A thesis submitted to the Faculty of Science of the University of Birmingham for the degree of Doctorate in Clinical Psychology (CLIN.PSY.D)

Volume II

By

Faisal Mir

School of Psychology
Faculty of Science
University of Birmingham
This unpublished thesis/dissertation is copyright of the author and/or third parties. The intellectual property rights of the author or third parties in respect of this work are as defined by The Copyright Designs and Patents Act 1988 or as modified by any successor legislation.

Any use made of information contained in this thesis/dissertation must be in accordance with that legislation and must be properly acknowledged. Further distribution or reproduction in any format is prohibited without the permission of the copyright holder.
Acknowledgements

There are a number of people who I would like to thank over the three years of my clinical psychology training.

Firstly, all my clients and their families who have kindly shared their life experiences and afforded me the opportunity to help them with their psychological difficulties.

I would also like to express my gratitude to each of my clinical supervisors who have been both instrumental and inspirational in my development as a clinical psychologist.

Mr Roger Look (Learning disabilities)
Dr Richard Bennett, Dr Lisa Hewitt, & Dr Jason Jones (Forensic)
Dr Joanna Grave (Child)
Dr Sue Adams (Older adult)
Mrs Julie Luscombe (Physical health)

Finally, my exceptional family who have all supported me at each stage of my clinical psychology training. This accomplishment is very much a shared achievement.
Overview

This thesis is submitted in order to meet the academic requirements for the award of Doctorate in Clinical Psychology, from the School of Psychology, University of Birmingham. This thesis is presented in two volumes, which comprises of a research component (Volume I) and clinical practice reports from five clinical placements (Volume II).

Volume I

This volume comprises of two parts. The first part is a theoretical review which evaluates empirical papers examining major depressive disorder (MDD) within a cognitive framework. A tentative model based upon a diathesis-stress framework is postulated which may account for the high prevalence of depression in type 2 diabetes. This paper was prepared for submission to the journal Diabetes/Metabolism Research and Reviews.

The second part is an empirical study which investigates self-efficacy and attachment style upon support of dietary self-care activities in people with type 2 diabetes and their spouse. This paper was prepared for submission to the journal Psychology and Health.
Volume II

Volume II comprises of four Clinical Practice Reports (CPR) and an abstract which summarises an oral presentation, assessed as the fifth and final CPR. The psychological models CPR presents the case of an 18-year-old male with a mild learning disability who was referred for treatment in relation to his social phobia. The report draws upon a cognitive and psychodynamic model to formulate the case.

The single-case experimental design CPR presents a functional analysis of a five-year old girl with cerebral palsy referred for challenging behaviour, to the community psychology learning disability service. A behavioural formulation is described and subsequent intervention implemented. The efficacy of the intervention is examined by utilising a split middle analysis.

The small scale service-related project CPR investigates ward atmosphere, activity levels, and quality of life within a forensic in-patient setting. National service standards as stipulated by the Department of Health were drawn upon to evaluate the service. The case study CPR reports on the assessment, formulation, and cognitive-behavioural intervention of an 11-year old girl presenting with post-traumatic stress disorder symptoms.

The fifth CPR describes an assessment, formulation, and cognitive-behavioural intervention of a 71-year old man presenting with a major depressive episode.
# Table of Contents – Volume II

## Psychological Models: Clinical Practice Report 1

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>1</td>
</tr>
<tr>
<td>Referral and background</td>
<td>2</td>
</tr>
<tr>
<td>Assessment</td>
<td>2-7</td>
</tr>
<tr>
<td>Cognitive formulation</td>
<td>7-13</td>
</tr>
<tr>
<td>Psychodynamic formulation</td>
<td>13-20</td>
</tr>
<tr>
<td>Critical appraisal</td>
<td>21-23</td>
</tr>
<tr>
<td>References</td>
<td>24-28</td>
</tr>
</tbody>
</table>

## Single-Case Experimental Design: Clinical Practice Report 2

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>29</td>
</tr>
<tr>
<td>Referral and background</td>
<td>30</td>
</tr>
<tr>
<td>Assessment</td>
<td>31-38</td>
</tr>
<tr>
<td>Formulation</td>
<td>38-43</td>
</tr>
<tr>
<td>Intervention</td>
<td>44-48</td>
</tr>
<tr>
<td>Outcome evaluation</td>
<td>48-50</td>
</tr>
<tr>
<td>Critical appraisal</td>
<td>50-53</td>
</tr>
<tr>
<td>References</td>
<td>53-55</td>
</tr>
<tr>
<td></td>
<td>56-60</td>
</tr>
<tr>
<td>Title</td>
<td>Page</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Small Scale Service-Related Project: Clinical Practice Report 3</td>
<td>61</td>
</tr>
<tr>
<td>Abstract</td>
<td>62</td>
</tr>
<tr>
<td>Introduction</td>
<td>63-69</td>
</tr>
<tr>
<td>Methodology</td>
<td>70-74</td>
</tr>
<tr>
<td>Results</td>
<td>74-83</td>
</tr>
<tr>
<td>Discussion</td>
<td>83-86</td>
</tr>
<tr>
<td>References</td>
<td>87-91</td>
</tr>
</tbody>
</table>

**Case study: Clinical Practice Report 4**  92

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>93</td>
</tr>
<tr>
<td>Referral and background</td>
<td>94-99</td>
</tr>
<tr>
<td>Assessment</td>
<td>99-103</td>
</tr>
<tr>
<td>Formulation</td>
<td>103-109</td>
</tr>
<tr>
<td>Intervention</td>
<td>110-112</td>
</tr>
<tr>
<td>Outcome Evaluation</td>
<td>112-114</td>
</tr>
<tr>
<td>Discussion</td>
<td>115-117</td>
</tr>
<tr>
<td>References</td>
<td>118-122</td>
</tr>
</tbody>
</table>

**Case study: Clinical Practice Report 5**  123

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>124-125</td>
</tr>
<tr>
<td>References</td>
<td>125</td>
</tr>
</tbody>
</table>
Figures and tables

Psychological Models: Clinical Practice Report 1

Figure 1: A cognitive model of Robert’s social anxiety 11
Figure 2: Robert’s triangle of conflict 15
Figure 3: Robert’s triangle of person 16

Single-Case Experimental Design: Clinical Practice Report 2

Table 1: Summary of results from A-B-C charts 39
Table 2: Results obtained from MAS 41
Figure 1: Column chart of verbal outbursts at baseline phase 43
Figure 2: Development of Lucy’s screaming 45
Figure 3: Positive reinforcement processes maintaining screaming 47
Table 3: Screaming episodes in baseline and intervention phase 50
Figure 4: Line graph of screaming episodes 51
Figure 5: Split middle trends in the baseline and intervention phases 52

Small Scale Service-Related Project: Clinical Practice Report 3

Table 1: Characteristics of participants and non-participants 75
Table 2: Mean number of structured therapeutic hours 77
Table 3: Mean scores on each measure 79
Table 4: Correlations between measures 80
Table 5: Mean scores comparing acute and rehabilitation wards 81
Table 6: Mean activity levels between acute and rehabilitation wards 82
Case study: Clinical Practice Report 4

Figure 1: Development of Kate’s PTSD
Figure 2: Maintenance of Kate’s PTSD
Table 1: Scores in pre and post stages of intervention
Figure 3: Column chart of pre and post scores
Appendices

Psychological Models: Clinical Practice Report 1 126
Appendix 1: HADS 127
Appendix 2: Social Interaction Scale 128

Single-Case Experimental Design: Clinical Practice Report 2 129
Appendix 3: Functional Analysis interview form 130
Appendix 4: Motivational Assessment Scale 131
Appendix 5: Scatter plot chart 132
Appendix 6: Behaviour modification programme 133

Small Scale Service-Related Project: Clinical Practice Report 3 134
Appendix 7: Patient information sheet 135
Appendix 8: Consent form 136
Appendix 9: Demographic questionnaire 137
Appendix 10: Good Mileux Index 138
Appendix 11: WHOQOL-BREF 139
Appendix 12: OQ-45.2 140
Appendix 13: Activity level 141
Case study: Clinical Practice Report 4

Appendix 14: Pre-therapy Children's Impact Of Events Scale
Appendix 15: Pre-therapy Spence Children’s Anxiety Scale
Appendix 16: Pre-therapy Child Depression Inventory Short
Appendix 17: Post-therapy Children’s Impact Of Events Scale
Appendix 18: Post-therapy Spence Children’s Anxiety Scale
Appendix 19: Post-therapy Child Depression Inventory
Appendix 20: Transcript of exposure session
Appendix 21: Behavioural experiment (dad banging doors)
Appendix 22: Behavioural experiment (football match)
Psychological Models CPR

CPR 1

Two psychological formulations of an 18 year old male with a mild learning disability and social phobia
Abstract

This clinical practice report examines the case of Robert, an 18-year-old white male with a mild learning disability. Robert was referred to the community learning disability service for treatment relating to social phobia and self esteem difficulties. Two formulations of his social phobia are presented through a cognitive and psychodynamic formulation. The cognitive model (Clark & Wells, 1995) addresses Robert’s beliefs which centre upon threat and fear of evaluation and how these serve as a catalyst for his anxiety. The psychodynamic formulation (Malan, 1995) focuses upon Robert’s unconscious conflicts and how these are replayed in his current relationships with people. Each formulation is compared and contrasted and their weaknesses identified with an attempt to remedy them.

* Note: Names and other identifying material have been changed to maintain anonymity and confidentiality
Background To The Case

Referral

Robert is an 18-year-old white male who currently lives at home with his mother and stepfather. A referral was made by his social worker to the community psychology team for a number of reasons. Primarily it was for an assessment to ascertain whether Robert had a learning disability. In addition to this were problems related to social anxiety, low self esteem and a lack of confidence. The referral also stated that Robert had been bullied at school and that he had a history of physical and verbal abuse.

Presenting problem

Robert’s presenting problem revolves around social anxiety associated with entering places in which there are groups of people. He has difficulty going to shopping centres, restaurants, and more recently attending the job centre. This is related to extreme levels of anxiety when performing tasks such as interviews, eating in public and giving money to shop keepers. Robert currently copes with his anxiety by avoiding such situations and staying at home. He mentioned enjoying going to the park with his sister and nephew, and not feeling anxious at home on his own, or with his mother. However his anxiety rose when his step-father returned from work.

Assessment

After gaining Robert’s consent, a WAIS scale (Weschler, 1997a) was administered to ascertain whether he had a learning difficulty. His full scale IQ was measured at 70 indicating a mild learning disability. Semi-structured interviews were then conducted with Robert’s social worker, mother, and Robert himself to obtain further information related to the development, onset, and maintenance of his anxiety. The findings of these interviews shall be
Children

Robert was born in 1988 in Manchester. He was the youngest of three children. His mother Denise described the birth as normal and was happy to have had another son. At the time of his birth Michael (Robert’s father) worked in a glass factory and Denise as a cleaner in order to support the three children. Michael had severe alcohol related problems and was physically and verbally abusive to Denise and the three children on a daily basis. Denise denied that any sexual abuse took place. They had been married for 10 years before Denise left after the abuse became unbearable.

Denise took Steve (six-years-old), Mary (four-years-old), and Robert (2-years-old) away in 1990 and arrived in Birmingham where her only sister Carol lived on her own. Carol was not married, had no children and was happy to look after her sister and the children. A court case ensued shortly afterwards and Denise was awarded custody of the three children.

Denise and the children lived with Carol for two years during which Denise saw a psychiatrist for depression related to her relationship with Michael. For this reason Carol assumed responsibility for the care of the three children. After she completed her treatment Denise found a part-time job and she with her children moved into a council house. Robert could not recall anything about this period nor did he have any memories of his father.

He did, however, inform me that he was angry at his father for what he had done to his family. Robert mentioned that as a child his mother had been over-protective and strict towards him, compared to Steve and Mary. Denise never suspected that Robert had learning
difficulties as he spent time alone and preferred his own company. At home Steve bullied Robert by fighting with him, taking away his toys, and laughing at him which Robert stated made him feel “unhappy”. Robert reported that he had a better relationship with his sister Mary who looked after him and tried to protect him from Steve.

**Schooling**

Robert attended mainstream nursery, primary and secondary schools. He stated that he found school difficult as he felt “different” to the other children by not being “clever”. When he started to attend primary and then subsequently secondary school he found mathematics and science demanding, and was bullied in these classes because of his difficulty comprehending the subjects. The children in his class would taunt him and called him “fat” and “stupid”. Robert reported that he made no friends at school because of his lack of confidence and the treatment he received from his peers and spent time alone.

Robert recalled an occasion as a sixteen-year-old when he was asked to answer some arithmetic questions by his teacher Mr Smith. Robert answered the first couple of problems but as they became progressively more difficult he started to worry. Robert felt that the class was “staring” and “laughing” at him and this made him feel stupid.

He started to avoid going to school on a regular basis because of bullying and also the fear of failing exams. Robert did not disclose this to his family but eventually Denise was asked by the school to attend for an explanation of his absence. This caused her to become angry and Robert felt she forced him to go to school. Robert continued to avoid school on a regular basis and was eventually asked to leave. He left with no qualifications. Since leaving school Robert felt that his anxiety had escalated to the degree of fearing most social situations.
**Recent difficulty**

Robert reported that the last time he felt anxious was three months ago at the job centre. In the morning he had been worrying about going to sign for his benefits and dreaded the questions asked of him. This was because he felt he would not be able to answer them correctly. He asked his mother to accompany him and when he arrived felt his heart racing and started to sweat. When the two male interviewers started their questioning, he began to feel scared and thought that what he was telling them was inaccurate and envisaged failure again.

He started sweating more profusely and having a headache. Robert thought that the interviewers and other people in the job centre were “laughing at him,” “judging him” and “staring at him”. Robert began to avoid looking at the interviewers and shortly ran out of the room before the interview ended with his mother following him. At home Denise shouted at him and upon doing so Robert ran into his bedroom thinking about his failure.

**Current Situation**

Robert currently spends most of his time watching television during the day and smoking a substantial number of cigarettes. Denise reported that Robert shouts and bangs the walls and doors if she doesn’t do certain tasks such as getting his meals. This behaviour causes Denise to become angry but she continues to do the tasks because she feels Robert needs help. Robert feels that he can live happily with his mother if she listens to him but that he perpetually argues with his stepfather, who has been married to Denise for four years. Mary who is currently happily married lives nearby and regularly visits with her son Sean who is one-year-old. Robert feels that he has a good relationship with Mary who encourages him to resolve his anxiety by taking him to the park with Sean. He mentioned not having a good
relationship with Steve who is in prison for assault and armed robbery. Robert also recently informed me that he dislikes his male social worker and does not trust him as they “take people into care”.

**Presentation**

Robert did not react when it was disclosed to him that he had a mild learning disability. He started using this diagnosis when questions were asked to him during the early stages of therapy. Developing a good rapport was initially challenging as Robert seemed angry at the therapist when questioned about his difficulties, often denying problems existed. Once he felt comfortable in the presence of the therapist he began to disclose his difficulties. Robert presents as a tall and slightly overweight individual who is softly spoken. Therapy sessions are conducted at his home and he lies on a sofa with a blanket covering him.

His mood is generally unemotive and he has a vacant facial expression during the therapy sessions. Robert has a good vocabulary and memory and can also read and write at a simple level. He stated that his goal for the therapy was to become more confident in social situations without feeling afraid of them.

**Measures**

Research has suggested that people with a mild learning disability are likely to be able to distinguish between their thoughts and emotions (Sams, Collins, & Reynolds, 2006). In order to assess whether this was the case with Robert, a cognitive mediation task was conducted in which six hypothetical scenarios were described (Dagnan, Chadwick, & Proudlove, 2000). The first three scenarios assessed whether he could link emotional consequence (C) to belief (B). The second three scenarios assessed whether Robert had the capacity to make the link...
between belief (B) and emotional consequence (C). Robert was successful in making both types of links. Robert also completed two questionnaires namely the Hospital Anxiety and Depression Scale (Zigmond & Snaith, 1983) and the Social Interaction Anxiety scale (Mattick & Clarke, 1998).

A score of 14 on the anxiety scale of the Hospital Anxiety Depression measure supported a severe anxiety difficulty. A cut off point of 11 or above on the HADS indicates a severe anxiety (see Appendix 1). Robert scored 3 on the depressive scale implying that he was not depressed. In addition to this a score of 42 on the Social Interaction Anxiety Scale supported the presence of a social anxiety. A cut off point of 34 or above indicates a social anxiety (see Appendix 2).

**Cognitive Formulation**

The cognitive model postulates that thought processes act as inferences which influence our emotions (Alford & Beck, 1997). Regarding people with anxiety disorders these cognitions generally revolve around the perceived danger of threatening events and not having the personal resources to manage them (Beck, Emery, & Greenberg, 1985). Central to this model is the concept of schemata which are stable cognitive sets consisting of knowledge and experiences learnt during early childhood events and relationships (Beck & Clark 1988, cited in Eysenck, 1997).

The schemata consists of two types of data which are beliefs and assumptions. Beliefs are rigid and unconditional; a suitable example being “I’m useless”. Assumptions are unconditional which link situations to thoughts such as, “if I can’t do this task, then I am a failure”. The schema is triggered by critical incidents which are events appraised by the
individual as intimidating. These elicit further negative automatic thoughts which are interpretations of the event and involved in the continuity of the anxiety. As a result physiological symptoms and cognitive difficulties are activated (Wells, 1997).

In people with social anxiety difficulties the cognitions can lead to an individual adopting a tunnel-minded approach as they become pre-occupied with their beliefs and negative automatic thoughts. This can lead to the individual neglecting the reality of the social situation they are in which further perpetuates their distress (Ingram & Kendall, 1987). In formulating Robert’s social anxiety from a cognitive perspective an explanation of how his dysfunctional schemata developed through early childhood relationships and events will be depicted. Following this will be a description of how his current social phobia is maintained.

**Development of dysfunctional schemata**

People with learning disabilities are a highly vulnerable and disadvantaged group whose emotional needs in particular are likely to have been neglected (Arthur, 2003). As a marginalised group there is a higher prevalence of mental health problems compared to the general population (Borthwick-Duffy, 1994).

It could be hypothesised that Robert’s early experiences as a child have been central to the development of his maladaptive schemata. As an infant he was physically and verbally abused by his alcoholic father and was also possibly neglected by his mother for two years whilst she was being treated for depression. Such disruption in Robert’s care may have been influential antecedents in the progression of his assumptions related to the world being dangerous and untrustworthy (Harter & Vanecek, 2000).
Other factors which have contributed to Robert’s belief that he is vulnerable include events such as being bullied by both his brother and children at school (Mishna, 2003). Robert also mentioned feeling “different” which may have led to the onset of his low self esteem and increased stigmatism (Dagnan & Sandu, 1999).

Robert’s experience of being humiliated by his peers and teacher would validate his belief that he is unable to perform tasks without failing them. Other risk factors pertinent in the aetiology of a social phobia include parental conflict and history of mental disorder (Chartier, Walker & Stein, 2001). Each of these difficulties existed in Robert’s life and support how his schemata related to threat, poor self evaluation and fear of failure have been composed and triggered in social situations.

**Maintenance of social anxiety**

As Robert’s problem revolves around anxiety related to social interaction, the cognitive model of social phobia devised by Clark and Wells (1995, cited in Heimberg et al, 1995) is relevant (see Figure 1). This cycle explains how the anxiety begins, is maintained, and the way in which the individual behaves in situations where their performance will be evaluated.

In the first stage, the social situation is encountered which triggers maladaptive schemata activating both conditional and unconditional beliefs. These centre upon the way the individual perceive themselves, how others perceive them and the anticipation of failing a task. The individual then interprets the task as being a threat and a number of negative automatic thoughts (NATs) are processed in a rapid manner. Simultaneously other symptoms are elicited including physiological responses such as sweating, and cognitive problems such as a lack of concentration. Their attention is then immediately focused upon themselves as
social objects and the individual begins to form a negative image of how they are perceived based upon previous social anxiety-related experiences.

In an attempt to rectify the situation the individual adopts safety behaviours such as averting eye contact in order to attempt to reduce their anxiety and impede failure in the social task. Once the situation has ended the individual will ruminate about the event (post-event processing) and reflect upon how they were unsuccessful in achieving their goal (Wells, 1997).

This model can be applied to the social situations which Robert finds anxiety provoking such as going to restaurants and shopping centres. Recently, Robert went for an interview and a diagrammatic representation of how his anxiety may have occurred is indicated in Figure 1.
Activates Robert’s Assumptions/Beliefs
Any strange situation will always be dangerous
If I answer the questions wrong then I will get humiliated
I am stupid
I am a failure

Perceived social danger: The interview and people
(Triggers Robert’s negative automatic thoughts)
People are judging me
I’m getting the questions wrong
People are staring at me
I am an idiot
People are laughing at me

Safety behaviours
Taking mum along
Avoiding eye contact with interviewers
Leaving early

Processing of self as a social object

Somatic & cognitive symptoms biases
Sweating
Heart racing
Confusion
Headaches

Figure 1. A Cognitive Model Of Robert’s Social Anxiety at the Job Centre

Clark & Wells (1995)
Robert’s anxiety begins by him anticipating that the interview will occur in a disastrous fashion and ruminating about past failures expecting a similar catastrophic outcome such as rejection (Vassilopoulos, 2005). This was evident when before his interview Robert mentioned that he was dreading the questions that were going to be asked of him, and whether he would be able to get them correct.

As Robert enters the job centre he interprets this as a critical incident and dysfunctional beliefs are triggered which activate negative automatic thoughts. In the job centre Robert starts to have conditional beliefs such as “if I answer the questions wrong then I will get humiliated” and unconditional beliefs such as “I am a failure”. As the interview begins a stream of negative automatic thoughts are activated which are centered upon, “people are laughing at me” and “I’m getting the questions wrong” (Stopa & Clark, 2003).

These negative automatic thoughts are then focused upon instead of the external situation (interview). It could be hypothesised that Robert believes the interviewers think he is getting the questions wrong, are laughing at him, and think that he will fail. He then begins to experience physiological symptoms including a racing heart and sweating, in addition to cognitive problems such as headaches (Roth, Antony & Swinson, 2001). It could also be speculated that Robert thinks the interviewers are perceiving him in a way in which he construes himself and starts to process himself as a social object (Woody & Rodriguez, 2000).

This self focus exacerbates his worry about how others envisage him and provides a catalyst for his negative automatic thoughts. Robert then draws upon a number of safety behaviours such as averting eye contact and eventually leaving early to protect himself from the
perceived failure of the interview. Although in the short term such safety behaviours assist Robert in reducing his anxiety they simultaneously minimise his ability to challenge his beliefs (Wells et al, 1995). Finally, in his bedroom Robert ruminates about the interview and being unsuccessful at achieving the goal of getting his benefits which is the post event processing of the incident (Rachman, Gruter-Andrew, and Shafran, 2000).

**Psychodynamic Formulation**

The psychodynamic model proposes that anxiety is emotional pain due to unconscious conflicts based upon early childhood events. In an attempt to reduce anxiety levels, the ego adopts a number of defence mechanisms, which the individual is unaware of. When these defences start to fail, an array of hidden feelings begin to emerge in the conscious and it is these which lead to a psychological disturbance (Leiper & Maltby, 2004).

This theory has, however, been criticised by Bowlby (1952, cited in Holmes, 1993) who deemed it “unscientific” because of the disregard it had for the observable relationship between infant and mother. His work focused upon the emotional connection between baby and mother which he termed “attachment”. Bowlby distinguished between secure and insecure attachments.

Those infants who formed secure attachments had care-givers that were receptive and devoted to their needs in contrast to those who had formed insecure attachments. Furthermore, he suggested that situations of maternal deprivation in which the mother was separated from the infant for an extended period of time, could lead to profound deficits in cognitive and emotional functioning.
In formulating Robert’s difficulties from a psychodynamic perspective, Malan’s (1995) triangles of conflict and person will be utilised. The concept of attachment theory is also pertinent and will be considered in this formulation.

The first triangle is the Triangle of Conflict and consists of three corners which are hidden feelings, anxiety and defence. The hidden feelings are formed by the person’s childhood experiences. An awareness of these can lead to anxiety which is the fear of what may happen if the individual expresses their hidden feelings. To reduce the chance of this the individual adopts a number of defence mechanisms to prevent these suppressed feelings from being manifest (Leiper & Maltby, 2004) (see Figure 2).

The second triangle is the Triangle of Person and consists of three relationships located in each corner of the triangle. These include past relationships, current relationships and the relationship with the therapist known as transference. The triangle of conflict can be directed at any one of these relationships (Malan, 1995) and is depicted in Figure 3.
### Hidden Feelings

- Anger/fury to others
- Not good enough/unlovable
- Anger at self

**Figure 2. Robert’s Triangle of Conflict (Malan, 1995)**
Mother: Dependent Relationship

Stepfather: Conflictual: bullying relationship

Interviewers at job centre: (male) Conflictual: bullying relationship

Male social worker: Conflictual: bullying relationship

Transference

Initially negative Conflictual: bullying relationship with male therapist

Countertransference

Male therapist: Annoyed/irritated

Past

Father: Abusive relationship (no recollection)

Mother: Conflictual relationship (possible neglect)

Brother Conflictual: bullied relationship

School Conflictual: bullied relationship with male teacher and peers.

Figure 3. Robert’s Triangle Of Person (Malan, 1995)
**Triangle of conflict**

**Defences**

Robert draws upon various defence mechanisms which assist him to contain his anxiety and hidden feelings. One of these defences is avoidance in social situations. The first is through staying at home and avoiding social situations in which he will be evaluated. The second is through the use of his blanket which could be a symbolic representation of the need to stay safe acting as a barrier so that other people cannot intrude into his life. The anxiety aligned with this defence is a fear of being rejected which serves to protect him from a feeling of being not good enough.

Another defence identified was projection whereby the individual unconsciously assigns their own unacceptable and challenging feelings onto others which leads to that person experiencing the emotion (Bateman & Holmes, 1995). Robert shouts and bangs on walls and doors which leads to his mother becoming angry. The anxiety affiliated with this is a fear of being abandoned which masks the hidden feeling of being unlovable. Bowlby (1952, cited in Holmes, 1993) proposed that such behaviour is a separation protest primary response. This implies Robert’s outbursts serve to chastise the carer and ensure that further separation does not occur.

Robert may also use secondary handicap as a defence mechanism (Sinason, 1992) whereby he acknowledges his learning disability as a factor preventing him from answering assessment related questions. The individual exaggerates their disability to hide the painful feelings of being dissimilar in society. By elaborating upon the disability Robert avoids thinking about his life and the traumatic incidents he has experienced. It could be suggested
that this anxiety is a fear of humiliation and how incompetent he perceives himself to be. The hidden feeling is the anger he has towards himself. Finally, it could also be suggested that Robert is using displacement as another defence mechanism in which he is displacing his own anger upon the men in his life such as his social worker (Bateman & Holmes, 1995).

**Anxiety**

The anxieties in the triangle of conflict stem from the fears of rejection, abandonment, humiliation, and being overwhelmed. At an unconscious level Robert is angry at people in the past for humiliating and rejecting him. He is also angry at his mother but is aware that he is dependent upon her and fears being abandoned. Robert is also angry at himself but fears becoming overwhelmed, out of control, and falling to pieces, if he experiences this feeling.

**Hidden Feelings**

Robert’s hidden feelings seem to revolve around anger towards others, being unlovable or not good enough, and anger at himself. Each of these feelings are currently contained by the use of a number of elaborate defences and anxieties which seem to be functioning well for Robert in the short term. It could be hypothesised that his anger developed from the traumatic experiences of abusive male figures in his early childhood including his father and brother.

There may also be suppressed fury at his mother for not letting him be independent, and not giving him the same degree of autonomy his sister and brother were afforded. Robert may also have hidden feelings of being unlovable and not good enough, as he was abused by his father and possibly uncared for by his mother for two years. Evidence suggests that such an insecure attachment style as an infant with caregivers can be instrumental in the development of a social anxiety as a child (Bohlin et al, 2000).
Triangle of Person

Past Relationships
There are a number of relationships in Robert’s past which have predominantly revolved around aggression and violence towards him. His father had alcohol related problems and was physically abusive to him which can lead to the development of a social anxiety. (Sinason, 2002). He was also bullied by his brother and children at school because of his appearance and difficulty in classes. Robert seems to have had very few opportunities to make any form of positive and meaningful attachments in his life. His relationship with his mother could be construed as insecure as there seem to be feelings of intense love and dependency, but at the same time irritability and fear of rejection (Bowlby, 1952 cited in Holmes, 1993). One positive relationship Robert has is with his sister who looked after him and helps by taking him out of the house to the park for a few hours a week.

Present
A distinguishing feature of Robert’s life is the string of negative relationships he has had with the men encountered in his life. Robert currently does not share good relationships with his step-father and social worker both of whom are male authority figures. The conflict occurring here is that he may use displacement as a defence mechanism to mask the anxiety of being abandoned and being in touch with the suppressed anger he has towards his biological father. Another difficult relationship is between Robert and his mother based upon it being a possible insecure dependent relationship. Robert uses projection as a defence mechanism by banging on doors and walls to ensure that he is not abandoned by his mother. This serves to defend him from the hidden feeling of being unlovable. His relationship with his sister still seems to be positive, and it could be speculated that Robert does not feel threatened by
females as is the case with males.

**Therapist**

Initially, Robert seemed to be angry and hostile towards the male therapist by replying that he could not answer the assessment questions in a threatening fashion. It could be postulated that he was displacing his anger onto the therapist based upon earlier relationships of abusive male authority figures. It could also be hypothesised that the anxiety was a fear of rejection which protects him from the hidden feeling of being unwanted and inadequate.

Robert would also use secondary handicap as a defence from answering questions (Sinason, 1992). The anxiety demonstrated here is a fear of humiliation which functions to protect him from a hidden feeling of the anger he has at himself. This led to a countertransference feeling which evoked a similar reaction in the therapist who was annoyed and irritated by Robert in these early stages of treatment (Leiper & Maltby, 1994). Robert may have under-performed when completing the WAIS assessment due to his anxiety.

This would have implications as to whether Robert had a learning disability or not. The BPS (2000) specifies that an IQ of 70 is above the cut-point for a “significant” learning disability. Since the assessment stages of therapy the working relationship has become more productive. This may be attributed to positive transference in which the therapist may be perceived as another “mother” or “sister” figure comforting him. It could be postulated that Robert will again become angry with the therapist when therapy draws to an end and interpret this as another experience of rejection or abandonment.
Critical Appraisal

A formulation can be described as a tentative explanation of a person’s difficulties which is reliant upon psychological models and principles (Johnstone & Dallos, 2006). This report has endeavored to fulfill that definition by drawing upon psychological assessments in constructing these two formulations.

One of the similarities between the two models is that they both consider Robert’s early childhood traumatic events and relationships and how these may have been influential in the genesis of his social phobia. The cognitive model postulates that early experiences lead to the development of core beliefs which focus upon the threat and fear of failure. The psychodynamic model suggests that conflict between defences and anxieties mask hidden feelings of anger, being unlovable, and not being good enough. In this respect both models argue that Robert’s social anxiety is preordained and processed within the mind.

Another commonality is that both models draw upon similar coping strategies which serve to protect Robert from the anxiety he experiences. The cognitive model defines these as safety behaviours whereby Robert will avert eye contact from people and avoids going into social situations which temporarily postpones his anxiety. The psychodynamic model suggests that such actions are defence mechanisms which guard the individual from the conflict they have between their anxieties and feelings.

There are however a number of theoretical differences between the two formulations. The cognitive model proposes that the individual can be enabled to become conscious of their thinking patterns and is able to identify the content of their thoughts and feelings. The psychodynamic model addresses unconscious conflicts mirrored in current relationships
which the individual is unaware of.

Another distinction is that the cognitive model suggests that anxiety is triggered in specific situations which the individual perceives as threatening. In contrast the psychodynamic model does not stipulate which situations lead to the individual becoming anxious and relies more upon the relationship with the therapist and other people in the individual’s life. This approach is also dependent upon the therapist’s interpretations of unconscious conflicts and could therefore be construed as more subjective compared to the cognitive model.

A strength of the cognitive model of social anxiety is that each of the mechanisms have been tested in a number of recent research studies and as a result the model adds to the current evidence base (Wells, 1997). The concept of beliefs can also be tested empirically by the use of assessments such as questionnaires and cognitive-mediation tasks. These further substantiate the finding that people with mild learning disabilities can make links between beliefs and emotions, thus justifying their suitability for cognitive therapy (Willner, 2006).

One of the flaws of the cognitive model of social phobia is its complexity and application to someone with a learning disability. In the cognitive formulation it was speculated that Robert processed himself as a social object. However, from his interview this could not be supported fully and remains a tentative hypothesis.

The two models share a common limitation and do not consider current systemic factors and how these may have an impact on Robert’s difficulties (Vetere & Dallos, 2003). This might have been remedied by interviewing other members of his family to ascertain their views for the cause and maintenance of his anxiety. By conducting a more thorough assessment there
may have been a greater likelihood of selecting an intervention tailored to Robert’s psychological needs.
References


Wells, A; Clark, D.M; Salkovskis, P; Ludgate, J; Hackmann, A; & Gelder; M. (1995). Social Phobia: The Role of In-Situation Safety Behaviors in Maintaining Anxiety and Negative Beliefs. *Behavior Therapy, 26*, 153-161.


Single Case Experimental Design

CPR 2

A functional analysis of a five-year old girl with cerebral palsy and screaming episodes
Abstract

Lucy is a 5 year-old-girl with cerebral palsy and a severe learning disability who was referred to the community clinical psychology service for treatment of her tantrums. These behavioural difficulties consisted of screaming, kicking, and pinching her arms. Lucy’s parents requested psychological support for frequent episodes of screaming as these occurrences were a source of tremendous stress.

This report includes a description of the initial referral followed by an overview of the background information pertinent to the case. Assessments employed in the study comprised of interviews, questionnaires, observations, and scatter plot charts. A behavioural formulation of the development and maintenance of Lucy’s screaming is described which draws upon principles of classical and operant conditioning respectively. This is followed by details of the intervention implemented which was a fading behavioural programme.

The efficacy of this treatment is evaluated by utilising a within-subject A-B design in which baseline and intervention phases are analysed using a split middle technique. Finally, a critical appraisal was carried out which highlights limitations and identifies ways of improving the study.

* Note: Names and other identifying material have been changed to maintain anonymity and confidentiality
Background

Referral
Lucy is a 5-year-old girl who was referred to the learning disability psychology service by her community nurse. The referral stated that Lucy had cerebral palsy and that she was highly dependent upon her parents to care for her. It also described that she was having tantrums which her parents were finding extremely challenging and were keen to seek psychological support to help resolve the issue.

Presenting problems
A psychological assessment was conducted in which Lucy’s parents (Mr & Mrs Jones), respite nursing staff, speech therapist, and teacher were interviewed in order to obtain information about Lucy and the difficulties she was experiencing. Mr and Mrs Jones described a number of problematic behaviours which Lucy exhibited at home. These included screaming, kicking, and pinching her arms. In addition, they both reported being extremely worried and stressed by these persistent tantrums and the disruptive influence Lucy’s behaviour was having at home. Mr and Mrs Jones also stated that if her behaviour continued to be disruptive they would contemplate finding Lucy a residential home, where her needs would be met by full time care staff. The findings from this assessment are in agreement with previous research which indicates that challenging behaviour exhibited by children with a learning disability can cause parental stress (Hastings, 2002). In addition to this, caring for young children with special needs has been reported to be an overwhelming and distressing experience (Heiman, 2002).
**Current situation**

Lucy currently lives at home with her mother (Deborah), father (Gary) and younger brother (Sam). She attends a special school from Monday to Friday and goes to respite for one week three times a year providing Mr and Mrs Jones with a break from caring for her.

Mrs Jones reported that Lucy would have tantrums for “attention” and described her as highly “manipulative” and “controlling”. She also stated that when left alone Lucy had tantrums which consisted of the behaviours depicted above. However, if she was engaged in an activity with either Mr or Mrs Jones no tantrums occurred. Mrs Jones stated that the current strategy they deployed to manage the tantrums was to attend to Lucy immediately by engaging her in activities she enjoyed. This decreased the magnitude of these tantrums and helped to alleviate their stress. Lucy was reported to enjoy a number of sensory activities such as foot massages, swings, and playing with toy bricks. It was mentioned that she liked watching CBBC (children programmes) and listening to nursery rhymes on her CD player. Mr Jones also stated that she preferred to engage with either himself or Mrs Jones when playing with her toy bricks, painting and drawing.

Gary is a self employed tiler with this suiting the family as he can work flexible hours and take Lucy to school and to her appointments with the paediatrician and physiotherapist. Deborah has been working as a part-time paediatric nurse since 1992 and reported enjoying her job as it provides her with a great deal of satisfaction. On some occasions however the job was extremely demanding due to the constant exposure of caring for children with profound medical problems.
Description of nuclear family
Gary (40) and Deborah (38) have been married for 12 years. They described their relationship as supportive but were finding it difficult to spend time together because of Lucy’s tantrums and their respective work commitments. Lucy has a younger brother called Sam who is one and a half years old and does not have a learning disability. Deborah stated that he had no behavioural problems and suspected that there was a “sibling rivalry” as Lucy’s tantrums had escalated since his birth. She also stated that if Sam was given more attention the tantrums would escalate in frequency.

Social support
Gary has one younger sister (Jane) who lives in the locality and visits regularly to provide assistance with Lucy’s care during the weekend. Deborah described a decrease in the frequency of Lucy’s screaming during the weekend and attributed this to her being occupied with Jane. Deborah is an only child and disclosed that her mother lived far away and rarely visited the family. Both Gary and Deborah had requested carer assistance and for Lucy to have more time at respite. However this was taking more time than had been envisaged and both Mr and Mrs Jones expressed that they felt unsupported by Social Services.

Developmental history
Birth
Deborah reported that Lucy was born prematurely and stated that there were complications during the birth. A diagnosis was made that Lucy had suffered a brain haemorrhage and that this had caused irreversible damage. The lesion was described as being global rather than being confined to a specific location in the brain. Deborah described feeling extremely depressed when this information was conveyed to her and disclosed to me that the effects of
the haemorrhage had been an obstacle to her bonding with Lucy. Although psychological support was offered she declined this and did not have treatment for her low mood.

**Infancy**

Lucy was an unsettled infant who would cry incessantly when alone. Deborah also stated that Lucy was “odd” because she did not smile like a “normal child”. As Lucy did not pass the usual milestones of walking and talking an assessment was conducted by her paediatrician at the age of two which led to a diagnosis of athetoid cerebral palsy. It was also at this age that the Local Education Authority (LEA) documented that Lucy had a severe learning disability.

**Communication**

Lucy cannot express herself verbally and uses gestures such as nodding, pointing, and vocalisations. Her receptive language is also poor and she is currently seeing a speech therapist at school to improve her communication skills through the use of a picture book containing symbols. The speech therapist felt that this was progressing extremely slowly as she preferred to play rather then learn.

**Medical difficulties**

Lucy does not have any auditory or visual difficulties but does suffer from epilepsy which was reported to be characterised by phases of regular seizures followed by the seizures becoming rare. Presently the condition is well controlled through the use of two medications namely Epilim and Tegretol.
**Educational provision**

Lucy attended a private nursery until the age of three after which she moved to a school for children with special physical health needs. Her teacher stated that she was a sociable girl and that they rarely encountered the tantrums Mr and Mrs Jones witnessed at home. The teacher speculated that this was a result of the constant interaction Lucy received from teaching assistants, coupled with the structured classroom environment the school provided.

**Respite provision**

From interviews with nursing staff involved in Lucy’s care it was ascertained that she had settled in well at the respite service. The nursing staff stated that as was the case when Lucy was at school she did not have tantrums when at respite. This may again be related to Lucy finding such interaction socially rewarding.

**Parental perspective**

Gary stated that he and Deborah would “give in” to Lucy because of her constant tantrums. In addition they both mentioned that they felt like “bad parents” who were “not coping” with her difficulties. They also stated that it was impossible to attend to her all the time and felt more like “carers” than parents. Both Mr and Mrs Jones had tried a number of behavioural interventions which included ignoring Lucy (extinction), giving her consequences by taking away her favourite toys, using time outs by putting her on the “naughty step”, and star charts which had all consistently failed to reduce the tantrums. Techniques which minimised the tantrums centred upon engagement in activities such as massaging her feet, painting and drawing with her, or going in the car for drives. They did however seem motivated to try other psychological approaches to help manage Lucy’s tantrums.
**Target behaviour**

There were a number of behaviours which needed to be addressed with the priority for Mr and Mrs Jones being Lucy’s episodes of screaming. These were deemed difficult to manage because of how regularly they occurred. They stated that Lucy could scream between 10 to 20 times per day with each episode lasting for between 5 and 30 minutes. It was decided that the frequency of Lucy’s screaming episodes would be monitored from Monday to Fridays at home during her school holiday to identify distinguishing patterns and triggers. This information would then be used to devise a collaborative behavioural intervention to assist in minimising the outbursts. It was felt that recording the screaming episodes on the weekend was unnecessary as she was occupied with her aunt.

**Relevance of Cerebral palsy**

Cerebral palsy (CP) refers to a group of neurological disorders which cause difficulties with both motor control and posture. This condition can have profound psychosocial implications for those affected and their families. It has been estimated that moderate to severe CP occurs in one out of every 1000 births. As a group approximately one third of children with cerebral palsy will function within the average intellectual range (Cogher, et al 1992).

McDermott et al (1996) conducted a population-based analysis of behavioural problems in children with CP. Such difficulties were reported to be five times more likely in children with CP than in those with no known health problems and were particularly common in children with CP and mental retardation. Specific behaviours identified were overdependency, “acting headstrong”, and hyperactivity.
In addition to this, another robust finding has been an association between the severity of intellectual impairment and the degree of challenging behaviour (Emerson, 2001; Oliver et al, 2003). This can also be applied to children who have profound communicative deficits (Sigafoos, 2000) and are non-ambulant (Chadwick et al, 2000). Studies have also suggested that social reinforcement in the form of attention can be a common cause of challenging behaviour (Thompson & Iwata, 2001; Oliver et al, 2005) and that physical interactions in particular can have a positive reinforcing effect (Kodak et al, 2007).

**Functional analysis**

The evidence base in learning disabilities indicates that one of the most effective ways to address challenging behaviour is to conduct a functional analysis (Repp & Horner, 1999; Hastings & Brown, 2000). This strategy has been adopted when assessing and treating children within a behavioural paradigm (Kamps et al, 1995). Functional analysis postulates that behaviours serve a purpose in their current context and are maintained by their antecedents or consequences. This enables the clinician to formulate hypotheses and devise an appropriate intervention based upon them (Sturmey, 1996). In terms of applying functional analysis to assess screaming and implementing psychological treatments, some studies have supported its efficacy and have advocated extinction as an effective strategy (Graff et al, 1999). There is however a paucity of studies related to this field and behavioural treatment for screaming remains inconclusive (Galiatsatos & Graff, 2003).

The first stage in conducting a functional analysis is to clearly identify and define the behaviour to be treated (Douglas, 1989; Emerson, 2001). In this case it was the screaming episodes which were defined as a loud piercing sound which lasts for longer than a second. The next phase is to assess the behaviour by drawing upon measures which determine
frequency, duration, setting, and possible functions the behaviour may serve. This information is then used to devise hypotheses with the final stage being to implement the intervention and assess its efficacy (Repp & Horner, 1999).

**Assessment**

A number of assessments were used to assist in the formulation of Lucy’s screaming behaviour. These included A-B-C charts, Functional Analysis Interview Forms, the Motivational Assessment Scale (MAS), Scatter plot charts and general observations.

A-B-C charts are the most frequently used observational approach for challenging behaviour. The methodology involves the informant recording occurrences of a defined behaviour and describing these. Such a description would include antecedents, the behaviour itself and the consequences (Desrochers, Hile & Williams-Moseley, 1997). Due to the regularity of Lucy’s screaming episodes Mr and Mrs Jones were asked to complete this twice a day. The results from the A-B-C charts are summarised in table 1.
Table 1: Summary of results from A-B-C charts

<table>
<thead>
<tr>
<th>Antecedent (A) events that trigger Lucy’s screaming episodes</th>
<th>Behaviour (B) description</th>
<th>Consequent (C) events of Lucy’s screaming</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Lucy alone in room.</td>
<td>• Screaming episodes occur between 16 to 20 times a day.</td>
<td>• Lucy becomes tearful and begins kicking or pinching her arms.</td>
</tr>
<tr>
<td>• Mrs Jones attending to Sam.</td>
<td>• Episodes can last from 5 minutes to 20 minutes.</td>
<td>• Mr or Mrs Jones engage with Lucy and she stops screaming.</td>
</tr>
<tr>
<td>• Mr Jones ignoring Lucy.</td>
<td>• Screaming occurs frequently after breakfast and again in the afternoon between 4 and 5pm.</td>
<td>• Both Mr and Mrs Jones get irritated that Lucy has so much interaction and that they can’t do their chores.</td>
</tr>
<tr>
<td>• Lucy seeing Sam getting more attention then her.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It was felt that functional analysis interview forms (O’Neill et al, 1987) would be useful in addition to A-B-C charts so that a greater understanding of Lucy’s screaming could be obtained. Functional analysis interview forms (O’Neill et al, 1987) which are more detailed than A-B-C charts consist of questions which describe behaviours of concern and identify physical and environmental factors which help to trigger the behaviour. The interview forms were completed by both Mr and Mrs Jones at their home and substantiated findings from the A-B-C charts (see Appendix 3).

The results from A-B-C charts and functional analysis interview forms suggested that Lucy screamed when she was alone to gain positive reinforcement from her parents which was socially rewarding. Other triggers may also have been ignoring her or seeing Sam receiving more attention. However both Mr and Mrs Jones ardently felt that the precipitant to the
tantrums was when Lucy was left alone, and that the screaming was a means for her to gain interaction from either parent. This was also recorded as the most common antecedent.

The Motivational Assessment Scale (MAS) (Durand & Crimmins, 1992) is a questionnaire which assesses the function of challenging behaviour. Responses are organised into four categories of reinforcement namely attention, tangible, escape, and sensory. This helps to assess whether the function of challenging behaviour is to gain attention, obtain preferred activities or objects, escape nonpreferred activities or acquire sensory stimulation through preferred acts and objects (see Appendix 4). Literature related to the reliability and validity of the MAS is varied ranging from strong evidence regarding its utility as a clinical tool (Durand & Carr, 1992) to reports suggesting that the scale is psychometrically weak (Duker & Sigafoos, 1998; Kearney, 1994). The MAS was utilised as a means of rapidly gathering information at the initial stages of functional analysis which aided in generating an initial hypothesis. A total score and mean score for each scale is obtained from the ratings and each scale is then given a relative ranking. Mr and Mrs Jones both completed the MAS at home. The results from the MAS questionnaires are depicted in Table 2.
Table 2: Results obtained from MAS

<table>
<thead>
<tr>
<th>Factor Scores</th>
<th>Person</th>
<th>Attention</th>
<th>Escape</th>
<th>Sensory</th>
<th>Tangible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr Jones</td>
<td>25</td>
<td>14</td>
<td>15</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Mrs Jones</td>
<td>25</td>
<td>9</td>
<td>15</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>23</td>
<td>30</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td>Mean Score</td>
<td>25</td>
<td>11.5</td>
<td>15</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>Ranking</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

The results showed that Mr and Mrs Jones were consistent with what they felt the possible reinforcers of the screaming were. The assessment identified gaining “attention” and obtaining something “tangible” as the two primary functions of Lucy’s screaming episodes according to her parents. These results were congruent with findings from A-B-C charts and the functional analysis interview forms.

The clinical psychologist in training observed Lucy at school before her holidays began. She was settled during these observations and did not display any verbal outbursts. However, her teacher did mention that if Lucy was not given regular attention she would scream, but stated that this was a rare occurrence as a number of teaching assistants were present to provide support.

Scatter plot charts are used to identify patterns in the occurrence of a particular challenging behaviour. The measure consists of a grid in which incidents of screaming are chronologically recorded with reference to the time they occurred. Mr and Mrs Jones agreed
to record her verbal outbursts for a period of 10 days whilst she was at home during the summer holiday (see Appendix 5).

The scatter plot identified screaming episodes occurring most frequently between 10.00am to 12.00pm and between 4.00pm and 5.00pm between Monday and Friday over a two week period. After breakfast Lucy had no interaction with her parents who were doing their household chores or looking after Sam. Between 4.00pm and 5.00pm Mr Jones returned from work and both parents would be busy as the evening meal was prepared and Sam looked after. Lucy may therefore have screamed for attention during these time intervals. When Mr or Mrs Jones were in the same room as Lucy there were no episodes of screaming documented. At these times they would be feeding, changing, or interacting with her which decreased the occurrence of tantrums (See Figure 1).
Figure 1: Column chart of mean number of verbal outbursts at baseline phase of design over a two week period.
**Formulation**

When working with people who have severe communication and learning deficits a behavioural approach has a number of strengths and hence was adopted. As Lucy was unable to articulate her thoughts and feelings a cognitive approach would have been inappropriate (Carr, 1999). Mowrer’s (1956, cited in Glassman, 1995) two-factor theory integrates classical and operant conditioning principles to explain the development and maintenance of behavioural problems.

**Development of Lucy’s screaming**

The theory of classical conditioning could be applied to understand the development of Lucy’s screaming behaviour. This theory proposed by Pavlov (1927 cited in Glassman, 1995) suggests that when a neutral stimulus is associated with an unconditioned stimulus the neutral stimulus will initiate the reflex or unconditional response. Due to this, the neutral stimulus becomes a conditioned stimulus that produces the previously reflexive response as a conditioned response. The way in which this model can be applied to Lucy’s screaming is depicted in Figure 2 overleaf.
### Before conditioning

<table>
<thead>
<tr>
<th>Unconditioned Stimulus (US)</th>
<th>Unconditioned Response (UR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early experience of being left alone as an infant</td>
<td>Anxiety</td>
</tr>
</tbody>
</table>

### During conditioning

<table>
<thead>
<tr>
<th>Unconditioned Stimulus (US)</th>
<th>Unconditioned Response (UR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early experience of being left alone as an infant coupled with being left alone now</td>
<td>Anxiety</td>
</tr>
<tr>
<td>Conditioned Stimulus (CS)</td>
<td>Conditioned Response (CR)</td>
</tr>
<tr>
<td>Being left alone in a room</td>
<td>Anxiety</td>
</tr>
</tbody>
</table>

**Figure 2. Development of Lucy’s screaming based upon classical conditioning**

The application of this theory as a means of understanding Lucy’s behaviour is based upon the background information ascertained from interviews with Mr and Mrs Jones. Lucy may have found being isolated as an infant worrying with this causing her to become anxious when left alone in a room for a prolonged period of time.
**Maintenance**

The second part of Mowrer’s (1956, cited in Glassman, 1995) two factor theory draws upon operant conditioning to explain the maintenance of a particular behaviour. Skinner’s (1950, cited in Glassman 1995) theory of operant conditioning proposes that the probability of a behaviour occurring again is directly determined by its consequences. When a behaviour is followed by a favourable consequence such as attention there is an increased chance that the behaviour will occur again. This is referred to as positive reinforcement. Both Mr and Mrs Jones felt that Lucy’s screaming was due to the positive reinforcement she gained from their engagement with her. Furthermore, this interaction may also have served to reduce her anxiety level.

Figure 3 adapted from Oliver’s (1995) reinforcement model addresses the processes involved in the maintenance of Lucy’s screaming and her parents current strategy of managing these episodes.
Lucy is alone in a room and feels anxious or scared. This is aversive and screaming has previously reduced these feelings.

Screaming starts

Lucy’s screaming is aversive to her parents

Parents attend to Lucy

Lucy no longer feels anxious or scared and is able to calm down

As Lucy calms down, her parents anxiety levels subside as they attend to Lucy

Screaming stops

Figure 3. Positive reinforcement processes maintaining Lucy’s screaming
From this formulation it can be postulated that Lucy is in a deprived state when she is alone as there is no positive reinforcement available such as social interaction. In this context being alone is referred to as an establishing operation (McGill, 1999). Within her home environment there was intermittent social interaction compared to school and respite. Lucy may therefore be anxious or afraid and screams when she experiences such unpleasant feelings.

The screaming is stressful to Mr and Mrs Jones who share the belief that they are “bad parents” who “can’t cope”. They respond by attending to Lucy and engaging her in an activity she enjoys. Lucy’s anxiety is reduced and she subsequently stops screaming. A contingency has therefore been established between the response (screaming) and the consequence (interaction in activities).

From both assessment and formulation it was evident that the appropriate times to intervene were between 10am and 12pm and from 4pm to 5pm. These were the times that Lucy was left alone from Monday to Friday which triggered her screaming (Figure 1). It was collaboratively decided that the goal of treatment should be to implement a behaviour modification programme which minimised the number of screaming episodes Lucy exhibited.

**Intervention**

The BPS clinical practice guidelines stipulate that interventions for challenging behaviour can be divided into two broad categories namely “reactive behaviour management” and “proactive prevention and treatment”. Reactive interventions focus upon managing behaviours as they arise whereas proactive strategies centre upon the prevention, reduction,
and elimination of challenging behaviour through planned interventions (Ball, Bush, & Emerson, 2004).

A number of established reactive interventions had been tried by Mr and Mrs Jones when Lucy started to scream including extinction, time outs, and reward schemes which had not worked. This may have been due to the severe learning disability which would have prevented Lucy from understanding the consequences of her behaviour. Research suggests that proactive interventions with a particular focus on adapting an individual’s environment are effective in minimising challenging behaviour. Such approaches have included environmental enrichment strategies (Ball, Bush, & Emerson, 2004).

As Lucy’s screaming appeared to be triggered by feelings of anxiety and a lack of social interaction, the aim of a developed proactive strategy was to introduce positive changes to her environment. Lucy would be given a choice of activities such as painting, drawing, or playing with her toy bricks at 10.00am. Then either Mr or Mrs Jones would engage in the activity with her for 10 minutes and begin to slowly move away as she started to play on her own accord. If Lucy screamed (due to being in a deprived state) either parent would engage with her again, but if she continued playing on her own they were advised to discreetly keep moving away from her, until she could manage these feelings of anxiety autonomously.

At 4.00pm Lucy was given the choice of either watching CBBC or listening to her nursery rhymes on the CD player. Again Mr or Mrs Jones were advised to stay in the lounge with Lucy for 10 minutes and slowly move away. This was done until Lucy’s feelings of anxiety had subsided enough for her to either listen to nursery rhymes or watch children’s television
on her own. Mr and Mrs Jones recorded the number of screaming episodes using the tally chart during the intervention phase of the study (see Appendix 6).

This intervention termed fading (Emerson, 2001) is similar in procedure to the technique of systematic desensitisation in which the interaction is slowly extinguished and replaced by the individual managing their anxious state independently. Although the evidence base for fading is limited (Flood & Wilder, 2004; Whitaker, 2002) it appeared to be an intervention which was tailored to the psychological needs of Lucy and her parents.

**Outcome evaluation**

The screaming episodes in both the baseline and intervention phase are depicted in Table 3 and shown graphically in Figure 4.

<table>
<thead>
<tr>
<th>Day</th>
<th>Phase</th>
<th>Number of screams</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Baseline</td>
<td>19</td>
</tr>
<tr>
<td>2</td>
<td>Baseline</td>
<td>18</td>
</tr>
<tr>
<td>3</td>
<td>Baseline</td>
<td>20</td>
</tr>
<tr>
<td>4</td>
<td>Baseline</td>
<td>17</td>
</tr>
<tr>
<td>5</td>
<td>Baseline</td>
<td>16</td>
</tr>
<tr>
<td>6</td>
<td>Baseline</td>
<td>17</td>
</tr>
<tr>
<td>7</td>
<td>Baseline</td>
<td>16</td>
</tr>
<tr>
<td>8</td>
<td>Baseline</td>
<td>18</td>
</tr>
<tr>
<td>9</td>
<td>Baseline</td>
<td>17</td>
</tr>
<tr>
<td>10</td>
<td>Baseline</td>
<td>17</td>
</tr>
<tr>
<td>11</td>
<td>Intervention</td>
<td>19</td>
</tr>
<tr>
<td>12</td>
<td>Intervention</td>
<td>16</td>
</tr>
<tr>
<td>13</td>
<td>Intervention</td>
<td>17</td>
</tr>
<tr>
<td>14</td>
<td>Intervention</td>
<td>17</td>
</tr>
<tr>
<td>15</td>
<td>Intervention</td>
<td>14</td>
</tr>
<tr>
<td>16</td>
<td>Intervention</td>
<td>13</td>
</tr>
<tr>
<td>17</td>
<td>Intervention</td>
<td>14</td>
</tr>
<tr>
<td>18</td>
<td>Intervention</td>
<td>13</td>
</tr>
<tr>
<td>19</td>
<td>Intervention</td>
<td>12</td>
</tr>
<tr>
<td>20</td>
<td>Intervention</td>
<td>12</td>
</tr>
</tbody>
</table>
Figure 4 suggests a stable trend of screaming episodes during the baseline stage of the A-B design. When the intervention was implemented there was a reduction in the number of screaming episodes during the second week of this phase. The mean number of screaming episodes in the baseline stage was 17.5 (SD = 1.27). In the intervention stage the mean number of screaming episodes was 14.7 (SD = 2.4).
**Statistical analysis**

A significant autocorrelation was observed for frequency of screaming episodes at lag=1 (r = 0.75; p<0.01). Accordingly, traditional statistical procedures premised upon the assumption of independence of observation were not appropriate for the analysis of this data. Therefore, a split middle analysis strategy was selected (White 1974, cited in Barlow & Herson, 1984). Figure 5 shows the frequency of verbal outbursts in the baseline and intervention phases. The split middle trend-lines for the baseline and intervention phases are shown along with the projected baseline trend in the intervention phase (i.e., the serrated line in the intervention phase).

![Figure 5. Split middle trends in the baseline and intervention phases](image)

Assuming the intervention had no effect then the split middle slope for the baseline should be the split middle slope for the intervention as well. Thus, under the null hypothesis of no effect, 50% of the data in the intervention phase should fall above the projected baseline trend and 50% should fall below. It is possible to test this null hypothesis by using a binomial test.
A non-significant binomial probability ($p<0.113$) was observed for the departure of the intervention data from that expected under the null hypothesis. Accordingly, it may be concluded that no statistically significant reduction in frequency of screaming episodes was observed in the intervention phase relative to the rate in the baseline period.

**Critical Appraisal**

The behaviour modification programme indicated a gradual reduction in Lucy’s screaming episodes. Overall, the baseline phase seemed stable with little variance and a clear distribution. This is an important facet when carrying out a single case design as the effect of an intervention can be assessed (Kazdin, 1982). Figure 4 suggests that the intervention had a greater impact in week two when Lucy may have adjusted to the fading programme implemented by her parents.

There were various strengths of this single case design study. Firstly, a number of assessments were employed in constructing the formulation. These included questionnaires, interviews, observations, and scatter plot charts. In addition, Mr and Mrs Jones were consistent in that they both felt the reason for Lucy’s screaming was to obtain social interaction. This initial, uniform hypothesis was substantiated by a detailed assessment which enabled a coherent formulation to be constructed. Another positive point was the innovative nature of the intervention. This was necessary as Mr and Mrs Jones had consistently tried a number of established behavioural approaches to manage the screaming. The fading programme although not used regularly seemed to be the most appropriate intervention which Mr and Mrs Jones could implement with ease at home.
There are however certain factors which could have reduced the validity of this experimental paradigm. The study adopted an A-B design which can be criticised as it does not definitively demonstrate whether the intervention contributed to minimising Lucy’s screaming episodes. Mrs Jones stated that during the second week of the intervention phase, she had taken Lucy to a play scheme from 12.00pm to 3.00pm. At the play scheme she participated in activities such as sensory room, cooking, and going on swings with the assistance of volunteers. As she was accustomed to this from her school and respite environments it may have acted as a potential confounding variable and assisted towards decreasing her screaming episodes.

A weakness of the A-B design is that it does not provide a robust enough framework in which it can be confirmed that the treatment caused a decrease in the screaming episodes. This drawback could have been remedied by drawing upon an A-B-A strategy in which following the baseline treatment (A) the intervention could be introduced (B) and then withdrawn (A). If after the baseline measurement the application of treatment led to improvement and results deteriorated once withdrawn, it could be cogently concluded that the intervention was responsible for the positive change. While such limitations of the A-B design weaken this study the use of enhanced designs such as the A-B-A method which involves withdrawal of treatment would not have been ethically justifiable. In addition it was not practically feasible due to time constraints.

One flaw of the fading programme is that it only provides a short-term solution to Lucy’s screaming episodes as she will eventually tire of activities such as playing with toy bricks and watching CBBC. Therefore the effectiveness of this treatment will eventually diminish. Functional communication training which as an intervention has a stronger evidence base (Durand, 1990) may provide a long term strategy to minimise the screaming outbursts.
During functional communication training the individual is taught that a certain stimulus is paired with a response. In this case Lucy could point to a symbol which is associated with obtaining the social interaction she ordinarily demands through screaming.

**Follow up and Conclusion**

The intervention which was implemented did not yield a statistically significant reduction in the frequency of screaming episodes. This may have been due to the follow up time being too limited and an extended intervention phase of the study may have been useful in order to gain a more accurate assessment of efficacy. Indeed at a follow up appointment just after the end of her summer holiday, Mr and Mrs Jones stated that Lucy was engaging in activities at home and screaming less often. If data had been collected during this period a statistically significant reduction may have been observed.

In summary, fading programmes may be a useful strategy to minimise episodes of screaming in children. These may need to be supplemented with functional communication training in addition to strategies which alleviate parental stress enabling them to tolerate tantrums more effectively. The clinical psychologist in training will take this into account when carrying out future studies addressing similar cases.
References


Small Scale Service-Related Project

CPR 3

A study examining ward atmosphere and quality of life within a forensic setting
Abstract

The primary aims of this study examined the ward atmosphere service users reported, and whether service users engaged in at least 25 hours of structured therapeutic activity per week. These two objectives are in accordance with best practice guidance for medium secure services, addressing suitable care environment and relational security standards respectively (Department of Health, 2007). In addition to these aims, the audit also inspected whether service users who reported psychological distress, perceived a poorer quality of life and discontent with ward atmosphere.

Thirty-nine forensic service users participated in the study comprising 14 service users on acute wards and 25 service users on rehabilitation wards. Overall, participants conveyed being moderately content with ward atmosphere, thus achieving the standard suitable care environment. The study also ascertained that 63% of service users were not carrying out at least 25 hours of structured therapeutic activity per week, thus failing the relational security standard. Service users reporting psychological distress perceived a poorer quality of life and endorsed the most negative views about ward atmosphere.

Service users on acute wards conveyed more negative views with ward atmosphere, psychological distress, and were reported doing greater levels of “no activity” compared to patients on rehabilitation wards. The audit suggests acute wards may require more input from occupational therapists and therapy support workers. Engagement in such structured activities could ameliorate psychological distress, thereby improving service users’ satisfaction with acute wards.
**Introduction**

Clinical governance is the system by which the National Health Service is accountable for continuously improving delivery of services to service users, thereby assisting in safeguarding high standards of care. One key aspect within such a framework is the notion of clinical audit. This entails setting parameters for good clinical practice, comparing current practice with such parameters, and implementing changes to rectify identified shortcomings in service provision (Department of Health, 1998).

Research suggests offenders can experience severe and enduring mental health problems (e.g. Birmingham, 2003; Harty, Tighe, Leese, & Thornicroft, 2003). These individuals may therefore require more specialist interventions that prison services cannot deliver. Forensic medium secure psychiatric services aim to provide comprehensive assessment, treatment, and rehabilitation for people experiencing such problems. Crimes committed by service users tend to be varied, with approximately half detained for violent or sexual offences (Rutherford & Duggan, 2007).

**Best practice guidance**

Within this context, forensic medium secure services should adhere to best practice guidance which ensure service users health care needs are met. Such criteria encompass high-level performance indicators in several areas allied to service users, staff, and the medium secure setting (Department of Health, 2007). Each benchmark will be delineated in greater detail.

**Standard 1: Safety & security**

Safety and security comprises physical, procedural, and relational security. Physical security refers to wards being sufficiently robust so that contraband items are not passed into the
service, and service users cannot abscond from locked units. Procedural security involves checking systems such as locks on closed wards, alarm systems on each ward, and that service users are monitored vigilantly. Finally, relational security postulates service users are assessed thoroughly so they have access to treatment programmes tailored to their needs. The standard also ordains each service user carries out at least 25 hours of structured therapeutic activity per week. This encompasses occupational therapy, psychology sessions, and leisure activities with peers or staff.

**Standard 2: Governance**

Governance entails all clinical staff working in medium secure services are adequately skilled to cope with the demands of their respective roles. This involves staff being trained in risk assessment and management, break-away training, and cultural sensitivity. It is also essential for such tertiary services to foster excellent working relationships with referring agencies such as prisons and secondary care mental health services.

**Standard 3: Clinical effectiveness & patient focus**

Clinical effectiveness considers each service user’s need under the care programme approach (CPA). This involves drawing upon a holistic framework which addresses service users medical and psychological needs. The standard also advocates each service user receives high-quality therapeutic interventions. Patient focus proposes service users collaborating with the clinical teams, and becoming actively involved in their mental health care. Such values are achieved by service users relaying their level of satisfaction with the treatment offered to them.
Standard 4: Suitable care environment

The standard suitable care environment refers to service users receiving treatment in a safe and secure setting. This must also be maintained by a high degree of cleanliness, space, and privacy. Service users should also be content with the ward and therapeutic activities intended to assist them with their rehabilitation.

Standard 5: Public health

Public health involves delivering expert physical healthcare from other specialities to service users. These include dentistry, physiotherapy, and ophthalmology. Providers should also offer disease prevention programmes on exercise, nutrition, smoking, substance misuse, and sexually transmitted diseases. Such principles have been supported by recent documentation associated with the care of prisoners (Department of Health, 2008).

Views of service users with wards

Increasingly, service users views with regards to their ward environment has been depicted as a salient goal of healthcare, indicator of outcome, and a key determinant related to service quality and provision (Donabedian, 1992; Stallard, 1996). There are, however, very few studies which have explored service users’ views with psychiatric services. This may emanate from the belief that service users are unable to give reliable and valid opinions about their care (Weinstein, 1981).

Such limited research also permeates to studies addressing service user views with forensic psychiatric services (Coffey, 2006). Morrison, Burnard, and Philips (1996) conducted an initial investigation addressing service users views with the ward. Outcomes indicated dissatisfaction with a lack of privacy, noise on wards, and limited opportunities to carry out
activities. Service users reported higher levels of satisfaction with nursing staff and occupational therapists, in comparison to psychologists and psychiatrists. This was due to the perceived time they spent assisting them with their rehabilitation.

In another study, service users conveyed greater satisfaction with wards, activities that aided recovery, and relationships with the staff involved in their care (Huckle, 1997). More recently, service users were impressed with the forensic service in several areas. This included information provided to them, level of care from staff, and ward environment. It was also ascertained that younger patients reported greater discontent with the service than older patients (Carlin, Gudjonsson, & Yates, 2005).

A uniform criticism of these papers was that a small sample of service users participated in the research. Conclusions reached could be considered dubious because the majority of service users reported only the positive aspects of wards and therefore could have given biased accounts. Furthermore, the studies did not elucidate whether discrepancies in service users’ views existed, by comparing service users residing upon open wards to those on locked wards.

Preliminary findings suggest service users on open wards are pleased with their medication, wards, and visiting opportunities in comparison to service users on locked wards (Muller, Schlosser, Kapp-Steen, Schanz, & Benkert, 2002). This study was, however, conducted in a psychiatric in-patient service and therefore cannot be generalised to forensic in-patient settings.
Quality of life within forensic settings

Another outcome of treatment for mental health difficulties analogous to service user satisfaction is the perceived quality of life (QOL) reported (Katschnig, Freeman, & Sartorious, 1997). The World Health Organisation defines quality of life as “an individual’s perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectancies, standards and concerns” (WHOQOL Group 1994, p25).

This construct comprises both objective and subjective factors (Berlim & Fleck, 2003). Objective factors refer to the individual’s housing, employment, income, and social networks. Subjective factors consist of internal affective states that the individual experiences. These include positive emotions (e.g. happiness), negative emotions (e.g. depression), and physical health difficulties (e.g. pain) (Lehman, 1988). QOL is therefore extremely useful to assess, as service users with a severe mental illness cannot realistically be expected to regain full levels of functioning. Sustaining an acceptable QOL is therefore an aim health providers hope to achieve when rehabilitating service users (Oliver, Huxley, Bridges, & Mohamad 1996).

Research suggests service users with schizophrenia, who are symptomatically stable, are able to report their perceived QOL in a reliable and valid manner (Voruganti, Helsegrave, Awad, & Seeman, 1998). Studies also propose service users experiencing emotional problems convey a poorer QOL (Packer, Husted, Cohen, & Tomlinson, 1997; Trauer, Duckmanton, & Chiu, 1998).
Conversely, factors which contribute to a greater QOL include perceiving greater levels of self-esteem and employing emotional coping strategies (e.g. seeking help for distress related to symptoms associated with schizophrenia) (Ritsner, Gibel, & Ratner, 2006). Therefore, when applying this concept to forensic services, significant improvements in service user’s QOL may not only prevent future relapses (Meltzer, 1999) but also reduce their risk of recidivism (Draine & Solomon, 2000). Routinely assessing QOL can be incredibly informative for clinical teams when determining if service users are ready for discharge.

A limited body of literature exists investigating the QOL service users experience within forensic settings. A pilot study exploring the QOL of two forensic inpatient groups with a mental illness and personality disorder was examined (Swinton, Oliver, & Carlisle, 1999). The study indicated service users with a personality disorder were more despondent about their subjective QOL then service users experiencing a mental illness. Another paper inspected QOL in a forensic inpatient setting by comparing the QOL in detained mentally disordered offenders with service users from a general psychiatric community. Several domains were construed to be worse for detained service users, including living situation (e.g. control and independence), physical health, and physical safety (Walker & Gudjonsson, 2000).

When examining forensic service users views about wards, their QOL, and psychological distress within medium secure services, a number of factors are pertinent to consider. Due to the severity of their offences, service users are admitted to medium secure services on a compulsory basis under the Mental Health Act (1983). Such individuals are unable to access the community freely (unless they have authorised leave sanctioned by the Ministry of Justice). Service users are also meticulously watched by nursing staff involved in their care,
which could possibly be interpreted as an invasion of their privacy. Finally, each of the service users' requests is discussed in weekly multi-disciplinary team meetings. Depending upon whether such requests are granted, service users may report further discontent with ward atmosphere, psychological distress, and a poorer QOL than would ordinarily be experienced.

**Aims of the small-scale service evaluation**

Four questions were addressed by the small-scale service evaluation:

1. Are forensic service users content with the ward atmosphere?

2. Do forensic service users participate in at least 25 hours of structured therapeutic activity\(^1\) per week?

These two questions relate to standards of best practice for forensic medium secure care and were selected as they relate specifically to suitable care environment and relational security standards respectively (Department of Health, 2007).

3. Does psychological distress have a negative impact upon forensic service users perceived quality of life?

4. Does psychological distress have a negative impact upon forensic service users' views with ward atmosphere?

---

\(^1\) Structured therapeutic activity is defined as carrying out a leisure activity on the ward with peers or staff, an occupational therapy activity, psychology sessions, psychiatry sessions, and key worker sessions.
Methodology

Service setting
The evaluation was conducted in a regional medium secure forensic setting. Referrals are accepted via prison, other forensic units, and special hospitals from across the West Midlands. The service users are typically detained under sections of the Mental Health Act (1983), which may or may not include a restriction order overseen by the Ministry of Justice. The inpatient psychiatric service comprises of three acute (locked) and four rehabilitation (unlocked) wards. Ethical approval for the study was obtained by the supervisor.

Design
This was a cross-sectional design as participants completed the measures at one time point only. There were no exclusion criteria. Eighty service users were invited to participate in the study as 10 service users were away on leave. Of those, 39 service users (49%) consented to take part in the study with 41 service users declining (51%).

Procedure
Participants were approached on each ward (locked or open) by either a clinical or forensic psychologist in training, and asked whether they would be willing to participate in a study about their quality of life at the Clinic. Those who agreed were given an information sheet that explained the aims of the study, confidentiality, and the right to withdraw at anytime (Appendix 7). Each participant was required to provide written informed consent before the interview proceeded (Appendix 8).

Participant’s responses were noted by the psychologist in training on each questionnaire. The interview time varied according to the ability and concentration of each participant.
Therefore, the completion time ranged from 25 to 45 minutes. Once each interview was completed participants were asked if they had any further questions with regards to the study. They were then thanked for participating in the audit.

Nursing staff on each ward recorded the activity level of every service user in the Clinic using observation schedules for one week. This occurred within a designated time frame during the study. Instructions were provided to ensure that nursing staff knew how to complete the observation schedules. The quantitative data was analysed using statistics package for social sciences (SPSS version 15).

**Measures**

1. **Demographic questionnaire**
   A demographic questionnaire was devised to ascertain service user’s age, ethnicity, educational level, other illnesses currently experienced (e.g. physical health problems), date of admission, index offence, observation levels, medication, and section of the Mental Health Act (Appendix 9). Their demographic details were obtained from notes once they had consented to carrying out the study. These were completed by the psychologists in training on each ward.

2. **The Good Milieu Index**
   The Good Milieu Index (Friis, 1986a cited in Moos, 1997) is a brief measure examining service user’s views with the ward atmosphere. It consists of five questions which assesses the ward, staff, peers, confidence with the ward, and whether the ward gives an opportunity to the service users express their abilities. Items are scored on a five point Likert scale assessing “not at all”, “to a small extent”, “to some extent”, “to a large extent”, or “to a very
large extent”. The lowest score is 5 and the highest is 25. Higher scores suggest the service user is content with the ward atmosphere (Appendix 10).

3. World Health Organisation Quality of Life Assessment – Brief Version UK

(WHOQOL-BREF UK Version)

The WHOQOL-BREF (Skevington, Lofty, & O’Connell, 2004) is a cross-culturally sensitive questionnaire allowing comparison of QOL perceptions among people with various physical and mental health conditions. It contains 28 items covering four dimensions of QOL (physical, psychological, social, and environmental constructs). The physical domain incorporates pain, medication, energy, mobility, sleep, activities, and capacity for work; the psychological domain incorporates positive and negative feelings, cognitions, self-esteem, body image and spirituality; the social domain incorporates satisfaction with social support, personal relationships, sex; and the environmental domain comprises of safety and security, home environment, satisfaction with physical environment, finance, information, transport, leisure, and access to health/social care. Items are scored on a five point Likert scale assessing “how much”, “how completely”, “how often”, “how good”, or “how satisfied” the participant has felt in the last two weeks.

The raw scores are converted into standard T-scores. The higher the T-score on each domain the higher the satisfaction level (Appendix 11). The WHOQOL-BREF has been found to have good properties of reliability and validity nationally and internationally (e.g. De Vries & Van Heck, 1997; Saxena et al; 2001).
4. Outcome Questionnaire 45.2 (OQ-45.2)

The OQ-45.2 (Lambert et al, 2003) is a highly reliable and valid psychometric assessment which consists of 45 questions relating to how distressed service users have been over the past week. Items are scored on a five point Likert scale assessing “never”, “rarely”, “sometimes”, “frequently”, and “almost always”. It is composed of three domains: symptom distress, interpersonal relations, and social role. This yields a total score (0-180). High scores suggest that the service user is admitting to a large number of symptoms of distress, interpersonal difficulties, difficulties in their social role, and their quality of life. The cut-off point for caseness is 63. When service users scores fall below 63 their distress is most akin to the level of distress noted to be experienced by healthy volunteers.

The symptom distress subscale assesses anxiety, depression, and stress related symptoms. It consists of 25 questions and has a range of 0-100. A high score indicates that service users are bothered by these symptoms, while low scores indicate either an absence or denial of the symptoms. The cut-off point for this subscale is 36. When a subject score falls below this point, service users are scoring like those people who made up the non-patient sample.

The interpersonal relations subscale assesses complaints such as loneliness, conflicts with others, family and marriage problems. It consists of 11 questions and has a range of 0-44. High scores suggest difficulties in these areas while low scores suggest the absence of interpersonal problems as well as satisfaction with the quality of intimate relationships. The cut-off point for this subscale is 15. Scores below this score suggest that the service user is experiencing a level of satisfaction in relationships that is equivalent to normal functioning.
The social role subscale measures the extent to which difficulties in the social roles of worker, homemaker, or student are present. It consists of nine questions and has a range of 0-36. High scores indicate difficulty in social roles, while low scores indicate adequate social role adjustment. The cut off score for this subscale is 12. Scores below this score suggest that the service user is experiencing satisfaction with their social role equivalent to normal functioning (Appendix 12).

5. Activity Level

An observation schedule was constructed to gather information about the range of therapeutic activities service users engaged in over a 24-hour period (from 07:15 am to 06:15am) for one week. An observation was made by nursing staff to record what the service user was doing. The activities measured included; no activity (e.g. sleeping), personal (e.g. self-care, eating), domestic (e.g. tidying, cooking), leisure on own (e.g. watching TV, reading) leisure with others (e.g. sport), and contact with others (e.g. occupational therapist). Nursing staff were requested to tick what the service user was doing at that point in time. If two columns were ticked (e.g. personal and leisure with others) then the therapeutic activity leisure with others was selected. This may have reduced the validity of the data obtained as it cannot be asserted for certain service users, were carrying out structured therapeutic activities for one complete hour. They could also have been attending to their personal and domestic tasks during this time period (Appendix 13).

Results

Participants

The mean age of participants was 36 years old (sd= 9.1). The majority of participants were White (41%) (N = 16), 11 Black (28%), 9 Asian (23%), and 3 Dual heritage (8%). At the
time of the study the majority of service users who participated in the study resided upon four rehabilitation wards (N= 25; 64%); and 14 service users on three acute wards (36%). The mean length of admission was 3 years (sd= 2.8) ranging from 2 months to 6 years. Unfortunately, physical health problems were not recorded by each psychologist in training. This was therefore omitted from the final analysis.

The characteristics of service users who participated in the study were compared to those who declined. Table 1 indicates the characteristics of participants and non-participants.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Participants</th>
<th>Non-participants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N= 39</td>
<td>N= 41</td>
</tr>
<tr>
<td>Acute</td>
<td>14</td>
<td>13</td>
</tr>
<tr>
<td>Rehab</td>
<td>25</td>
<td>28</td>
</tr>
<tr>
<td>Mean age</td>
<td>34</td>
<td>38</td>
</tr>
<tr>
<td>Black</td>
<td>11</td>
<td>15</td>
</tr>
<tr>
<td>White</td>
<td>16</td>
<td>11</td>
</tr>
<tr>
<td>Asian</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Dual Heritage</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Middle Eastern</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

There were no significant differences between participants and non-participants for unit type (acute vs rehab, $\chi^2= 0.157$, df= 1, p ns), age ($t= 1.38$, df= 78, p ns), or ethnicity ($\chi^2= 3.34$, df= 5, p ns).
Service users structured therapeutic activities

Structured therapeutic activities are defined as carrying out a leisure activity with either patient or nurse (on or away from wards) or contact with another professional (e.g. occupational therapist). These activities were examined by nursing staff completing observation sheets addressing how many hours service users participated in leisure with others (e.g. sport), and contact with others (e.g. psychologist).

This was achieved by monitoring what each service user was doing from 07:15am to 06:15am the next day (24 hours) for one week. The best practice guidance advocates service users carrying out a minimum of 25 hours of therapeutic activity per week. Therefore these two activities were combined to give an overall mean score of the number of hours service users engaged in structured therapeutic activities.

Table 2 overleaf depicts the average number of hours service users spent doing structured therapeutic activities and the cumulative percentage. The findings suggest that approximately 63% of service users do not carry out at least a minimum of 25 hours of structured therapeutic activity. This would imply that only 37% of service users carried out at least 25 hours of structured therapeutic activity. This outcome fails to meet the best practice guidance of all forensic service users, engaging in at least a minimum of 25 hours structured therapeutic activity per week.
Table 2: Mean number of hours services users carried out structured therapeutic activities and cumulative percentage

<table>
<thead>
<tr>
<th>Mean number of hours spent on structured therapeutic activities per week</th>
<th>Cumulative percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8.8</td>
</tr>
<tr>
<td>4</td>
<td>11.3</td>
</tr>
<tr>
<td>6</td>
<td>15.0</td>
</tr>
<tr>
<td>9</td>
<td>25.0</td>
</tr>
<tr>
<td>11</td>
<td>26.3</td>
</tr>
<tr>
<td>13</td>
<td>31.3</td>
</tr>
<tr>
<td>15</td>
<td>40.0</td>
</tr>
<tr>
<td>17</td>
<td>46.3</td>
</tr>
<tr>
<td>19</td>
<td>48.8</td>
</tr>
<tr>
<td>22</td>
<td>52.5</td>
</tr>
<tr>
<td><strong>24</strong></td>
<td><strong>62.5</strong></td>
</tr>
<tr>
<td>28</td>
<td>66.3</td>
</tr>
<tr>
<td>30</td>
<td>72.5</td>
</tr>
<tr>
<td>33</td>
<td>78.8</td>
</tr>
<tr>
<td>36</td>
<td>80.0</td>
</tr>
<tr>
<td>38</td>
<td>82.5</td>
</tr>
<tr>
<td>44</td>
<td>88.8</td>
</tr>
<tr>
<td>50</td>
<td>92.5</td>
</tr>
<tr>
<td>58</td>
<td>96.3</td>
</tr>
<tr>
<td>63</td>
<td>98.8</td>
</tr>
<tr>
<td>67</td>
<td>100</td>
</tr>
</tbody>
</table>
Descriptive statistics for each measure (Good Milieu Index, WHOQOL-BREF, OQ-45.2, and Activity level) are depicted in Table 3 overleaf. The mean score of 15.7 (sd = 4.86) from a potential total score of 25 on the Good Milieu Index suggests service users were generally content with the wards’ atmosphere. This sufficiently conforms to the standard suitable care environment.

T scores on the WHOQOL-BREF suggest service users seemed less content with their social support networks, personal relationships, and environment. Each of these scores was just below cut-off point scores suggesting no significant problems. The study found that all service users spent an average of 44% of their time during those hours (07:15am to 06:15am) doing nothing or sleeping. Overall, service users did not report high levels of psychological distress or physical difficulties. This was corroborated by scores on the OQ-45.2. Service users reported mean scores of 27 (sd = 13.21), 14 (sd = 7.27), and 11 (sd = 5.5) on symptom distress, interpersonal relations, and social role respectively.

Table 4 depicts the negative correlations found between level of distress, QOL, and ward atmosphere. The scores suggest that service users reporting high symptom distress perceived lower levels of physical, psychological, and social well being. Service users reporting distress associated with their interpersonal relations perceived lower levels of psychological, environmental, and social well being. Service users reporting distress associated with their social role perceived lower levels of psychological well being, in addition to their environment. It was also found that service users reporting higher distress with their interpersonal relations were despondent with the ward atmosphere. Although such correlations were found, it cannot be asserted that one variable caused a definite decrease in the other. Other factors may also have influenced service users perceived quality of life.
Table 3: Mean scores for the Good Milieu Index, WHOQOL-BREF, OQ-45.2, and Activity level (standard deviations in parentheses)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Mean scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good Milieu Index (N= 37)</td>
<td>15.7 (4.86)</td>
</tr>
<tr>
<td>WHOQOL-BREF (N= 39)</td>
<td></td>
</tr>
<tr>
<td>Physical</td>
<td>65.9 (16.90)</td>
</tr>
<tr>
<td>Psychological</td>
<td>62.8 (20.62)</td>
</tr>
<tr>
<td>Social</td>
<td>50.0 (20.73)</td>
</tr>
<tr>
<td>Environment</td>
<td>56.3 (17.42)</td>
</tr>
<tr>
<td>OQ-45.2 (N= 35)</td>
<td></td>
</tr>
<tr>
<td>Symptom distress</td>
<td>27.2 (13.21)</td>
</tr>
<tr>
<td>Interpersonal relations</td>
<td>14.3 (7.27)</td>
</tr>
<tr>
<td>Social role</td>
<td>11.0 (5.50)</td>
</tr>
<tr>
<td>Total Score</td>
<td>54.5 (23.3)</td>
</tr>
<tr>
<td>Activity level (N=80)</td>
<td></td>
</tr>
<tr>
<td>No activity</td>
<td>0.44 (0.20)</td>
</tr>
<tr>
<td>Personal</td>
<td>0.06 (0.04)</td>
</tr>
<tr>
<td>Domestic</td>
<td>0.02 (0.03)</td>
</tr>
<tr>
<td>Leisure on own</td>
<td>0.13 (0.09)</td>
</tr>
<tr>
<td>Leisure with others</td>
<td>0.04 (0.03)</td>
</tr>
<tr>
<td>Contact with others</td>
<td>0.10 (0.08)</td>
</tr>
<tr>
<td>Missing data</td>
<td>0.21 (0.14)</td>
</tr>
</tbody>
</table>
Table 4: Correlations between OQ-45.2, WHOQOL-BREF, & Good Milieu Index

<table>
<thead>
<tr>
<th>OQ-45.2</th>
<th>Symptom distress</th>
<th>Interpersonal relations</th>
<th>Social role</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHOQOL-BREF</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>r = -.420</td>
<td>r = -.342</td>
<td>r = -.264</td>
</tr>
<tr>
<td></td>
<td>n = 35</td>
<td>n = 31</td>
<td>n = 33</td>
</tr>
<tr>
<td></td>
<td>p&lt;0.05</td>
<td>p&gt;0.05</td>
<td>p&gt;0.05</td>
</tr>
<tr>
<td>Psychological</td>
<td>r = -.544</td>
<td>r = -.652</td>
<td>r = -.374</td>
</tr>
<tr>
<td></td>
<td>n = 35</td>
<td>n = 31</td>
<td>n = 33</td>
</tr>
<tr>
<td></td>
<td>p&lt;0.01</td>
<td>p&lt;0.01</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td>Social</td>
<td>r = -.444</td>
<td>r = -.821</td>
<td>r = -.353</td>
</tr>
<tr>
<td></td>
<td>n = 35</td>
<td>n = 31</td>
<td>n = 33</td>
</tr>
<tr>
<td></td>
<td>p&lt;0.01</td>
<td>p&lt;0.01</td>
<td>p&gt;0.05</td>
</tr>
<tr>
<td>Environmental</td>
<td>r = -.149</td>
<td>r = -.518</td>
<td>r = -.488</td>
</tr>
<tr>
<td></td>
<td>n = 35</td>
<td>n = 31</td>
<td>n = 28</td>
</tr>
<tr>
<td></td>
<td>p&gt;0.05</td>
<td>p&lt;0.01</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td>Good Milieu</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Index</td>
<td>r = -.245</td>
<td>r = -.439</td>
<td>r = -.281</td>
</tr>
<tr>
<td></td>
<td>n = 33</td>
<td>n = 29</td>
<td>n = 31</td>
</tr>
<tr>
<td></td>
<td>p &gt;0.05</td>
<td>p&lt; 0.05</td>
<td>p &gt;0.05</td>
</tr>
</tbody>
</table>

In order to decipher whether differences between psychological distress, quality of life, and ward atmosphere existed between acute wards and rehabilitation wards independent sampled t-tests were employed. Table 5 overleaf depicts mean scores on each psychometric measure utilised in the study.
Table 5: Mean scores comparing acute and rehabilitation wards (standard deviations in parentheses)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Acute ward</th>
<th>Rehabilitation ward</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHOQOL-BREF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical</td>
<td>67.10 (17.94)</td>
<td>65.29 (16.64)</td>
</tr>
<tr>
<td>Psychological</td>
<td>60.05 (22.13)</td>
<td>64.33 (20.02)</td>
</tr>
<tr>
<td>Social</td>
<td>50.00 (22.17)</td>
<td>50.17 (20.36)</td>
</tr>
<tr>
<td>Environmental</td>
<td>51.52 (16.81)</td>
<td>59.05 (17.48)</td>
</tr>
<tr>
<td>OQ-45.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symptom distress</td>
<td>32.91 (13.23)</td>
<td>24.26 (12.47)</td>
</tr>
<tr>
<td>Interpersonal relations</td>
<td>15.92 (7.79)</td>
<td>13.32 (6.96)</td>
</tr>
<tr>
<td>Social Role</td>
<td>14.0 (6.36)</td>
<td>9.05 (3.91)</td>
</tr>
<tr>
<td>Total OQ-45.2</td>
<td>68.70 (21.26)</td>
<td>46.67 (21.10)</td>
</tr>
<tr>
<td>Good Milieu Index</td>
<td>12.58 (4.76)</td>
<td>17.20 (4.22)</td>
</tr>
</tbody>
</table>

**WHOQOL-BREF**

There were no significant differences between mean ward scores on the WHOQOL-BREF physical, psychological, social, and environmental dimensions.

**OQ-45.2**

There was no statistically significant difference between service users residing upon the acute wards reporting symptom distress compared to service users on rehabilitation wards. A significant difference between mean scores on the social role dimension existed ($t= 2.775$, df= 31, $p= 0.009$, two-tailed). This suggests service users on the acute ward had more difficulties with their roles related to worker, homemaker, or student. There was a significant difference between the mean total scores on this measure ($t= 2.64$, df= 26, $p= 0.014$, two-
tailed). Service users residing upon acute wards were overall more psychologically distressed than service users on rehabilitation wards.

**Good Milieu Index**

A significant difference existed between the mean scores on the Good Milieu Index ($t= -2.98$, $df= 35$, $p= 0.005$, two tailed). Service users residing upon acute (locked) wards reported greater discontent with the ward atmosphere compared to service users on rehabilitation (open) wards.

**Service user activity levels**

Table 6 compares mean activity levels of service users residing upon acute (locked) to those on rehabilitation (open) wards.

<table>
<thead>
<tr>
<th>Activity level</th>
<th>Acute wards</th>
<th>Rehabilitation wards</th>
</tr>
</thead>
<tbody>
<tr>
<td>No activity</td>
<td>0.52 (0.20)</td>
<td>0.40 (0.19)</td>
</tr>
<tr>
<td>Personal</td>
<td>0.06 (0.04)</td>
<td>0.06 (0.05)</td>
</tr>
<tr>
<td>Domestic</td>
<td>0.01 (0.02)</td>
<td>0.02 (0.03)</td>
</tr>
<tr>
<td>Leisure on own</td>
<td>0.07 (0.03)</td>
<td>0.16 (0.98)</td>
</tr>
<tr>
<td>Leisure with others</td>
<td>0.05 (0.04)</td>
<td>0.03 (0.03)</td>
</tr>
<tr>
<td>Contact with others</td>
<td>0.14 (0.08)</td>
<td>0.08 (0.07)</td>
</tr>
<tr>
<td>Missing data</td>
<td>0.15 (0.09)</td>
<td>0.25 (0.13)</td>
</tr>
</tbody>
</table>

There was a significant difference between no activity levels ($t= 2.48$, $df= 78$, $p= 0.016$). Service users on acute wards did much more “no activity” (52%) then service users on
rehabilitation wards (40%). There was also a significant difference between leisure on own activity \( (t= -4.36, \ df= 78, \ p= 0.001) \). Service users on acute wards did less leisure activities on their own (7%) compared to service users on rehabilitation wards (16%).

Finally, a significant difference between contact with others existed \( (t= 3.01, \ df= 78, \ p= 0.03) \). It was found that service users on acute wards had significantly more contact with their psychiatrist and psychologist (14%) compared to service users on rehabilitation wards who had more contact from their occupational therapist, therapy support workers, and key workers (8%). This was calculated by counting the number of observations each time a health care professional contacted a service user, on the observation schedule.

**Discussion**

The standards which this service was compared to were in accordance with best practice for forensic medium secure care, inspecting suitable care environment and relational security standards respectively (Department of Health, 2007). The study found that all service users were not engaging in at least 25 hours of structured activity per week. Only 63% of service users in Clinic at the time did not carry out the minimum standard of 25 hours structured therapeutic activity. Overall, service users reported being moderately content with the ward atmosphere which satisfied the criterion of a suitable care environment. The audit also ascertained that service users reporting psychological distress perceived a poorer quality of life, and lower levels of discontent with the ward atmosphere.

Such outcomes are disappointing, because forensic services are designed to provide a therapeutic environment in which service users can be rehabilitated. It may be hypothesised that service users at the time of the audit, were either too ill or unmotivated to participate in
structured therapeutic activities. This could be supported by the finding that a large cohort of service users (51%) refused to take part in the study.

There were significant differences between service users residing upon acute (locked) wards and rehabilitation (open) wards. Service users on acute wards reported greater symptom distress, and difficulties associated with their social role compared to service users on rehabilitation units. Moreover, service users on acute wards reported greater discontent with the ward atmosphere compared to service users on rehabilitation units. Such results verify previous findings in the literature (Muller et al, 2002).

A number of limitations could have reduced the validity and had an impact upon the results. Firstly, a high number of service users refused to participate in the study. This led to a smaller sample size, which could have increased the chance of sampling errors, and greater threats to internal and external validity.

Although the psychometric measures in this study were highly reliable and valid, they only assessed service users perceived psychological distress and quality of life over the last week (OQ-45.2) and two weeks (WHOQOL-BREF) respectively. When giving their responses service users may have been influenced by their mood or fatigue at the time. In addition, to this, other factors such as medication, external social support networks, and physical health problems, could all have been potential confounders influencing service user’s perceived QOL and psychological distress. Service users were also observed for one week by nursing staff and this may therefore have been unrepresentative of their activity levels within Clinic. In order to overcome such weaknesses, future studies should control for such variables and adopt longitudinal designs as they are more robust.
A possible bias inherent in the study was interviewer bias. Participants were asked about their views regarding ward atmosphere, psychological distress, and quality of life within the medium secure environment. Service users could have under reported their symptoms as a means of progressing within the Clinic and eventual discharge. This flaw could have been overcome by asking service users to complete the study on their own and sending the questionnaires back to the researchers by post in an anonymous manner.

Conversely, service users may have wished to elaborate upon their symptoms and discuss their distress, views about the ward atmosphere, and QOL in greater detail. Use of qualitative techniques could have encapsulated their views more fully.

**Reflections on study**

Prior to interviewing service users I felt slightly anxious because of the index offences they had committed. Furthermore, some members of the nursing staff on one acute ward were initially reluctant to complete the observation sheets, which I thought was inappropriate. I therefore reiterated to the manager and nursing staff the importance of this evaluation as a means of possibly gaining more funding. This seemed to motivate the staff team and I felt that by clearly explaining the rationale of the study enabled them to feel more empowered. Although the study was demanding to carry out I relished the challenge associated with it.

**Recommendations and conclusion**

There are a number of recommendations for service delivery. Firstly, it would seem that the best practice guidance of service users engaging in at least 25 hours of structured therapeutic activity each week is currently not being achieved. Based upon this audit a high proportion of
service users (63%) are doing less than the 25 hours specified by the Department of Health (2007).

Overall, service users seemed relatively content with ward atmosphere thus achieving the standard suitable care environment. However, significant differences existed with regards to ward atmosphere, distress, and therapeutic activity levels. Service users on acute wards expressed greater psychological distress, discontent with ward atmosphere, and did more “no activity” compared to service users on rehabilitation wards. This would imply service users on acute wards could be avoiding others by remaining in their rooms, and require additional support apart from psychiatry and clinical psychology input.

Service users on acute wards could possibly benefit from more structured therapeutic activities comprising of occupational therapy, and access to therapy support workers on wards. These activities could be perceived by the nursing staff on acute wards, as promising treatment programmes which facilitate service users with their rehabilitation. Moreover, such programmes may also reduce potential burnout experienced by nursing staff and in turn minimise their stress levels. Potential barriers towards achieving these goals is the current lack of funding available for service development.

In addition, such therapeutic activities may not only possibly ameliorate service users distress, but also improve the performance of the service relative to the best practice guidance. Research has identified a strong association between patients’ satisfaction with daily activities, level of engagement, and self rated QOL (Kelly et al, 2001; Eklund & Backstrom, 2005). Such interventions could assist service users on acute wards manage their distress with the long-term goal of eventual discharge into the community.
References


Lambert, M.J; Morton, J.J; Hatfield, D; Hamilton, S; Shimokawa, K; Christensen, C; Peal, S; & Burlingame, G.M. (2003). *Administration and Scoring Manual For The OQ-45.2*. Brigham Young University.


Voruganti, L; Helsegrave, R; Awad; A.G; & Seeman, M.V. (1998). Quality of life measurement in schizophrenia: reconciling the quest for subjectivity with the question of reliability. *Psychological Medicine, 28*, 165-172.


Case Study

CPR 4

A cognitive-behavioural formulation and intervention of an 11 year old girl presenting with post-traumatic stress disorder (PTSD) symptoms
Abstract

Kate, an 11-year-old girl was referred to the child and adolescent mental health (CAMHS) psychology service for treatment of post-traumatic stress disorder (PTSD) symptoms. These difficulties comprised of intrusive images, hyper vigilance to loud noises, and nightmares. Kate requested psychological treatment in order to manage these problems and improve her quality of life.

This report includes a description of the initial referral followed by an overview of the background information pertinent to the case. Assessments employed in the study consisted of interviews and questionnaires. A formulation of Kate’s PTSD is described by drawing upon a cognitive model (Ehlers & Clark, 2000). This model provides a theoretical framework which describes the development and maintenance of her PTSD symptoms respectively. This is followed by details of the intervention implemented which were six cognitive-behavioural therapy sessions.

The efficacy of treatment is addressed by comparing pre and post measures and Kate’s feedback during the end of treatment. Reflections are then highlighted which include thoughts and feelings the clinical psychologist in training had in relation to the case. Finally, a critical appraisal was carried out which discuss limitations and ways of improving the study.

* Note: Names and other identifying material have been changed to maintain anonymity and confidentiality
**Background to the case**

**Referral**
Kate is an 11-year-old girl who was referred by her GP to the child and adolescent mental health psychology service (CAMHS) for the treatment of her post traumatic stress disorder (PTSD) symptoms. The referral stated that Kate was experiencing a constellation of difficulties. These comprised of intrusive images, hyper vigilance to loud noises, and nightmares.

**Presentation**
Kate was seen by the clinical psychologist in training for three assessment sessions. This consisted of two clinical interviews with Kate and her mother (Melinda) and one session with Kate. During the sessions Kate presented as a tall, slim, well-dressed, and articulate girl who initially spoke only when asked questions by her mother and the clinical psychologist in training in the first two sessions. She seemed to concentrate in each session and did not appear to get overtly distracted.

Developing a therapeutic rapport with Kate was at first difficult as she did not converse spontaneously in the first two assessment sessions. In the individual assessment and subsequent intervention sessions with the clinical psychologist in training Kate seemed to be more at ease, and disclosed her psychological difficulties in greater detail and how they were impacting upon her life.
Background Context

Both Kate and Melinda stated that the antecedent to Kate’s distress was an incident which occurred in January 2008 during the Christmas holiday. Melinda stated that their next door neighbour (David) was walking into his back garden, and heard her husband Jim placing their cat through the flap of the back door. The noise this created was interpreted by David as excessive and he began to verbally insult Jim about the intensity of the sound. Jim retaliated by shouting back at him which led to David sprinting into his house and obtaining a hammer and knife.

David then climbed over their fence and pursued Jim into his house with the weapons simultaneously shouting “I am going to kill you”. Also present in the home was Jim’s mother (Alice), sister (Louise), Kate, Louise’s daughter (Cara aged 6), and son (Ben aged 1). Kate said that she was in the corridor and remembered David screaming “I warned you about the noise” as he entered their house by breaking the glass of the door using a hammer. Jim and Kate ran into the lounge where the rest of the family were and barricaded the door with a sofa. Kate stated that she recalled seeing David’s face momentarily and also remembered him shouting from outside the lounge door “I am not going to hurt you kids”.

Jim then called Melinda at work and informed her what was happening and she advised calling the police without delay. Alice then contacted the police and they arrived approximately ten minutes later. They arrested David and took him away to the station for questioning. Jim, his mother, and sister were later asked for their statements regarding the ordeal. David underwent a mental health evaluation and was subsequently diagnosed with paranoid schizophrenia by the psychiatrist. He was then admitted to an in-patient unit for treatment in relation to his paranoia.
In the second assessment session, Melinda mentioned that Jim had received limited treatment for the incident from a primary care counsellor. Melinda added that Jim had not found the counselling beneficial and felt “humiliated” for failing to protect his family from David. Melinda also added that her husband had become more wary of people and that his confidence had plummeted since the incident.

In this session, Melinda also described meeting her neighbour David’s mother prior to the court case who conveyed the impression that her son had been acting in an extremely peculiar fashion before the attack. David would state that the “radiators were making noises” and were “talking about him”, Moreover, he could become extremely angry and shouted at her frequently. Although David’s mother tried to convince him that he required professional help for his outbursts he denied having any mental health difficulties.

Melinda was unable to divulge any further information as they rarely saw David or his mother up until the incident. The court case occurred in May 2008 and it was adjudicated that David was unfit to plead. The judge mentioned that his sentence would be indefinite until his mental health problems had been fully resolved. This was to ensure that he did not pose a risk to the general public again.

**Current Presenting Difficulties**

In the first session, Melinda stated that Kate became extremely scared when she heard loud noises such as men shouting and doors banging. It was mentioned that she would then “cling” to either her or Mr White (Jim). Kate stated experiencing flashbacks of the traumatic event only at night-time which had reduced to a few occasions each week since the incident.
These flashbacks occurred when she was alone lying on her bed and thinking about the incident. Kate reported seeing images of the neighbour’s face, him smashing the glass of the front door, and remembered his shouting. Kate said that she would sometimes seek reassurance from her parents and stayed in their room, until she felt less scared. However, this behaviour had decreased over the last few weeks.

Kate also said that she sometimes had nightmares about the trauma, and would become extremely anxious when she currently heard men shouting (for example her neighbours arguing) and people banging doors loudly. Kate mentioned coping with the images by trying not to think about them and avoiding anxiety provoking situations. Kate stated that she thought that the “neighbour would get her again” if she was in situations where the doors were banged loudly and men were shouting.

**Recent episode**

Kate reported the last time she experienced PTSD symptoms had been one week ago. She stated having images of the trauma when she saw a bin man in the morning before going to school who resembled the individual who attacked her family. Kate began to have flashbacks of the incident and felt extremely sick. She then went to seek her parents for reassurance. Melinda said that Kate looked extremely pale and was concerned that she may have “passed out” and said to her “everything was all right” and that the “man was locked up so could not get her”.

This anxiety attack lasted for approximately 10 minutes. Melinda explained to the clinical psychologist in training her concern that such an incident could have profound negative consequences upon Kate’s mental well being. When asked what Kate wished from treatment
she said she wanted to feel less scared by these symptoms and in turn possibly become more confident.

**Family Background**
Kate currently lives with her mother Melinda (45) who works as a full-time administrator and father Jim (48) who works as a factory foreman on a shift rota. Kate also has two older brothers (Mark) and (Chris) who are 22 and 20 years old respectively and live independently. Kate said that she was fond of both brothers but was particularly close to Chris as he visited regularly.

**Current situation**
Kate attends school during the weekdays from 9.00am to 3.15pm and is collected by her grandfather at home time. She then stays with her grandparents until Melinda comes to collect her from work. Kate also attends two karate classes each week.

**Childhood and Developmental History**
Melinda said that Kate’s birth was fine and that there were no complications during the pregnancy. She achieved all the usual milestones saying her first word at the age of eight months old and was walking at 10 months old. As a child, Kate was described by Melinda as “shy”, “clingy”, and “unconfident”. Although Kate attended nursery she was reticent and tended to play on her own. When asked by the clinical psychologist in training about her possible lack of confidence as a child, Kate vehemently denied having any such problems.
**Schooling**

Melinda said that due to Kate’s lack of confidence she enrolled her in a karate class at the age of six. Due to this, Kate became more self-assured and outgoing which Melinda felt helped towards her becoming a popular and more confident pupil at primary school. Melinda disclosed that Kate was in top sets for all subjects, received excellent school reports, and was particularly good at mathematics. Kate mentioned that she was keen to become an accountant because of her aptitude with numbers.

**Assessment**

Post-traumatic stress disorder (PTSD) comprises various symptoms which include intrusive thoughts, feelings, and images about the trauma. Moreover, the individual may avoid ruminating about the trauma and experience an inordinate level of arousal (Foy, 1992).

For a formal diagnosis of PTSD a number of criteria related to DSM-IV classification must be fulfilled. Firstly, the person has been exposed to a traumatic event which entailed actual or threatened death or serious injury, and their response involved fear, helplessness, or horror (criterion A). The traumatic event is re-experienced by recurrent and intrusive recollections of the event, upsetting dreams, and an array of physiological symptoms (criterion B).

Other features include avoiding unpleasant thoughts and feelings associated with the trauma, (criterion C) and persistent difficulties such as sleep problems, hyper vigilance, and an exaggerated startle response (criterion D). The duration of disturbance (symptoms in criteria B, C, and D) should also be longer then one month (criterion E). If the trauma persists for less then three months it is defined as an acute trauma but if it continues for longer this is considered a chronic trauma (APA, 1994).
Clinical Interviews

From the clinical interviews conducted with Kate and Melinda it seemed evident that she was experiencing symptoms analogous to PTSD, due to the violent incident that occurred in January 2008. This included experiencing flashbacks and intrusive images, anxiety, hyper vigilance to stimuli (e.g. loud noises), exaggerated startle response, and drawing upon coping strategies such as physical and mental avoidance to manage such symptoms.

From the exposure session with Kate she also described a number of cognitions she had in relation to the threat the neighbour posed. Such hot thoughts entailed that the neighbour was going to “Kill her”, She would die”, and “He would get her” (Appendix 7).

Standardised Measures

In order to assess the impact of the trauma upon Kate’s psychological well being a battery of standardised measures were administered in session three. These assessments are commonly utilised in the psychological assessment and treatment of children and adolescents who have experienced a traumatic event. Each assessment is delineated in greater detail below.

1. The Children’s Impact of Events Scale (CIES)

The CIES is a 8-item questionnaire (Appendix 14) which examines reactions to single acute stressors and chronic stressful situations over the last seven days (Dyregrov, Kuterovac, & Barach, 1996). The CIES comprises 2 subscales which assess intrusive (4 items) and avoidance symptoms (4 items). Children are asked to rate the frequency of symptoms they experienced during the past week (not at all = 0, rarely = 1, sometimes = 2, and often = 3). A score of 17 or above signifies the child has symptoms indicative of PTSD. Scores of 8.11
(intrusion subscale) and 9.30 (avoidance subscale) or above signifies the child is finding it difficult to deal with the trauma.

The short form correlates very highly with the 15-item version from which it was derived in adolescents following an acute trauma (CIES-15, r = 0.76; CIES-8, r = 0.70). The CIES has also been shown to have strong convergent validity with other measures such as the Childhood Trauma Screening Questionnaire (Perrin et al, 2005).

Kate’s total score on this measure before treatment was 30 which indicated she had profound PTSD symptoms. Kate’s score on the intrusion sub-scale was 12 which was above the mean cut-off point of 8.11 (t= 5.48). This suggested that Kate experienced intrusions about the incident. Kate’s score on the avoidance sub-scale was 18 which was above the mean cut-off point of 9.30. This would imply that Kate strongly avoided trying not to think about the traumatic event before treatment.

Studies have also highlighted children with PTSD may also experience other co-morbid psychological difficulties. This includes depression, (Brent et al, 1995), substance abuse, (Clark et al, 1995), and other anxiety disorders such as separation anxiety or agoraphobia (Yule & Udwin, 1991). Therefore the clinical psychologist in training also administered the SCAS and the CDI-S.

2. The Spence Children’s Anxiety Scale (SCAS)

The SCAS consists of 38 anxiety items, six filler items, and one open ended question, non-scored item which provides an overall measure of anxiety (Spence, 1997). Scores on six sub-scales tap into a specific aspect of child anxiety. The child is asked to rate on a four-point
scale how often each of the items happens to them (never = 0, sometimes = 1, often = 2, and always = 3). This yields a maximum score of 114.

The six sub-scale scores comprise of Panic attack and agoraphobia, Separation anxiety, Physical injury fears, Social phobia, Obsessive compulsive, and Generalised anxiety disorder/Overanxious disorder. A total score of 42 or above indicates the child is clinically anxious. The measure has shown to be highly reliable and valid to use in clinical settings (e.g. Muris, Schmidt, & Merckelbach, 2000; Essau, Muris, & Ederer, 2002).

Kate’s total score on this measure before treatment was 44 indicating that she was clinically anxious. Kate also had significant elevations on the following sub-scales:

- Generalised anxiety disorder scale: Kate scored 11 which was above the mean score of 6.96 (sd= 3.73).
- Anxiety in relation to physical injury: Kate scored 9 which was above the mean score of 4.12 (sd= 2.82) (Appendix 15).

3. Child Depression Inventory Short (CDI-S)

The CDI-S is a 10-item self-rated symptom orientated scale suitable for assessing depression over the last two weeks in school aged youngsters and adolescents (Kovacs, 1983). The instrument quantifies a range of depressive symptoms and has available normative information. Participants score the presence of depressive symptoms on a scale of zero to two with higher scores indicating more depressive symptoms. The scale has good test-retest reliability and concurrent validity. Internal consistency coefficients are excellent. The CDI-S has also been used in other research involving children who have PTSD symptoms (Winston
et al, 2003). Kate’s total score on the CDI-S before treatment was one which equated to a T-score of 44 (8th percentile). This indicated Kate was not clinically depressed (Appendix 16). The results of these assessments were fed back to Kate and Melinda.

**Formulation**

Psychological models which elucidate the development and maintenance of PTSD in children still remain elusive (Meiser-Stedman, 2002). Pynoos et al (1987) developed an initial model which postulated that a child’s reaction to a trauma was moderated by four factors. These were proximal trauma reminders (external or internal cues), proximal secondary stresses (changes to family circumstances), the child’s environment, and factors intrinsic to the child (e.g. genetic predisposition to anxiety).

Researchers have also begun to investigate PTSD in children with the view of depicting salient factors associated with its prevalence, aetiology, co-morbidity with other psychological conditions, and treatment protocols (Foa, Keane, & Friedman, 2000). The British national survey of mental health which comprised of 10,000 children and adolescents reported only 0.4% of 11-15 year olds were diagnosed with PTSD, with girls being twice as likely having PTSD compared to boys (Meltzer et al 2002, cited in Dyregrov & Yule, 2006).

Foy et al (1996) reviewed empirical papers examining the risk factors involved in the development of PTSD in children. The types of trauma included witnessing community violence, accidents or natural disasters, or being subjected to trauma associated with physical or sexual abuse. Results indicated variables such as being female, severity of the trauma, and parental trauma-related distress were all influential factors in the development of PTSD. The authors cited several flaws which may have impacted upon the conclusions reached. These
included small numbers of children assessed, unrepresentative samples, and the absence of control groups.

In the adult literature, one model which has had a recent impact upon understanding PTSD in greater depth is Ehlers & Clark’s cognitive model (2000). This model takes into account several background factors which are considered neither necessary nor sufficient in the development of persistent PTSD.

Development of PTSD

The development of PTSD includes characteristics of trauma such as duration and predictability. In addition to this, other factors such as previous experience of trauma, coping strategies utilised in the past, and prior negative beliefs about themselves, are all considered as factors pertinent in the development of PTSD.

During the trauma itself, the model suggests that two cognitive processes lead to a sense of current threat in PTSD. The first is mental defeat which refers to people interpreting the trauma as evidence for a negative view of themselves, that they are not worthy, and are indelibly damaged. Another aspect is the individual’s memory of the event which is influenced by their thinking at the time. Trauma victims who describe their thinking was clear at the time compared to people who were confused and overwhelmed by the event report persistent PTSD symptoms. This is because the memory of the event has not been processed fully within their autobiographical memory resulting in intrusive images and the physiological response of anxiety experienced.
As a result of such traumatic memories, a variety of idiosyncratic negative appraisals can generate a sense of current threat and contribute to persistent PTSD. Symptoms such as emotional numbing and flashbacks can lead to negative appraisals such as “I’m dead inside” or “I’ll never get over this” respectively. People with PTSD may also appraise how other people interpret them after the traumatic event and the consequences of the trauma. Such beliefs may comprise of “They think I am too weak to cope on my own” and “My body is ruined”.

**Maintenance of PTSD**

The maintenance of PTSD symptoms suggests that triggers which remind the person of the trauma can serve as a catalyst towards the involuntary thoughts about the trauma, flashbacks, and nightmares. These triggers tend to be sensory in nature and can comprise of visual images, olfactory, and auditory stimuli (e.g. smells and noise).

This leads to the individual drawing upon various maladaptive coping strategies to deal with the trauma. This includes thought suppression whereby the individual tries hard to push thoughts about the trauma out of their mind, thus increasing the frequency of unwanted intrusive recollection. In addition to this, behavioural strategies which prevent a change in the appraisal of the trauma are utilised and referred to as safety behaviours (Salkovskis, 1996). Other strategies adopted include trying not to think about the event and avoiding situations which remind the person of the traumatic event.
Development of Kate’s PTSD

Although Ehlers & Clark (2000) model was validated in mainly adult clinical populations, it has also been tentatively applied towards understanding the development, maintenance, and treatment of PTSD in children and adolescents (Vickers, 2005). Therefore, this model will be utilised when explaining the development and maintenance of Kate’s PTSD.

It could be hypothesised based upon Melinda’s interview that Kate was apparently a shy and clingy young girl who could become anxious when apart from her parents. It was also reported that Kate enjoyed playing on her own accord. Such prior experiences may suggest that Kate had an early predisposition in childhood towards encountering situations (e.g. meeting new people) whom she was unfamiliar with as anxiety provoking.

The incident involving the neighbour which occurred in January could have been interpreted by Kate as unpredictable and dangerous. This is because Kate did not expect the neighbour to attack her family. During the incident Kate may also have cognitively processed the following thoughts, “Why is this happening to me” and “What does it mean for the future” during the trauma incident which lasted for 10 minutes.

Maintenance of Kate’s PTSD

As Kate’s problems revolved around the traumatic incident which occurred in January 2008, the maintenance of her PTSD symptoms will be explained by drawing upon Ehlers and Clark’s cognitive model (2000, cited in Vicker’s 2005).
In the first stage, Kate holds a stored memory of the traumatic event involving the next door neighbour. This is a fragmented memory and possibly poorly organised within her autobiographical memory. Kate then experiences flashbacks of seeing the man’s face and him coming through the door with weapons. She also recalls the neighbour’s shouting when in the lounge with her family and him banging on the door saying “I am not going to get you kids”. This is remembered in a very vivid and emotional fashion and experienced as if they are occurring in the present rather than the past.

The matching triggers to such flashbacks include being alone in her room at night ruminating about the event and when she sees men who resemble the attacker (e.g. bin man). This is appraised in a negative fashion by Kate who thinks that the neighbour will again “harm her” “get her”, and “kill her”. Such “hot” thoughts lead to physiological feelings of sickness and the emotion of anxiety experienced.

Kate then utilises various maladaptive coping strategies. The first one is a cognitive strategy called thought suppression by which Kate tries hard not to think about the intrusions, but as a result the images keep returning intermittently. This is because Kate believes that by pushing them out of her mind will stop them coming back. She also uses behavioural strategies and avoids anxiety provoking situations due to her assumptions about what may happen. In addition to this, she will sometimes seek reassurance from her parents (safety behaviour) and avoids situations which remind her of the event (avoidance). The development of Kate’s PTSD is depicted in Figure 1 and the maintenance in Figure 2 overleaf.
Prior experiences

Shy and clingy as an infant
Unconfident as a young child
Anxious when away from parents

Cognitive processing during trauma

“Why has this happened to me”
“What does it mean for the future”

Nature of trauma memory

Trauma memory in relation to the attack by the next-door neighbour

Figure 1. Development of Kate’s PTSD (Ehlers & Clark, 2000 cited in Vickers, 2005)
Matching triggers
Men resembling the attacker (e.g. bin man)
Ruminating about attack at night-time

Current threat
Intrusions
Thoughts about trauma
Flashbacks
Nightmares

Negative appraisals
“He is going to get me”
“He will harm me”
“I will die”

Emotions
Anxiety
Fear
Stress

Cognitive/behavioural strategies intended to control threat/symptoms

Thought suppression (Trying not to think about the event)
Seeking reassurance from parents (safety behaviour)
Avoiding situations which precipitate feelings of anxiety e.g. men shouting and doors banging

Figure 2. Maintenance of Kate’s PTSD (Ehlers & Clark, 2000 cited in Vickers, 2005)
Intervention

There appears to be a paucity of research examining effective psychological interventions for treating children with PTSD (Ruggiero, Morris, & Scotti, 2001). Therapies which have been employed to alleviate the distress associated with PTSD encompass play therapy, psychodynamic treatments, eye movement desensitisation reprocessing (EMDR) and family therapy in adult clinical populations (Foa, Keane, & Friedman, 2000).

Cognitive-behavioural therapy (CBT) has been shown to reduce emotional symptoms such as depression and general anxiety difficulties in children with PTSD, who were exposed to natural disasters (Goenjian et al, 1997) or sexually abused (Deblinger, Steer, & Lippmann, 1999). Strengths of both these studies included usage of longitudinal designs, assessments possessing high reliability and validity levels, and control groups. Indeed, the National Institute for Clinical Excellence (NICE) guidelines (2005) stipulates CBT being the most effective psychological therapy to treat PTSD, with sessions lasting between eight to 12 sessions because of its stronger evidence base compared to other treatments.

This intervention advocates the use of various techniques. The first part involves the person discussing the traumatic event in detail (exposure) and identifying anxiety related cognitions and feelings associated with the trauma. The second part comprises restructuring cognitions which centre upon the perceived threat associated with the trauma. The final part of treatment, if required, is the use of behavioural experiments so that the person has the opportunity to test their alternative beliefs in real life scenarios (Bennett-Levy et al, 2004; Stallard, 2005).
Kate’s goals of treatment were to be able to cope with the PTSD symptoms she was experiencing and feel less anxious. Kate was therefore seen by the clinical psychologist in training with the view of alleviating her distress associated with the PTSD.

In the fourth session, the clinical psychologist in training socialised Kate to the cognitive-behavioural model. Kate understood how her thoughts could affect her feelings and behaviour. A formulation of her difficulties was also described to Kate and Melinda. The clinical psychologist in training stated that the trauma memory consisted of various images and that by looking at each image in sequence would help Kate process the memory fully. After this was completed it would be easier to put the memory away and forget about.

During this session, the clinical psychologist in training suggested that exposure treatment could be useful in order to carry out this work. The clinical psychologist in training also mentioned to Kate and Melinda that this approach had been helpful to other children who in the past had experienced similar difficulties. Kate stated that she understood why this approach could be beneficial by looking at the formulation with the clinical psychologist in training together.

After taking a booklet on CBT treatment and PTSD to read Kate also felt that this approach could help her with her difficulties. The clinical psychologist in training ascertained the necessary consent from Kate and Melinda when taping psychotherapy sessions.

Session five involved Kate describing the trauma in greater detail and the anxiety associated with it. This was tape recorded to identify possible cognitions (see formulation) from the
exposure session which currently maintained her sense of ongoing threat. The clinical psychologist in training also transcribed this session (See Appendix 20).

Sessions six and seven involved restructuring the cognitions identified by Kate in the exposure session with the clinical psychologist in training. Kate was able to find more evidence against her current catastrophic thoughts and came up with alternative thoughts to draw upon. For homework she would practise these self coping strategies before going to bed. Such self coping strategies included “The man cannot get me I am safe”, “I will not die as he is not around anymore”, and “It was unlucky what happened to me and I can forget it happened now”.

Sessions eight and nine involved devising two behavioural experiments with Kate which would enable her to test and practise her alternative thoughts. The prominent assumption which Kate identified was that the man would “get her again”. This could occur in two situations including people banging on doors and men who shouted. In each scenario she would become worried and looked for reassurance from her parents (Appendix 21 and 22).

As Kate would seek the reassurance of her parents Melinda was advised to slowly move away after she had confidently practised each behavioural experiment. This was to ensure that Kate dropped this safety behaviour. Sessions 10 & 11 reviewed treatment and the same assessments were administered to Kate in the final session (See Appendix 17, 18, and 19).

**Outcome Evaluation**

Kate’s scores on the SCAS, CIES, CDI-S, before and after therapy are depicted in Table 1 and graphically in Figure 3.
Table 1: Scores in pre and post stages of CBT intervention

<table>
<thead>
<tr>
<th>Measure</th>
<th>Pre score</th>
<th>Post score</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCAS</td>
<td>44</td>
<td>25</td>
</tr>
<tr>
<td>Sub-scale: Generalised anxiety disorder (SCAS)</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>Sub-scale: Anxiety to physical injury (SCAS)</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>CIES</td>
<td>30</td>
<td>10</td>
</tr>
<tr>
<td>CDI-S</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
Figure 3. Column chart showing Kate's pre and post scores on each measure
Discussion

Kate was seen by the clinical psychologist in training for 11 sessions. The first three sessions were assessment sessions, followed by six sessions of CBT, and the final two sessions reviewed treatment. The CBT intervention indicated an overall decrease in Kate’s anxiety level. There were also reductions in the two sub-scale scores generalised anxiety and anxiety in relation to physical injury. In addition to this, there was also a decrease in the Children’s Impact of Events Scale scores suggesting Kate experienced less intrusions and avoidance associated with the trauma after therapy.

One of the strengths of this case study is that a number of assessments with strong psychometric properties were utilised to formulate Kate’s PTSD e.g. CIES and CDI. This was in conjunction with Kate’s self report from clinical interviews. The case study also substantiates the efficacy of CBT when working with children who have been exposed to a single traumatic episode. Indeed, from Kate’s self report she stated finding talking about the trauma helpful, experienced less flashbacks, anxiety, and felt more confident.

There are however certain flaws with regards to the assessment and formulation. During the assessment stages of therapy Kate could have felt anxious when being interviewed by the clinical psychologist in training. This may have impacted on her pre therapy and post therapy scores. To overcome this drawback, it could have been beneficial for Kate to complete the questionnaires at home on her own instead of in clinic. This could have strengthened the reliability and validity of the scores on each measure thus reducing potential acquiescence bias.
The information for the development of the Kate’s PTSD came from Mrs White and was not substantiated by Kate’s self report. In addition to this, the model suggests other aspects such as previous trauma and low intellectual ability can be influential in the development of PTSD. However, from Kate and Mrs White’s interviews there was no evidence that Kate had experienced such factors in her life. Therefore, this part of the formulation remains more speculative compared to the maintenance element of the model.

Finally, the cognitive-behavioural formulation does not consider systemic factors and addresses Kate’s difficulties at an intrapersonal level only. Other people who were also involved in the incident included Mr White. There may have been some scope to have worked therapeutically with both Mr White and Kate together, in relation to the trauma. Although, there is currently a limited evidence base compared to CBT, some research suggests family therapy can also be an effective intervention when treating PTSD symptoms in children and their families (Ochberg, 1988).

The behavioural experiments seemed to be effective as although Kate’s safety behaviour was to seek reassurance from her parents she practised these experiments regularly between sessions. Indeed, from Melinda and Kate’s report they stated that Kate would remain in such situations without the need to seek reassurance and could now manage her anxiety in these situations.

**Reflections on case**

As Kate’s therapist I was concerned that the exposure treatment would exacerbate her PTSD symptoms, and in fact make her feel much worse. This worry was perceived by my supervisor during supervision who informed me that children were resilient. Having never
worked with young children or adolescents within a clinical capacity, I was impressed with Kate’s bravery in treatment. As treatment progressed, I became much more confident and my thoughts that Kate would get worse began to dispel.

On reflection, it may also have been useful for Mr White to attend the assessment sessions for various reasons. Firstly, as it was reported that they shared a good relationship Kate may have felt less anxious during the first two sessions. Mr White could also have provided more information about Kate and as he was involved in the incident given his perspective of the experience and how Kate managed during the traumatic incident.

**Conclusion**

A case study can be considered as a thorough psychological enquiry which draws upon assessments in order to test hypotheses, regarding formulation and intervention within the context of clinical practice (Gomm, Hammersley, & Foster, 2000). In this case study, the clinical psychologist in training drew upon various psychometric measures and interviews when constructing Kate’s formulation and intervention. Based upon the positive outcomes of Kate’s treatment CBT seems to be particularly effective when treating single trauma episodes in children. This finding endorses NICE guidelines (2005) thus adding to the growing evidence base in this area.
References


Case Study

CPR 5

A cognitive-behavioural formulation and intervention of a 71-year old man presenting with a major depressive episode
Abstract

Patrick, a 71-year old man was referred for the treatment of his depressive difficulties. Thought diaries, weekly activity schedules, questionnaires, and clinical interviews were drawn upon in constructing a cognitive-behavioural formulation. Based upon Patrick’s self-report in clinical interviews and thought diaries he stated being a “terrible father”, “failure in life”, and “loser”. From his childhood history, Patrick said that he would be regularly punished by being caned for making mistakes at school.

This early experience led to the core belief that Patrick perceived himself as a failure. This was further verified when he was asked by the clinical psychologist in training to explain the meaning associated with such negative automatic thoughts using a Socratic questioning technique. Patrick mentioned that if he was not a good father, employee, husband, or brother then he was a failure (dysfunctional assumptions). He also disclosed being worthless if such assumptions were not met most of the time.

Patrick also stated having a number of physical health difficulties, including Type 2 diabetes, arthritis in his hands and legs, and cardiac problems. Such factors were considered imperative within the formulation as they dictated what Patrick could do without exacerbating his physical health symptoms.

Patrick mentioned growing up with his “tough uncles” in Ireland and felt talking about such weaknesses at times made him even more “worthless”. Such a cohort belief of “men being tough” may have implied that Patrick was possibly embarrassed to see a male therapist. This however did not seem be the case in our therapeutic work together.
In addition to this, Patrick’s role investment of being a “successful” father and employee implied he had regrets about not completing this adequately. Patrick stated retiring early due to his physical health problems which had led to a sense of no longer being effective anymore. This may have fed into his core belief about being a failure (Laidlaw et al, 2003). Treatment comprised of behavioural activity scheduling and cognitive restructuring. CBT can be an effective intervention in treating depression in older adults with co-morbid physical health problems (NICE, 2009).

References


Appendices: CPR 1

Hospital Anxiety Depression Scale

Social Interaction Scale
Appendix 1

Hospital Anxiety Depression Scale
Appendix 2

Social Interaction Scale
Appendices: CPR 2

Functional Analysis Interview Form

Motivational Assessment Scale

Scatter Plot Chart

Behaviour modification programme
Appendix 3

Functional Analysis Interview Form (O’Neill et al, 1987)
Appendix 4

Motivational Assessment Scale (Durand & Crimmins, 1992)
**Appendix 5: Scatter plot chart**

The **scatter plot chart** is a simple tally chart in which a line is placed in the column next to the date, day, and time when the screaming behaviour occurs. Please complete this each time Lucy screams for the next fortnight.

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Time</th>
<th>Number of times screaming occurred</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>7am to 8am</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>8am to 9am</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>9am to 10am</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10am to 11am</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>11am to 12 pm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>12pm to 1pm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1pm to 2 pm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2pm to 3pm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3pm to 4pm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4pm to 5pm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5pm to 6pm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6pm to 7pm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>7pm to 8pm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>9pm to 10pm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10pm to 11pm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>11 pm to 12am</td>
<td></td>
</tr>
</tbody>
</table>

---

132
Appendix 6: Behaviour Modification Programme

From the information we have received it would seem that Lucy’s screaming serves to gain an interaction which she finds highly rewarding (positive reinforcement). This behaviour is long-standing and will take time to treat due to the rewarding nature of the positive interaction.

In this situation certain behavioural strategies will not work, these include:

1. Extinction (ignoring the screaming as this will cause an increase in Lucy’s screaming due to previous positive reinforcement).

2. Time outs (By trying to place Lucy in a different place where she cannot receive any form of reinforcement may in fact be aversive because Lucy may not understand why this has happened and will scream due to being anxious).

3. Giving Lucy consequences will not work as she may not understand this and scream due to feeling anxious.

What has shown to decrease the screaming has been this interaction. It is however impossible to attend to Lucy all the time therefore the strategies we adopt must concentrate on decreasing her level of anxiety when she is alone. The times when she does have frequent screaming episodes is from 10am to 12pm and 4pm to 5pm. Therefore following this programme consistently during Lucy’s summer holiday may help to reduce her outbursts.

This behaviour programme is called **Fading** and works by fading out the positive interaction.

1. The first stage is to give Lucy a choice of activities she enjoys such as making beads, painting, drawing, or playing with toy bricks at 10.00am. This should be for about 10 minutes.

2. Once the 10 minutes have ended begin to move away from her as she begins to play on her own. If Lucy screams move towards her but if not continue to move away from her.

3. At 4.00pm Lucy may watch CBBC or listen to her nursery rhymes. Again stay in the same room for about 10 minutes and walk away from her slowly, if she starts to scream approach her. Then again begin to move away from her slowly as she occupies herself. This process of fading out will hopefully minimise Lucy’s screaming as she becomes less anxious without the need for extended periods of interaction.
Appendices: CPR 3

Patient information sheet

Consent form

Demographic questionnaire

Good Mileux Index

WHOQOL-BREF

OQ-45.2

Activity level schedule
Appendix 7

Patient information sheet
Appendix 8

Consent form
Appendix 9

Demographic questionnaire
Appendix 10

Good Mileux Index

(Friis, 1986a)
Appendix 11

WHOQOL-BREF

(Skevington et al, 2004)
Appendix 12

OQ-45.2

(Lambert et al, 2003)
Appendix 13

Activity level schedule
Appendices: CPR 4

Children’s Impact of Events Scale (CIES)

Spence Children’s Anxiety Scale (SCAS)

Child Depression Inventory Short (CDI-S)

Children’s Impact of Events Scale (CIES)

Spence Children’s Anxiety Scale (SCAS)

Child Depression Inventory Short (CDI-S)

Transcript of exposure session with therapist

Behavioural experiment: Dad banging doors

Behavioural experiment: Men who shout
Pre therapy assessments

Appendix 14

Children’s Impact of Event Scale (CIES)
Appendix 15

Spence Children’s Anxiety Scale

(SCAS)
Appendix 16

Child Depression Inventory Short

(CDI-S)
Post-therapy assessments

Appendix 17

Children’s Impact of Events Scale

(CIES)
Appendix 18

Spence Children’s Anxiety Scale

(SCAS)
Appendix 19

Child Depression Inventory Short

(CDI-S)
Appendix 20

Transcript of exposure session
Appendix 21

Behavioural experiment

Dad banging doors
Appendix 22

Behavioural experiment

Men who shout