilaration” (Henry, line 112) to a “total demotivation” (Jim, line 220). The intensity was accentuated by dramatic fluctuations in the course of a match or season. This emotional roller-coaster was welcomed by some participants - “it can feel that nothing’s going right, and then just suddenly something turns on its head, and life’s brilliant and life’s fantastic” (Annette, line 641), but was also seen as potentially dangerous - “there’s some bad physical [...] consequences to stressing yourself up too much or allowing yourself to go up and down too much” (Andrew, line 321).

Participants were asked how long their mood was affected by an important match. Those who described a positive event (Andrew, Annette and Henry) described a sustained impact “lasting for weeks” (Annette, line 302), “certainly a good month or so”; (Henry, line 190), whereas those recalling a negative event (Jim and Vincent) both reported a lowering of mood lasting around a week. It may well be that those who wished to bask in their team’s glory used strategies to keep their mood elevated for as long as possible and enable them to “hold on to these little moments of glory” (Andrew, line 235). Henry described “wanting to relive that goal time and time again [...] in my mind... on news bulletins or video or whatever” (Henry, line 181). Negative events also engendered intense emotions which might be prolonged “by being dragged up in the newspapers” (Vincent, line 89), but they seemed more fleeting, perhaps due to fans’ efforts to move on “and think, oh well – they’ll do it next season” (Jim, line 268).
Emotional Function of Football

This theme emerged from the participant’s descriptions of the role that football served in allowing them to experience and express a range of emotions: “I don’t know what it is about football [...] it’s quite a good way of expressing your feelings” (Vincent, line 243). Participants described how the pressures that build up in everyday life can undergo cathartic release in the context of a football match, “[football is] useful as a release for their emotions, it may be that they’re bringing stresses and strains from [...] their everyday lives [...] and maybe releasing it through that way” (Henry, line 294); “[in everyday life] you end up internalising a lot, but you don’t have to do that, you’ve paid your thirty quid” (Annette, line 514). In addition to releasing everyday stresses, football for some (Henry, Jim, Annette) represented a way of forgetting about day-to-day life: “it’s an escape more than anything” (Jim, line 637); “it’s engaging and it’s escapism” (Annette, line 659).

Participants were attuned to the “physical manifestation of emotion” (Annette, line 335) both as an internal event: “I’ve had times where I’ve had to say to myself calm down because I’ve got headaches and it’s felt like I’ve burst a blood vessel in my head” (Andrew, line 318) and as an observable behaviour: “[I] just jump up and down and shout at [the referee] and probably swear a little bit and it makes me feel a little bit better” (Vincent, line 262). However the consequence of not venting emotions was also commented on: “if you don’t you’d just explode” (Annette, line 334).

Safety

Participants described how the safety and containment of the environment supported their emotional expression “there’s ten or eleven thousand other people doing it as well” (Vincent, line 246); “if you’re in the crowd [...] shouting quite
literally like a dickhead […] or being slumped in your seat with your head in your hands everyone else is doing it [there’s a] uniformity of reaction” (Annette, line 343). Nonetheless participants described an acute awareness of difference and the effect this had on their behaviour whether due to their age or gender: “I was conscious of controlling what I was saying and the content of, and obviously the language I was using, because of the presence of women and younger children” (Henry, line 331) or their identification as being from a minority group: “if there were more black people I would have wanted to say some different stuff” (Andrew, line 387).

**Sustaining emotional well-being**

Participants described techniques to protect themselves against the extremes of negative emotions by anticipating failure: “if you go in there thinking “oh we’ve got this sewn up” then you’re going to be heavily disappointed – so you always have that anticipation that you’re gonna lose” (Jim, line 286); “even if they’re playing Cheltenham Girl’s School you go into games thinking, well I know they can fuck this up” (Annette, line 234). This was made explicit by Henry: “I tend to…err on the side of…pessimism” (Henry, line 196); “I think I keep expectations low, in order not to be too disappointed” (Henry, line 251).

Participants tended towards negativity rather than positivity. This could reflect the reality of being a football fan - “they’ve never done anything in that whole time [approximately 20 years] so why would I expect them to ever do anything” (Andrew, line 533). It could also be linked to the fear of enjoying success to the extent that future disappointment or failure would be too much to bear. One positive strategy used by participants involved emphasising different criteria by which their team’s value could be measured, in the absence of obvious markers of success such as
trophies: "Tottenham are shit...but they've got a history and tradition of playing entertaining football and having entertaining footballers...show me something beautiful please" (Andrew, line 255). By focusing on different measures of success, fans could sustain their well-being and self-esteem in the face of mediocre team performance.

Wider effects on well-being

As well as providing a safe environment for emotional expression, the crowd provided participants with a strong sense that they were part of a particular community. Henry described, "a sense of belonging or an affiliation with the team" (Henry, line 520) and this was echoed by others: "it's quite tribal in respect of you're part of one clan and they're part of another clan and you've got to make sure your drums sound louder than their drums" (Jim, line 438). There was a wider sense of a community of football fans which overarched team rivalries; "we're all just football fans at the end of the day" (Vincent, line 324).
Discussion

Links between the themes

The results identified five major themes arising from the interview transcripts, and a coherent thread emerged linking these themes. The phenomenology of emotions showed that the participants were able to describe intense emotions connected to football, which served particular emotional functions for them. However, this appeared to be dependent on feelings of safety that the football context provided. Connected to the theme of safety were the notions of social identity and boosting self esteem through positive associations with the team and a number of strategies appeared to be employed for sustaining emotional well-being.

Focusing on the phenomenology of emotions, the participants produced rich and vivid descriptions of how they felt whilst watching football. This was likened to a roller-coaster which was characterised by dramatic fluctuations that were more intense than in everyday life, supporting the previous findings by Elias & Dunning (1986; Dunning, 1999). Therefore, a function of football for some fans could be gaining access to intense emotions otherwise not available to them.

Further to this, other emotional functions were identified, whereby football was an escape or distraction from the stress of everyday life. It was also described as ‘cathartic’ or a way of venting pent-up stresses and strains, which resonated with the beliefs of the researchers where we had hypothesised that football may serve a ‘therapeutic’ purpose in helping people express accumulated emotions from their everyday lives. However, this notion of catharsis deviates from that previously identified in the literature by Sloan (1979) who described a process of catharsis occurring through the observation of football (specifically aggressive acts). In the
current study, the participants described a cathartic release through the expression of emotion rather than through observation alone, suggesting that a more active process may be required.

The theme of safety appeared to be a prerequisite to allowing people to express their emotions. Factors connected to safety included being part of the crowd (belonging) and sensing the uniformity of reaction. It was also apparent that the participants were aware that their emotional expression would be affected if they perceived themselves as different from others in the crowd. Being aware of differences within the crowd appeared to strongly influence participants' feelings of safety and their ability to express emotions in the football context. Therefore, being part of the crowd and experiencing a sense of belonging helped the participants to feel safe, as well as providing a source of social identity (Jones, 2000). In addition, Cialdini (1976) and Jones (2000) identified that associating with a football team and its supporters can boost self-esteem through 'basking in reflected glory' and it was evident that the football fans defended themselves against negative emotions by being pessimistic about the team's performance or by finding 'alternative successes' such as flashes of beautiful or inspired play, a concept also noted by Jones. This desire to protect oneself and sustain emotional well-being was commonly reported.

*Emotions outside the football context*

When describing football events, the participants gave vivid narratives. This produced a powerful sense that during the interviews, participants were fully engaged in the process and were reliving the events they described. However, it was apparent that the participants did not produce the same richness of description for emotions in
other contexts. This fits with Walton, Coyle and Lyons (in press) who found that football was a place where it was permissible to talk about emotions.

Although it was felt that the participants were fully engaged in the interview process, some people found it easier to recall their emotional experiences than others and in relative terms, all participants found it easier to discuss emotions in the football context than in other areas of their life. There appear to be four potential explanations for this. Firstly, the participants may have felt inhibited from a more general discussion of emotions due to not feeling ‘safe’ during interviews. This would support the notion that football serves as a vehicle for emotional expression.

A second explanation is that it could be an artefact of memory processes as the football emotions were particularly strong and possessed rarity value (Wagenaar, 1986). In contrast, emotions at this time outside of the football context may not have had the same salience and significance for the participant, making them less memorable. In addition, memories of emotions were not specifically cued outside of football since participants were not asked to recall a specific event. Thirdly it is possible that the questions were less effective at facilitating the discussion of emotions outside of football. Finally, as participants were known to the interviewers, for some this may have inhibited emotional expression. However, there was no evidence to suggest that this had occurred.

**Evaluation of the research**

The validity of this research was evaluated against criteria proposed by Yardley (2000) who suggests that good qualitative research contains the essential elements of sensitivity to context, commitment and rigour, transparency and coherence, and impact and importance. The current study demonstrates sensitivity to
context by consideration and discussion of relevant theories and evidence and by placing emphasis on participants’ perspectives, their socio-cultural context and the social context of the research process. Commitment and rigour has been evidenced by the thoroughness with which data was collected, analysed and reported. For example, this was conducted at both an individual and group level, suggesting the researchers were fully engaged with the data and research process (see appendix 5 & 6). Descriptions and interpretations have been accompanied by extracts from the data, resulting in a construction of reality that is both transparent and coherent to the reader. As a result the investigation provides a rich account of the emotional function of football. It has been able to elaborate on the nature of emotions and the conditions that football may provide in order to facilitate emotional expression, providing an alternative account of why so many people support football.

A potential limitation of the research may be that the interview schedule facilitated the exploration of emotions in the football context, but was less effective at exploring emotions in other areas of peoples’ lives. Therefore further research in this area may need to revise this aspect. A possible solution could be to use two timelines, one for a significant football event and one for a significant emotional event from everyday life (non-football). This may help to focus the participant’s mind on equally important and salient emotional events, allowing a better qualitative exploration of the participant’s emotions in each context. Additionally, the number of participants is problematic, as it is a small sample of people and further qualitative investigation will be necessary to be able to generalise the findings.
Implications for Clinical Psychology

In general, there has been very little published research on football in scientific forums, despite the preponderance of opinions disseminated through the media and social circles. The findings of this research tentatively suggest that being a football supporter may serve purposes for the fan which include the expression and experiencing of intense emotion in a way that feels safe and appropriate. This may be of interest to clinical psychologists as for some people, football may be a topic through which intense emotions can be described and understood. Certainly, a shared interest in football can be an instant way of connecting and joining in conversation with a stranger, a phenomenon described by several participants. Therefore, if nothing else, football may offer a means for clinicians to gain an initial rapport with a person. With creativity, it may also be a way to facilitate exploring or relating to complex emotions.

Ideas for further research

An idea to explore further is why some people may seek to experience intense emotions at football events. If people lack access to these emotional experiences in other areas of their lives, this would appear to be an area of interest to clinical psychologists.

Summary of the research

Overall, this research has met its aims, as a greater understanding has been gained of the role of football in the expression of emotion from five football supporters using interpretative phenomenological analysis (Smith, 1996). Whilst it is difficult to generalise from a small sample, the results have suggested that supporting
Qualitative Research Project

football may serve purposes for the fan which are not commonly discussed in the existing literature. This relates to the finding that football may have utility in facilitating everyday emotional expression. Also, the highs and lows of football were seen as mirroring life, as Henry (line 509) articulately summarised - "[the team's performance] does act as a barometer sometimes for, for your own life".

216


Appendix 1: Interview schedule
Qualitative Research Project Questions

Introduction

Thank you for agreeing to take part in this interview. Please take a moment to read through this information sheet; you don't have to sign it right now. I would like to talk to you about your views and feelings about being a football supporter. I will start by asking you some questions to find out a bit more about the team you support and then we will move on to the main interview. If any of the questions do not seem relevant to you, please tell me and we can expand or move on as you wish. If there is anything you wish to add at any time, please do so. You can stop the interview at any time if you wish to do so. At the end I will ask you to read through and answer some simple background questions. Do you have any questions? Are you ready to sign the information sheet? If you are ready we can begin the interview.

Contextual questions

1. Who do you support?
2. How long have you been a fan?
3. How did you start supporting your team?
4. Could you give a brief description of how committed you see yourself as being to your team?
5. Could you briefly describe the things you do to follow your team? (Prompt: go to matches; read newspapers; listen to radio; watch on TV)
6. How would you rate your team's performance at the moment on a scale of 1 to 5. 1 = Very Poor, 5 = Excellent

Introduce timeline (see attached)

This is a timeline. It is meant to represent your life, past, present and future. We can use it to help you identify when certain things happened or occurred in your time as a football fan and what else might have been going on at those times. I will ask you a few questions and we can use the time-line when you are answering.

1. I'd like you to describe for me some significant event that has happened over the time that you have been supporting your team. It might be a positive event, like an important win, or it might be a negative event, such as relegation. Indicate on the timeline when it happened, and tell me something about it.

Preamble: I'm interested in how you felt about [the event] and would like to ask you something about your feelings at the time.

2. Tell me about your emotions at this time.
   • How long did these feelings last/how long do your feelings last?
   • What were you like the day after? Week after?
   • Was the event you described in line with your expectations? How did that affect how you felt?
   • When do you feel the strongest emotions during a match (or a season)?
Preamble: You’ve described how you felt about [the event] and I’d also like to ask you something about what happened to those feelings.

3 Did you show your feelings?
  - How did you show them?
  - What did you get from showing your emotions?
  - Some people show their emotions more than others when they’re watching a match. What do you think are the benefits/drawbacks of this?
  - If you perceive the people around you to be different from yourself, does that affect the emotions you express?

4 Looking at the timeline, I’d like you to think about what things unrelated to football were going on in your life at that time. Can you tell me something about that?
  - Did these events have any effect on each other?
  - Either: [Other event/circumstances] sounds difficult. Do you think the fact your team were doing well/badly helped/made things more difficult?
    - Or: [other event/circumstances] sounds like a good time in your life. Do you think the fact your team were doing well/badly helped/made things more difficult?
    - If [your team]'s performance had been the opposite at that time, do you think that would have affected other events in your life?

5 Is it easier to express negative emotions at a football match rather than showing negative emotions other areas of life? And similarly, is it easier to express positive emotions at a football match than it is to show positive emotions in other areas of your life?

6 Changing focus a little, I’m interested in the differences between fans of teams that are winning and fans of teams that are losing. Do you think a team’s performance can affect how fans see themselves?
  - Does the team’s performance affect how they behave in areas of their life outside football?

7 What do you personally get from being a football fan?
Background information sheet

The following information is collected so that people who read the final report can know more about the people who have taken part. However, you will not be identifiable in the research as the study is complete confidential.

1. How old are you? _____

2. How would you describe your ethnicity?

(Please choose one section from (a) to (e) and tick the appropriate box to indicate your cultural background).

<table>
<thead>
<tr>
<th>Section</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) White</td>
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</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td>(b) Mixed</td>
<td>White and Black Caribbean □</td>
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<tr>
<td></td>
<td>White and Black African □</td>
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<tr>
<td></td>
<td>White and Asian □</td>
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<td></td>
<td>其他混血背景，请填写在下面</td>
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<tr>
<td>(c) Asian or Asian British</td>
<td>Indian □Pakistani □Bangladeshi □</td>
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<td></td>
<td>其他亚洲背景，请填写在下面</td>
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<tr>
<td>(d) Black or Black British</td>
<td>Caribbean □African □</td>
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<tr>
<td></td>
<td>其他黑人背景，请填写在下面</td>
</tr>
<tr>
<td>(e) Chinese or Other ethnic group</td>
<td>Chinese □</td>
</tr>
<tr>
<td></td>
<td>其他，请填写在下面</td>
</tr>
</tbody>
</table>

222
3. **What is your highest qualification? (please tick appropriate box)**

- None
- GCSE(s)/O level(s)/CSE(s)
- A level(s)
- Diploma
- Degree
- Postgraduate degree

4. **What is your current job (or, if you are not working, what was your last job)?**

........................................................................................................................................

223
Appendix 2: The timeline
Time Line - representing your life from birth until now and a little into the future
Appendix 3: Information Sheet and Consent Form
INFORMATION SHEET AND CONSENT FORM

An Exploration of the Relationship Between Team Performance and Reported Emotional State of Committed Football Fans

You are invited to take part in a study looking at the types of experiences reported by committed football fans. Your participation will help to develop an understanding of the types of feelings that supporting football can generate in fans and how these may relate to other events in your life.

If you agree to take part you will be asked a number of questions about your team’s performance and how you felt about this. You will be asked some questions about what it is like to be a football supporter. You will also be asked some more general questions about yourself.

The interview will be audiotaped and the conversation will be transcribed to provide a paper copy of the interview. On this paper copy all names and identifiable information will be changed to preserve anonymity. Once the study is completed, the audiotape will be erased. The anonymised paper copy may be kept as a record. All members of our research group will have access to the transcripts. If, at any time, you decide that you wish the tape to be erased immediately, let the interviewer know.

The total duration of the study is about 45 minutes.

You do not have to take part in this study if you do not want to. If you decide to take part you may withdraw at any time without having to give a reason.

The data collected from your participation will be completely confidential.

I agree/do not agree to take part in this study. (Please delete as appropriate)

Signature of Participant: ................................................. Date: ..............................
Name in Block Capitals: ..........................................................................................

Signature of Interviewer: ................................................. Date: ..............................
Name in Block Capitals: ..........................................................................................
Appendix 4: Example Interview Transcript
<table>
<thead>
<tr>
<th>Line</th>
<th>Speaker</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Teddy:</td>
<td>The tape’s on. Okay I’m going to start with some</td>
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<tr>
<td></td>
<td></td>
<td>contextual questions. Who do you support?</td>
</tr>
<tr>
<td>02</td>
<td>Henry:</td>
<td>Arsenal.</td>
</tr>
<tr>
<td>03</td>
<td>Teddy:</td>
<td>As if I didn’t know that!</td>
</tr>
<tr>
<td>04</td>
<td>Henry:</td>
<td>[Laughs]</td>
</tr>
<tr>
<td>05</td>
<td>Teddy:</td>
<td>Okay. How long have you been a fan?</td>
</tr>
<tr>
<td>06</td>
<td>Henry:</td>
<td>About... thirty... three years. Yep</td>
</tr>
<tr>
<td>07</td>
<td>Teddy:</td>
<td>Quite a long time then.</td>
</tr>
<tr>
<td>08</td>
<td>Henry:</td>
<td>Suffering... [Laughs]. Long suffering</td>
</tr>
<tr>
<td>09</td>
<td>Teddy:</td>
<td>Long suffering okay. How did you start supporting Arsenal?</td>
</tr>
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<td>10</td>
<td>Henry:</td>
<td>I think I first became aware of the significance of football</td>
</tr>
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<td></td>
<td></td>
<td>and teams and supporting teams around about 1970-71 cup</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>final, day, on cup final day 71 and from that decided that</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>it’s good, a good thing to support the team that wins the FA</td>
</tr>
<tr>
<td>13</td>
<td></td>
<td>cup, so sort of following that really.</td>
</tr>
<tr>
<td>14</td>
<td>Teddy:</td>
<td>Could you briefly describe the things you do to follow your</td>
</tr>
<tr>
<td></td>
<td></td>
<td>team?</td>
</tr>
<tr>
<td>15</td>
<td>Henry:</td>
<td>I check the website, probably the official club website</td>
</tr>
<tr>
<td></td>
<td></td>
<td>probably daily, umm, look out for the results err when I’m</td>
</tr>
<tr>
<td>16</td>
<td></td>
<td>not actually watching or listening to matches. Try and</td>
</tr>
<tr>
<td>17</td>
<td></td>
<td>watch the games when they’re on TV, if I can’t get to a TV</td>
</tr>
<tr>
<td>18</td>
<td></td>
<td>I’ll listen to them on the radio and occasionally I’ll even</td>
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<td>20</td>
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<td>22</td>
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<tr>
<td>23</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Teddy: Ok. And how would you rate your, how would you rate Arsenal's performance at the moment on a scale of one to five, where one is very poor and five is excellent?

Henry: At the moment I'd probably put them on a three.

Teddy: Ok. Ok the next bit... I'll need this piece of paper and this is a timeline. It's meant to represent your life past, present and future. We can use it to help you identify when certain things happened or occurred in your time as a football fan and what else might have been going on at those times. I will ask you a few questions and we can use the time-line when you are answering. I'd like you to describe for me some significant event that has happened over the time that you have been supporting Arsenal. It might be a positive event, like an important win, or it might be a negative event, such as relegation. Indicate on the timeline when it happened, and tell me something about it.

Henry: I suppose my first recollection, significant recollection would be the cup final in 1972. So we're looking...this kind of stage here [writing on timeline]... they played in the cup final and lost that game to Leeds United 1-0. That was quite a downer, a very negative event. I would say the next recollection of the team was... in their performance in the late 70s, 78 to 80, and they appeared in three cup finals in
succession winning one of them, I especially remember

1979 cup final win against Manchester United. After that

[laughs] the team went through I can only describe as a bit

of a wilderness, barrens patch and, I think, the next

significant event and I suppose this is one which is

particularly poignant event for me cause I went, was the

Littlewoods Cup Final at Wembley in 1987 and I actually

was fortunate enough to be at the game to watch them win

that 2-1. Particularly good, I’d, I’d being at a Wembley,

Wembley Cup Final to watch the team win, excellent. The

next year the 88-89 season was particularly significant

because that was the year they won the championship, for

in, for first time in about 20 years, and of course there was

the err dramatic late winner at Anfield against Liverpool in

that match. And I do particularly remember that, watching

at home on TV, having given up hope of them winning it

and then them scoring in the last minute, I think I can

definitely recall screaming and rolling around [laughs]

Teddy: [laughs]

Henry: on my sitting room floor when that, when that went in.

That was another particularly uh memorable one and

[unintelligible] a couple of good seasons following that,

another championship win a couple of years later. Umm...

1994 I remember... them winning the European Cup
Teddy: Winners Cup, the first time I remember ever seeing them win a European Final. Err, again the following year they appeared in the final again but happened to lose that one… and I would say it wasn’t until 1998 when I first saw them win the double… that, I really, again, really remember that cup final watching that with a friend round at his house and watching them beat Newcasical, err Newcastle United in the final 2-0, err win the double that was good. And then err again in 2002 winning the double again, umm… I suppose err devaluing it a little bit, that that the the trophies coming a bit too too thick and fast for me as an Arsenal supporter but err, no particularly enjoyable 2002 that that season there. And I think particularly from the year sort of 98 onwards not only the winning of the trophies but I think it was significant that the style of play and the way that they played football was a significant improvement in what the team and certainly the club had served up before and the, they were playing with a style and panache I think which as an Arsenal supporter I certainly wasn’t used to so. Yea. That was good.

Teddy: Does that bring it up to the present?

Henry: Yep, to the current season, of course which, they’re currently umm trying to win the league title having more recently gone out of two competitions and I have to say that...
was a little sad, but umm, nonetheless playing good football again.

Ok, you you’ve identified a number across this time is there one of these which you feel is the most significant out of all those?

I think the one which, the event which... I think just due to the excitement and the climax of the season and the events was the 1989 league championship win at err Liverpool which I saw on the television, yeah I’d say that was the most significant in my lifetime. First time I’d actually seen the team win the league umm, but... so that was good, yeah very good.

Ok. I’m interested in how you felt about that event, the league championship win, and would like to ask you something about your feelings at this time. Can you tell me anything about your feelings at the time?

At the actual time I think it was just one of sheer, sheer exhilaration. I think, the way the season had gone and the build up to the match a kind of... the demands on Arsenal of having to win 2-0 and although they were leading 1-0 at half time, as the game grew on and got closer to the final whistle, it just, it just didn’t look as though a goal was going to come and I think remembering back to the evening, getting into injury time, just expecting to hear the final
whistle and the, the subsequent disappointment coming from even though they’d won the game 1-0 was really yeah quite poignant. So, the players, the Liverpool players I think by that time quite rightly so in many respects were almost kind of congratulating each other, sort of, saying that they’d won it and err I think for that goal to come when it did it, it just was, the sheer exhilaration of of winning a game that close to the edge, and and for it to be such a a major trophy as well, I think the combination, I actually felt exhilarated, I I I was on a high and I remember, I think going out to see my girlfriend afterwards, and it almost being impossible really to hold any kind of sensible conversation [laughs] so yeah it was umm it was amazing, and er but I felt alone it many respects because I wasn’t sharing it with other Arsenal supporters, err my girlfriend’s family at the time all being quite avid Spurs supporters and they weren’t quite sympathetic to my excitement and I actually remember going into a pub that was full of Tottenham supporters after that, that game, and again being almost met with a stony wall of silence really [laughs] I don’t think [laughs] it was the right place for me to have been at the time so I had to contain my excitement somewhat, umm so it’s quite, although it’s quite exhilarating it’s quite a a kind of lonely experience [laughs]
but I, I also valued my safety [laughs]

Teddy: [laughs]... You said that you felt that exhilaration

Henry: Hmmm hmmm

Teddy: Umm, that excitement, was that throughout the match?

Henry: I think ummm

Teddy: Or were there other emotions that you felt during the match?

Henry: Oh certainly other emotions, I, as I said, as I said, prior to the umm the goal, the final goal going in there was a sinking feeling of of been here before, you know we’ve seen it, been so close, they’ve got so close this time. And there was the feeling of the inevitable, you know I felt resigned, I think it was that, that combination of of having resigned myself to the fate of them not winning sufficiently to win the league. Err, and and sort of thinking I can’t bear to watch this I I want to go out now, but of thinking, for some reason, strange reason wanting to hang on there until the end in the kind of vain hope that something good would come. So I think it was the sheer unexpectedness of it and the kind of air of resignation, disappointment, feelings of despondency really, that had preceded the goal going in. I think that roller coaster if you like of emotions certainly was you know to the fore there, where you, you’re kind of sunk and sort of thought, oh well that’s it for another year,
got so close and to this point, come to that. But then I think, you know to be lifted, in the way, there was no time for Liverpool to come back, and you knew, basically the last kick of the game, I think it was just, yeah, just from, complete low to high in the space of, of a, you know, half a minute, it was, sheer exhilaration.

Teddy: And that exhilaration, that high, how long did that last for?

Henry: I think the, the intensity of the moment as I said the rest of the evening, I mean it was just impossible really to think about anything else or to hold a a sensible conversation about any other subject really and err, I I would say that probably stayed with me for a few days and I think reading about it, wanted to read every paper, see every report on the TV, you know, relive that that goal time and time again whether it was just in my mind or just, on news bulletins or video or whatever, I can’t remember whether I taped it or not. But I, I say, its, you know, for the next week or so just thinking about nothing else really, umm, apart from getting on with day to day life but it mean it was, it was that significant and I would say that the enjoyment of that has lasted, ever since although obviously that initial feeling of exhilaration obviously dissipates after a while, it was certainly, a good month or so I think umm before things really really moved on and err it was just a case of wanting
Qualitative Research Project

Teddy: to relive that moment by whatever means, whether papers, or reports or TV, whatever means possible really.

Teddy: Was, was the, was the result of that match in line with your expectations?

Henry: I tend to underplay or err on the side of caution or pessimism with these games and I, if I’m honest, although obviously willing and wanting them to win my head would have said, due to the form of Liverpool at that time, and Arsenal not having won a trophy, err for some, for a significant, the league championship for about 20 years, my expectations I think were, that the, the team wouldn’t win, certainly by the significant margin of two goals, to actually win the league, no my expectations were not, positive.

Teddy: So knowing that, that it didn’t fit... your expectations weren’t positive, how did you think that affected how you felt?

Henry: I’m sure that, as I’ve said, umm relating to the kind of sensations leading up to the goal going in and the kind of, the air or resignation about everything, sinking into a kind of, oh well we gave it a good go you know, it was you know, a good try a good effort but in the end we just weren’t quite good enough. I think it was significant, that the expectations were, not there to win that actually produced the exhilaration of when they actually did win.
So I think it was that combination, both over the build up to the game and actually during the course of the game, that led to the incredible high that followed the goal going in, yes.

Teddy: When do you think you feel the strongest emotions during the match?

Henry: I think, [cough] strongest emotions are at the time of goals... either goals being scored by your team, or against, and the inevitable highs and lows, and... that exhilaration when a goal goes in especially when it’s a significant goal or err a winning goal, although of course during the course of a game you don’t know when a winning goal is going in but I think if they start to extend the lead by two or three goals, you become confident the team should win that match. But again, the lows occur umm, when, I think, particularly the opposing team scores, either really early on in the game, and you think oh no it’s going to be an avalanche and they are going to wop us sort of five or six nil, or I think towards the end of the game that the opposing team scores because, if it’s, particularly if it’s a tight game, there’s not many goals in it, you think, I think the tendency is to think well that’s it they, they’ve blown it. So I think at those times, err particularly strong and, I’d say they’re the particular low points of a game, when the opposing team
Teddy: On balance, do you think you experience more lows or more highs during a game?

Henry: Again I think it’s umm, a, a kind of, almost like a defense mechanism, to kind of keep expectations low, and almost accentuate the negative in the belief that, if something positive comes, or a goal comes, it’s more like, more of a bonus. So I think it’s like a deliberate, even though the evidence and the performance of the team, especially this season suggests that I should be confident and going into it expect expecting them to win, because actually in the league they’ve been unbeaten, but, umm, I think I keep expectations low, in order not to be too disappointed if they don’t fulfill them. [laughs].

Teddy: You’ve described how you’ve felt about the, this event, the winning the league, and I’d also like to ask you something about what happened to those feelings. Did you show your feelings and how did you show them?

Henry: When I was at home and the goal, I was watching it on Television and the goal went in, yes, I think there was a high degree of, certainly the most intense shouting or screaming that I have ever experienced watching a football match, I think it was partly because I was in the safety of my own home, and umm… it was the sheer disbelief that
Teddy: [laughs]

Henry: When that goal went in, and I think almost uncontrolled in terms of rolling around the floor or, just jumping around for joy really yeah, certainly the most intense emotions I have ever experienced watching football, yeah, and I think partly that was due to, yeah, being at home and not being in a pub, but I think if I was in a pub watching with friends or around watching, I would have done the same, I think there would have been a collective, even more of a collective

Teddy: So what did you get from showing those emotions and doing that?

Henry: A release [laughs] an amazing release, I mean it was, yeah, I don’t think it would have been safe to try and contain that in any other way [laughs], yeah [laughs].

Teddy: Some people show their emotions more than others when they are watching a match. What do you think are the benefits or drawbacks of that?

Henry: I think, I would say for a lot of people when I have actually been to games and watched or listened to them, as I’ve been there, taken notes on people it’s clear that people find it therapeutic in terms of a release for emotions, and, to some degree I think it’s quite healthy, people as a safety valve
and having to have that outlet, it's almost like in a safe contained environment where, I think due to the behaviour of those, those other supporters around them it appears to be quite the norm, to, certainly shout, sing or, you know, be emotionally... verbose or, or... trying to think of the right words, articulate, emotionally articulate the one, the when, when one normally is but, and I think a lot of people find that useful as a release for their emotions, it may be that they're bringing stresses and strains from their lives, their everyday lives to sort of, that game, and maybe releasing it through that way, so I think that's useful. But of course the downside to that is when that becomes over the top and it starts impinging either on those sitting around them and clearly people can get upset certainly by the use of, of foul language, and also of course when it overspills into abuse either of players or of opposing supporters, and its clearly, you know, the there are people who who, umm I think, abuse those situations umm to the effect of, detriment of other people.

**Teddy:** What about abusing the referee? Is that cathartic, is that a release or what is that?

**Henry:** In the same way that, I think its all again, its almost a, I think he's amongst football supporters a legitimate target, I mean he's, he's the official so he, he doesn't carry any
favour in terms of any supporters but, again I suppose
within reason I would say ok to have a go, have a question
his decisions but, but again umm he’s a human being like
anyone else and doesn’t deserve to be, verbally abused.

Teddy: If you, one of the... you mentioned about the people around
you. If you perceive the people around you to be different
from yourself, does that affect the emotions you express?

Henry: Interesting point. I, I, I, I compared umm a game, a match
or matches that I’d watched err in the early 70s when
standing on the North Bank terracing at Highbury to a
situation where I was then sitting in the same stand but it all
being all seated and I did compare the crowd that was
around me in the early 70s, there was an all male crowd, err
one of lots of singing and shouting and and foul language I
have to say... umm to one where I found myself in later
years, I think the early 90s, sitting in a stand with women
and children, almost a like a more family err environment,
and I must say that, it did, I was more aware of what I
myself was shouting and saying, in that, in the latter
environment than I was earlier on because I think I was
conscious of controlling what I was saying and the content
of, and obviously the language I was using, because of the
presence of women and younger children. I would say that
it was more restrained, in that environment, certainly.
336 Teddy: Ok, so the emotions you expressed might have been slightly more restrained, depending on the people that were around.

338 Henry: Yes, certainly would have affected that, I was actually quite conscious of that yeah, at the time, I was there yeah.

340 Teddy: If you perceive the people around you to be supporting a different team to yourself would that affect the emotions you express?

343 Henry: Absolutely umm [laughs]...

344 Teddy: And how so?

345 Henry: Good case in point, I actually went to a game at Arsenal, but I went with a friend of mine who was err a Spurs supporter, and because err, of the way things worked out I decided to go in to stand with him in the Tottenham supporters end... and it was amazing because, although Arsenal had the good fortune to win the game, when they scored, when Arsenal scored, of course, because I was surrounded and I mean compacted, surrounded in a standing terrace full of Tottenham supporters, I actually changed my responses to the goals, the Arsenal goals going in, so when umm the Arsenal goals went in, in terms of not jumping up for joy in terms of the release of that emotion, I’m sure I shouted words to the effect of oh damn [laughs] and it was clear by my, probably clear by my overreaction [laughs] to these events that, that it was probably quite, quite marked
and false compared to the rest of the Tottenham, who just
sat stony faced and silent [laughs] so, that that was how I
dealt with that in that situation of course yeah. Although
the release was there when the goals went in, the content or
the, or the guise of it was certainly changed, because I, I, I
feared that I would be abused either verbally or probably
physically if I had of shouted, started shouting when that
goal went in [laughs].
Teddy: Do you think that the umm, those emotions that you felt,
that release
Henry: Hmmm
Teddy: The intensity of it
Henry: Hmmm
Teddy: Do you think that it was diminished because you had those
different fans around you?
Henry: Yes, oh certainly
Teddy: Would you have got a more intense burst of emotion if...
Henry: Absolutely I would have been jumping and shouting for joy
if I had of been with the right, set of supporters certainly.
So I had to contain, you know even even voicing
disappointment, I had to temper that or tailor that down, err
simply because you, its clear, the normal reaction for an
opposing supporter is really just not to do anything
emotionally, just stand there stony faced and probably shout
the odd word of verbal abuse at the player who had scored
but certainly yeah it was more constrained, yes.

Teddy: Ok, so looking at the timeline, I’d like you to think about
what things unrelated to football were going on in your life
at that time. So when they won the league. Can you tell me
something about that?

Henry: I think at the time umm, I was, working as... as an estate
agent... that’s right it was a career change and... I think, in
a way the football provided an escape or a release... umm
probably for the confusion or dissatisfaction, I was having
err at the time in that, in that, in that job. Yeah I’d say it
was a a positive distraction from an otherwise umm...
transitional, career kind of move at the time, yeah. It was
quite good. Although I had a a stable relationship with a
girlfriend... ummm, most things were pretty ok, umm, but I
I think football always acts especially when the team’s
doing well as a welcome, escape from sort of day to day
life, yeah.

Teddy: So was it the estate agent part that was
Henry: I think yeah, it was the uncertainty of having made a career
change umm and and the dissatisfaction job dissatisfaction
of the actual work yeah, it wasn’t fulfilling actually.
Teddy: So that that part of it sounds quite difficult do you think the
fact that your team were doing well... helped make things
Henry: Absolutely oh yeah. I, I think umm, in the way that it acts and serves in most people’s lives it’s a welcome release, I think from the day to day life umm... that you have and I think if if things are possibly quite difficult or troublesome, in any err at any level then it serves as a good distraction umm a welcome release I think away from those day to day pressures yeah.

Teddy: Cause you mentioned how you were kind of on a high for about a month

Henry: hmmm

Teddy: weren’t you, you were feeling

Henry: absolutely

Teddy: how do you think that affected?

Henry: I’m, I’m sure it had had a positive impact across the rest of my life and you know in terms of, who I was with and, who I was working with or you know in a small office or whatever I’m, I’m sure my mood would have been elevated and and was probably elevated at the time because of that umm result yeah that outcome yeah.

Teddy: If Arsenal’s performance had been the opposite at that time

Henry: hmm

Teddy: do you think that would have affected other events in your life?
Henry: … it’s hard to say umm, I don’t think to any significant
degree, but I’m sure, that my mood, would have been,
would have been sorry somewhat, lower or, I would have
been less enthusiastic, enthusiastic, enthusiastic about my
work or, relationships at at the time, so I’m I’m, yeah, I’m
sure it does, although I think it’s difficult to put any kind of
umm, tangible kind of measure on it. I’m sure it does have
some, some err impact on your mood, yeah.

Teddy: Do you think, is it easier to express negative emotions at a
football match rather than showing negative emotions in
other areas of life?

Henry: I think it, it, as I said the football environment certainly the
crowd environment does, permit, the release of a lot of
negative… emotions or thoughts… and I think consciously
or subconsciously they can be channeled out… as a a you
know through legiti legitimate targets like either the
opposition, or the referee I think, yes, I, I think it’s almost
like a, a kind of safe environment, to release that kind of
negative emotion, even though I think it has umm potential
negative outcomes in terms of the, players or referees and
and the opposing supporters being overtly, abused, yeah.

Teddy: What makes it safer… to express negative emotions at a
football match?

Henry: I think if you are sitting, sorry
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<tr>
<th>Teddy</th>
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<tr>
<td>Rather than generally?</td>
<td>If you are sitting with supporters of, your team, err the</td>
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<td>safety in numbers element I think you feel, you’re amongst</td>
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<td>like minded people, like thinking people, and actually</td>
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<td>this is, you’re just following the consensus of what’s around</td>
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<td>you and if that’s the prevailing mood or, thoughts that are,</td>
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<td>you’re experiencing which obviously you can hear and pick</td>
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<td>up on, then you feel that security in actually endorsing</td>
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<td>what, what’s being said. So, it has to do with, with who</td>
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<td>you’re with yeah definitely</td>
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<td>And similarly, is it easier to express positive emotions at a</td>
<td>Yes... umm for the same reasons I think you’re, you’re</td>
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<td>football match than it is to show positive emotions in other</td>
<td>amongst... you’re... tribe if you like, your, your you know</td>
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<td>your family or whatever they’re, they’re people of like</td>
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<td>ironically they’re people you might only meet sort of once a</td>
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<td>week or may, once a month or once a year and actually</td>
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<td>probably don’t know them any more closely than you</td>
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<td>would someone in the street, but... err I think the... the</td>
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<td>bond that’s held between the football supporters is</td>
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<td>sufficiently strong... to allow... the safety err valve of of</td>
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480 emotional release that probably, wouldn’t occur unless you
481 were sort of either within the safety of your own home
482 or own family.
483 Teddy: Changing focus a little, I’m interested in the differences
484 between fans of teams that are winning and fans of teams
485 that are losing. Do you think a team’s performance can
486 affect how fans see themselves?
487 Henry: ...I think that’s quite umm…difficult question to gauge it
488 but I mean in terms of behaviour, what you would normally
489 find of course is the, the team, supporters of the team that is
490 winning, more exuberant, more vociferous… umm probably
491 singing and chanting a lot more err and I would have
492 thought that they would, they would obviously feel more
493 positively about themselves and be looking to assert that
494 through, the chanting and singing that would be going on.
495 So I, I would think from the behaviour of team’s supporters
496 who were losing, it is a question of, they do want to
497 encourage their team and some will react very positively,
498 and keep chanting and singing for them, but undeniably,
499 they’re aware, only too aware from the noise going on
500 around them… umm… that they are on the, the wrong end
501 of the, the result so I would have thought their self-
502 perception would, would definitely decrease or fall,
503 absolutely, yeah.
Teddy: What about outside the match, would the performance of the team, whether they’re winning or losing affect how the fans see themselves when you’re away from the match and during the week say?

Henry: Yeah absolutely, I, I, I think the team’s performance, does act as a barometer sometimes for, for your own life and I think if, the team does suffer a particularly negative or bad result, there is a tendency either you want to, immerse yourself in a distraction to, to kind of, alleviate the mood and getting away from thinking about that, or, or I think, alternatively it can highlight other negative aspects or areas going on in your life at the time. But I think it can act as a trigger sometimes, to to channel your, other negative thoughts or emotions err with, yeah, yeah.

Teddy: ... Umm, what do you get personally from being a football fan?

Henry: ... I think there’s a sense of... I think there is a sense of belonging or an affiliation with the team... and following their progress, is is... a welcome distraction... and and almost umm, it’s like acting out successes or failures vicariously, err through someone else’s endeavours you feel... umm... a sense of not being in control of events and not, not being able to influence them but nonetheless emotionally bonded or attracted, to, that that end, I mean to
their end sorry. So I argh, I, I think it’s... it is a question of
feeling, of belonging really and, and being... part of
something... hopefully... err something good... umm, that,
you know can give you, the exhilaration and the pluses...
but of course with that I think you have to buy into the fact
that, there’s going to be some lows, and some
disappointments on the way, but umm, I, I think the, the
emotional appeal of of that err rollercoaster ride is, is too
strong to kind of, for a lot of people anyway to kind of,
distract so, yeah or detract from that so no it’s good... a
positive thing.

Teddy: That’s it
Henry: That’s it
Teddy: Yep we’re finished, thank you.
Appendix 5: Reflections from each of the researchers
Reflections throughout the research process included consideration of the interview process as well as the conceptions and preconceptions that I brought to the project. The interview was conducted using a schedule of questions. I chose to stick fairly closely to this schedule, using only a small number of additional questions and probes. This was to ensure that, while the participant’s perspective was explored I did not influence the process by asking any ad hoc questions that could have been considered leading. The disadvantage of this, of course, is that there may have been some interesting avenues that were not explored in great detail, thereby limiting the data.

Being a female researcher who had not been committed to football in recent years may have had a positive effect on the responses given. The balance between what knowledge and interest I had about football against what I didn’t know about the topic made me genuinely curious during the interview. Evidence that this was picked up by the participant came from the elaborate explanation provided during the interview about the system by which teams play each other in a bid to secure league promotion.

The fact that I haven’t followed football for a number of years placed me in a relatively neutral position throughout the research. Although I came to the study having had the experience of being swept along by the emotions of watching football from the terraces (in most cases literally, due to experiences prior to the introduction of all-seater stadiums) I had always been left with a nagging feeling that I was somehow missing out because I didn’t quite get it.
Qualitative Research Project

Personal reflection - Two

It was a slightly apprehensive time, choosing the research topic from the choices given and waiting to see who else would be interested. The topic seemed to provide an opportunity to add a light-hearted aspect to my clinical training, however this was somewhat dependent on my fellow researchers: would we get on, did they have similar ideas to mine about how the project might “go”, would we be able to negotiate whatever differences arose? Nevertheless I recall being pleased with the final group, one of whom I knew fairly well and the remainder I perceived to be friendly and sociable people.

Once discussions began it became clear that others appeared to have the same approach as I did. Banter and friendly rivalry emerged between those of us that were football fans; the remainder joined in with the laughter and sought to gain more understanding about the game. I can say with contentment that the subsequent steps in the research process passed unremarkably. We seemed to be able to listen to one another’s ideas, commenting on the positives and negatives where necessary; thinking back I hope that everyone felt as free as I did to both challenge and praise suggestions. I think the interview schedule is testament to our cooperative working style and when it arrived typed and formatted in my email box I was proud of and impressed with the finished product.

The interview itself was a somewhat nerve-wracking experience. I was conscious not only of how the participant perceived me but also what my fellow researchers would learn about me as a clinical interviewer. However I recall enjoying the interview – I had thought myself a football fan until I conversed with my participant! He was able to engage me and take me into the very strong positive emotions he was still feeling despite the chosen event occurring some years previously. However my “high” soon became a “low” when the realisation of the arduousness of the transcribing process hit me. Remaining true to the recording was hard particularly where I perceived my questioning to be slightly flawed, yet I persisted in order to be faithful to the process. Throughout I wondered how my colleagues’ interviews had gone and how my transcript would “stand up” to theirs; had I gathered sufficient information to be able to generate themes, had I wandered too far away from the interview schedule? Handing over the completed transcript to the others was another anxious moment.

Reading the other transcripts was fun! Like my participant the other fans were engaging and even when describing a negative event were able to evoke feelings in me; the life of a true fan really amazed me! For example I recall keeping an eye out for the results of all the participants’ teams so that I could have some idea of how they might be feeling on that particular weekend. A similar amount of fun came through re-reading the transcripts with my colleagues; the banter remained and it felt like we were “quite good at this qualitative stuff” having generated a number of themes common to most or all participants.

The final stage – the write-up seems to have gone almost too smoothly. Schedules have been kept to, joint writing has been enjoyable and a high standard of work has been produced. Despite the extra workload I shall really miss this project and am glad to have been left with new football friendships!
"It became apparent during the course of the research process that my interest in the subject of football and football fandom - which had originally been driven by a scientific curiosity rather than emotional involvement - had undergone subtle changes whereby I began to notice (and worry about!) the fortunes of the football clubs followed by the research interviewees, especially the club supported by my interviewee, poor old downtrodden, stigmatised Millwall. I started to listen to the five minute sport slots after the news on television and even stopped to read the Sun at the newstands in the supermarket! All this was possibly exacerbated by Millwall's gutsy performance leading up to the cup final where sadly they were absolutely crushed by Manchester United, but nevertheless gave me real insight into what it must be like for the committed lifelong football fan and the emotional highs and lows of the football season. My reactions were a complete surprise to me and it will be interesting to see if they are sustained for any length of time. I might even go to a match next season!"
When the topic was first proposed I expressed immediate interest, and was pleased when several others did too. I was a little surprised to see who joined the group – as a football fan myself, I have a good idea which members of the course have an interest in football, and had expected more of these people to join us. On reflection, I was pleased with the group – had there been less football fans, I would have worried that the project would be too distant from the topic, and could not express what I felt was important about football and emotions. However, I was also aware that in a group containing more (male) football fans, I may have felt the authenticity of my “fandom” challenged. As a female fan, I sometimes feel more pressure to prove my commitment, or display my soccer knowledge. Moreover, living far from my club and no longer going to matches, I am very aware that I do not feel as “true” a fan as in the past, and I was grateful that my research group would not be comprised of those whose season-ticket-holding dedication would expose me as the fraud I sometimes feel.

Throughout the project, I inhabited two roles, that of the fan as well as the researcher. An ongoing interest in the complexities of football fandom certainly helped in applying myself to onerous research tasks such as transcribing. Looking back at the transcription, I was also aware that my status as a fan helped the interview progress smoothly, as my participant (also female) knew of my interest in football and therefore a common language and understanding was quickly established, and a richer vein of information was tapped than might otherwise have been possible. However, in the course of the interview it was a struggle to maintain any semblence of an “outsider” perspective, to the extent that on occasion I finished my interviewee’s sentences for her, over-confident that nothing she could say about the emotional highs and lows of football could be a surprise to me.

Naturally, my participant and the others who took part described widely varying experiences and opinions about fandom and their feelings, and it was this privileged insight into the differences and commonalities of fans which was the highlight of the research for me. I was pleased that the write-up seemed to capture the passion, dedication and even some of the humour of our participants. Through this project, I have gained an insight and empathy into the experience of all fans, beyond the blinkers of traditional club rivalries. I also feel that working as a group has been a worthwhile experience, and a valuable introduction into qualitative research.
As an enthusiastic football fan, researching this area has been fascinating, engaging, stimulating and fun. I think this is largely attributable to my fellow researchers, who have delighted me with their similar interest and passion for the topic. We have been a great team and I feel proud to identify myself with them.

At the outset of this research we had a belief that football may serve emotional purposes for the fan which we had not heard discussed before. Consequently it was very satisfying to find that our participants described experiences that supported these beliefs and fulfilled the research question. However, the parallels between the research topic and our experience of it seem uncanny. For example, I recently found myself thinking that even if we don’t achieve a good mark, then we’ll still know that we had the most fun, or we were the best team. Clearly I was finding an alternative success to protect myself. There has also been a sense of unity, with people wanting to be involved in all aspects of the work and supporting each other.

The requirements of the course have affected the research, as the nature of the project has been influenced by the marking criteria. At one point this was particularly notable due to the request that we grade each others’ contributions. I felt very strongly against this as it seemed to jeopardize the integrity of our team-spirit, placing us in competition. Since this has been revoked, the project has rolled along very smoothly and entirely without hitches or conflict.

The use of IPA has been very effective, however, this methodology was restrictive and consequently frustrating in one instance. During a group meeting where we were analysing each interview transcript, it was observed that one of the transcripts contained very little emotion. We were finding it hard to identify themes in the transcript and everyone seemed a little ‘flat’. In particular I found myself feeling subdued and having nothing to say about it. I remember thinking about this and wondering why I had nothing to say, at which point I was struck by the similarity between my feelings and the content of the interview. I felt nothing, and this seemed to reflect the content of the transcript which had very little emotion.

At the time I found this fascinating, as it had a transference type quality to it, where I felt that I was picking up this ‘nothingness’ from the transcript and was feeling it myself. However, what could be done with this? It was an interesting observation to us as a group, but what use was it to the analysis? Nothing, really. This was frustrating as there was no way to discuss this, to articulate it, or to represent these feelings that the transcript generated, although at the time I found them striking. In retrospect, the best that I can make of these feelings is that they demonstrate how strongly we were engaged with the data from our participants.

I think the process of completing this research has changed my perception of football. Above everything, football is entertainment and drama, but having intimately encountered the beliefs of our participants, I can see that football is much more than that. There is a diversity and plurality of functions that football serves, and the next time that someone says to me “I don’t see why people get so excited watching adults chase a ball for 90 minutes”, I will have a number of opinions to share with them.
Appendix 6: Reflections from the whole team
Towards the end of the project, we met as a group to share our reflections on our group processes. As discussion progressed, it quickly became apparent the extent to which our experience of being football researchers mirrored the experiences of the football fans we sought to describe.

We had entered into this research topic because football fandom was of interest to us, but also because we had a strong sense that the topic had the potential to be more light-hearted than the other proposed subjects. We welcomed the opportunity to incorporate a frivolous element into our coursework, as an escape from the day-to-day realities of clinical training. Looking back, we are pleased that this sense of fun was sustained throughout the project’s life. Opportunities for the use of football analogies in group discussion were rarely missed, and when difficult decisions regarding allocation of work or negotiating contrasting ideas arose, these humorous asides served to deflect potential tensions and make us a more bonded group. For example, when one of the group expressed a reluctance to work late, her commitment and loyalty to the project was questioned with accusations of being a “fairweather fan”!

The fact that the project was a “friendly” (rather than a “competitive fixture”) eased performance pressure and allowed us to develop as a team. Had the project counted towards our portfolio, perhaps there would have been more of a clash of individual preferences and styles. As it was, we seemed to forge a safe arena in which opinions could be expressed and ideas challenged, without damage to the group’s cohesion. As the project progressed, we became strongly bonded as a group, choosing to sit together in teaching sessions. On an occasion when one group member was unable to sit close to the others, he experienced strong feelings of isolation, likened to
being seated amongst the opposing team’s fans! Comments made by members of other research groups, concerning our apparent organisation and the laughter so often heard during our discussions, increased our sense of belonging to a “football family”.

It was entirely coincidental that the research took place during the most important and exciting period of the football season, namely the climax of the league and FA cup competitions. This added impetus permeated discussions and heightened our awareness of the ‘emotional rollercoaster’ that was so evident in the fans’ interviews. The fact that our research topic was being so vividly expressed in real live terms in the outside world very likely contributed to our sense of its value as a phenomenon worthy of formal investigation. This value seemed doubtful at the outset, when the topic seemed rather flippant and we were unsure what data would be generated. However, the richness of the data and the drama of the climax of the football season affirmed and justified our position relative to the other research groups. Accordingly, towards the end of the project the group felt vindicated in our choice of research topic, to the extent that the phenomenon of ‘basking in reflected glory’ noted in football fans became part of our experience, as we revelled in what we hoped were our project’s mounting successes.

We have also noted that group members whose interest in football was fleeting prior to this project now profess some allegiance to the team supported by their interviewee. This seems a measure of the value of the qualitative methodology in capturing the experience of participants in such a way that outsiders are drawn into their world.
The effect of manipulating responsibility on probabilistic reasoning and decision-making in obsessional thinking

Major Research Project

Word Count = 19971

July 2005

Year III
Abstract

Introduction

Previous research suggests that people with obsessive-compulsive disorder (OCD) believe there is a greater probability of their intrusive thoughts becoming reality, than people without OCD (Salkovskis et al., 2000). They also feel responsible for any harmful consequence associated with their intrusive thoughts, especially if they are perceived as particularly awful (Salkovskis et al., 2000). In addition, there is evidence that this client group deviate from the normal manner in which estimates of probability are made, and take longer and require more information in order to make decisions (Volans, 1976). However there is no research so far which has attempted to directly investigate the effect of responsibility on decision-making and probabilistic reasoning.

Aim

To manipulate perceived responsibility for a probabilistic reasoning task in high and low obsessionality participants and investigate the impact this has on decision-making and probability judgements. Three hypotheses were proposed.

Method

It was a quasi-experimental, repeated measures design, and university students (n=45) were divided into low and high obsessionality groups. They were subjected to a manipulation of perceived responsibility for a probabilistic reasoning task and data was collected on their probability judgements, amount of information required to make a decision, and the time taken to make a decision.
Results

Heightening perceived responsibility resulted in increased time taken to make a decision, more information being requested before making a decision, and led participants to deviate more from Bayesian normative values. However, the hypotheses were not supported as the results did not reach significance despite being in the predicted direction.

Discussion

A new finding from this study was that perceived responsibility leads people to be conservative in their probability judgements irrespective of obsessionality. The findings also support previous research indicating that responsibility and obsessive-compulsive symptoms influence the time taken and amount of information required to reach a decision. Potential reasons for the lack of support for the hypotheses and limitations of the study are considered. Implications for existing theories of OCD and suggestions for further research are discussed.
Introduction

Context

Obsessive-compulsive disorder (OCD) has been studied by researchers and clinicians for over a century. Numerous accounts of its origins and development have been proposed including psychodynamic, biological, behavioural and cognitive approaches. The importance of studying OCD is evidenced by the fact that the prevalence of the condition, although the evidence is mixed, appears to be within the range of 1-3% of the general population (Jakes, 1996). In addition, the symptoms of OCD can be negatively evaluated by the general public and hence stigmatising for the individual, which may delay the person from seeking help or treatment (Simonds & Thorpe, 2003). Also, the impact of the disorder on the individual can be very distressing and debilitating.

What is OCD?

In order to make sense of OCD, many researchers describe the experience of it. Salkovskis, Forrester and Richards (1998, p.53) state that "obsessions are unwanted and intrusive thoughts, images (mental pictures) and impulses (urges)." These can be experienced as very unpleasant, difficult to escape, intolerable and nonsensical, and they can be accompanied by uncomfortable feelings of depression and anxiety and a desire to neutralise the obsessive thought or the perceived consequences of it (Salkovskis, Forrester & Richards, 1998).

With respect to the definition of OCD, there is considerable debate and speculation, with several variations (e.g. the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition: DSM-IV; American Psychiatric Association, 1994) which are continuing to be refined (Jakes, 1996). López-Ibor and López-Ibor (2003)
state that OCD is a heterogeneous syndrome and Mataix-Cols et al. (2005) state that clinical presentations of OCD are actually a "spectrum of potentially overlapping syndromes" (p.235). Despite this, researchers believe that OCD can be encapsulated using a few symptom dimensions (e.g. Watson et al., 2004).

Pleva and Wade (2002) believe that the causes of OCD are multi-factorial and identify that the two main explanations for the disorder focus on attentional and cognitive-behavioural processes. According to Salkovskis, Forrester, Richards and Morrison (1998) it is the latter that currently provides the best explanation of OCD from the clinical and research data available. Therefore, the cognitive-behavioural approach is the model which is focused on here.

**Cognitive-behavioural theory of OCD**

A comprehensive model of OCD was proposed by Salkovskis (1985), which he has subsequently revised and extended, with many other researchers making contributions. Salkovskis, Forrester and Richards (1998) observe that Beck’s (1976) cognitive model proposes that emotions are experienced by an individual according to the way that an event triggering that emotion is appraised. In addition, beliefs developed early on in life or through unusual or extreme events (Salkovskis, Forrester, Richards & Morrison, 1998), will have an influence over whether certain events are perceived as dangerous and subsequently elicit anxiety (Salkovskis, Forrester & Richards, 1998). According to the cognitive model, people who experience anxiety will be likely to overestimate the probability of a situation being threatening (Salkovskis, Forrester & Richards, 1998). Therefore, it can be seen that the cognitive explanation of OCD is similar to the other cognitive explanations of anxiety disorders,
as beliefs about danger or threat trigger anxiety in typically non-threatening situations (Salkovskis, Forrester & Richards, 1998).

**Intrusive thoughts**

With respect to OCD, Beck (1976; cited in Salkovskis, 1985) identified that the thoughts of obsessional patients were different to the typical automatic thoughts described in his cognitive model of anxiety. To explain this difference, Salkovskis (1985) proposed that the difference between negative automatic thoughts and obsessions could be seen in three ways. These are: (1) the perceived intrusiveness, (2) the fact that they are readily available to consciousness, and (3) the amount to which the obsessions are in accord with the individual’s beliefs. Therefore, Salkovskis (1985) proposed that intrusive thoughts could trigger negative automatic thoughts if the intrusion was evaluated as unacceptable by the person’s individual beliefs, which could lead to dysphoria.

Research indicates that intrusions and obsessions are actually part of our normal everyday experience (Rachman & de Silva, 1978; cited in Salkovskis, 1985). However, although intrusions are part of normal experience, people with OCD appear to treat these intrusions differently. Therefore at the heart of OCD, the cognitive-behavioural explanation proposes that people experiencing obsessions make negative evaluations of their intrusions (thoughts, images, doubts and impulses) which lead to the development of anxiety (Salkovskis, Forrester, Richards & Morrison, 1998). Shafran (1997) comments that the majority of people do not dwell on these intrusions, however the person with OCD has beliefs which interfere with the intrusion and subsequently produce negative automatic thoughts leading to anxiety about the possibility of something awful occurring, which then has to be neutralised somehow.
Neutralisation

As we have seen, OCD is characterised by intrusive thoughts that generate anxiety. In OCD, this state of anxiety is followed by attempts to neutralise. According to Salkovskis' (1985) model, neutralization can be either a compulsive behaviour (overt) such as washing your hands repeatedly, or a cognitive strategy (covert), such as thinking a 'good' thought immediately after you have had a 'bad' thought. Salkovskis states that this can be seen as an attempt to remedy the situation by trying to prevent the possibility of being blamed (by the self or other people). If successful, this results in a reduced sense of discomfort and the neutralising behaviour is therefore negatively reinforced, becoming the origin of neutralising behaviour as a coping strategy for distressing obsessional thoughts (Salkovskis, 1985). In addition, people with OCD may also avoid situations that could give rise to obsessional thoughts and both of these mechanisms serve to maintain OCD (Salkovskis, Forrester & Richards, 1998).

According to Salkovskis (1985), another significant component in OCD is that neutralization is likely to occur if the person feels responsible in some manner for the automatic thoughts which have been provoked by the intrusion. If the person did not feel responsible for the intrusion, then it is proposed that the person is likely to feel anxious or depressed rather than obsessional (Salkovskis, 1985).

The role of responsibility

This aspect of Salkovskis’ model, perceived responsibility, is a vital part of the cognitive-behavioural explanation of OCD. Salkovskis et al. (1996; cited in Salkovskis, Forrester & Richards, 1998, p.57) define responsibility as "the belief that one has power which is pivotal to bring about or prevent subjectively crucial negative
outcomes. These outcomes may be actual, that is, having consequences in the real world, and/or at a moral level”. Therefore if the intrusion is interpreted by the person in a way that suggests that they might be responsible for causing harm to themselves or to other people, then it is proposed that this perception of responsibility will trigger the discomfort experienced in OCD and corresponding efforts to neutralise the intrusion. The neutralisation then serves to avert the possibility of harm being caused as a result of the intrusion and associated negative automatic thoughts, and the discomfort and anxiety experienced will subsequently diminish (Salkovskis, Forrester, Richards & Morrison, 1998).

Placing responsibility at the centre of the cognitive-behavioural model is not a new idea however, as Carr (1971, 1974; cited in Ladouceur et al., 1995), had suggested that OCD was the product of the person judging the possibility of negative consequences and accompanying costs as more likely than they actually were. However, Rhéaume et al. (1995) comment that Carr’s model may not be specific to OCD and may reflect a more general threat across anxiety disorders.

Salkovskis, Forrester, Richards & Morrison (1998) identify some associated effects of perceived responsibility. For example, they note that it can increase anxiety and depression, and attention can become focused on the intrusions making it easier for them to be accessed in the future. There are also active attempts to decrease obsessional thoughts and/or the perceived level of responsibility, which may be ineffective or exacerbate (maintain) the problem (e.g. avoidance of related situations or thought suppression: Salkovskis, Forrester, Richards & Morrison, 1998).

The cognitive-behavioural model of OCD asserts that there are a number of cognitive biases that occur in people with OCD and the most important one appears to be that having any perceived influence over the outcome is equivalent to being
actually responsible for the outcome (Salkovskis, Forrester, Richards & Morrison, 1998). This is developed further through the concept of thought action fusion which includes two components (Shafran et al., 1996). Firstly, “the belief that thinking about an unacceptable or disturbing event makes that event more probable, more likely to happen in reality”, and secondly “the belief that having an unacceptable thought is the moral equivalent of carrying out the unacceptable or disturbing action” (Shafran et al., 1996, p.379).

An important feature of the cognitive-behavioural model of OCD is that it does not imply that obsessional thoughts and normal intrusive thoughts are different. It is only when these thoughts are interpreted in a way that involves personal responsibility, that the discomfort and neutralising associated with OCD will occur (Salkovskis, Forrester & Richards, 1998).

Putting all of this together, Salkovskis, Forrester and Richards (1998) published a cognitive-behavioural conceptualisation of OCD which is presented in Figure 1. At the heart of this formulation is the fact that the qualities of intrusive cognitions are not important in themselves, rather it is the way in which they are interpreted or appraised that is critical to the genesis of disturbed mood and neutralisation (Salkovskis et al., 2000).
Salkovskis *et al.* (2000) comment that if the person feels a sense of responsibility for causing harm in relation to their obsessional thoughts, this is likely to make any potential harmful consequences seem increasingly awful to the person. Therefore, even if the perceived probability of harm is minimal, if the person with OCD perceives the potential harm as being particularly awful it is likely to generate considerable anxiety and discomfort (Salkovskis *et al.*, 2000).
Summary of the cognitive-behavioural model

It can be seen in the cognitive-behavioural explanation, that obsessions are involuntary, automatic, intrusive cognitions and impulses which are followed by increasing levels of anxiety, when a sense of responsibility for causing harm to themselves or others is experienced (Salkovskis et al., 2000). The experience of anxiety prompts the urge to neutralise, which is a compulsive behaviour that can be overtly or covertly carried out and serves the purpose of reducing anxiety and the risk of potential harm being caused (Salkovskis, Forrester and Richards, 1998). However, neutralisation can lead to an increase in the chance of having further intrusions, which, coupled with avoidance of situations which might trigger obsessional thoughts, means that the person does not learn that these thoughts are not in fact threatening, and the obsessive-compulsive cycle is maintained (Salkovskis et al., 2000). As reported earlier, there is a large body of evidence to support the cognitive-behavioural explanation of OCD (Salkovskis, Forrester, Richards & Morrison, 1998). In particular there is a growing body of evidence supporting the role of responsibility in OCD, which will now be discussed.

Experimental studies supporting the role of responsibility in OCD

Studies on people with OCD

Lopatka and Rachman (1995) conducted an experiment (n=30) in which they manipulated perceived responsibility in patients with OCD. Their manipulation involved the experimenter assuming responsibility for any negative outcomes for a fixed period of time (low responsibility condition) and then the person with OCD assumed responsibility at the other times (high responsibility condition). They found that when the people with OCD had a low level of responsibility, their discomfort and
urges to check were reduced. Conversely, when they had high levels of responsibility, they demonstrated increases in their discomfort and urges to check. Although their results were in the correct direction to support their hypotheses, they did not reach a statistically significant level (Lopatka & Rachman, 1995).

A study by Shafran (1997) also manipulated responsibility in patients meeting diagnostic criteria for OCD (n=36). The manipulation occurred by varying the presence and absence of the experimenter whilst the participants completed a task. The results indicated that the manipulation was effective and participants with OCD experienced higher levels of perceived responsibility for threat when they were alone. However, Shafran notes that the magnitude of the difference in perceived responsibility was small compared to the study by Lopatka and Rachman (1995). A difficulty with interpreting the results of this study is that the feared situation the participants were exposed to was negotiated with the experimenter. Whilst this idiographic approach maximises the external validity of the study, it does reduce the internal validity and makes it difficult to generalise the results. Overall, Shafran (1997) concluded that the results supported the role of responsibility in OCD.

Studies on non-clinical populations

In a study on non-clinical participants, Ladouceur et al. (1995) conducted two experiments and manipulated responsibility in the sample. In the first study, they divided the sample into two groups, one of which was a low responsibility group and the other was a high responsibility group. The experiment involved a computerised sound recognition task, where the participants were presented with some target sounds. They were then presented with one of these target sounds and they had to identify which one it was. The person could listen to the sound as many times as they
liked before making their decision, but they could not change once they had made it. In the high responsibility group the participants were told that this was part of a study to improve the safety of blind people crossing roads and informed that their recognition of sounds might influence the use of equipment at pedestrian crossings. The low responsibility group on the other hand were told that this was just a sound recognition study and only a practice for the real study later on. Despite successfully manipulating responsibility, there was no effect on the participants on checking behaviours, errors made and time taken. They concluded that the manipulation of responsibility may not have been potent enough and the task too difficult (Ladouceur et al. 1995).

In a second study reported by Ladouceur et al. (1995), non-clinical participants (n=40) were again randomly assigned to high and low responsibility conditions. This time they had to classify and distribute pills into pill bottles as quickly and accurately as they could. If they had any doubts they could check the pill bottles as often as they wanted. In order to manipulate responsibility, the high responsibility group were told that the research was for a pharmaceutical company distributing a medication to combat a widespread virus in a poor country. They were told their results would influence the manufacture of the medication and influence the safe distribution of this medication. In the low responsibility group, the participants were informed it was a colour perception task and that it was a practice and their results wouldn’t be analysed (Ladouceur et al.).

Their results suggested that the responsibility manipulation in the second study was more potent, hence the pivotal power component in relation to the potential consequences had been influenced. The high responsibility group produced more hesitations and checking behaviour, and reported more anxiety than the low
responsibility group. Ladouceur et al. concluded that this supports the link between responsibility and OCD symptoms (checking behaviour) proposed by Salkovskis (1985).

However, Ladouceur et al. (1995) also suggested that the perceived severity of the outcome may be important to the perception of responsibility. Therefore a perception of danger or threat may be necessary in order to feel responsible. However, Ladouceur et al. note that it is not clear which comes first, e.g. does the person feel responsible as they have perceived a threat, or do they perceive the threat and then feel responsible?

Research by Rhéaume et al. (1995) explored the definition of responsibility proposed by Salkovskis. They used a semi-idiographic approach, where a number of OCD related situations (e.g. contamination) were generated and made personally relevant by asking the participant to describe a possible negative outcome for each. Their sample included 397 undergraduate students and they had to rate the probability, severity, influence and pivotal influence for each situation. They found that the best predictors of responsibility ratings were influence and pivotal influence, which were better than probability and severity at predicting responsibility ratings (Rhéaume et al., 1995).

In conclusion, Rhéaume et al. (1995) found support for Salkovskis' (1985) cognitive model of OCD and the role of responsibility. In addition they found that non-clinical participants would make responsibility appraisals about situations that were characteristic of OCD symptomatology. Therefore responsibility may induce obsessive-compulsive behaviours in people without OCD (Mancini et al., 2004).

In another study, Mancini et al. (2004) used a computer based visual memory task and manipulated perceived responsibility. The task involved accurately matching
and placing a collection of shapes to a target arrangement of these shapes. The participants could check the target arrangement as often as they wanted to whilst constructing their replication of this configuration. To manipulate responsibility, Mancini et al. split the 47 participants into three groups. The control group simply thought they were completing a visual memory experiment. The other two groups were told that the experimenter was being unfairly pressured by the supervisor to produce results from this study, and the participant was therefore made to feel they had the power to prevent harm to the experimenter. In addition, they further manipulated one of the two experimental groups, by giving them negative feedback about their performance on a training task, to generate more perceived responsibility and preoccupation with the potential outcome of any mistakes they made (Mancini et al., 2004).

Their results indicated that the manipulation of responsibility was successful and both groups experiencing excessive responsibility produced more doubts, checking, hesitations and took more time than the control group. Further to this, the group who were given negative feedback (to raise perceived responsibility and preoccupation with the outcome) produced more checks and hesitations, and took more time to complete the tasks than the other experimental group (Mancini et al., 2004). They concluded that their study was reflective of personal characteristics of OCD and proposed that their results add to the body of evidence implicating the role of responsibility in the cognitive-behavioural conceptualisation of OCD (Mancini et al., 2004). They also concluded that if a person perceives themselves to have inadequate abilities (inadequate personal influence) to cope with the situation at hand, then they might show obsessional behaviours when responsibility is perceived to have increased. As they state, "the more one expects to behave inappropriately, the more
one will control his own performance and will exhibit obsessive-like behaviour”
(Mancini et al., 2004, p.451)

Summary of the experimental manipulations of responsibility

The studies described above show increasing support for the role of responsibility within the cognitive-behavioural conceptualisation of OCD. However, with respect to these studies, only Lopatka and Rachman (1995) and Shafran (1997) used clinical samples. Further to this, only Shafran (1997) produced statistically significant results with a clinical sample, and both experiments reported had small sample sizes.

Studies using non-clinical populations have shown mixed findings, but on the whole there is evidence to support the role of responsibility in OCD. Also, although research has suggested that using non-clinical participants is valid in the study of OCD (e.g. Burns et al., 1995), it is still possible that the samples may differ on some critical variable (Wu & Watson, 2003). This area will be discussed in more detail later. Therefore there is still a question as to how useful the results of these studies are to enhancing our understanding of the cognitive-behavioural model of OCD.

Overall, experimental manipulations of responsibility have added to the evidence for the role of responsibility, but limitations in the studies means that there is still uncertainty over its contribution to obsessive-compulsive symptoms. One of the issues apparent in these studies is that successfully manipulating responsibility in a clinically meaningful way can be difficult. The discussion will now turn to some other factors involved in OCD.
**Decision-making in OCD**

**Intolerance for uncertainty**

Doubting is a central feature of OCD and according to Tolin *et al.* (2003) it may be due to difficulty coping with situations that involve uncertainty or ambiguity. Tolin *et al.* suggest that research has indicated that compulsive behaviour occurs after people with OCD experience anxiety and discomfort triggered by uncertainty. Therefore they propose that compulsive behaviours are initiated in order to reinstate a sense of certainty (and reduce distress). As well as showing doubt, Mancini *et al.* (2002) report that research has found people with OCD to have trouble making decisions. Ladouceur *et al.* (1997) found that intolerance for uncertainty is associated with increased attempts to gain more information in ambiguous tasks. However this was not a study focusing on OCD, but, more broadly, on worry.

**Inferential confusion**

This construct is explained by Aardema *et al.* (2005) as a metacognitive confusion where a person confuses an imagined possibility with an actual probability. It is believed to be relevant to OCD as it “conceptualizes OCD as a form of belief disorder similar to a delusion or overvalued idea that is a product of distorted reasoning processes” (Aardema *et al.*, 2005, p.293).

Inferential confusion arises from reasoning errors and a crucial element is the notion of inverse inference, where a person starts out strongly believing a hypothesis, despite contradictory evidence (Aardema *et al.*, 2005). Inferential confusion is compatible with an appraisal based model of OCD (e.g. Salkovskis, 1985) as it is a reasoning process. Aardema *et al.* (2005) state that it comes into action when
obsessions occur and has been found to be connected to most obsessive-compulsive behaviours.

**Probability judgements in OCD**

Judgements of the likelihood of an event occurring can be important when making decisions. Investigations into OCD have found that when patients experience intrusive thoughts, they judge the probability of the thoughts occurring as more likely, and they feel responsible for the perceived awfulness of any harmful consequences related to these thoughts (Salkovskis et al., 2000). Therefore people with OCD appear to be showing a bias in their estimation of the likelihood of their thoughts becoming reality. The role of probability judgements in OCD has been explored by several researchers over the past 40 years.

One of the earliest studies of probability judgements in OCD was completed by Volans (1976) who noted that previous research had identified that people with anxiety often held erroneous expectations about anxiety provoking situations. In the study it was hypothesised that people with OCD who were asked to complete a judgement task, would require more probabilistic information before they would reach a decision than patients without OCD. In addition it was predicted that people with OCD would show a distorted reasoning process, where their estimates about probabilities would be further removed from optimal judgements, than non-obsessional people (Volans, 1976). To explore these hypotheses, Volans employed a probabilistic reasoning paradigm which was based on a procedure used by Phillips & Edwards (1966). Before discussing the results of this study it is necessary to explain the nature of probabilistic reasoning tasks.
The probabilistic reasoning paradigm

According to Fisk (2005) probabilistic reasoning is an essential part of our everyday lives. There are numerous ways that probabilistic reasoning can be investigated experimentally, however within OCD the most commonly used approach is a derivative of the "Book bag and poker chips" method, which involves making judgements about bags containing coloured chips in different proportions (Phillips & Edwards, 1966). Within the area of OCD, the following variation of this task has been employed (e.g. Fear & Healy, 1997), which for convenience has been called the Bead and Jar task here (see Garety et al., 1991; Huq et al., 1988, for further descriptions of this procedure).

At the start of the task in an experimental situation, the participants would be presented with two containers, each containing different coloured beads or tokens. For example, one container may have 85 red beads and 15 silver beads, the second container would hold the opposite proportions (15 red: 85 silver). One of the two jars would be chosen by the experimenter and the participant would be informed that both jars would be equally likely to have been picked (therefore initial prior probability = 50A:50B). From the chosen jar a bead would be drawn and the participant would then estimate the probability that it came from a particular jar. The bead would then be replaced (sampling with replacement), and more beads would be drawn to complete a sequence of probability estimates (e.g. 20 beads/probability judgements). The participant may also be asked to make a decision as to which jar the beads are being drawn from, when they feel certain they know which jar it is (i.e. after they have received enough information to feel able to make the decision).

One of the difficulties in evaluating whether a person's judgements are reasonable is deciding on what is 'normal' (Huq et al., 1988). Probability theory is a
normative model, therefore it is a criterion against which data can be compared (Baron, 1988). To do this, probability judgements from participants in an experimental task, would be compared to probability data generated using Bayes' theorem (cited in Baron, 1988). According to Baron (1988), this theorem provides a way of calculating the probability of a hypothesis (e.g. a particular jar was chosen) following the accumulation of some specific data (e.g. a red bead was drawn from the jar). Therefore, a set of theoretical probability estimates representing a rational solution to the problem can be created. The formula for Bayes' theorem is as follows:

\[
p(H|D) = \frac{p(D|H) \cdot p(H)}{p(D|H) \cdot p(H) + p(D|H^c) \cdot p(H^c)}
\]

Where,
- \(H\) = the hypothesis (a particular jar is chosen)
- \(D\) = the data (a particular coloured bead is drawn)
- \(p(H|D)\) = the posterior probability of the hypothesis
- \(p(H)\) = the prior probability of the hypothesis
- \(p(D|H)\) = the likelihood of the data (D), given the hypothesis is true
- \(p(D|H^c)\) = the likelihood of the data, given that the hypothesis is false
- \(p(H^c)\) = the probability the hypothesis is false

Using this formula, for a set of data (beads drawn from a jar), given a hypothesis (a particular jar is chosen), specific probabilities can be calculated. Using these optimal probabilities, responses from participants for the Bead and Jar task can be compared to see how much they deviate (Volans, 1976). Harries and Harvey (2000), note that judgements of likelihood can be expressed in a number of ways, such
as a probability format (a score between 0 and 1, e.g. 0.7) or a relative frequency format (e.g. 1 in every 1000, 35%). Detailed explanations of this procedure and calculations for the study reported here are presented in appendix 1. Although there is a logical and rational way to calculate probabilities for this task using Bayes’ theorem, this may not be employed by people in practice. Tversky and Kahnemann (1993) state people use a small number of heuristic strategies to estimate the probabilities of events, which focus on making these judgements simpler for the person.

**Studies of probabilistic reasoning in OCD**

Returning to the work of Volans (1976), this study employed a probabilistic reasoning task to explore decision-making and probability judgements in people with OCD. The sample (n=24) comprised three groups of participants, two groups being the clinical sample who were inpatients at a psychiatric hospital and a control group made up of staff from that hospital. The clinical part of the sample were given a questionnaire designed by Volans to assess beliefs associated with expressed fears and checking behaviour. From this a ‘phobic’ group were constructed from people who expressed irrational expectations about anxiety provoking situations. Secondly, an ‘Obsessional’ group was constructed from participants scoring highly on questionnaire items related to checking.

These groups were administered the Bead and Jar probabilistic reasoning task and their probability estimates were subtracted from the normative values derived from Bayes’ theorem, creating deviation scores. These deviation scores were averaged across the participants for each bead drawn (piece of data) and comparisons made between the three groups.
In an initial comparison, focusing on the number of beads drawn before a decision was made, Volans (1976) found that the control group required 4.8 draws to reach a decision on average, the ‘phobic’ group required 5.28 draws and the ‘obsessional’ group required 8.86 draws before they reached a decision. Whilst these data support the hypothesis that people high in obsessional thinking need more information before making a decision, the difference was not statistically significant. This lends some support to a finding by Milner et al. (1971) who found that obsessional patients required more repetitions of information than depressed patients in a perceptual judgement task.

However, regarding the probabilistic data there was a statistically significant difference, with the ‘obsessional’ group showing greater deviation in their scores from the normative values, than the ‘phobic’ and control group. Volans (1976) concluded that the ‘obsessional’ group may have difficulty in aggregating probabilistic information and that their decision-making skills may be “vulnerable rather than grossly impaired” (p.316). It was also suggested by Volans that to show true differences between the groups might require a level of stress in the experimental situation similar to that experienced in real situations.

Phillips and Edwards (1966) observed that in several studies of inferences about probability, the participants tended to behave ‘conservatively’. By this they mean that the participants were unable to extract as much probabilistic certainty from they data they were presented with as they could have done according to the theoretical solution offered by Bayes’ theorem. Therefore, in any sample on a probabilistic reasoning task, participants could be expected to make more conservative probability estimates than the normative values according to Bayes’ theorem. An interesting exception to this is reported by Huq et al. (1988), who gave a probabilistic
reasoning task to schizophrenic patients with delusions. They found that these patients requested less information before reaching a decision, were more certain, and were over-confident in their probability estimates in relation to the control groups.

Phillips and Edwards (1966) suggest that a reason that people may be conservative in probabilistic reasoning tasks is because they may be insufficiently motivated, i.e. there is no cost to them if they wait for further information. However, Phillips and Edwards (1966) included a financial incentive in order to try and reduce conservatism in an experiment, but found that whilst it did reduce it, it did not eliminate it. Therefore, a lack of motivation does not seem to explain why people are conservative in probabilistic reasoning tasks.

As well as the study by Volans (1976), there have been two other uses of the probabilistic reasoning paradigm in OCD. Firstly, Fear and Healy (1997) compared probabilistic reasoning in patients with OCD, patients with delusions, patients with both OCD and delusions (mixed group) and a non-clinical control group. They based their procedure on Garety et al. (1991) which is essentially the same as the task described here. In particular, they had two conditions, the first involved beads being drawn but no probability estimates were made for each draw. The participants could keep requesting beads to be drawn until they felt able to make a decision. In the second condition, the probabilistic response mode was used with participants estimating probabilities for the relative chances of the beads coming from the two Jars. According to Fear and Healy (1997), the participants found the second condition more stressful as their probability estimates were followed by a bead which might confirm or disconfirm their reasoning. Effectively the participants felt that this was a type of feedback although no explicit feedback was given during the task.
Their results extended the findings of Volans (1976), as they found that the OCD patients took more time to reach a decision and required more information before they were certain (more beads drawn). Fear and Healy (1997) found this to be consistent with the idea that OCD involves perpetual rumination. Additionally, the OCD patients deviated more from the Bayesian normative values than the delusional patients and the control group (Fear & Healy, 1997).

As the participants found the second experimental condition more stressful (the probabilistic mode), Fear and Healy (1997) suggest that in ‘low risk’ situations patients with OCD will reason in a normal manner, but when the situation is perceived as more risky, their probabilistic reasoning starts to fluctuate.

The other study using a probabilistic reasoning task in people with OCD was completed by Péllissier and O'Connor (2002). They investigated whether deductive and inductive reasoning processes were different in people with OCD compared to people with generalized anxiety disorder and a non-anxious control group (total n=34). They define inductive inferences as creating a generalization from past experience to support a hypothesis, and state that in OCD the person is making deductions about danger that are not rational. In deductive reasoning, conclusions naturally follow on from prior assumptions without the use of additional information. Péllissier and O'Connor (2002) included a range of deductive and inductive reasoning tasks, one of which was a probabilistic reasoning task (based on Garety et al., 1991; Huq et al., 1988; and Volans, 1976).

In their study, Péllissier and O'Connor included tasks that were neutral with respect to typical OCD themes. Across the groups they found no statistically significant differences in terms of deductive reasoning. However, for inductive reasoning, they found that people with OCD had a distinctive style of reasoning
(Péliissier & O'Connor, 2002). Their results also supported the findings of Volans (1976) and Fear and Healy (1997), as the OCD group required more information before making a decision, suggesting a 'cautious preparatory strategy'. Péliissier and O'Connor (2002) suggested that their findings might indicate that people with OCD become influenced by their own inductive arguments, which may serve to increase their feelings of doubt and obsessionality. Therefore they may qualify what they correctly interpret with extra unnecessary information that then leads them to become less certain about their inference.

In summary, there are three studies that have investigated probabilistic reasoning in people with OCD. The results indicate that this client group show a distinctive reasoning style, taking longer and requiring more information to make decisions. In addition, people with OCD appear to deviate more from 'ideal' estimates of probability, than people who are not obsessional. These results suggest that people with OCD have difficulty making decisions and show a distorted way of judging the likelihood of an event occurring. However there are limitations to these studies as all three have relatively small sample sizes which limit the conclusions that can be drawn. Also, Volans (1976) did not use a standardised measure of OCD to determine her groups, raising doubt over the validity of the OCD group in this study.

**Factors influencing decision-making in OCD**

As has been seen, there is evidence that people with OCD have difficulty making decisions. Mancini *et al.* (2002) cite further research by Frost and colleagues (1988, 1993) indicating that people with OCD are more cautious, take longer to classify objects, request more information and show greater doubt over the accuracy of their decisions.
A study by Foa et al. (2003) examined the way in which people with OCD (n=18) and a non-anxious control group (n=18) made decisions. They created twelve scenarios involving decisions that had different consequences attached (e.g. low risk decisions, high risk decisions, and decisions relevant to OCD typical anxieties). The participants were initially presented limited information in order to make a decision, but they could opt for more information before making their decision.

Their results indicated that in high risk situations, both groups requested similar amounts of information. However, for low-risk situations, the OCD group requested more information before reaching a decision than the non-anxious control group. Further to this, Foa et al. (2003) concluded that when the OCD group perceived risk associated with a situation, they required more information and took longer to reach a decision. A difficulty with their study that they acknowledge is that it takes a nomothetic approach, where everybody received the same scenarios. Accordingly, whilst this enhances the internal validity of the study, the fact that people with OCD may be quite heterogeneous in their presentations may consequently reduce its external validity (Foa et al., 2003).

Although the presence of risk predicted the decision-making difficulties of the OCD group, Foa et al. state that other factors could be implicated in these difficulties. In particular, they mention perceived responsibility for harm associated with making the decision. This is an issue that has not been addressed within experimental studies of OCD and probabilistic reasoning.

Similarly then, the study by Fear and Healy (1997), where they found probabilistic reasoning was affected by perceived risk, may have also been influenced by perceived responsibility felt by the participants. As yet the influence of perceived responsibility on probabilistic reasoning has not been investigated in obsessional
thinking. Before turning to the aims of this study however, some methodological issues need to be addressed.

Methodological Issues

Whilst the studies discussed above have shed light on the cognitive mechanisms present in OCD, finding answers to these questions is complicated by a number of methodological issues related to research in this area.

Measuring OCD symptomatology

There are several measures available for measuring OCD symptoms, most of which focus on the goal of accurate diagnosis. One of the most commonly used measures in research is the Yale-Brown Obsessive–Compulsive Scale (Y-BOCS) which was devised by Goodman et al. (1989; cited in Foa et al., 1998). The scale includes 10 items which relate to severity of obsessions and compulsions, but Foa et al. concluded that the discriminant validity of the measure is poor and it is intended to be administered by trained interviewers.

In addition to the Y-BOCS, there are several other self-report measures amongst which two of the most commonly used are the Maudsley Obsessive-Compulsive Inventory (MOCI: Hodgson & Rachman, 1977) and the Padua Inventory (PI: Sanavio, 1988). Whilst both of these measures have satisfactory psychometric properties, a problem with the MOCI and PI identified by Foa et al. is that both measures only cover subsets of obsessive-compulsive symptoms, missing out on some of the heterogeneous elements that comprise OCD.

Because of this, Foa et al. (1998) devised a new measure called the Obsessive Compulsive Inventory (OCI) which measures the frequency and distress
of obsessive-compulsive symptoms. Part of their goal was to cover the broad and varied content of obsessions and compulsions in order to be able to derive seven subscales from the measure (washing, checking, doubting, ordering, obsessing, hoarding and mental neutralising). This was achieved by using the major symptoms of OCD from the DSM-IV (American Psychiatric Association, 1994; cited in Foa et al., 1998). Foa et al. also designed the measure so that it could be applied to clinical and non-clinical populations, so that the presence of sub-clinical OCD could be explored within the general population. Foa et al. concluded that the OCI could be used as an efficient measure of “diagnostic screening, symptom profiling, and severity determination” (p.213).

Use of student populations

Wu and Watson (2003) note that there has been a shift in the populations included in OCD research, which has moved to include a wider range of people (e.g. non-OCD psychiatric patients, community-based adults, students, etc.). Consequently, non-clinical populations have been commonly used in OCD research and these are commonly ascertained from university student populations.

Use of these populations has been justified with a series of research studies specifically examining the obsessional characteristics of OCD patients and non-OCD patients. For example, Burns et al. (1995) stated that the use of non-OCD patients assumes that some individuals will reach clinically diagnostic levels of OCD, they will show stable OCD characteristics over time, and they will also share OCD features with actual OCD patients. In a study to test out these assumptions, Burns et al. found support for two of them and concluded that OCD can be helpfully studied by conducting research on people who score highly on self-report
measures of OCD. Further to this, they recommend using the top 2% of scores on OCD measures from a sample and to ensure that the participants score twice in this range (to guarantee stability over time and ensure the participants are representative of OCD patients). Therefore the severity of obsessive-compulsive symptoms within the sample is an important issue (Burns et al., 1995).

*Generalisability to clinical populations*

Wu and Watson (2003) note that previous research has shown that non-clinical participants frequently report OCD-like symptoms. Consequently, they conclude that the use of participants who have not been diagnosed with OCD is acceptable, but they acknowledge that it is possible that patients with OCD may differ on some as yet unknown variable, for example their could be differences experienced in terms of the distress associated with symptoms between OCD and non-clinical participants (Wu & Watson, 2003).

*Diversity issues*

It will be apparent from the discussion so far that issues of diversity and difference have not featured significantly. This is reflective of the fact that little attention has been paid to this area within this field of OCD research. Accordingly our understanding of how decision-making processes in OCD vary across cultures and ethnic groups is poorly understood.
Aims of the current study

The discussion so far has covered the cognitive-behavioural model of OCD and highlighted the role of responsibility. In addition it has been seen that probabilistic reasoning and decision-making are affected by high levels of obsessional thinking. It has also been suggested that people with OCD overestimate the probability of situations being threatening (Salkovskis, Forrester & Richards, 1998). What is not clear is how perceived responsibility influences probabilistic reasoning in people with OCD.

Therefore the aim of this research was to manipulate perceived responsibility for a probabilistic reasoning task in a group of participants and investigate the impact this has on decision-making and probability judgements. On the basis of the previous research in this area three hypotheses were generated:

1) People high in obsessional thinking will deviate more from the Bayesian model in their probability judgements when they feel a high level of perceived responsibility, than people low in obsessional thinking.

2) People high in obsessional thinking will take longer to make a decision when they feel a high level of perceived responsibility, than people low in obsessional thinking.

3) People high in obsessional thinking will request more information before making a decision when they feel a high level of responsibility, than people low in obsessional thinking.

In order to test these hypotheses, an experiment was devised based on the previous research on probabilistic reasoning tasks (Fear & Healy, 1997; Garety et al.,
1991; Huq et al., 1988; Volans, 1976) and experimental manipulations of perceived responsibility (Ladouceur et al., 1995; Lopatka & Rachman, 1995; Mancini et al., 2004; Rhéaume et al., 1995). By exploring these hypotheses, it was hoped that a greater understanding of decision-making and estimations of likelihood in OCD would be achieved, with the ultimate goal of contributing knowledge to potential ways of treating OCD.
Method

Design

The study was a quasi-experimental, repeated measures design (Coolican, 1994). There were two independent variables: 1) whether the participants were high or low in obsessional thinking (between-subjects variable), and 2) the manipulation of responsibility (within-subjects variable). In addition there were three dependent variables: 1) probability judgements, 2) amount of information required to make a decision, and 3) time taken to make a decision.

Participants

It was not possible to conduct a power analysis to determine the number of participants required for the study for two reasons. Firstly previous studies had used a different experimental design and secondly the studies that were available did not present effect sizes or information that would have facilitated these calculations. Therefore the target number of participants for the study was based on the numbers used in the previous experimental studies on probabilistic reasoning and OCD. A post-hoc power analysis was conducted to establish the power of the study to determine medium or large effects.

The participants were mainly students of the University of Surrey from the undergraduate and postgraduate programmes and were recruited by posters advertising the research and word of mouth. There were no exclusion criteria except that it was specified that participants currently being treated for mental health problems by the NHS should not participate. This was implemented to meet ethical
requirements of the University of Surrey's Ethics Committee (as NHS ethical approval was not sought – see appendix 2).

There were 45 participants in total and their mean age was 23.2 years (S.D = 9.0 years, range = 43 years). There were 12 males and 33 females (26.7% and 73.3% respectively). The majority of the sample were undergraduate psychology students (86.7%) and the remainder were in employment of some sort (e.g. university staff, but not psychology lecturers). Information about ethnic background was collected using the categories from the British Census (National Statistics Online, 2001). The sample was predominantly White (91.1%), with 71.1% of these participants being White British. The non-white participants were from Black, Indian or Mixed backgrounds (8.9%).

Materials

A number of different materials were used, including questionnaires, visual analogues and the probabilistic reasoning task apparatus (based on: Phillips & Edwards, 1966; Volans, 1976; Garety et al., 1991; Fear & Healy, 1997).

Probabilistic reasoning task

Responses for the probabilistic reasoning task were elicited using a response board and data generators which are shown in Figure 2. This was built by the experimenter using specifications from Volans (1976). Photographs of the apparatus are presented in Appendix 3.
Data generators

Four jam jars each containing one hundred beads were used to generate the probability data. The jars were divided into two pairs, the first pair of jars were used for the Practice Task and the second pair of jars were used for the Main Task. The jars for the Practice Task (see Figure 2) contained red and silver beads in the proportions 85 red: 15 silver (Jar A) and 15 red: 85 Silver (Jar B). For the Main Task the jars contained beads in exactly the same proportions, however the colours were blue and gold.

Response board

The response board was used to register the participants' probability estimates and served as a screen between the experimenter and the participant. Two rods were connected by a cord and were supported on two hooks which allowed the rods to
move up and down. As the participant moved one rod (e.g. up), the other rod moved in the opposite direction (down). The experimenter’s side of the screen was calibrated and numbered with 50 equal divisions so that it was possible to quantify the participant’s probability estimates between 0 and 100 (i.e. as a percentage). The participants’ side of the screen was not calibrated. Probability estimates were recorded by asking the participant to move the rods to the place which corresponded to their estimate and the experimenter read off (silently) the appropriate value and recorded it. As one rod was moved to a probability estimate, for example 80% likelihood of it being Jar A, the rod representing Jar B would automatically move to the probability of it not being Jar A which in this case would be 20% (alternatively this is the likelihood of it being Jar B). To make it clear which rod corresponded to which jar, labels were placed on the screen and a picture of each Jar was put next to each rod. Both pictures showed the beads in their correct proportions.

Data lists

The order of beads presented to the participants was prepared in advance, so that each participant would receive the same sequence in each condition. The sequence of beads was taken from the experiment by Huq et al. (1988: Condition 3, p.806) and are presented in Table 1 below. The same sequence was used for the Practice Task and the Main Task, to avoid a potentially confounding variable. The only difference was that the colours of the beads were different in each trial.
Table 1: Presentation sequence of beads in each trial

<table>
<thead>
<tr>
<th>Bead</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practice</td>
<td>Red</td>
<td>Red</td>
<td>Red</td>
<td>Red</td>
<td>Red</td>
<td>Red</td>
<td>Silver</td>
<td>Red</td>
<td>Red</td>
<td>Silver</td>
</tr>
<tr>
<td>Main</td>
<td>Gold</td>
<td>Gold</td>
<td>Gold</td>
<td>Gold</td>
<td>Gold</td>
<td>Gold</td>
<td>Blue</td>
<td>Gold</td>
<td>Gold</td>
<td>Blue</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bead</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practice</td>
<td>Red</td>
<td>Red</td>
<td>Red</td>
<td>Silver</td>
<td>Red</td>
<td>Red</td>
<td>Red</td>
<td>Silver</td>
<td>Red</td>
<td>Silver</td>
</tr>
<tr>
<td>Main</td>
<td>Gold</td>
<td>Gold</td>
<td>Gold</td>
<td>Blue</td>
<td>Gold</td>
<td>Gold</td>
<td>Gold</td>
<td>Blue</td>
<td>Gold</td>
<td>Blue</td>
</tr>
</tbody>
</table>

Probabilistic reasoning task recording form

As the participants moved the rods to estimate their probability data, the experimenter matched this to the scale on his side and recorded the data on a prepared form (see appendix 4). The time taken to complete the task and the number of beads drawn to decision were also recorded. A space was also included to record whether people asked how many beads had been drawn during the tasks (however it was not necessary to use this during the data collection).

Questionnaires

To check for potentially confounding variables in the form of existing psychopathology within the sample, measures of anxiety and depression were administered. All of the questionnaires used were self-report measures and took between 5-10 minutes each to complete.

To ascertain the level of obsessional thinking (and obsessive-compulsive symptomatology), the Obsessive Compulsive Inventory was administered (OCI: Foa et al., 1998). To investigate levels of anxiety, the Spielberger State-Trait Anxiety Inventory was administered (STAI: Spielberger et al., 1983). Finally, the Beck
Depression Inventory-II (BDI-II: Beck et al., 1996) was administered to gain an objective indication of the participant's mood and depressive symptomatology.

1) Spielberger State-Trait Anxiety Inventory:

The State section is a sensitive indicator of transitory anxiety, covering feelings of apprehension, tension, nervousness and worry that are occurring 'right now' (Spielberger et al., 1983). There are a total of 20 items and participants respond using a 4-point Likert-type scale (ranging from: 1 = not at all, to 4 = very much so). Scores for 10 of the items have to be reversed as they correspond to anxiety-absent items and the participants' scores will range from 20 to 80. In terms of reliability, the internal consistency of the State section using the median Cronbach's alpha coefficient is 0.90, representing a good level of reliability. Its temporal stability (test-retest reliability) is low however (median reliability coefficient = 0.33), which is unsurprising as it is a transitory measure of anxiety (Spielberger et al., 1983).

The Trait section investigates how people 'generally feel' and can identify clinical levels of anxiety. Like the State section, the Trait section contains 20 items that are rated using a 4-point Likert-type scale (where 1 = almost never, and 4 = almost always). Ten of the items are 'anxiety-absent' for which the scores have to be reversed and the scores will range from 20 to 80. The test-retest reliability of the Trait section is relatively high (median alpha coefficient = 0.77) and its internal consistency is good (median alpha coefficient = 0.92).

With respect to validity of the STAI, a number of steps were taken to establish this. Both measures have good face validity and the Trait section has relatively high levels of concurrent validity with other measures of trait anxiety (correlations ranging from 0.73 to 0.85). The State section has been found to be sensitive to widely varying
levels of stress. The STAI has been widely used in clinical and research settings and is established as a valid means of measuring anxiety.

2) Beck Depression Inventory-II:

The BDI-II is a 21 item questionnaire that measures depressive symptomatology over the two weeks preceding administration. Each item is rated on a 4-point Likert-type scale, ranging from 0-3, where higher scores reflect more severe depressive symptoms. Scores can range from 0 to 63. The reliability of the BDI-II is good, with a coefficient alpha of 0.92 (Beck et al., 1996). The measure has been widely used in clinical and research settings as a valid measure of depressive symptomatology.

3) Obsessive Compulsive Inventory:

The OCI is a relatively new self-report questionnaire developed to measure symptom frequency and associated distress in obsessive-compulsive disorder (Simonds et al., 2000). Each item is a brief statement that describes thoughts or behaviours that are characteristic of obsessions and compulsions. Frequency and distress are recorded separately for each item using 5-point Likert-type scales. The frequency scale ranges from 0 (never) to 4 (almost always) and the distress scale from 0 (not at all) to 4 (extremely). Scores on the frequency and distress scales will range from 0 to 168. In addition to these total scores, it is possible to derive a further seven subscales corresponding to: Washing, Checking, Doubting, Ordering, Obsessing, Hoarding and Neutralising (Foa et al., 1998).

The measure has been administered to clinical and non-clinical samples. Using a clinical population of patients with OCD, Foa et al. (1998) reported good
levels of internal consistency for the OCI for total frequency and distress scores (coefficient alphas = 0.93 and 0.92 respectively). Test-retest reliability for the total frequency and distress scores for OCD patients and non-patients were also good (scores ranged from $r = 0.84$ to 0.90). According to Foa et al. the only aspect of the OCI which did not have satisfactory psychometric properties was the Hoarding subscale. Foa et al. also demonstrated good convergent validity of the OCI with other OCD measures and good discriminative validity (therefore it could accurately identify clinical OCD correctly).

In a non-clinical sample of university students ($N=83$; Simonds et al., 2000), the total scores and subscale scores showed high internal consistency (coefficient alpha was above 0.7 in every case). Regarding test-retest reliability, all scales showed adequate levels of reliability, however the total frequency and distress scores were good (Coefficient = 0.88 for both scales). With regards to the validity of the measure, the OCI correlated adequately with another measure of OCD (Simonds et al., 2000). In addition, Wu and Watson (2003) concluded that most of the items demonstrate relevance to the broad domain of OCD and found similar levels of internal consistency to Foa et al. (1998) and Simonds et al. (2000).

*Responsibility and anxiety visual analogues*

At four points during the experiment the participants were asked to rate their subjective feelings of anxiety and responsibility, and a series of visual analogues were used to record this. The visual analogues all had the same basic format and were based on the method used by Zucker et al. (2002). Anxiety Check 1 is shown in figure 3 below:
Figure 3: Example of the visual analogue for Anxiety Check 1

Please indicate how anxious you feel right now...

0 100
Not at all anxious Extremely anxious

When the participant was presented with the visual analogue, they were asked to put a mark somewhere on the line that reflected how they were feeling. The line was exactly 10 cm to allow an easy conversion to a score between 0 and 100. The four anxiety checks were all identical to the example shown in figure 3. The responsibility checks however required different wordings, according to the stage in the experiment. The text anchors were kept as similar as possible to the anxiety checks, however in the responsibility checks zero was accompanied by “Not at all responsible” and one hundred was accompanied by “Entirely responsible”. The four statements used to prompt their responses were 1). “How responsible do you feel for completing Chris’s practice task correctly?” and 2). “How responsible did you feel for completing Chris’s practice task correctly?”, 3). “How responsible do you feel for completing Chris’s main task correctly?”, and 4). “How responsible did you feel for completing Chris’s main task correctly?”.

Demographic information

Information on age, gender, status (i.e. student, staff, etc.) and ethnicity were collected (see appendix 5). The categories for ethnicity were taken directly from the British Census (National Statistics Website, 2001).
Pilot Study

A pilot study was completed using two participants. This process was used to refine the experimental procedure and allowed the experimenter to rehearse it. Feedback from the participants indicated that the ‘story’ presented during the manipulation was over-elaborate. Therefore this was revised and a simpler version was employed. The pilot was also used to check if the participants were aware that the same order of beads was used in both trials. Neither realised this was the case.

Procedure

The study was conducted in a small, quiet room at the University of Surrey. The participants were given an information sheet (see appendix 6) and the opportunity to ask questions about the study. Next they were given a consent form to sign if they were willing to take part in the study (appendix 7). Following this, if the participant consented, the person was thanked for agreeing to participate and told that the experimenter was desperate for data as he was being hassled by his research tutor. This was done to enhance the effect of the manipulation later in the experiment by raising the importance of the individual participant’s contribution.

It was explained that they would be completing some questionnaires and the same task twice. The first attempt at the task would be a practice and the second attempt was the important trial that they needed to get correct. To preserve anonymity, the participants were asked not to write their name anywhere on the questionnaires. In addition, as the questionnaires requested sensitive personal information, it was explained to the participants that all of their measures (and data from the tasks) would be put into an unmarked envelope and sealed. This was then placed in a box with the other data collected. The purpose of this was to reassure the
participants of their anonymity as they were completing the measures with the experimenter nearby.

They were then given the STAI and asked to complete just the first part of this measure (the State section). The nature of the experimental task was then explained to the participants in detail (the exact explanation used is presented in Appendix 8). First, it was explained that the two jars in front of them contained exactly 100 beads, with Jar A containing 85 red beads and 15 silver beads, and Jar B containing 15 red beads and 85 silver beads. The two jars were then removed and pictures representing the jars were put in their place (appendix 9).

The participants were informed that the experimenter would pick one of the two jars at random and beads would then be drawn, one at a time, from just the jar that had been chosen. The participant was told that their goal was to work out which jar the beads were being drawn from. They were informed that they had a maximum of 20 beads to make their decision, but it was requested that they select the correct jar in as few a beads as possible and in as quick a time as possible. They were told that on presentation of the first bead, they would be asked to estimate the probability that either Jar A or Jar B had been chosen, using the rods to reflect their probability estimate. They were informed that positioning a rod at the bottom would be a probability of zero and positioning the rod at the top of its range would indicate 100%. The experimenter then demonstrated how to estimate a probability of 80% using one rod and it was pointed out to the participant that the second rod had automatically moved to indicate the probability that it was the alternative jar (e.g. 20% in this case). The rods were then set in the 50/50 position for the start of the trial. The participant was informed that each bead would be replaced in the same jar before another bead
was randomly drawn, and that beads would only be drawn from the jar chosen at the beginning of the task.

Prior to starting the practice task, the participant was given the first anxiety and responsibility checks and were asked to rate how they were feeling right now, by putting a mark somewhere on the line. The main goals of the practice task were then reiterated and it was emphasised that this attempt was just a practice to become familiar with the task. The last thing that was said before the trial started was an instruction to tell the experimenter when they were certain which jar the beads were being drawn from. The beads were then presented to the participant in the prescribed order. As soon as the first bead was presented, a stopwatch was started and this was not stopped until the participant selected which jar they believed the beads were being drawn from. If the participant reached their decision before 20 beads were presented, it was explained that more beads would be drawn from exactly the same jar and they were asked to keep estimating the probabilities as they had been doing. The sequence of beads presented in the practice task favoured Jar A. The time taken and the number of beads required to make a decision were recorded along with the 20 probability estimates (one for each bead). At the conclusion of the practice trial the second anxiety and responsibility checks were administered.

The participant was then told that they had got the hang of the task and they would now be moving on to the main task. The manipulation of perceived responsibility was achieved by telling the participants that it was vital that they get this task correct, as the experimenter could only use data from people who completed it correctly. The experimenter appealed to the participant to get it right. They were then told that the main task would work in the same way as the practice task, however the beads were different colours (blue and gold) and the participant was shown the
two jars of beads. Again, pictures of the jars of beads (blue and gold) showing the correct proportions of beads were placed in the appropriate places. The participant was then reminded that they had to complete the task as quickly as possible, using as few a beads as possible, but the important goal was to select the correct jar. The third anxiety and responsibility checks were then administered and lastly the person was reminded to inform the experimenter when they were certain of which jar the beads were being drawn from.

The main task was then administered in the same manner as the practice task, however this time the sequence of beads favoured Jar B. The same sequence of beads was used as in the practice task. Once the participant had reached a decision, they were asked to keep estimating the probabilities until they reached 20 beads. Again the time and number of beads drawn to decision were recorded. At the end of the main task, the fourth anxiety and responsibility checks were administered.

The participant was then informed that the tasks were complete and they were asked to complete the OCI, the BDI-II, the Trait section of the STAI and some demographic data. Once this was completed the participant’s data was gathered up and sealed in a blank envelope and placed in a box with the other envelopes of participants’ data.

Finally, the participants were thoroughly debriefed, starting with an explanation of the cognitive-behavioural model of obsessive-compulsive disorder and the role of responsibility (which was explained in terms of a real-life example). This was then related to the experimental procedure and the purpose of the manipulation. The deception aspect was explained to the participant so that they were aware that the practice task did actually count and that their data would be used regardless of their success at the tasks. It was explained that it was necessary to do this in order to raise
the participant’s sense of responsibility for the task. The implications of the research were explained to the participants and they were given an opportunity to ask any questions. The entire experimental procedure lasted between 35 and 45 minutes. Finally, undergraduate students were given one course credit in return for their participation.

*Ethical issues*

The study was approved by the university ethics committee, but it did raise two ethical issues. First, the participants were subjected to a deception and were unaware beforehand that this would happen. The deception was necessary to induce a sense of responsibility in the participants. To counter any negative effects of feeling misled or manipulated, the participants were fully debriefed (as described above). No participant reported being distressed as a result of taking part in the experiment.

Second, the undergraduate psychology students were offered an incentive for taking part in the form of one course credit in exchange for their participation. To benefit from course credits the students have to accumulate four course credits in a year which would allow them to discount their lowest coursework grade to improve their average grade. The students did not have to participate in this study as there were a number of different studies offering course credits and the students could select which they participated in.
Results

Overview of statistical analysis

All statistical analyses were conducted on a computer using SPSS (version 12.0.01). The sample was divided into high and low levels of obsessional thinking and the results of the STAI and BDI were compared across the high and low obsessional groups to see whether there were any differences in psychopathology between them. A series of analysis of variance (ANOVA) tests were conducted to explore the main hypotheses. Three, two-factor mixed factorial ANOVAs were run with Group (high vs. low obsessionality) as between-subjects variables, and Task (practice task vs. main task) as within-subjects variables (this was the manipulation of responsibility).

The dependent variables for the three ANOVAs were: 1). the number of beads requested to make the decision, 2). the time taken to make the decision and 3). a deviation score which was calculated from the difference between the participant’s probability estimate and that which was expected by the Bayesian model. The results have been produced and presented following the recommendations of Wright (2003: e.g. exact p-values have been presented) and the data were checked to ensure they conformed to the major assumptions for analysis of variance (Roberts & Russo, 1999).

With regard to these assumptions, firstly the data were interval level (Coolican, 1994). Secondly, the data were checked for normality of distribution and homogeneity of variance for each analysis. If these two assumptions were violated a transformation was attempted. With respect to the fourth assumption, that participants were randomly assigned to each condition, this was not possible as it was a quasi-
experimental design. However, to counter this group sizes were kept equal, as recommended by Roberts and Russo (1999), if randomisation is not possible.

**Excluded data**

One female participant was excluded from the data analysis as she revealed during the debriefing that she had misunderstood the task and based her judgements on criteria unrelated to the probabilistic reasoning task. Therefore the total number of participants in the analysis was forty-four.

**Missing data**

Missing data was only present on the OCI and a total of 11 items did not receive a response across the 44 participants (this corresponds to 0.6% of the OCI items). These data were coded as missing during the SPSS analysis.

**Deriving the high and low obsessionality groups**

The participants' scores on the OCI were used to split them into two groups. Dividing the sample around the median value would have maximised the group sizes, however Wright (2003) states that it is rarely appropriate to split a sample based on the median of a variable. Therefore, because of this and to maximise the difference in obsessional thinking, it was planned to use only the top and bottom thirds in the analysis. Wu and Watson (2003) observe that the correlation between the total frequency score and total distress score on the OCI is extremely high (above .90), therefore only the frequency scale needs to be administered. Accordingly, just the total frequency scores were used to split the sample. Although it was planned to use the top and bottom thirds, due to tied scores the most natural split fell at 36.4%, which
meant that the two groups had 16 participants each. These were called the High Obsessionality group (HO) and the Low Obsessionality group (LO). The remaining ‘middle’ group contained 12 participants and they were not used in group comparisons.

A statistical analysis was completed to check that there was a meaningful difference between the HO and LO groups in terms of their total frequency score on the OCI. Using a one-sample Kolmogorov-Smirnov test it was confirmed that the OCI total frequency scores were normally distributed \( (z=1.004, D=.151, p=.354) \). Using an independent samples T-Test for separate variances (as Levene’s Test was significant), there was a statistically significant difference between the groups (95% CI from -46.8 to -31.3, \( t(17.347)=-10.603, p<.001, d=4.3 \), one-tailed test), with the HO group (mean=54.4, S.D=14.2) scoring higher as expected than the LO group (mean=15.4, S.D=4.0).

**Demographic variation**

The demographic data were scrutinised to check for potential differences between the low and high obsessional thinking groups. There were more females than males in the study, and within the high and low obsessional thinking groups there was a significant difference in gender ratio \( (\chi^2=11.25, \text{d.f.}=3, p=.004) \) within the HO group (14 females, 2 males) and the LO group (11 females, 5 males), with more females than males in both groups. Concerns have been raised about using chi-squared when frequency scores are less than 5 in a cell, however Coolican (1994) states a score of less than 5 in one cell only will not violate the test. The data for *age* was not normally distributed so the non-parametric Mann Whitney test was performed instead and the LO and HO group did not show a statistically significant difference \( (U=100.0, p=.292, \)
two-tailed test). The ethnicity data revealed that the sample were marginally more diverse than the general population for the United Kingdom (National Statistics Website, 2003), as 91.1% were white (compared to 92.1% for the UK) and 8.9% were non-white (compared to 7.9% for the UK).

**Psychopathology within the sample**

This was examined for state anxiety, trait anxiety and depression, and the normality of the data was checked using one-sample Kolmogorov-Smirnov tests. Normal distributions were found for state anxiety \( z=.566, D=.085, p=.978 \), trait anxiety \( z=.839, D=.127, p=.581 \) and depression \( z=.969, D=.146, p=.354 \), so independent samples T-Tests were used to check for differences between the groups.

The levels of state anxiety showed a statistically significant difference between the two groups with the HO group (mean=40.2, S.D=10.7) showing more anxiety at the time of assessment than the LO group (mean=32.5, S.D=6.25). As there were unequal variances according to Levene's Test, the separate variances T-Test was used (95% CI from -14.1 to -1.3, \( t(24.156)=-2.48, p=.021, d=0.90, \) two-tailed test). Although this was a statistically significant difference between the groups and a large effect size (Cohen, 1992), the mean score for college students on the State section was found to be in the range of 36.5-38.8 (Spielberger *et al.*, 1983). Therefore on average the LO group were less anxious at the outset than a normative sample and the HO group were marginally more anxious. Further to this in a sample of neuropsychiatric patients, the mean score on the State section for people with anxiety was 49.0 (S.D=11.6), therefore the mean scores for the LO group, and nearly the HO group, are one standard deviation below the mean score in anxious patients (Spielberger *et al.*, 1983).
1983). This suggests that the levels of state anxiety did not approach clinical levels of anxiety at the beginning of the experiment.

Differences in Trait anxiety were also statistically significant (95% CI from -18.8 to -2.2, t(30)=-2.615, p=.014, d=0.96, two-tailed test), with the HO group (mean=46.6, S.D=14.1) showing greater levels of trait anxiety than the LO group (mean=36.1, S.D=7.8). On this measure, the HO group were close to the mean value for anxious patients reported by Spielberger et al. (1983; mean=48.0, S.D=10.7), but the LO group were lower. In addition, the LO group mean score was lower than the norms for college students and the HO group mean was higher (Spielberger et al.). This suggests that the HO group were approaching clinical levels of Trait anxiety, but the LO group were not.

With respect to the levels of depression between the HO group (mean=16.1, S.D=10.2) and the LO group (mean=6.1, S.D=4.9) there was a statistically significant difference between them (95% CI from -15.9 to -4.3, t(30)=-3.546, p=.001, d=1.3, two-tailed test), indicating the high obsessionality group were showing more symptoms of depression than the low obsessionality group. According to Beck et al., (1996), a total score on the BDI-II between 0-13 is considered in the minimal range, 14-19 is in the mild range, 20-28 is in the moderate range, and 29-63 is in the severe range (Beck et al., 1996). Therefore on the BDI-II, the LO group mean fell in the minimal range and the HO group fell in the mild range. This suggests that whilst there was a difference between the two groups, neither were reporting significant levels of depressive symptoms overall.
Manipulation of responsibility

Responsibility visual analogues

To check whether the experimental manipulation had been successful, the scores from Responsibility Check 2 (immediately after the practice task) and Responsibility check 3 (after the manipulation and immediately before the main task) were compared for the whole dataset. Investigations into normality using one-sample Kolmogorov-Smirnov tests, revealed that both Responsibility check 2 ($z=1.029$, $D=1.55$; $p=.354$) and Responsibility Check 3 ($z=.633$, $D=.095$; $p=.828$) were normally distributed.

Accordingly, a t-test for related data was carried out and there was a statistically significant difference between the two scores (Responsibility check 2: mean=64.7, S.D=24.4, Responsibility check 3: mean=72.1, S.D=19.6), indicating that the participants rated themselves as feeling more responsible for the outcome of the main trial, (95% CI from -11.9 to -2.8, $t(43)=-3.268$, $p=.002$, $d=0.34$, two-tailed test).

A comparison of the participants’ sense of responsibility at the beginning and end of the tasks was also carried out (Responsibility Checks 1 and 4). Both of these were found to be normally distributed using one-sample Kolmogorov-Smirnov tests (Responsibility Check 1: $z=1.011$, $D=.152$, $p=.354$; and Responsibility Check 4: $z=.939$, $D=.142$, $p=.354$).

Using a related T-Test, there was a statistically significant difference, with the participants feeling less responsible at Check 1 (mean=59.6, S.D=24.1) than they did at Check 4 (mean=71.0, S.D=23.3), indicating that the participants felt more responsible for the outcome of the tasks at the end than they did at the beginning (95% CI from -18.6 to -4.4, $t(43)=-3.253$, $p=.002$, $d=0.48$, two-tailed test).
Anxiety visual analogues

The participants' self-reported anxiety levels across the four visual analogues were also examined. Similarly to the responsibility checks, there was a statistically significant difference beyond the \( p < 0.05 \) level between the participants' anxiety immediately before (Anxiety Check 2) and after (Anxiety Check 3) the experimental manipulation (95% CI from -11.5 to -0.82, \( t(43) = -2.325, p = 0.025, d = 0.23 \), two-tailed test). One sample Kolmogorov-Smirnov tests revealed the data were normally distributed (Anxiety Check 2: \( z = 1.182, D = 0.178, p = 0.193 \), and Anxiety Check 3: \( z = 0.900, D = 0.149, p = 0.354 \)). The mean anxiety at Check 2 was 32.2 (S.D=25.9) and at Check 3 it was 38.4 (S.D=27.0), indicating that anxiety increased following the manipulation.

Comparing anxiety levels at times 1 and 4, revealed that there was no statistically significant difference in anxiety at the end of the tasks compared to the beginning, using the Wilcoxon test (\( z = -0.356, p > 0.05 \), two-tailed test) as the data were not normally distributed. The mean score at Anxiety Check 1 was 31.5 (S.D=23.9) and at Anxiety Check 4 it was 30.6 (S.D=29.0), indicating that levels of anxiety decreased very slightly across the sample by the end of the experiment. For clarity, the means from all of the visual analogues are summarised in Table 2, firstly for the whole sample, and then they are separated into the LO and HO group mean scores. It can be seen that the HO group consistently rated themselves as feeling more responsible than the LO group, and the HO group also showed higher levels of self-reported anxiety.
Table 2: Responsibility and anxiety mean scores

<table>
<thead>
<tr>
<th>Visual analogues</th>
<th>Group</th>
<th>Check 1</th>
<th>Check 2</th>
<th>Check 3</th>
<th>Check 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsibility</td>
<td>Whole sample</td>
<td>59.6</td>
<td>64.7</td>
<td>72.1</td>
<td>71.0</td>
</tr>
<tr>
<td>Anxiety</td>
<td>Whole sample</td>
<td>31.5</td>
<td>32.2</td>
<td>38.4</td>
<td>30.6</td>
</tr>
<tr>
<td>Responsibility</td>
<td>LO</td>
<td>54.0</td>
<td>54.3</td>
<td>67.2</td>
<td>64.5</td>
</tr>
<tr>
<td></td>
<td>HO</td>
<td>58.9</td>
<td>65.4</td>
<td>75.6</td>
<td>71.5</td>
</tr>
<tr>
<td>Anxiety</td>
<td>LO</td>
<td>26.8</td>
<td>25.1</td>
<td>31.4</td>
<td>24.8</td>
</tr>
<tr>
<td></td>
<td>HO</td>
<td>37.6</td>
<td>48.6</td>
<td>53.6</td>
<td>50.0</td>
</tr>
</tbody>
</table>
Hypothesis one: Comparing groups for deviations from Bayesian normative values

To determine whether the data from the High Obsessionality group deviated more from the normative values provided by Bayes’ theorem than those participants in the Low Obsessionality group, a two-factor mixed factorial ANOVA was conducted.

Treatment of probability data

To conduct this analysis the probability estimates produced by the participants had to be averaged. Therefore, for the high obsessionality group, the scores for all sixteen participants for Bead One from the practice task were averaged to produce an average score for Bead One for the high obsessionality group (in the practice task). This procedure was then repeated for Beads Two through to Twenty, until there were twenty average scores (one for each bead presented in the practice task). This was then repeated for the low obsessionality group, resulting in two sets of average probability scores for the twenty beads presented during the practice task. This procedure was then repeated for the twenty beads presented in the main task.

The average probability scores expressed as percentages by the participants were next converted to proportions (e.g. a score between 0 and 1), by dividing each percentage score by 100 (e.g. a score of 95 would become 0.95). This was to make them comparable to the Bayesian normative values.

In order to analyse this data using analysis of variance, difference scores were created following the procedure used by Volans (1976) and Huq et al. (1988). This was achieved by subtracting each averaged proportion for a particular bead, from the equivalent normative value for that bead generated using Bayes’ theorem. For example, in the high obsessionality group the average score for the first bead drawn in the practice task was 0.79. The normative value for the first bead drawn is 0.85
Major Research Project

according to Bayes’ theorem. Therefore, a difference score was calculated by subtracting the two values \((0.85 - 0.79 = 0.06)\). Table 3 shows the unconverted scores for both groups across the two tasks.

Table 3: Averaged participant scores and Bayesian normative values

<table>
<thead>
<tr>
<th>Bead number</th>
<th>Practice task</th>
<th>Main task</th>
<th>Practice task</th>
<th>Main task</th>
<th>Bayesian normative values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low obsessionals (n=18)</td>
<td>High obsessionals (n=18)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>0.790</td>
<td>0.693</td>
<td>0.791</td>
<td>0.689</td>
<td>0.850</td>
</tr>
<tr>
<td>2</td>
<td>0.816</td>
<td>0.748</td>
<td>0.816</td>
<td>0.726</td>
<td>0.969</td>
</tr>
<tr>
<td>3</td>
<td>0.878</td>
<td>0.801</td>
<td>0.846</td>
<td>0.759</td>
<td>0.994</td>
</tr>
<tr>
<td>4</td>
<td>0.915</td>
<td>0.858</td>
<td>0.855</td>
<td>0.805</td>
<td>0.999</td>
</tr>
<tr>
<td>5</td>
<td>0.945</td>
<td>0.896</td>
<td>0.901</td>
<td>0.835</td>
<td>0.999</td>
</tr>
<tr>
<td>6</td>
<td>0.934</td>
<td>0.921</td>
<td>0.915</td>
<td>0.858</td>
<td>0.999</td>
</tr>
<tr>
<td>7</td>
<td>0.885</td>
<td>0.881</td>
<td>0.741</td>
<td>0.724</td>
<td>0.999</td>
</tr>
<tr>
<td>8</td>
<td>0.917</td>
<td>0.898</td>
<td>0.827</td>
<td>0.853</td>
<td>0.999</td>
</tr>
<tr>
<td>9</td>
<td>0.934</td>
<td>0.921</td>
<td>0.863</td>
<td>0.859</td>
<td>0.999</td>
</tr>
<tr>
<td>10</td>
<td>0.816</td>
<td>0.893</td>
<td>0.739</td>
<td>0.719</td>
<td>0.999</td>
</tr>
<tr>
<td>11</td>
<td>0.926</td>
<td>0.909</td>
<td>0.839</td>
<td>0.821</td>
<td>0.999</td>
</tr>
<tr>
<td>12</td>
<td>0.942</td>
<td>0.916</td>
<td>0.888</td>
<td>0.848</td>
<td>0.999</td>
</tr>
<tr>
<td>13</td>
<td>0.952</td>
<td>0.934</td>
<td>0.889</td>
<td>0.869</td>
<td>0.999</td>
</tr>
<tr>
<td>14</td>
<td>0.821</td>
<td>0.903</td>
<td>0.753</td>
<td>0.732</td>
<td>0.999</td>
</tr>
<tr>
<td>15</td>
<td>0.910</td>
<td>0.922</td>
<td>0.861</td>
<td>0.841</td>
<td>0.999</td>
</tr>
<tr>
<td>16</td>
<td>0.931</td>
<td>0.927</td>
<td>0.887</td>
<td>0.873</td>
<td>0.999</td>
</tr>
<tr>
<td>17</td>
<td>0.944</td>
<td>0.936</td>
<td>0.895</td>
<td>0.886</td>
<td>0.999</td>
</tr>
<tr>
<td>18</td>
<td>0.879</td>
<td>0.918</td>
<td>0.783</td>
<td>0.794</td>
<td>0.999</td>
</tr>
<tr>
<td>19</td>
<td>0.942</td>
<td>0.925</td>
<td>0.877</td>
<td>0.892</td>
<td>0.999</td>
</tr>
<tr>
<td>20</td>
<td>0.874</td>
<td>0.898</td>
<td>0.755</td>
<td>0.775</td>
<td>0.999</td>
</tr>
</tbody>
</table>

Screening of the probability data

Using one-sample Kolmogorov-Smirnov tests, the difference scores for the practice task \((z=1.078, D=.171, p=.298, \text{two-tailed test})\) and the main task \((z=.646, D=.102, p=.782, \text{two-tailed test})\) were not significant indicating that they were both normally distributed. The variances for the four cells were found to be homogenous using the criteria by Roberts and Russo (1999), where the variance of the largest cell can be no more than four times greater than that of the smallest cell.
The boxplot (figure 4) indicated the presence of three potential outliers within the data, however a check of the data revealed that these were not data entry errors so they were not removed from the analysis.

**Main effects**

To determine whether the hypothesis was supported, a two-factor mixed factorial ANOVA was conducted, with *Task* as a within-subjects variable (two levels: practice and main task) and *Group* as a between-subjects variable (two levels: high obsessionality versus low obsessionality). The dependent variable was the *deviation scores* and the means are presented in Table 4.
Table 4: Deviation scores

<table>
<thead>
<tr>
<th>Difference score</th>
<th>Mean scores per group (Standard deviation in brackets)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low obsessionality</td>
</tr>
<tr>
<td>Bayes – Practice task</td>
<td>0.092 (0.042)</td>
</tr>
<tr>
<td>Bayes – Main task</td>
<td>0.104 (0.043)</td>
</tr>
</tbody>
</table>

1) **Between-subjects effects**

The mean scores show that the high obsessionality group had higher deviation scores across both trials than the low obsessionality group. This difference was a statistically significant main effect of *Group* (F[1,38]=44.60, p<.001, $\eta^2=.54$). The partial eta-squared of .54, indicates a medium effect size (Cohen, 1992).

2) **Within-subjects effects**

Exploring the main effect of *Task*, revealed that there was a significant difference in scores, with the deviation scores in the main task being significantly greater than those in the practice task (F[1,38]=10.104, p<.01, $\eta^2=.21$). The effect size of .21 was a small effect (Cohen, 1992).

*Interaction effect*

Investigating the relationship between the variables of *Task* and *Group*, revealed a non-significant interaction (f[1,38]=0.63, ns, p>.05, $\eta^2=.002$). Therefore hypothesis one, that *people high in obsessional thinking will deviate more from the Bayesian model in their probability judgements when they feel a high level of*
perceived responsibility, than people low in obsessional thinking", has not been supported as both those high and low in obsessional thinking deviated to a similar amount when they felt responsible.

Figure 5 below shows the relationship between the variables and it can be seen that the changes in deviation scores between the practice and main task are very similar in both the high and low obsessionality groups.

**Figure 5: Mean deviation scores for probabilities (Group x Task interaction)**

*Hypothesis two: Impact of responsibility on time taken to make decision*

This analysis was to determine whether the HO group took longer to reach a decision than those participants in the LO group, and a second two-factor mixed factorial ANOVA was conducted.
Time taken to reach a decision

Using one-sample Kolmogorov-Smirnov tests, the data for Time Taken for the practice task were statistically significant indicating that they were not normally distributed ($z=1.737$, $D=.262$, $p=.007$, two-tailed test). In addition, there was heterogeneity of variance as the highest variance was more than four times greater than the lowest variance (Roberts & Russo, 1999). As this violates the assumptions of ANOVA, the scores were transformed to satisfy conditions of normality using a logarithmic ($\log_{10}[X]$) transformation (Howell, 1997). Subsequent one-sample Kolmogorov-Smirnov tests were not statistically significant for the practice task ($z=1.12$, $D=.169$, $p=.193$, two-tailed test) or the main task ($z=1.348$, $D=.203$, $p>.05$, two-tailed test).

However, Roberts and Russo (1999) state that when deciding whether to transform data, if the transformation does not change whether differences between means are statistically significant, then the untransformed results should be reported. Accordingly, running the ANOVA on both the transformed and untransformed data did not reveal substantially different results (although it slightly increased the statistical significance of the main effects). Therefore, following Roberts and Russo’s (1999) recommendation, the results of the untransformed data have been reported. A clustered boxplot was created to show the spread of data and potential outliers and is presented in Figure 6.
The five potential outliers shown in the boxplot were checked for possible data entry errors. However they were not errors, so they were kept in the analysis.

**Main effects**

To investigate hypothesis two, a two-factor mixed factorial ANOVA was conducted, with *Task* as a within-subjects variable (two levels: practice and main task) and *Group* as a between-subjects variable (two levels: high obsessionality versus low obsessionality). The dependent variable was the *Time Taken* to reach a decision and the means are reported in Table 5.
Table 5: Mean scores and standard deviations for time taken

<table>
<thead>
<tr>
<th>Time taken</th>
<th>Mean scores per group (Standard deviation in brackets)</th>
<th>Low obsessionality</th>
<th>High obsessionality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practice task</td>
<td>51.8 (19.6)</td>
<td>81.8 (68.4)</td>
<td></td>
</tr>
<tr>
<td>Main task</td>
<td>76.3 (72.8)</td>
<td>114.1 (61.5)</td>
<td></td>
</tr>
</tbody>
</table>

1) **Between-subjects effects**

The mean scores show that the high obsessionality group had higher scores across both trials than the low obsessionality group. This difference was statistically significant ($F[1,30]=4.72, \ p<.05, \ \eta^2=.136$). The partial eta-squared of .136 is equivalent to a very small effect size (Cohen, 1992).

2) **Within-subjects effects**

Exploring the main effect of Task, revealed that there was a statistically significant difference, with the time taken in the main task being greater than it was in the practice task for both the HO and LO groups ($F[1,30]=4.26, \ p<.05, \ \eta^2=.124$). The effect size of .124 was very small (Cohen, 1992).

**Interaction effect**

Investigating the relationship between the variables of Task and Group, for the dependent variable Time Taken, revealed a non-significant interaction ($F[1,30]=.088, \ ns, \ p>.05, \ \eta^2=.003$). Therefore hypothesis two, *that people high in obsessional thinking will take longer to make a decision when they feel a high level of perceived*
responsibility, than people low in obsessional thinking’, has not been supported, as both the high and low obsessional groups took a similar amount of time when they felt responsible.

Figure 7 below shows the relationship between the variables, and it can be seen that the change in Time Taken between the practice task and main task is very similar in both the high and low obsessionality groups.

Figure 7: Time taken (Group x Task interaction)
Hypothesis three: Impact of responsibility on information required to reach a decision

To test the third hypothesis, another two-factor mixed factorial ANOVA was conducted, to determine whether the High Obsessionality group required more information (more beads drawn) to reach a decision than those participants in the Low Obsessionality group.

Information required to reach a decision

Using one-sample Kolmogorov-Smirnov tests statistically significant results were found indicating that the data on the Number of beads drawn for the practice task ($z=2.1, D=.317, p<.001$, two-tailed test) and the main task ($z=1.72, D=.260, p<.01$, two-tailed test) were not normally distributed. There was also heterogeneity of variance and as for the data on Time Taken, this violated the assumptions of ANOVA so an inverse transformation (Tabachnick & Fidell, 2001) was attempted ($1/X$). As for hypothesis two, the transformation did not alter the overall significance of the main and interaction effects, hence the results of the untransformed data have been reported (Roberts & Russo, 1999). A clustered boxplot was generated to show the spread of data and potential outliers and is presented in Figure 8.
The outliers shown in the boxplot were not excluded from the analysis as they were checked and found not to be data entry errors.

**Main effects**

To investigate the last hypothesis, another two-factor mixed factorial ANOVA was conducted, with *Task* as a within-subjects variable (two levels: practice and main task) and *Group* as a between-subjects variable (two levels: high obsessionality versus low obsessionality). The number of beads drawn was the dependent variable and the means are presented in Table 6.
Table 6: Number of beads drawn

<table>
<thead>
<tr>
<th>Number of beads drawn</th>
<th>Mean scores per group (Standard deviation in brackets)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low obsessionality</td>
</tr>
<tr>
<td>Practice task</td>
<td>4.5 (1.2)</td>
</tr>
<tr>
<td>Main task</td>
<td>6.2 (3.8)</td>
</tr>
</tbody>
</table>

1) **Between-subjects effects**

The mean scores show that the high obsessionality group had higher scores across both trials than the low obsessionality group. This difference was statistically significant ($F[1,30]=8.02$, $p<.01$, $\eta^2=.211$). The partial eta-squared of .211 was equivalent to a small effect size (Cohen, 1992).

2) **Within-subjects effects**

Exploring the main effect of *Task*, revealed that there was a statistically significant difference, with the *Number of beads drawn* in the main task being greater than it was in the practice task for both the HO and LO groups ($F[1,30]=7.17$, $p<.05$, $\eta^2=.193$). However, the effect size of .193 was very small (Cohen, 1992).

**Interaction effect**

Investigating the relationship between the variables of *Task* and *Group*, for the dependent variable *Number of beads drawn*, revealed a non-significant interaction ($F[1,30]=.54$, ns, $p>.05$, $\eta^2=.018$). Therefore hypothesis three, *that people high in obsessionality will request more information before making a decision when*
they feel a high level of responsibility, than people low in obsessional thinking', has not been supported as both the high and low obsessional groups took a similar number of beads to reach a decision when they felt responsible.

Figure 9 shows the relationship between the variables, and it can be seen that the number of beads drawn across the practice task and main task are similar in both the high and low obsessionality groups.

Figure 9: Number of beads drawn (Group x Task interaction)

Refining the experimental groups

As the three hypotheses were not supported, a further analysis was completed by restricting the participants to the top and bottom 20 percent. This was justified on the basis that the High Obsessionality group's mean score on the OCI total frequency was below the mean score that Foa et al. (1998) reported for the OCD patients in their study (mean score for total frequency on the OCI = 66.4). Therefore a possible reason
why the hypotheses were not supported was that the original HO group did not reach clinical levels of obsessionality. Dividing the sample into two groups based on the top and bottom 20% of the OCI total frequency scores amounted to nine participants in each condition. The new mean OCI total frequency score for the LO group was 12.4 (S.D=2.1), which was slightly lower than the previous LO group score. For the HO group the mean was 65.3 (S.D=7.3), which is very close to the mean score for OCD patients described by Foa et al. (1998).

However, despite taking more extreme groups on the OCI, there were still no statistically significant interactions across the three dependent variables. Therefore, even with the HO group closely resembling clinical levels of OCD, when responsibility was increased, the HO group did not take more time or request more information to make a decision, and their probability judgements did not deviate more from the Bayesian normative values than the LO group, which was contrary to the predictions of the three hypotheses.

**Power analysis**

A post-hoc power analysis was conducted using GPOWER (Faul & Erdfelder, 1992) to establish the probability of detecting a medium and large effect using a sample of this size. Using an alpha of 0.05, N=32, there was a power of 0.28 to detect a medium effect and 0.59 to detect a large effect.
Discussion

From the results, it can be seen that the three hypotheses have not found empirical support. The discussion will first interpret the main findings and then issues relevant to all three hypotheses will be considered. The implications of the results will then be explored, before moving on to some of the limitations of the study and ideas for further research.

**Hypothesis one: Deviation from the Bayesian normative values**

For the first hypothesis to have been supported, that ‘people high in obsessional thinking will deviate more from the Bayesian model in their probability judgements when they feel a high level of perceived responsibility, than people low in obsessional thinking’, a statistically significant interaction would need to have been found showing an additive effect of the role of responsibility. What was observed was that the high obsessionality group deviated more from Bayesian normative values than the low obsessionality group. If the interaction had also been significant, this would have indicated that when the HO group were made to feel responsible, they deviated even further from the Bayesian values than the low obsessionality group. Accordingly there is no empirical support for hypothesis one. The implication of this is that perceived responsibility did not have a discriminatively greater influence on the probabilistic judgements of the participants who were high in obsessional thinking. What actually occurred is that feeling responsible led all participants to deviate more in their probability judgements (from the Bayesian norms).

A second finding was that when the sample were made to feel responsible, they deviated more in their probability judgements from the optimal estimates
provided by Bayes' theorem. This is interesting because it is my understanding that no research to date has explored this effect. Therefore, when feeling more responsible for an outcome, probability judgements become more cautious. Phillips and Edwards (1966) have already identified that people do not extract as much certainty as they could from the data, which they called conservatism. What this study appears to have shown is that feeling responsible exacerbates conservatism and affects both people high and low in obsessional thinking to a similar extent although it was a small effect size. Further to this, it supports the findings of Mancini et al. (2004) who found that responsibility can induce obsessive-compulsive behaviours in people without OCD.

The first significant finding, which was a medium-sized effect, indicates that people with high levels of obsessional thinking estimate probability in a different way to people low in obsessional thinking, as they show a greater deviation from Bayesian normative values. This result adds support to the previous research by Fear and Healy (1997), and extends the findings of Volans (1976) who did not achieve statistical significance in her study although the results were in the same direction. Therefore, this study adds weight to the observation that people who score highly on self-reported symptoms of OCD, also tend to deviate more in their probabilistic reasoning than people low in OCD symptomatology, from normative values.

As has been shown, there is good evidence that OCD is associated with distortions in probabilistic reasoning. However, it does not appear on the basis of this research that judgements of likelihood are mediated by perceived responsibility. It is possible that the conditions were not right during the experiment in order to produce this effect (further consideration of this will be presented later), but as it stands, perceived responsibility appears to influence probability judgements across the board, not just those people who are high in obsessional thinking. This would therefore
support the notion of responsibility having a broader influence on people, rather than being specific to people with OCD (Rhéaume et al., 1995).

**Hypothesis two: Time taken to reach a decision**

Similar to hypothesis one, a statistical interaction was required to indicate an additive effect of responsibility. However, it was not statistically significant and the hypothesis, that 'people high in obsessional thinking will take longer to make a decision when they feel a high level of perceived responsibility, than people low in obsessional thinking' was therefore not supported. The results did show that the participants took longer to reach a decision if they scored highly on self-reported OCD symptoms and they also took longer to reach a decision when they felt more responsible for the outcome of the task. These results are therefore similar to those for hypothesis one, but they were very small effect sizes. However, they add some support to prior research indicating that OCD is associated with increased time taken to reach a decision (Fear & Healy, 1997).

An interpretation of this finding is that when the participants feel more responsible for the outcome they are more hesitant about reaching a decision (as taking a longer time to reach a decision implies being more hesitant). Similarly, those participants high in obsessional thinking were also more hesitant in reaching a decision. This reflects other research which has found that manipulations of responsibility lead people with OCD to hesitate more when making decisions (e.g. Ladouceur et al., 1995). Unfortunately there was no evidence that responsibility and high levels of obsessionality interacted to increase the time taken to reach a decision.
**Hypothesis three: Amount of information required to reach a decision**

The results showed that the group high in obsessional thinking required more information before reaching a decision than those low in obsessional thinking. Likewise, when the participants felt more responsible for the outcome, they also required significantly more information in order to make their decision. Unfortunately, the interaction between responsibility and obsessionality was not statistically significant meaning that the third hypothesis, that ‘people high in obsessional thinking will request more information before making a decision when they feel a high level of responsibility, than people low in obsessional thinking’, has not found empirical support in this study. This means therefore, that when the group high in obsessional thinking felt more responsible for the outcome of the main task, they did not require a greater amount of information before making their decision than the other groups did.

The amount of information required before making a decision is comparable to checking behaviour in OCD. As the participant requests more information they are effectively checking the correctness of their answer before finally revealing it. Considering it this way, the results support previous research which has indicated that responsibility leads to more information being requested (e.g. Ladouceur *et al.*, 1995) and by implication a greater degree of checking behaviour (Mancini *et al.*, 2004).

**Summary**

So far it can be seen that none of the three experimental hypotheses have found empirical support. However, both the impact of feeling responsible and being high in obsessional thinking, did separately have an influence on the amount of information required in order to reach a decision, the time taken to reach a decision, and the extent...
to which probability judgements deviated from normative values. The discussion will now turn to a more general consideration of the study findings.

**General comments on the research findings**

It is clear from the results that when a sense of responsibility was applied it did not discriminatively exacerbate the responses of the group that were high in obsessional thinking, above those of the low obsessionality group. However, there were consistent findings that being high in obsessional thinking caused probability judgements to be more deviant, time taken to reach a decision was longer, and the amount of information required to reach a decision was increased. These findings were also found when the participants felt more responsible. Clearly then, perceived responsibility and obsessive-compulsive symptomatology affect likelihood judgements and decision-making, which adds to the body of research already having found similar results (e.g. Fear & Healy, 1997).

In addition to this, there is further support for the role of responsibility in the cognitive-behavioural conceptualisation of OCD, as the participants by implication were more hesitant about making a decision and engaged in a greater degree of checking when they felt responsible. Likewise, high levels of obsessional thinking were associated with greater levels of checking and hesitation.

The experiment has explored the relationship between responsibility and obsessional thinking on three separate variables which are commonly affected in OCD, and found no statistically significant relationship between them. It was clear though that the level of obsessional thinking in the sample influenced the participants’ responses. Likewise, perceived responsibility also influenced responses. Given the central role afforded to responsibility in Salkovskis’ (1985) model, it would be
expected that when this was manipulated it would have a greater influence on those high in obsessional symptoms. However this was not the case and it raises questions over the centrality of responsibility in the cognitive-behavioural conceptualisation of OCD. Both responsibility and obsessionality influenced the dependent variables to similar degrees and it raises a question over whether there is a common element that is present in these factors.

Having questioned the centrality of responsibility in the cognitive-behavioural model, looking closely at the means for all three dependent variables reveals that the same pattern occurred in each variable (see Tables 4, 5 and 6). This pattern was a consistent hierarchy in the means, with the LO group on the practice task being the smallest mean score. The LO group mean for the main task was the next largest score, with the HO group mean for the practice coming next. Lastly, the HO group mean for the main task was the greatest of the four means. Although there were no statistically significant interactions for the three dependent variables, these results are in the direction predicted by the three hypotheses. Therefore, higher levels of obsessional thinking and higher levels of perceived responsibility resulted in greater mean scores for the probability judgements, time taken and information required, although they did not reach statistical significance.

It should be noted that some degree of similarity between the findings for hypotheses two and three would be expected, as requesting more information will correspondingly result in the person taking more time to reach their decision. However, there is not an entirely linear relationship between these two dependent variables, as the person may take a variable amount of time to decide whether to make their decision or receive another bead.
Overall the main hypotheses have not been supported but the results have shown a trend in the predicted direction, with perceived responsibility leading highly obsessional participants to deviate more in their probability judgements, take longer to complete the tasks and request more information. Before thinking of what other factors may be important it is necessary to address some aspects of the study in order to place potential explanations for the results in an appropriate context. Hence the discussion will now turn to some methodological issues that might have influenced the lack of empirical support for the hypotheses.

Manipulation of responsibility

The results indicate that the attempt to manipulate responsibility was successful. The statistically significant difference between the responsibility checks immediately before and after the manipulation showed that perceived responsibility, when self-reported on a visual analogue, showed an increase suggesting that the sample felt more responsible for the outcome of the second task. Further to this, the HO group reported higher levels of perceived responsibility than the LO group.

The success of the manipulation is also indirectly supported by the corresponding changes in anxiety scores. Following the experimental manipulation of responsibility, all of the participants felt more anxious. Salkovskis et al. (2000) state that when a sense of responsibility for causing harm is perceived, then an increase in anxiety follows. Further to this, there were higher levels of anxiety in the HO group compared to the LO group and anxiety increased further following the experimental manipulation. Therefore the increases in anxiety found in this study are further confirmation that the manipulation of responsibility was achieved and this should not be a reason for the hypotheses failing to reach statistical significance. This is an
important accomplishment as previous research has noted that this is difficult to achieve (e.g. Ladouceur et al., 1995).

However, when comparing the means, the magnitude of the difference between the responsibility checks indicated a small to medium effect (Cohen, 1992). Therefore, it is possible that the responsibility manipulation lacked potency for the participants, despite reaching statistical significance. This could possibly explain why the interaction effects failed to reach significance and consequently the hypotheses were not supported.

Further to this, certain factors have been found to be important to responsibility in people with OCD. For example, Rheaume et al. (1995) found that the best predictors of responsibility were Influence and Pivotal influence. In addition, Salkovskis (1985) proposed that a feature of responsibility was a perception that harm might be caused and Ladouceur et al., (1995) also noted that the perceived severity of the outcome was important. Therefore if the responsibility manipulation was not potent enough, then intrusive thoughts experienced by the participants may not have been appraised in a manner that represented potential harm being caused to the experimenter. Salkovskis (1985) states that if a person doesn’t feel responsible for an intrusive thought, they are likely to feel anxious or depressed rather than obsessional.

Whilst it was intended to make the person feel they had a pivotal role in the outcome of the study and the consequences for the experimenter, it is not clear to what extent they actually believed this. Therefore, the modest effect size may reflect the fact that the HO group did not reach a level of responsibility that would have had a more marked impact on their responses in the tasks. If this was the case, then increasing the sense of responsibility further in the participants may yet show a mediating role of perceived responsibility in probability judgements, time taken and
information required to reach a decision. As indicated earlier, the mean scores hinted that the participants were responding in the direction predicted by the hypotheses and the lack of statistical significance in the interaction effects may have been a product of a lack of potency of the responsibility manipulation.

Accordingly, it may be the case that responsibility has to reach a perceived critical level of severity, danger and pivotal influence before it will activate strong OCD symptoms. As shown above, this experiment may not have produced those conditions, but instead tapped into a lower level effect of responsibility that affected all participants irrespective of their obsessionality.

**How representative were the sample of OCD populations?**

A second important factor is how similar the sample were to OCD populations. A strength of this study was that the sample (and group sizes) were larger than comparable studies in this area (e.g. Volans, 1976; Pélissier and O'Connor, 2002). Also it was mainly comprised of university students which has already been established as a valid population on which to conduct research into OCD (e.g. Wu & Watson, 2003). Comparing the OCI total frequency means for the HO and LO groups revealed a statistically significant difference between the two groups which was a very large effect. The HO group also reported high levels of trait anxiety that approached clinical levels and mild symptoms of depression. Foa et al. (1998) reported that OCD patients showed strong positive associations on the STAI and BDI when they were correlated with the OCI. Therefore the presence of differences between the groups supports the fact that the HO group were similar to clinical populations and strengthens the generalisability of the results to OCD patients.
As has been shown, the HO group were clearly separated in terms of their obsessionality. However, the HO group were still slightly below the mean score for OCD patients described by Foa et al. (1998) and may not have had the same intensity of symptoms that people with clinical levels of OCD experience. Therefore, a possible reason for not seeing additive effects of responsibility could be that the HO group were not truly representative of OCD populations.

But this explanation is contraindicated by the results of refining the sample. This analysis used smaller groups, but the refined HO group was very close to the mean score on OCD symptoms measured on the OCI in people diagnosed with OCD (Foa et al., 1998). This analysis still did not produce any significant interactions, which suggests that the frequency of OCD symptoms was not the reason the hypotheses were not supported. Some caution must be taken here however as the group sizes were quite small (n=9), although other research in this area has used groups this size or smaller (e.g. Shafran, 1997).

Burns et al. (1995) recommended using only the top 2% of scores on OCD measures and ensuring that these scores occurred on two separate occasions. Pleva and Wade (2002) recommended using the top 10%. Both of these recommendations are more stringent than the procedure adopted in this study, which took the top and bottom 36.4% and then 20% of the sample in its analyses. Accordingly, the recommendations from the literature are more stringent than the procedure adopted here, but to follow these guidelines would make the groups extremely small in participant numbers. The justification for using the top and bottom 20% was that this produced a mean for the HO group which was very similar to that described by Foa et al. (1998) for patients with OCD. Yet this still did not produce results that supported the hypotheses. Therefore on the basis of symptom frequency, there is no reason to
think that the refined HO group did not approach clinical levels of OCD symptomatology.

However, Wu and Watson (2003) comment that non-clinical populations may deviate in some unknown way from clinical populations. To get a clearer idea of the severity of symptoms the OCI total distress scores can be examined. The mean for the LO group was 10.8 (S.D=5.8) and the mean for the HO group was 41.2 (S.D=18.6). Comparing this with data from Foa et al. (1998), the HO group were well below the mean score of their clinical sample (mean=66.3, S.D=31.9). In the refined sample in this study, the HO group (top 20%) had a mean of 50.2 (S.D=16.9) which is still below the mean score found in people with OCD. Therefore, whilst the frequency of symptoms was comparable, it appears that the sample were not experiencing the level of distress that clinical OCD populations experience. A suggestion for conducting similar research in the future may be to use the OCI total distress score to derive groups and this may be more representative of OCD populations. However, in this study that would have resulted in prohibitively small groups. Having said this, previous research has found frequency and distress scores to be highly correlated, suggesting in fact that it shouldn’t make a difference (Wu & Watson, 2003).

In summary then, although the two groups differed to a statistically significant degree with a very large effect size, a potential explanation for why the hypotheses were not supported is that the level of distress associated with OCD symptomatology in the HO group was lower than clinical levels. Future studies should therefore try and redress this situation to clarify whether this is the case or not. Having considered the composition of the sample, the discussion will now turn to a third factor that may have influenced the hypotheses, which was the probabilistic reasoning task.
The nature of the probabilistic reasoning task

There are several issues relevant here. Firstly, the task was somewhat confusing and perhaps intimidating at first sight. Although it was explained in detail to the participants, at least one person did not fully understand the task (hence they were excluded). Fear and Healy (1997) reported that some of their participants dropped out through not understanding the task. However, as the sample here were predominantly psychology undergraduates, on balance the task would appear to be appropriate and well within their intellectual abilities.

Although the task initially appears complex, in fact the opposite could have been true, with the task being too easy for the participants. For example, it may have been too obvious which jar had been selected as the first contradictory bead was the seventh one presented. The order selected was taken from previous research (Huq et al., 1988), but having a contradictory bead at no.4 may have made the task more ambiguous. The effect of this would be to introduce greater uncertainty which has been found to raise anxiety and elicit more obsessional symptoms and behaviours (Tolin et al., 2003). Therefore this could be used as a strategy to heighten the impact of the study on the participants in future research.

A further issue is how valid the task is for exploring the mechanisms involved in OCD as it does appear somewhat abstract. Fear and Healy (1997) concluded that this approach is ecologically valid and experimental studies to date have played a significant and unique role in OCD research (Radomsky & van den Hout, 2004). On this basis, it would appear then that the use of probabilistic reasoning tasks is a valid means of exploring the cognitive processes involved in OCD. However there are a few other factors that limit the conclusions from this study, which are considered below.
Limitations of the study

ANOVA assumes that all participants are randomly allocated to conditions (Roberts and Russo, 1999). This was a quasi-experimental study and violated this assumption in two ways. Firstly, participants were allocated to groups on the basis of classification, being either high or low in obsessional thinking. This was compensated by ensuring there were equal numbers of participants in every group, as Roberts and Russo (1999) recommend. Secondly, it was not possible to alter the order of presentation of the two tasks, as the experimental design kept perceived responsibility low by calling the first task a practice and raised perceived responsibility by classifying the second task as the ‘main and important task’. Therefore practice effects could be influencing the data and Volans (1976) found evidence of this effect in her study as there was a reduction in the amount of information requested as subsequent trials were administered. Accordingly, this may have reduced the time taken and information requested to make a decision, which might have affected potential interaction effects.

Another limitation relates to the power of the study, as the probability of detecting a medium or large effect was lower than the 0.80 level recommended by Cohen (1992). Therefore it is possible that with a larger sample the experimental hypotheses may have been supported. Despite being a smaller sample than the power analysis recommends, the sample size was equivalent to, or larger than other experimental research in this area (e.g. Lopatka & Rachman, 1995; Volans, 1976). Although it would have been desirable to collect more data, the study had to be completed within the time constraints of the doctoral programme in clinical psychology which unfortunately prevented the recruitment of further participants.
Issues related to diversity and difference

As mentioned in the introduction, diversity issues have not been considered in this specific area of OCD research so it is difficult to consider them. However, they may be important as Fisk (2005) noted that there is evidence that young adults violate some of the key rules of probability theory. This could therefore be important as the sample were predominantly young adults. However, Fisk found no difference between younger and older adults on probabilistic reasoning tasks, so the results of this study should be applicable to adults of all ages.

In addition to being skewed towards younger people, the sample also had a preponderance of females (which is not unusual for undergraduate psychology courses and other research in this area: e.g. Fear & Healy, 1997), and future research should try to balance this as much as possible. Finally, the ethnic diversity within the sample was broadly reflective of that found in the UK in general (National Statistics Website, 2003). Therefore, there is no reason to think that the results are not generalisable to the general population on the grounds of ethnic diversity. The potential influence of age, gender and ethnicity on probabilistic reasoning and decision-making in OCD remains unknown however.

Implications of the experimental results

Despite the fact that the hypotheses were not supported, responsibility has already been suggested as playing an important role in decision-making in OCD (Foa et al., 2003). Also, it would be premature to conclude that responsibility does not play an important role in probabilistic reasoning as well, as there are questions over the potency of the responsibility manipulation in this study and the representativeness of the HO group to people with OCD.
Situations involving uncertainty or ambiguity may be difficult for people with OCD to cope with, hence they engage in compulsive behaviours in order to achieve certainty and reduce their distress (Tolin et al., 2003). The probabilistic reasoning task involved both uncertainty and ambiguity and Ladouceur et al. (1997) found that intolerance for uncertainty can trigger attempts to get more information in ambiguous tasks. Therefore the results of this study lend some support to the construct of intolerance for uncertainty, as the high obsessional group requested more information when they were completing an ambiguous task.

Contrary to intolerance for uncertainty, this study does not find support for inferential confusion (Aardema et al., 2005). Central to this construct is the notion of inverse inference, where a person starts out strongly supporting a hypothesis despite evidence to the contrary. In this study, on the probabilistic reasoning task, the high obsessionality group were less certain than the low obsessionality group in their probability estimates, as indicated by the greater deviation in their scores from the Bayesian normative values. Also, their probability estimates vacillated following the presentation of beads that contradicted their hypothesis about the correct jar. Therefore, the HO group were less certain than the LO group at the beginning and did not ignore contradictory evidence when it appeared. Accordingly, this study does not find support for the construct of inferential confusion.

Overall, the study lends some support to the notion of intolerance for uncertainty, but has not found support for inferential confusion. With respect to the main findings, it is still possible that responsibility may have an important influence over probability judgements, however the methodological difficulties described above limit the conclusions that can be drawn.
Ideas for future research

Some ideas for further research have already been suggested, however some other ideas arose during the process of conducting this research. Firstly, it may be useful to try and increase the potency of the responsibility manipulation (e.g. severity, pivotal influence, perception of danger). As has been shown, this may have been less powerful than was intended and could have been a reason why the hypotheses were not supported. One way of achieving this manipulation of responsibility could be to conduct the probabilistic reasoning task twice, once with the experimenter taking responsibility for the practice task and supporting the person through it, and the second time offering no assistance and leaving the person entirely responsible for completing it correctly.

Alternatively, creating a more dramatic consequence could enhance the sense of danger or possible harm associated with the outcome of the task. For example, an idea based on a suggestion by J. Murray (personal communication, 13th September 2005) could be to direct the participants to write a brief statement on a piece of paper that involves significant harm coming to someone important to them. On a second piece of paper they could write a pleasant statement for the person. The participant would be told that the statements will be attached to the two jars in the second task, with the statement involving harm being attached to the jar chosen by the experimenter. The participant would be informed that only the statement attached to the jar they select will be destroyed at the end of the experiment, the other statement will be kept until the entire study is completed. Therefore, if they get it wrong, the statement involving harm would be preserved for a number of weeks. This modification to the procedure may be a potent way of increasing the sense of responsibility for causing harm in the participants.
To check how successful the manipulation had been, a more detailed exploration with the participant at the end may give additional information as to whether they believed it and how potent it was. Finally, it would be useful to conduct the research on actual patients with OCD, so that the problems surrounding the establishment of a high obsessionality group from non-clinical populations are avoided.

**Conclusions and implications for OCD treatment**

This research has explored the role of perceived responsibility in obsessional thinking and its effects on probabilistic reasoning and decision-making, in order to gain a better understanding of cognitive processes involved in OCD. Although the three main hypotheses weren’t supported, the results were tentatively suggestive of an effect in the predicted direction. Reasons for the lack of statistically significant results may have been due to a lack of potency in the manipulation of responsibility and possibly lower levels of OCD symptom intensity in the sample than might be found in a clinical population. The results do however support previous research in this area, adding weight to the finding that people high in obsessional thinking estimate probabilities in a different way to people low in obsessional thinking. Further to this, people high in obsessionality take longer to make a decision and require more information before they make that decision.

In addition to this it has been shown that perceived responsibility also leads people to take longer and request more information before they reach a decision, supporting other research in this area. However, a new finding from this study, is that raising a person’s sense of responsibility leads them to deviate more in their probability estimates from Bayesian normative values. This was not specific to
obsessional thinking though, as the whole sample deviated in their probability judgements once they felt more responsible, becoming more conservative in their likelihood estimates.

Relating this to the treatment of OCD, as previous research has suggested, addressing issues of responsibility in treatment may assist people with their checking and hesitations. Regarding judgements of likelihood, on the basis of this study, when people feel responsible they show a non-optimal pattern of responding and as Rhéaume et al. (1995) have suggested that responsibility may not be unique to OCD, other disorders may be influenced by responsibility and potential cognitive distortions regarding the likelihood of events happening. As reasoning biases are an important feature of Salkovskis' (1998) cognitive-behavioural model of OCD, a greater understanding of how likelihood judgements may be influenced by OCD and responsibility, may help to identify treatment strategies. What this research has found is that obsessionality, and responsibility both lead people to be more conservative in their probability estimates. Consequently, addressing this conservatism effect in therapy may be a useful way of reducing doubting and uncertainty, and subsequently reducing OCD symptoms.
References


Appendix 1: Calculations for the experiment using Bayes’ Theorem
Explanation of probability calculations

Bayes’ theorem provides a way of calculating the probability of a hypothesis following the gathering of some data (Baron, 1988). Therefore, using this theorem, a logical solution to a problem can be calculated from a set of theoretical probability estimates. With respect to this study, the ‘problem’ is the likelihood that a jar will be chosen (this is the hypothesis) followed by a particular order of beads being drawn (this is the specific data).

Using the practice task from this study as the example here, the first theoretical probability estimate will be the probability of jar A being chosen followed by a red bead being drawn. The second theoretical probability estimate will be the probability of jar A being chosen followed by a red bead and then a second red bead being drawn. This will continue until theoretical probability estimates have been calculated for the probability of Jar A being chosen and a specific order of 20 beads being drawn. A probability tree can be helpful in identifying the various possible outcomes and their associated probabilities. Figure 10 presents data for the first red bead drawn:

Figure 10: Probability tree for the first bead drawn

In the probability tree shown above, the numbers next to each line (branch) correspond to the probability of taking each branch. Therefore, at the start there is an
equal chance of jar A or jar B being chosen. If jar A was chosen, then there is a 0.85 probability of a red bead being drawn and a 0.15 probability of a silver bead being drawn. The probabilities at the end of the branches are achieved by multiplying the probabilities shown along those branches (e.g. 0.5 x 0.85 = 0.425) and all four of them add up to 1.0. It is important to remember that although in the tasks the jar and order of beads were pre-arranged, the participants were not aware of this hence they believed there was an equal chance of jar A or B being chosen and that the beads would be randomly sampled. Taking this further the probability tree in Figure 11 below shows the second bead drawn. However, we are only interested in two branches of the tree, as we know that the first and second bead drawn were red (so we can ignore branches where silver beads are drawn).

Figure 11: Probability tree for the first two beads drawn

As can be seen, the tree has been extended for a second bead drawn. This probability tree will continue for the remaining 18 beads to be drawn, and the probability of the next bead being red would be 0.85 and the probability of it being silver would be 0.15 (and vice versa for jar B). Following the branch of jar A being chosen, note that the probability of a red bead being drawn at any point is 0.85 and a
silver bead is 0.15. This is because the beads were *sampled with replacement*, meaning that the bead drawn was put back into the jar it came from, so there were always 100 beads that could have been chosen. Using the data from the probability tree, the theoretical probabilities can now be calculated using Bayes' theorem:

\[
p(H|D) = \frac{p(D|H) \cdot p(H)}{p(D|H) \cdot p(H) + p(D|\neg H) \cdot p(\neg H)}
\]

Where

- \( H \) = the hypothesis (a particular jar is chosen)
- \( D \) = the data (a particular coloured bead is drawn)

So,

- \( p(H|D) \) = the posterior probability of the hypothesis
- \( p(H) \) = the prior probability of the hypothesis
- \( p(D|H) \) = the likelihood of the data (D), given the hypothesis is true
- \( p(D|\neg H) \) = the likelihood of the data, given that the hypothesis is false
- \( p(\neg H) \) = the probability the hypothesis is false

So for the first bead in the practice task (red) the values would be as follows:

\[
0.85 = \frac{(0.85 \times 0.5) \cdot (0.5)}{(0.85 \times 0.5 \times 0.5) + (0.15 \times 0.5)}
\]

Using the probability tree it is easy to calculate and substitute the terms into the equation. For example, \( p(D|H) \) is the value at the end of the branch shown in Figure 10 (jar A chosen and a red bead drawn = 0.425) and \( p(D|\neg H) \) is the branch where jar B is chosen and a red bead is drawn (= 0.075). To explain this further a
second example is presented below and the values shown in the equation can be found in Figure 11. For the second bead drawn (also red) the equation would be as follows:

\[
0.97 = \frac{(0.36125 \times 0.5) \times (0.5)}{(0.36125 \times 0.5 \times 0.5) + (0.01125 \times 0.5)}
\]

This formula can then be used to calculate the theoretical probability of each bead being drawn, given that a particular jar has been chosen. The values for all 20 beads are presented below in Table 7, note that both the practice and main task used the same order of beads, however they were different colours.

Table 7: Theoretical probability estimates using Bayes’ theorem

<table>
<thead>
<tr>
<th>Bead number</th>
<th>Practice task</th>
<th>Main task</th>
<th>Bayesian normative values †</th>
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<tbody>
<tr>
<td>1</td>
<td>Red</td>
<td>Gold</td>
<td>0.850</td>
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<td>2</td>
<td>Red</td>
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</tr>
<tr>
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<td>Gold</td>
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<tr>
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<td>Gold</td>
<td>0.999</td>
</tr>
<tr>
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<td>Gold</td>
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</tr>
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</tr>
<tr>
<td>7</td>
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<td>0.999</td>
</tr>
<tr>
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<td>Red</td>
<td>Gold</td>
<td>0.999</td>
</tr>
<tr>
<td>9</td>
<td>Red</td>
<td>Gold</td>
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</tr>
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<td>Silver</td>
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<td>Gold</td>
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<td>Gold</td>
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<tr>
<td>20</td>
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<td>0.999</td>
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</table>

† Values are only presented to three decimal places as the changes in probability become increasingly small the more beads that are drawn.
Appendix 2: University of Surrey Ethical Approval
MATERIAL REDACTED AT REQUEST OF UNIVERSITY
Appendix 3: Photographs of the response board
Participant’s view of response board

Experimenter’s view of response board
Side view of the response board
Appendix 4: Probabilistic reasoning task recording form
<table>
<thead>
<tr>
<th>Balls drawn</th>
<th>Colour</th>
<th>Probability Estimate</th>
<th>Decision made</th>
<th>Did they ask how many left?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Red</td>
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<td>18</td>
<td>Silver</td>
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<tr>
<td>19</td>
<td>Red</td>
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<tr>
<td>20</td>
<td>Silver</td>
<td></td>
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<tr>
<td>Balls drawn</td>
<td>Colour</td>
<td>Probability Estimate</td>
<td>Decision made</td>
<td>Did they ask how many left?</td>
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<td>1</td>
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<td>17</td>
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<td>20</td>
<td>Blue</td>
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</tbody>
</table>
Appendix 5: Demographic data form
Demographic Information

Age ___________ Years
Sex
☐ Male
☐ Female
Course or occupation ___________________________________________________________________

What is your ethnic group?
Choose ONE section from A to E, then tick the appropriate box to indicate your cultural background.

A White
☐ British
☐ Irish
☐ Any other White background, please write in __________________________________________

B Mixed
☐ White and Black Caribbean
☐ White and Black African
☐ White and Asian
☐ Any other Mixed background, please write in __________________________________________

C Asian or Asian British
☐ Indian
☐ Pakistani
☐ Bangladeshi
☐ Any other Asian background, please write in __________________________________________

D Black or Black British
☐ Caribbean
☐ African
☐ Any other Black background, please write in __________________________________________

E Chinese or other ethnic group
☐ Chinese
☐ Any other, please write in ____________________________________________
Appendix 6: Information sheet for the participants

(This was printed on University of Surrey headed paper)
Major Research Project

Information sheet for volunteers

Principle researcher: Chris Gillmore
Title: Research into cognitive processes involved in anxiety

A brief description of the project:

I am a Trainee Clinical Psychologist and this research is part of my Doctorate in Clinical Psychology, which is being supervised by Dr Sue Thorpe (Psychology Department, University of Surrey). The research is an experiment which is looking at people's ability to make decisions and judgements about the likelihood of an event occurring, and relating this to self-reported levels of anxiety. The experiment will include a practice task and then the main experimental task. During each task you will be presented with two jars filled with coloured balls. On request you will be presented with coloured balls and you have to judge the likelihood that each ball came from a particular jar. In addition there are some questionnaires which will be completed before and after the tasks.

The use or potential benefits of the study:

Volunteers are being asked to participate in this experiment to help clarify the relationship between probability estimates, making decisions and cognitive theories of anxiety. I am hoping to recruit a minimum of 60 participants for this research from students at the University of Surrey.

Who will be informed of the results:

The research will be confidential and anonymous and no personally identifying information will be known by anyone other than the Principal Researcher (Chris Gillmore). Copies of the results will not be passed on to other people (e.g. your GP).

Your rights as a volunteer to this research:

It is important to remember that you can withdraw from this research at any point without giving a reason for doing so. There is no obligation to continue with the experiment if you do not wish to do so. All of the information you provide will be confidential and there will be no personally identifiable information in any reports or publications resulting from this research. You will be asked to sign a form indicating that you consent to take part in the research and this will be the only place your name is written. The consent form will be kept in a secure place by the Principal Researcher (Chris Gillmore). Your consent form will be allocated a number which will be used to identify the research data you provide (e.g. the data will be anonymous).

Participants with mental health problems

Any person currently receiving NHS treatment for a mental health problem should not participate in this research, as ethical approval has only been sought from the University Ethics Committee which does not cover NHS patients. Therefore if you fall into this category you should not participate further.

Course credits:

In exchange for completing the experiment you will receive one course credit.

Further information:

If you have any questions or require further information, please do not hesitate to ask the Principal Researcher (Chris Gillmore). Alternatively you can contact Dr Sue Thorpe, Psychology Department, University of Surrey, Guildford, GU2 7XH (01483 682916).
Appendix 7: Consent form

(This was printed on University of Surrey headed paper)
Consent Form

Principle Researcher:  Chris Gillmore
Title: Research into cognitive processes involved in anxiety

- I, the undersigned, voluntarily agree to take part in the study on the relationship between probability estimates, making decisions and cognitive theories of anxiety.

- I have read and understood the Information Sheet provided. I have been given a full explanation by the investigators of the nature, purpose, location and likely duration of the study, and of what I will be expected to do. I have been advised about any discomfort and possible ill-effects on my health and well-being which may result. I have been given the opportunity to ask questions on all aspects of the study and have understood the advice and information given as a result. I am not receiving NHS treatment for mental health problems at present.

- I agree to comply with any instruction given to me during the study and to co-operate fully with the investigators.

- I understand that all personal data relating to volunteers is held and processed in the strictest confidence, and in accordance with the Data Protection Act (1998). I agree that I will not seek to restrict the use of the results of the study on the understanding that my anonymity is preserved.

- I understand that I am free to withdraw from the study at any time without needing to justify my decision and without prejudice.

- I acknowledge that in consideration for completing the study I shall receive a course credit. I recognise that, at the discretion of the Principal Researcher, I will not receive this if I withdraw before completion of the study.

- I understand that the University of Surrey holds insurance which covers claims for injury or deterioration in health which arise directly from participation in clinical trials but that it applies only in those situations where the University can be shown to be legally liable.

- I confirm that I have read and understood the above and freely consent to participating in this study. I have been given adequate time to consider my participation and agree to comply with the instructions and restrictions of the study.

Name of volunteer (BLOCK CAPITALS)

Signed

Date

Name of witness (BLOCK CAPITALS)

Signed

Date

Participant Code Number: 373
Appendix 8: Detailed description of the experimental procedure
### Step Description

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
</table>
| **1** | **Introduction to the experiment and consent procedure:**  
"Can you read through the information sheet and then the consent form. Please sign and date the consent form if you are prepared to take part".  
"I'm glad you agreed to help me do this, I am desperate to get people to help me as my supervisor is chasing me for my data".  
"This experiment is investigating the way people think about decisions. I am going to ask you to do the same task twice. The first time will be a practice so that you can get the hang of it, but it doesn't count. The second time is the important one and it is vital that you complete it correctly. I will also be asking you to fill in some questionnaires which will be anonymous".  
"Please say if you have any questions".  |
| **2** | **The State section of the STAI is administered** |
| **3** | **Explanation of the practice task:**  
"In front of you there are two jars of coloured beads. In each jar there are 100 beads. The jar on your left is jar A and it contains 85 red beads and 15 silver beads. The jar on your right is jar B and contains 15 red beads and 85 silver beads".  
"During this task, I'm going to randomly choose one of the jars and draw beads from just that jar. You have to decide which jar I am drawing the beads from."  
"When the task begins, I will present you with one bead that I have drawn from the chosen jar and the trial will start. You will be asked to estimate the probability that the bead has come from Jar A or Jar B. You can do this by moving the black bars in front of you."  
"The two bars represent the probability of the bead coming from each jar. The bar on your left corresponds to the probability of the bead being drawn from Jar A and the bar on your right corresponds to Jar B. At the bottom it is zero and at the top 100% likely. When we start the bars will be at the 50/50 position. As you change the probability on one scale, it automatically changes the probability on the other scale."  
"For example, if you rate the likelihood of the bead coming from Jar A at 80% [demonstrate this], this means that there will still be a 20% chance of it coming from Jar B."  |
"I will keep drawing beads until you tell me you are certain of which Jar the beads are being drawn from. Each time I draw a bead, I will put it back into the same jar before another one is drawn at random. Every time I present a bead I will ask you to estimate the likelihood that the bead came from a particular jar."

Remember it is always the same jar the beads are being drawn from. You can have a maximum of 20 beads to make your decision. However, I would like you to try and make your decision in as few a beads as possible, and in as quick a time as possible."

Remember that this first attempt is just a practice for you to get the hang of it. It is the second trial that is the important one.

4 Anxiety check 1:

"I'm also going to ask you to fill in a few scales at various times. I'm sure you have seen similar scales before; all you have to do is rate how you are feeling right at the moment I give it to you. This one asks you to rate how anxious you feel right now. The scale goes from 0, not at all anxious, to 100, extremely anxious. Just put a mark somewhere on the line to indicate how you are feeling."

5 Responsibility check 1 is administered

"Ok, so now we can start the task, but remember it's just a practice. The goal is to work out which jar the beads are being drawn from, in as quick a time as possible and in as few a beads as possible. Can you let me know when you are certain of which jar the beads are coming from."

6 Participant starts the first trial

Once they have chosen a jar...

"Although you have made your decision, I am going to continue to draw beads from exactly the same jar. Please keep rating the probabilities in the same way you have been."

7 Anxiety check 2 is administered after 20 beads have been drawn

8 Responsibility check 2 is administered

9 Explanation of the second trial and manipulation of responsibility:

"OK, you've got the hang off the task and we're going to continue to the important trial for my experiment. This is the main part of the
experiment and this time you’re responsible for completing it correctly. For my experiment to work you have to select the correct jar. Basically, if you get this bit wrong I can’t use your data. So please get it correct for my sake [experimenter implores the participant]. The trial will work in exactly the same way, the only difference is the beads are different colours, they’re blue and gold.”

| 10 | Anxiety check 3 is administered |
| 11 | Responsibility check 3 is administered |
| 12 | Participant now completes the first trial...

“Remember, the goal is to select the correct jar, in as few a beads as possible and as quick a time as possible. However, the important thing is to select the correct jar. Please let me know when you are certain which jar the beads are being drawn from.”

“Just like earlier, although you have made your decision, I am going to continue to draw beads from exactly the same jar. Please keep rating the probabilities in the same way you have been.”

| 13 | Anxiety check 4 is administered |
| 14 | Responsibility check 4 is administered |
| 15 | Administration of the questionnaires (OCI, BDI-II, Trait section of the STAI) |
| 16 | Experiment concluded by the participant being fully debriefed |
Appendix 9: Pictures used to represent the jars
Each of the four pictorial representations of the jars contains the correct proportions of beads (85:15)
Research Logbook

July 2005

Years I to III
<table>
<thead>
<tr>
<th>Research skill/experience</th>
<th>Description of skills/experience gained</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature searches</td>
<td>Literature searches were regularly completed using a range of databases (e.g. PsycInfo, Medline, Cochrane Library and others). The internet was also used to find information as were the websites of organisations such as the British Psychological Society, NHS Direct, etc. Literature searches were used to inform all essays, case reports and research projects. They were also regularly completed to inform my clinical work and presentations or teaching sessions.</td>
<td>October 2002 to July 2005</td>
</tr>
<tr>
<td>Critically review the literature</td>
<td>All essays, case reports and research projects included a critical review of the relevant literature. Skills in this area were enhanced by reviewing literature on what constitutes evidence in the psychotherapies (e.g. Mace et al., 2001).</td>
<td>October 2002 to July 2005</td>
</tr>
<tr>
<td>Formulate a specific research question</td>
<td>Specific research questions were formulated for the SRRP, MRP and the Qualitative Research Project (QRP). They were developed from existing research and also local service needs.</td>
<td>December 2002 and December 2003</td>
</tr>
<tr>
<td>Write brief and detailed research proposals</td>
<td>Research proposals were written and adapted for different audiences (e.g. course team, ethics committee) for both the SRRP and the MRP.</td>
<td>December 2002 and December 2003</td>
</tr>
<tr>
<td>Obtain appropriate supervision</td>
<td>Supervision was acquired from both field and university supervisors and good working relationships were established. The clinical psychology department research tutors were consulted for more specific statistics and research methodology queries.</td>
<td>December 2002 to July 2005</td>
</tr>
<tr>
<td>Write a participant information sheet and consent form</td>
<td>I prepared participant information sheets and consent forms for both my SRRP and MRP, and was involved in the designing of the forms for the QRP.</td>
<td>February 2003 to October 2004</td>
</tr>
<tr>
<td>Designing questionnaires</td>
<td>For my SRRP I had to design a questionnaire that would survey service-user satisfaction. In order to make this reliable and valid I designed the questionnaire using suggestions from the literature. I also consulted relevant staff members to get their suggestions for relevant questions and I ran a focus group with service-users in order to get their ideas for questions. The questions from these three sources were put together and the research literature was consulted to ensure the questionnaire was structured in the most reliable and valid way (e.g. minimising potential response biases, etc).</td>
<td>December 2002 to February 2003</td>
</tr>
<tr>
<td>Judge ethical issues in research and amend plans accordingly</td>
<td>Ethical issues were comprehensively reviewed in all my research projects and they were discussed with my supervisors and an ethics committee. As my MRP contained an element of deception, it was necessary to consider in detail the necessity of this and guarantee that adequate provision was made to debrief the participants and ensure they were not adversely affected.</td>
<td>December 2002 to July 2005</td>
</tr>
<tr>
<td>Obtain ethical approval</td>
<td>My MRP was approved by the University Ethics Committee and changes were made in line with their comments and suggestions.</td>
<td>July 2004 to September 2004</td>
</tr>
<tr>
<td>Collect data from research participants</td>
<td>I have had a range of experience of data collection. My SRRP involved setting up a focus group through a voluntary organisation in order to generate a Questionnaire for service-user satisfaction. This Questionnaire was then used to collect data from service-users in a Crisis Service, giving me experience of research in an NHS setting and the difficulties involved in this. My QRP involved conducting a semi-structured interview with one participant. My MRP was an experiment and I collected data from 45 participants.</td>
<td>February 2003 to May 2005</td>
</tr>
<tr>
<td>Set up a data file</td>
<td>I used SPSS for my MRP and became proficient at setting up a data file with a large number of variables. I also set up subsidiary data files in order to carry out more specific analyses.</td>
<td>May to July 2005</td>
</tr>
<tr>
<td>Preparing data for analysis</td>
<td>For my MRP I screened the data to check that it was normally distributed using graphs and one-sample Kolmogorov tests. I also checked that there was homogeneity of variance. If these assumptions of ANOVA were not met, transformations were attempted in order to satisfy the conditions necessary. Outliers and missing values were also investigated within the data set. For the QRP, I transcribed the interview of my participant and adjusted the formatting (e.g. lines were numbered in the transcript) to facilitate the analysis process.</td>
<td></td>
</tr>
<tr>
<td>Analyse quantitative data</td>
<td>Both my MRP and SRRP involved quantitative data, with the SRRP using descriptive statistics only. For the MRP I used a range of parametric and non-parametric statistical tests, including repeated measures analysis of variance, chi-squared tests, independent and related t-tests, and the Wilcoxon test.</td>
<td>May 2003 to July 2005</td>
</tr>
<tr>
<td>Analyse qualitative data</td>
<td>Both my SRRP and QRP involved qualitative data. For the SRRP I used Content Analysis and calculated inter-rater reliability using Cohen's Kappa. The QRP was a group project and we used Interpretive Phenomenological Analysis.</td>
<td>May 2003 to June 2004</td>
</tr>
<tr>
<td>Summarise results in figures/graphs</td>
<td>All of my research projects have involved tables and graphs in order to effectively summarise complex information. They have also featured in case reports and some essays.</td>
<td>January 2003 to July 2005</td>
</tr>
<tr>
<td>Interpret results from data analysis</td>
<td>Quantitative data were interpreted for both the SRRP and MRP. Qualitative data were interpreted also in the SRRP and particularly in the QRP.</td>
<td>May 2003 to June 2004</td>
</tr>
<tr>
<td>Present research findings to an audience</td>
<td>I presented the findings of my SRRP to the service in which the research was completed, the audience being the staff from that Crisis Service. I have also summarised other people's research and presented it as part of team presentations or training events.</td>
<td>6th August 2003</td>
</tr>
<tr>
<td>Produce a written report on a research project</td>
<td>The SRRP, MRP and QRP have all been written up and I have adapted my style according to the demands of the project. The QRP involved working with colleagues to produce a group report, with pairs of members taking responsibility for different sections and bringing the whole report together as a collective.</td>
<td>May 2003 to July 2005</td>
</tr>
<tr>
<td>Defend research at an oral exam</td>
<td>This will occur during my PsychD viva.</td>
<td>September 2005</td>
</tr>
<tr>
<td>Submit research report for publication in a journal/book</td>
<td>On one of my clinical placements I facilitated an innovative piece of group work and I have been working on a summary of this with the co-facilitator which we intend to submit for publication. I also intend to publish my MRP in the near future.</td>
<td>March 2005 and onwards</td>
</tr>
<tr>
<td></td>
<td>Research Logbook</td>
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<tr>
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<td>---------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Apply research findings to clinical practice (give examples of 3 papers published during your training which influenced your practice).</td>
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</tbody>
</table>

*I used this chapter to help me design and administer effective behavioural experiments to test out beliefs in clients on my Substance Misuse placement.*  


*This article was very helpful for understanding the impact of therapeutic work on clinicians. I was able to use it to help me manage my clinical work better and I presented the findings of it to a team I was on placement with, that worked with highly traumatised individuals.*  


*This article was very helpful for planning and running a group on emotional awareness for adults with learning disabilities.*  

| May 2003 to July 2005 |