

**The Childhood
Experiences of People
With Psychosis**

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Table of Contents

Table of Tables	3
Abstract	4
Acknowledgements	6
Chapter One – Introduction	7
1.0 Schizophrenia and Expressed Emotion	9
1.1 Life Events and People with Psychosis	13
1.2 Childhood Experiences and Psychiatric Disorders	18
1.3 Post Traumatic Stress Disorder and Psychosis	21
1.4 Dissociation, Trauma and Borderline Personality Disorder	25
1.5 Childhood Experiences in Psychosis	30
1.6 Psychological Approaches to the Symptoms of Psychosis	34
1.7 Psychotic symptoms as a defence against adverse childhood experiences	44
1.8 Summary	45
1.9 Research Questions	45
Chapter Two – Method	46
Overview	46
2.1 Design	46
2.2 Participants	47
2.3 Measures	52
2.4 Procedure	57

Chapter Three – Results	60
3.1 Research Question One	60
3.2 Research Question Two	77
Chapter Four – Discussion	82
Overview	82
4.1 Summary of Research Findings	82
4.2 Interpretation of the Findings	89
4.3 Methodological Issues	100
4.4 Implications of the Findings and Suggestions for Further Research	114
4.5 Summary	122
References	123
Table of Appendices	140

Table of Tables

Table 1	Ethnic background of psychotic participants	51
Table 2	Ethnic background of arthritic participants	51
Table 3	Depression ratings for psychotic and arthritic participants	62
Table 4	Correlation between depression scores and CECA-Q sub-scale scores	62
Table 5	Length of time for which drugs were taken	64
Table 6	Frequency of drug use	64
Table 7	Category of drug use between groups	64
Table 8	Chi-square analysis of the effects of drug use on CECA-Q scores	66
Table 9	Confiding relationships for psychotic and arthritic participants	66
Table 10	Difference in indifference and antipathy between groups	69
Table 11	Ratings for indifference and antipathy	69
Table 12	Differences in indifference from parents between groups	72
Table 13	Differences in antipathy from parents between groups	72
Table 14	Comparisons between psychotic and arthritic participants in lack of indifference and antipathy	72
Table 15	Physical and sexual abuse in psychotic and arthritic participants	75
Table 16	Comparison of scores on CECA-Q sub-scales between diagnoses	79
Table 17	Mean scores for O-LIFE sub-scales	

Abstract

Previous research has shown that adverse childhood experiences such as sexual and physical abuse are more common in people with psychiatric disorders such as depression than in the normal population. Very few studies have looked at the prevalence of child abuse in the psychotic population, but the small number of studies in this area appear to indicate a high prevalence of childhood sexual and physical abuse within this group. However these studies have not used a control group. Furthermore recent psychological approaches to the symptoms of psychosis have suggested that psychotic symptoms may serve a defensive function. It has been speculated that the use of such defences may be a result of the early childhood environment.

The present study examined the childhood experiences of a group of 30 people with psychosis in comparison to a group of controls, consisting of 30 people with arthritis. Participants were recruited from a number of settings. Individuals were questioned about their childhood experiences, including their relationship with their parents and any physical or sexual abuse they may have experienced. All participants also completed questionnaires measuring psychotic or schizotypal symptoms.

Comparisons of childhood experiences were made between the two groups. Furthermore, the comparisons were made between each group's scores on psychotic or schizotypal symptom ratings and their scores on the measure of childhood experiences.

In general, differences between the two groups were not significant and there were few significant relationships within the groups between symptom measures and childhood experiences. Those findings that were significant are discussed, along with the implications of the non-significant findings. Methodological issues are discussed and suggestions are made for future research.

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Chapter One - Introduction

Psychosis is a psychiatric disorder in which individuals are, to varying degrees, out of touch with reality (Morrison 1995). Psychotic symptoms are grouped by DSM-IV (APA, 1994) into five categories, as outlined by Morrison (1995). *Delusions* are false beliefs that cannot be explained by the individual's culture or education and which the patient cannot be persuaded are incorrect despite evidence to the contrary. *Hallucinations* are false sensory perceptions in the absence of sensory stimuli that can occur in any of the five senses. *Disorganised speech* refers to speech in which there are not logical associations in the content of what is said. *Disorganised behaviour* refers to bizarre actions which do not appear to be goal directed or understandable. Finally, *negative symptoms* include a reduced range of emotional expression, a reduction in the fluency of speech and the loss of the will to do anything.

Psychotic symptoms have traditionally been classified into discrete syndromes, such as schizophrenia, affective psychosis and delusional disorders (Fowler, Garety and Kuipers, 1995). Bentall (1990a) notes that the economic, social and personal costs associated with schizophrenia have led to research into this syndrome being carried out on a massive scale. Fowler, Garety and Kuipers (1995) state that research into the nature of schizophrenia has often looked for evidence of a specific underlying neuropathology but that there is little evidence to support the view that a specific disease entity underlies all the symptoms of schizophrenia. Research into psychosis in recent years has focused on an interactional model of psychosis. In particular the development of schizophrenia is seen to be a result of both a biological vulnerability

and stressful life circumstances (Hans and Marcus, 1987). This is generally known as the “diathesis stress” model. These models suggest that factors such as genetic endowment and birth trauma may lead to a vulnerability to a psychotic disorder. This vulnerability may develop into an acute psychotic episode if triggered by a range of other stresses, which may be either biological (e.g. drug abuse) or psychological/environmental (e.g. a major life event). If the stresses continue a chronic psychotic condition may result (Fowler, Garety and Kuipers, 1995).

Psychologists have questioned the reliability and validity of schizophrenia as a disorder and have begun to study specific symptoms of psychosis (e.g. Bentall, 1990a). Much of this research has attempted to explain psychotic symptoms in terms of cognitive processes that may underlie psychotic symptoms and what factors may influence the development of these processes. This approach has generally viewed psychotic symptoms as being on a continuum with normal experiences e.g. the cognitive processes that underlie delusions may be considered to be the same as those that underlie the development of normal beliefs (Bentall 1990a). Thus it may be possible to study factors that may influence normal psychological processes to the extent that they produce psychotic symptoms.

A number of approaches in psychology and psychiatry suggest that childhood experiences may lay the foundations for adult psychiatric disorders (Wolkind and Coleman, 1983). This has been studied most extensively in the case of depression, and some of these findings will be outlined in this chapter. However, it is only in more recent years that researchers have begun to look more closely at how childhood factors may influence the development of psychosis. This study aims to examine

whether childhood experiences such as relationships with parents and physical and sexual abuse are factors that may influence the development of psychosis.

This chapter will outline evidence that the family environment and stressful life events can impact upon psychosis. Research that demonstrates an association between traumatic childhood events and other psychiatric illnesses will also be outlined. Evidence that psychosis is sometimes associated with traumatic experiences will be presented, with reference to links between posttraumatic stress disorder and psychosis. The role that dissociation may play as a defence against trauma will then be explored in the context of borderline personality disorder. Phenomenological and diagnostic overlaps between aspects of borderline personality disorder and psychosis will then be discussed. Evidence of abuse in the childhoods of people with psychosis will also be presented. This will then be discussed in relation to the findings of psychological research into the cognitive mechanisms that may underlie specific psychotic symptoms.

1.0 Schizophrenia and Expressed Emotion

This study will aim to explore whether there is an association between a child's family environment and the subsequent development of psychosis. An association between the family environment and relapse in *adults* with schizophrenia has been extensively studied in relation to the concept of expressed emotion. Reviews by Kuipers (1979), Hooley (1985), Kavanagh (1992) and Kuipers (1994) summarise the development of this concept. Work in this area first began when Brown, Carstairs and Topping (1958) and Brown (1959) found that schizophrenic patients returning to large hostels, parents and marital partners after discharge from hospital were more likely to relapse within a year than those living with siblings or in lodgings (Kuipers, 1979). A

further study by Brown, Monck, Carstairs and Wing (1962) established that patients returning to environments where there was a high “emotional involvement” were more likely to relapse than those returning to environments characterised by low “emotional involvement”. Both the patient and the key relative were interviewed in this study, but it was the ratings of the key relative that proved most predictive of relapse (Hooley, 1985).

Following these studies, Brown and Rutter (1966) developed the Camberwell Family Interview (CFI) to try to measure some of these characteristics more reliably. This is a standardised interview in which a key relative is asked about the emotional climate at home. This allows the interviewer to assess the emotions expressed by the relative during the interview, based on five scales; criticism, hostility, emotional over-involvement, warmth and positive remarks (Hooley, 1985). Of these, criticism, emotional over-involvement and hostility contribute to the level of expressed emotion (EE), and scores above a pre-defined criteria on any one of these scales lead to the interviewee being rated as high EE (Kavanagh, 1992). Analysis of the interview includes ratings not only of the content of what carers say, but also the speed, pitch and emphasis of delivery which may account for the ability of the ratings of EE to be consistent across languages and cultures (Kuipers 1994).

Using the CFI in a study of 101 schizophrenic patients returning to their families following discharge, Brown, Birley and Wing (1972) found that patients returning to a high EE environment were significantly more likely to relapse in the nine month period following discharge than those returning to low EE environments. It was also found that those in more frequent contact with high EE relatives (more than 35 hours

per week) were more likely to relapse than those in less frequent contact with a high EE relative (Kuipers, 1979). These findings were further confirmed by Vaughan and Leff (1976a) who used a shortened version of the CFI (Vaughan and Leff, 1976b) but found similar results. They also found that those patients returning to high EE environments were less likely to relapse if they remained on medication and had low levels of contact with relatives (Kuipers 1979).

Kavanagh (1992) notes that those relatives rated high on EE generally appear less informed about schizophrenia and are more likely to ascribe difficult behaviour to the person rather than the disorder. Leff and Vaughan (1985) found this was particularly likely with negative symptoms. Furthermore Hubschmid and Zemp (1989) have found that low EE families exhibit more “helping and protecting” behaviour and show flexible behavioural responses, whereas high EE families tend to exhibit more “blaming and belittling” responses and be more inflexible in their behavioural responses. Thus it appears that EE may measure different ways in which families cope with a difficult illness (Falloon, 1988). Recent research by Scazufca and Kuipers (1999) that has used a stress and coping model to examine how relatives cope with patients provides some evidence for this. They found that the coping mechanisms used by relatives were associated with the relative’s EE. In particular they found that relatives scoring high on emotional involvement tended to use behavioural avoidance as a coping strategy much more than relatives scoring lower on this measure who would tend to use problem solving strategies or to seek social support. The use of behavioural avoidance as a coping strategy was associated with a belief that the situation was unchangeable. Furthermore the use of this strategy was also associated with higher levels of burden of care and emotional distress in relatives.

Critics of EE suggest that the idea that EE alone can account for a family's behaviour towards the schizophrenic is too simplistic, and have suggested that it is not justifiable to classify a family on the basis of an interview with one member (Seywert, 1984). However there is considerable evidence that the concept is both valid and reliable (Hooley, 1985) and Kuipers (1994) notes how although the concept of EE was not derived from theory, it is an empirical tool that developed through its ability to predict outcome. Kavanagh (1992) in a review of 26 studies that predict outcome of schizophrenia from EE, found the median relapse rate for a period of 9-12 months was 21% for low EE groups and 48% for high EE groups. Furthermore, in a combined analysis of the data from 25 studies in EE, Bebbington and Kuipers (1994) found that overall, 50% of patients in the high EE group relapsed by the time of follow-up 9-12 months later. This compared to 21% in the low EE group. The measurement of EE has enabled the assessment of complex interactions and factors within the social environment that are associated with poor outcome (Kuipers 1994).

Kavanagh (1992) outlines possible models that may account for the effect of EE on a patient's illness. He suggest that rather than adopt simplistic models that state that either the relative's behaviour directly causes schizophrenic symptoms or that high EE is correlated with more severe forms of schizophrenia, research implies that a more interactive model is important to understanding this process. He argues that patient's symptoms and problem behaviour may lead to frustration, distress and concern from others. This leads to attempts to cope from others that sometimes include critical or intrusive interactions. Thus it is the interpretations and coping skills of patients and those around them that moderate likely outcomes, and the research of Scazufca and Kuipers (1999) provides support for this view. Kavanagh reiterates the

view that a biological vulnerability combined with the impact of life events (which can include EE) can produce psychotic symptoms. He suggests that such a model implies that the reactions of high EE families can therefore be considered to be understandable reactions to a stressful situation. He states this is in line with Leff and Vaughan (1987) who argue that high EE should not become a pejorative label. He notes that Mintz, Liberman, Miklowitz et al. (1987) have argued that EE puts the responsibility on treatment services to assist families in their attempts to cope. Kuipers (1994) notes how one of the most important results of EE research has been the development social interventions with families that have been shown to have a have reduced relapse rates in the 9 months following discharge. However evidence suggests that relapse is delayed rather than prevented as after two years, relapse rates for groups who have received intervention are about the same as those who have not (Kuipers, 1994).

The concept of EE has therefore been shown to be a significant factor in predicting relapse. In relation to the current research, it has shown one way in which the home environment may impact on a psychotic illness. As the model proposed by Kavanagh suggests, schizophrenia can be influenced by a number of factors, biological, social and cognitive, and EE is just one of these factors.

1.1 Life Events and People with Psychosis

The vulnerability/stress model of schizophrenia suggests that the relationship between factors within the individual and the environment is important in understanding schizophrenia and that environmental stress may trigger a psychotic episode in a vulnerable individual. Over the years a number of studies have looked at the impact of

life events in psychosis. Life events are significant events in a person's life, either positive or negative, that cause some form of emotional response in the individual. Brown and Birley (1968) conducted the first study to look at the relationship between life events and psychosis. They found that people with schizophrenia had a significantly higher number of life events than controls in the three weeks prior to the onset of the illness (cited from Bebbington, Wilkins, Jones, et al, 1993). However, Chung, Langeluddecke, and Tennant, (1986) noted that much research since then into this area had been hampered by methodological flaws, and that evidence for a relationship between life events and the onset of a psychotic illness was inconclusive. More recently a number of studies have been published that have addressed many of these methodological issues.

Chung et al (1986) looked at the relationship between life events and the onset of schizophrenia, schizophreniform psychosis and hypomania, compared to a control group. They used only patients for whom there was a clearly dateable onset of less than one year ago, and who had been free from any symptoms at least six months prior to this date. They then examined any life events that the individuals experienced in the six months prior to onset. They used the Life Events and Difficulties Schedule (LEDS) outlined by Brown and Harris (1978) to assess life events. This is a semi-structured interview that has been shown to be a more effective way to evaluate life events than inventory based methods (Bebbington, Tennant, Sturt and Hurry, 1984). Patients' life events were rated as to how threatening they were to the individual and to how clearly they could be considered independent of any behaviour that may have been a result of psychiatric symptoms. They found that people suffering from schizophreniform disorder experienced significantly more life events that could be

considered to be of long term threat than controls. People with hypomania experienced twice as many events as controls, but this difference was not statistically significant. People with schizophrenia showed a comparable number of life events to controls, although there was an increased number of events in the four weeks prior to admission. They conclude that their findings support the idea that brief psychotic illnesses such as schizophreniform disorder are more likely to be stress related than more chronic psychotic illnesses, such as schizophrenia.

Al Khani, Bebbington, Watson, and House, (1986) compared the life events of schizophrenic outpatients and controls in Saudi Arabia. They found that the only schizophrenic group to have significantly more life events across a six-month period was married women. In line with the findings of Brown and Birley (1968) they looked more specifically at the three weeks prior to onset of symptoms. They found no differences between the schizophrenic group as a whole and controls, however they again found significant differences between married women and controls. When they compared only those in their first onset, there were significant differences for both married and single women. They suggest that the negative findings for some of their groups may be a result of the fact that the life events interview did not cover particular aspects that may have been a source of stress, such as the cultural change occurring in Saudi Arabia. They suggest that Saudi Arabian men were more exposed to the results of these changes than women, but that these stresses were not reflected in the life events considered.

Bebbington et al. (1993) conducted a study that aimed to look at whether life events precipitated episodes of psychotic depression, mania and schizophrenia. They looked

at 97 patients, 57 of whom were diagnosed with schizophrenia, 31 mania and 14 depressive psychosis and compared these to a group of controls, using the LEDES. They found that controls had very few events that could be classified as severe, and that these tended to be of a relatively constant frequency. In the schizophrenic and manic groups, such events were more frequent and tended to increase near the time of onset. There were relatively few depressive psychotics, but this group showed a more rapid increase in severe life events in the two months prior to onset. All patient groups experienced significantly more life events rated as less severe than controls. Multiple experiences of events were also more common in patient groups. The authors therefore argued that it may be the cumulative effect of events that is significant in the onset of symptoms. They conclude that their findings suggest that life events are of a strong aetiological significance to the onset of psychosis.

Van Ost, Faht, Bebbington, et al. (1994) conducted a follow-up to the above study. They aimed to examine whether the course of a psychotic illness differed in those who experienced significant life events prior to onset compared to those who did not. They also looked at how this related to a perceived familial risk of psychosis. They followed up a group of patients who had not previously experienced psychotic symptoms prior to their current onset of symptoms. They divided the group into those suffering from affective psychosis (non-schizophrenic) and those with schizophrenia. They found that patients who had experienced significant life events showed less symptom severity and spent less time in hospital. Non-schizophrenic patients who had experienced life events were much more likely to be rated as having mild/recovered symptoms than those who had not experienced life events. The same differences were not present for the schizophrenic group, although those who had experienced life

events tended to have received less anti-psychotic medication. They found no differences in the pre-morbid risk of psychosis from family background in the non-schizophrenic group, but did find that schizophrenics that had experienced life events did showed a higher pre-morbid risk than schizophrenics who had not experienced life events prior to onset.

The authors state that the results suggest that the course of psychotic disorder may be different according to whether the individual has experienced life events or not. In those with a non-schizophrenic diagnosis, illness was likely to be less severe and the individual was likely to spend less time in hospital. There was no relationship between life events and familial pre-morbid risk of psychosis. In the schizophrenic group however, although symptomatology was reduced, there was an association between premorbid risk of psychosis and life events. They therefore suggest that life events play a more formative role in non-schizophrenic psychosis, and a triggering role in schizophrenia.

The research on life events and psychosis therefore seems to show that life events can play a significant role in schizophrenic relapse and may play a more aetiological role in the development of other psychotic disorders. Furthermore, it also suggests that the impact of life events may influence the course and severity of the illness. However most of this research examines life events in the six months prior to onset of the illness. This raises the question of whether significant stressful life events before this time might also have an influence on psychotic illness. More specifically, in relation to the current study, is it likely that traumatic events in childhood are associated with the development of psychotic symptoms later in life? Childhood abuse may be

considered to be a more distal life event that can influence the development of a psychotic illness. If this is the case, it may also lead to a particular course and severity of psychotic illness. Before considering this further, evidence of an association between childhood experiences and other psychiatric disorders will be outlined.

1.2 Childhood Experiences and Psychiatric Disorders

There have been numerous studies that have found an association between experiences in childhood and depression in later life. In a review of seventeen studies that examined the childhood experiences of adults diagnosed with depression by Bemporad and Romano (1993), sixteen of the studies reported that childhood experiences influenced adult depression. The only study of those reviewed that found no relationship limited negative experiences to placement in an adoptive home, institutional care or unstable placements. Studies showed that depressed patients had more unhappy experiences in childhood (Abraham and Whitlock, 1969), early deprivation and less parental care (Perris, Arrindell, Perris, et al., 1986, Parker 1979). Parental loss was not found to be a significant factor (Abraham and Whitlock, 1969) but the environment following the loss of a parent often did have an influence on later depression (Brown, Harris and Bilfulco, 1986). Bemporad and Romano concluded that parental over-protection and over-control and a lack of emotional warmth and care were most characteristic of the childhood of adults with depression. They suggest that it may be possible to show that particular aberrant childhood experiences may predict specific adult psychiatric disorders.

The possibility of childhood experiences predicting specific adult disorders has been explored in a series of studies by Alnaes and Torgersen. Torgersen (1985) divided 150

twins into three groups, anxiety, depression and mixed anxiety and depression. Childhood factors were seen to be more important in the development of depression, adult stress in the development of mixed conditions and hereditary factors to the development of anxiety. However, in a later study Alnaes and Torgersen (1988) found that although loss experiences were more common in patients with depression, anxiety or mixed anxiety and depression, when compared to other psychiatric disorders, patients with mixed conditions experienced a childhood that was very different from those with pure anxiety or depressive conditions. The characteristics were of a poor relationship with parents, bad family atmosphere, competition and jealousy between siblings, and the family as a whole felt isolated and inferior to other families. Similarly, Alnaes and Torgersen (1989) found that patients with a major depression mixed with dysthymic or cyclothymic disorders were more likely to have unsatisfactory relationships with parents, experience sibling competition and jealousy and for the family to be isolated. They therefore argue that mixed psychiatric conditions may be a result of particular childhood experiences that differentiate them from other psychiatric disorders.

Becker-Lausen, Sanders, and Chinsky (1995) looked at whether dissociation and depression could be linked to childhood experiences and negative outcomes in later life. They measured current depression, dissociation and the childhood experiences of a number of college undergraduates. They found that childhood maltreatment was significantly correlated with depression and dissociation. (The term maltreatment was used to represent physical and sexual abuse, neglect, and a negative home atmosphere). They also examined participants' life experiences and capacity for interpersonal relationships. They found that depression was correlated with poor

interpersonal relationships. Childhood maltreatment was correlated with victimisation in later life, and dissociation was a mediating variable in this. They suggested that children who experience maltreatment may develop a sense of hopelessness, which is characteristic of depression and may lead them to interpret everyday experiences in a negative light. This may lead to social withdrawal and isolation. Furthermore, they proposed that when faced with maltreatment, children will tend to detach from reality in an effort to survive such experiences. However this may lead to a tendency to dissociate in later life. The use of dissociation as a coping mechanism may result in the individual disregarding cues that would warn them of possible danger, making them more likely to experience re-victimisation and negative life events. Thus childhood maltreatment was seen as leading to depression and dissociation and that these two factors account for later difficulties such as poor interpersonal relationships, re-victimisation and negative life experiences.

Studies into the effects of childhood experiences and psychiatric disorders have therefore suggested that specific experiences may lead to specific diagnostic categories in later life. Factors of childhood environments that have been associated with psychiatric difficulties in later life include high parental protectiveness or control, a lack of emotional warmth, a lack of care, competitiveness within families and physical or sexual abuse. Later in this chapter, evidence for a relationship between childhood factors and some psychotic symptoms will be examined. However, before considering this, the relationship between traumatic experiences and psychosis will be discussed.

1.3 Post Traumatic Stress Disorder and Psychosis

A number of studies have looked at different ways in which post-traumatic stress disorder (PTSD) and psychosis might overlap. As the current study aims to explore whether traumatic childhood events may be significant in the development of psychosis, it is important to consider the relationship between these two disorders. DSM-IV (American Psychiatric Association, 1994) classifies PTSD as an anxiety disorder in which symptoms result from exposure to a traumatic event. The traumatic event must involve threatened death or actual/threatened serious injury, or a threat to the physical integrity of self or others, and the person's response must involve intense fear, helplessness or horror. Symptoms of PTSD are grouped into three categories:

1. *Re-experiencing the traumatic event.* This includes intrusive recollections of the event, distressing dreams, feeling the event is re-occurring (including hallucinations, illusions and dissociative flashbacks).
2. *Avoidance/numbing.* Avoiding thoughts, feelings or activities associated with the event, difficulties recalling aspects of the event and feelings of depersonalisation.
3. *Increased arousal.* This includes difficulties sleeping, hypervigilance and difficulty concentrating.

In recent years there has been increasing interest in an overlap between PTSD and psychosis. Some authors have shown that PTSD may often be mistaken for psychosis, to the extent that Waldfoegel and Mueser (1988) suggest that PTSD should be ruled out before a diagnosis of schizophrenia is made. Other authors have shown that the onset of psychosis may precipitate PTSD and that patients may be suffering symptoms of both of these disorders e.g. McGorry, Chanen, McCarthy, et al. (1991),

Williams-Keeler, Milliken and Jones (1994). These authors suggest that the experience of hospitalisation following a psychotic episode may lead to the development of PTSD and exploring with patients the traumatic effects of a psychotic episode may enhance recovery. However, of particular relevance to the current study are reports of findings of psychotic symptoms in people with PTSD and these will be discussed in detail here.

Mueser and Butler (1987) report on five individuals who experienced auditory hallucinations from a sample of 36 Vietnam veterans with PTSD. They found that those who experienced auditory hallucinations were significantly more likely to be Hispanic, to have more combat experience and to have higher scores on a scale measuring a wide range of psychiatric symptoms. They concluded that persistent auditory hallucinations can accompany PTSD in the absence of any other psychotic symptoms, and that cultural factors may play a part in the development of this phenomenon.

Wilcox, Briones and Sues (1991) further explored the link between cultural factors and the development of auditory hallucinations in PTSD. From a group of 59 combat veterans with PTSD, 38% of Hispanics experienced auditory hallucinations compared with 13% of non-Hispanics. The occurrence of auditory hallucinations appeared unrelated to age at time of combat experience, age of onset of PTSD or, contrary to Mueser and Butler (1987), length of combat exposure. Wilcox et al suggest that the occurrence of auditory hallucinations in PTSD may represent a subtype of PTSD that may be mediated by cultural variables, although it was unclear what particular cultural variables may be implicated in this.

Other clinicians have reported on cases where psychotic symptoms have been found in people with PTSD. Mayer and Pope (1997) report on a case of a Vietnam veteran with chronic PTSD who experienced hallucinations that although related to an injury he sustained, were clearly not flashbacks to the original trauma. They note that flashbacks of non-existent events can intermingle with flashbacks of real experience in patients with PTSD. Zarcone, Scott and Kauvar (1977) found that 54% of admissions to a Veterans Hospital received psychotic diagnoses. In some cases the onset of psychosis occurred while in Vietnam and in some cases appeared to be related to returning to difficult family conflicts or other difficulties in adjustment upon returning home. Waldfoegel and Mueser (1988) report on a man who experienced hallucinations and delusions following a sexual assault. The hallucinations and delusions were not clearly related to the assault, and the man had been diagnosed with schizophrenia, but he failed to improve when administered anti-psychotic medication. However his symptoms were reduced by the use of imaginal exposure to the traumatic event.

Butler, Mueser, Sprock and Braff (1996) reported on positive symptoms of psychosis found in people with PTSD. They took a group of 38 Vietnam veterans with combat experience. They excluded from their sample anyone with psychosis or a history of hospitalisation. Twenty of their subjects had a diagnosis of PTSD. They found that the group with PTSD scored significantly higher on a scale measuring positive symptoms of schizophrenia. These participants experienced significantly more hallucinations, delusions, and bizarre behaviour, though not significantly more thought disorder. Butler et al. noted that the hallucinations and delusions appeared unrelated to the

combat experience of the veterans. They suggested that they may in some way be related to the trauma, but were clearly not a re-experiencing of the trauma, symptomatic of PTSD. The authors contend however that these participants were not diagnosable with a psychotic illness. They suggest that taken together with the findings presented above, there is a possibility that chronic and severe PTSD may be misdiagnosed as schizophrenia.

Van der Hart, Witztum and Friedman (1993) have argued that long standing psychotic symptoms can be traumatically induced. They suggest a new diagnostic category of reactive dissociative psychosis as a replacement for the diagnostic category of brief reactive psychosis. Brief reactive psychosis is a traumatically induced response. The authors give a case example where psychotic symptoms were traumatically induced but persisted over time. The chronic nature of the symptoms lead the authors to argue for the replacement of the diagnosis of brief reactive psychosis with reactive dissociative psychosis. They assert that one of the key variables in contributing to this disorder is that of dissociation and that dissociation is a defence against the trauma. Van der Hart et al. note that dissociation can lead to the formation of mental experiences outside of consciousness. These experiences can then intrude into consciousness. They say these intrusions can become increasingly frequent to the extent that they can dominate the individuals normal reality, creating psychotic features. The authors argue that once the traumatic of the origins psychotic symptoms have been established, symptoms are reduced.

The above studies have therefore shown that psychotic symptoms can be present in people suffering with PTSD, and that in some cases, such people can be mis-

diagnosed as schizophrenic. Evidence therefore suggests that psychotic symptoms can sometimes be the result of a traumatic experience and they may be accompanied by a tendency to dissociate. However in the research presented above, the trauma happened in adulthood and the traumatic experiences studied were mostly related to combat. The effects of the experience of traumatic events in childhood, and how these might relate to psychosis will now be considered, beginning with a further discussion of the relationship between traumatic experiences and dissociation.

1.4 Dissociation, Trauma and Borderline Personality Disorder

Dissociation is the separation of a group of mental processes from the other mental process to the extent that some of the individual's thoughts, feelings or behaviours are removed from conscious awareness and control (Morrison, 1995). Research shows that if a trauma occurs in a person's childhood, they are more likely to develop a tendency to dissociate (van der Hart, 1993). Brewin, Dalgleish and Joseph (1996) have developed a model of PTSD that can account for the relationship between PTSD and dissociation.

Brewin, et al (1996) claim traumatic events result in the formation of a memory network. They state information can be subject to both conscious and non-conscious processing. Non-conscious memories of the event are more detailed. Brewin et al describe conscious memories as verbally accessible trauma memories (VAM). These can be retrieved easily but are selective memories of the event. Non-conscious memories are labelled situationally accessible trauma memories (SAM), and are accessed when the individual is in similar situation.

Brewin et al suggest two emotional reactions to traumatic events. Primary emotions are the emotional states experienced during trauma. Secondary emotions result from the consequences of the trauma. In order to adjust to the consequence of the trauma the individual must integrate the traumatic experience with existing beliefs reducing secondary emotions. This involves either changing VAM of events to fit beliefs or changing beliefs to fit the VAM. They describe three outcomes to emotional processing. *Completion* or *integration* occurs when memories are successfully integrated. *Chronic emotional processing* results if integration does not occur. This leads to preoccupation with the consequences of trauma, and may lead to attentional or memory biases, anxiety, depression or substance abuse. *Premature inhibition of processing* occurs when the individual avoids reactivating memories associated with the event. This may lead to attentional biases, avoidance schema, impaired memory, phobic state, dissociation, and somatisation.

According to Brewin et al (1996) therefore, dissociation is more likely when there is premature inhibition of emotional processing of the trauma. They state that this is more likely to occur if there are large discrepancies between the trauma information and prior assumptions, if there is inadequate cognitive development, poor social support, or the ability to prevent the intrusion of SAMs into consciousness. Similar characteristics are suggested as contributing to chronic emotional processing except that it is suggested that chronic emotional processing occurs if there is an *inability* to prevent SAMs entering into consciousness. Brewin et al suggest that whether emotional processing is inhibited or becomes chronic may depend upon whether the individual dissociates at the time of the trauma. They suggest that the use of

dissociative defences during the time of the trauma may result in the ability to prevent SAMs entering into consciousness, a process which may become automatic if repeated, leading to premature inhibition of emotional processing. Brewin et al. state that the effects of this type of processing are that the person may have appeared to recover, but that the unprocessed memories remain open to activation in later life when the person encounters similar situations or experiences similar mood states.

From the description of the circumstances that are more likely to lead to premature inhibition of emotional processing, it seems likely that abuse in early childhood would be a situation in which this inhibition of processing is likely to occur. For example, it would be likely that an abuse experience would be largely discrepant from the child's prior assumptions, and children will of course be less developed cognitively. Confronted with a traumatic experience they may dissociate from reality in an effort to cope with the traumatic experience. This model therefore gives a theoretical basis for the finding that people who have been sexually abused in childhood are more likely to dissociate. Dissociative experiences are a common feature of borderline personality disorder and a number of studies have found an association between dissociation, childhood abuse and borderline personality disorder (BPD).

Barnard and Hirsch (1985) note how the parents of people with borderline personality disorder have been described as less functional, unable to provide basic nurturance, protection or empathic caring. Adults with BPD were often asked to take on parental responsibilities as children and communication from their parents has been described as blurred, ambivalent and inconsistent. They note the similarities between these characteristics and those found in the family backgrounds of adults who had been

victims of incest as a child. Furthermore, they note similar behavioural outcomes between the two groups. They therefore hypothesised that the two may be associated. A case note review found that 57% of individuals in their sample of individuals with borderline personality had revealed histories of abuse. More controlled studies have revealed similar findings, and have also examined the relationship of dissociation to these findings. Ogata, Silk, Goodrich et al (1990) found a high prevalence of physical and sexual abuse in the childhoods of people with borderline personality disorder. The presence of abuse in this group was also associated with dissociative symptoms. Brodsky, Cloitre and Dulit (1995) found sixty percent of borderline participants in their study had experienced physical and/or sexual abuse. Those who had reported abuse scored significantly higher on a measure of dissociation than those who had no history of abuse. Becker-Lausen et al (1995) note that the link between dissociation and child abuse is well established and that dissociation is used as a defence mechanism as a means of surviving pain.

There appears therefore to be an association between childhood abuse, dissociation and adult borderline personality disorder. There is also some evidence of an overlap between borderline personality disorder and psychosis although this is a matter of dispute. Pope, Jonas, Hudson et al (1985) found that when BPD individuals were not abusing substances or not experiencing a major affective episode they did not exhibit psychotic symptoms. They therefore suggested that functional psychotic symptoms in individuals with BPD were probably attributable to substance abuse or a major affective disorder. However, they noted that factitious psychotic symptoms did appear to be a feature of BPD. In contrast, Chopra and Beatson (1986) found that in a sample of people with BPD, psychosis was either probable or definite in all cases. They found

the most common psychotic symptoms were of a dissociative type (derealization or depersonalisation), but also included paranoid experiences, psychotic depressive experiences, hallucinations and delusions. They noted that these symptoms tended to occur in stressful situations and were accompanied by an increased level of anxiety. They argued that this increase in anxiety appeared to refute the claim that these psychotic symptoms were likely to be factitious. Furthermore there is considerable overlap between BPD and schizotypal personality disorder (Spitzer, Endicott and Gibbon, 1979). Schizotypal personality disorder displays many of the characteristics of schizophrenia but they are not severe enough to meet the full diagnosis of schizophrenia (Roth and Fonagy, 1996).

Finally, Brett (1989) notes how flashbacks in PTSD can be considered to be dissociative experiences and dissociative disorders can result from childhood trauma. Clearly there is a similarity between dissociative flashbacks and hallucinations, and DSM-IV states that hallucinations can be considered as re-experiencing the trauma along with flashbacks. This indicates that dissociative flashbacks could be considered along the same continuum of experiences as hallucinations.

A number of studies have therefore shown a link between psychosis and PTSD and that traumatic experiences can sometimes appear to be associated with the development of psychotic symptoms. There is also evidence of an overlap between psychosis and BPD. Furthermore, evidence suggests that traumatic childhood experiences are associated with an increased tendency to dissociate, and that both childhood abuse and dissociation are frequently found in individuals with BPD. Dissociative flashbacks share a similar phenomenology to hallucinations. Dissociation

appears to be a way of defending against painful experiences and memories. Recent studies into psychotic symptoms that will be outlined later in this chapter have suggested that psychotic symptoms may also have a defensive function. This raises the possibility that psychosis and BPD may be associated with the use of particular defence mechanisms to protect the individual against traumatic childhood experiences. This suggests that there might also be an association between childhood abuse and psychotic symptoms. Evidence for this will be explored in the following section.

1.5 Childhood Experiences in Psychosis

Some authors have looked at the associations between childhood experiences and particular psychotic symptoms. Ensink (1993) investigated 100 women who had all experienced abuse as children, with the aim of trying to establish whether particular characteristics of childhood abuse correlated with particular psychiatric symptoms. They looked particularly at dissociative disturbances, hallucinations, self-injury and suicidal tendencies. They found that women who experienced auditory hallucinations were more likely to have experienced more severe trauma in early life than those without. In particular, women with auditory hallucinations experienced more frequent physical and sexual abuse from their father, along with emotional neglect from their mother. Ensink suggests that parents who abuse their children usually exhibit a distortion of reality. Ensink states that if this is the case then their children will have even greater difficulty learning the distinction between reality and imagination, and that furthermore, not learning this distinction has advantages for the child because the reality is too painful.

Honig, Romme, Ensink, et al (1998) found in a comparison of three groups of voice hearers that consisted of patients with schizophrenia, patients with a dissociative disorder or non-patients, that all three groups had experienced emotional neglect and abuse in childhood. Only 17% of schizophrenics, 14% of those with dissociative disorders and 27% of non-patients did not have a history of abuse. Sexual abuse was significantly more likely in the dissociative disorder group. Honig et al (1998) concluded that abuse and neglect are the rule rather than the exception in individuals who experience auditory hallucinations.

Goff, Brotman, Kindlon, Waites and Amico (1991b) looked at the association between child abuse, dissociation and delusions of possession, where an individual believes that they are possessed by another person or spirit. They note that Putnam, (1989) had shown that there is a considerable overlap between possession states and multiple personality disorder, and that several studies had shown that patients with multiple personality disorder often report being abused as children (Coons, Bowman and Milstein, 1986; Putnam, Guroff, Silberman, et al, 1986). Furthermore Bernstein and Putnam (1986) have shown that people with multiple personality disorder score higher on the Dissociative Experiences Scale than other diagnostic groups (multiple personality disorder is now called Dissociative Identity Disorder in DSM-IV). Given the similarities between these two groups, Goff et al. (1991b) argued that people with delusions of possession were likely to report histories of abuse and show a tendency to dissociate. They compared 25 patients who reported delusions of possession with 36 patients with psychotic disorders that did not present with such delusions. Patients reporting delusions of possession were significantly more likely to dissociate and reported significantly more sexual abuse in childhood. The two groups did not differ

in rates of physical abuse or parental loss. Furthermore, consistent with the findings of Ensink outlined above, patients with delusions of possession were more likely to experience auditory hallucinations than controls. Those with delusions of possession group also experienced more visual hallucinations.

Beck and Van der Kolk (1987) reviewed the records and interviewed the clinical staff associated with every chronically hospitalised psychotic female patient of two inpatient wards. From a total of 26 patients who had been in hospital for more than a year, 12 reported histories of childhood incest. They noted that this group differed significantly from those without a history of abuse. They were younger, were more likely to be suspected of having an organic disorder, had a higher prevalence of sexual delusions, a history of depressive symptoms and more major medical problems. Patients who had been abused also scored significantly higher on an approach/avoidance scale than those who had not, indicating that they were more likely to seek out social contact. However this contact tended to be characterised by hyper-arousal and agitation, disorganised thinking and delusions. The authors suggest a relationship between these symptoms and PTSD following abuse. They note that childhood incest is frequently followed by PTSD, which is characterised by a re-living of thoughts, feelings or actions related to the abuse. Individuals suffering from PTSD may experience a disorganisation of thought processes when presented with emotional stimulation.

Goff, Brotman, Kindlon, Waites, and Amico, (1991a) examined whether childhood trauma affected the age of onset, medication response and symptomatology of chronically psychotic patients. A group of 62 patients were assessed using measures

of dissociation, a diagnostic interview, a life experiences questionnaire and treatment response. They found that 27 of the patients reported childhood abuse and that this group showed a significantly earlier age of onset, scored higher on the dissociation scale, demonstrated more amnesia, had more relapses and were more likely to have a history of substance abuse. Again, it was found that the group who had experienced more abuse was more likely to report auditory hallucinations. They suggest that childhood abuse may lead to an atypical psychotic presentation characterised by earlier age of onset, more frequent relapses and more dissociative symptoms.

Greenfield, Strakowski, Tohen, Batson and Kolbrener (1994), note that the higher prevalence of abuse histories and dissociative symptoms in Goff et al.'s (1991a) study may be a result of using more chronic patients, and may therefore be a result of a sampling bias. They therefore examined childhood histories and dissociative symptoms in a group of people with first onset psychosis. From a group of 38 patients who took part in their study, 20 reported histories of childhood abuse. This group were significantly more likely to experience dissociative symptoms. Furthermore, patients for whom the abuser was a parent had significantly more dissociative symptoms than those who were abused by someone other than a parent. They concluded that the prevalence of abuse was consistent with studies of chronic patients and that this was also associated with an increased tendency to experience dissociative symptoms.

Therefore the studies that have looked at the relationship between childhood experiences and psychosis suggest that a significant proportion of people with psychosis have suffered physical or sexual abuse as children. Furthermore, the studies

suggest that the psychiatric presentation of people with psychosis who have suffered abuse may be different to those who have not. Presentation appears to be characterised by an increased tendency to dissociate, a greater number of auditory hallucinations, a tendency to seek out social contact and an increased likelihood of sexual delusions. Research into the psychological features of psychotic symptoms has given some insight into why psychotic symptoms might be associated with difficult childhood experiences, and this research will be outlined in the following section.

1.6 Psychological Approaches to the Symptoms of Psychosis

In recent years the concept of schizophrenia as a disorder has come under question. Bentall (1990a) has questioned the reliability and validity of this diagnostic category. Bentall notes how there has long been inconsistency between views as to what symptoms constitute a diagnosis of schizophrenia and although diagnostic criteria have made diagnosis more reliable, different diagnostic systems have been demonstrated to have low rates of concordance with each other (Brockington, Kendell, and Leff, (1978). Furthermore, Bentall (1990a) notes how factor and cluster analysis of the symptoms of schizophrenia have generally not found a strong association between the symptoms. This suggests that schizophrenia may consist of a heterogeneous set of symptoms, which calls into question its validity as a construct. Studies of the outcome of patients diagnosed with schizophrenia have also shown that outcome is varied. For example, Ciompi and Mueller (1976) found eight different patterns of outcome in schizophrenic illness (cited from Ciompi 1984). This variability in schizophrenic outcome calls into question the predictive validity of schizophrenia. Bentall (1990a) suggests that schizophrenia appears to be a disorder with no particular symptoms, course or outcome.

For these reasons in recent years a number of authors have suggested it may be more informative to explore the nature of specific symptoms rather than study psychotic syndromes. This work has resulted in much progress being made in exploring the nature of positive symptoms, although less progress has been made with negative symptoms (Lavender 1992). In this section I will outline some of the findings of the research into hallucinations and delusions, and their relevance to the present study.

1.6.1 Hallucinations

Bentall (1996) notes that hallucinations are more likely to occur in certain conditions. For example, Slade (1973) showed that people were more likely to experience hallucinations during periods of increased stress. Hallucinations are also more likely to occur during periods of sensory deprivation (Seigel, 1984) or during periods of unpatterned stimulation such as white noise (Margo, Hemsley and Slade 1981). Auditory hallucinations have also been shown to be accompanied by the same small movements of the vocal muscles or subvocalisations (Green and Preston, 1981), that accompany normal thoughts (McGuigan, 1978) which suggests that they are type of inner speech. Bentall (1996) states that a number of theories have been put forward to explain hallucinations, which all suggest that hallucinations occur when mental events are mistaken for external events. While some researchers have suggested that these misattributions result from neuropsychological deficits, Bentall suggests that they are the result of errors in cognitive processing. Bentall (1990b) argues that the ability to discriminate between real and imagined events is an inferential skill (metacognition). He suggests that it is influenced by specific characteristics of the events being

discriminated and peoples beliefs and expectations about what sort of events are likely to occur.

This raises the question of why some individuals have difficulty making this differentiation in everyday life. Lavender (1992) suggests that when faced with painful experiences children may increasingly escape into an “imaginary world” and that in times of crises the child experiences imaginary experiences as real. Consistent with this, Bentall (1990b) reports on a study by Heilbrun, Diller, Fleming and Slade (1986) which found differences between hallucinators and non-hallucinators in their ability to avoid attending to aversive stimuli. Bentall suggests that this might indicate that hallucinatory experiences may be reinforced because they might allow the individual to avoid aversive stimulation. He notes that psychoanalytic theorists have suggested that there is a similarity between dreams and hallucinations and that these may both express wishes that would be unacceptable to the conscious mind. Bentall (1990b) cites evidence from Forgas and DeWolfe (1969) that hallucinators are more likely to recall stories which reflect themes relating to their voices than unrelated stories, as evidence that hallucinations may reflect dominant psychological concerns.

There is some evidence to suggest that hallucinations may be associated with traumatic experiences. Evidence has already been presented showing that there is an association between abuse in childhood and a tendency to experience hallucinations in adulthood. Furthermore, Romme and Esher (1989) found that 70% of voice hearers develop hallucinations following a traumatic event (cited from Morrison 1998). Siegel (1984) found that 25% of a group of people who had been held hostage had experienced hallucinations. He identified five antecedent factors that were associated

with an increased likelihood of hallucinations. These were social isolation, visual deprivation, restraint on movements, physical abuse and threats to life. Of these he suggested that isolation and the threat of death were the necessary and sufficient conditions to produce hallucinations in a hostage situation.

Psychological studies into hallucinations therefore suggest that hallucinations occur as a result of a difficulty differentiating between a real and an imagined event. There is a growing body of evidence that suggests auditory hallucinations are associated with abuse in childhood. Combined with the evidence that individuals who are abused in childhood are more likely to dissociate, there appears to be some support for a view that dissociative experiences as a result of a traumatic experience may result in difficulties differentiating real from imagined events, increasing the likelihood of experiencing hallucinations. This may then have a reinforcing effect as it avoids attending to aversive stimuli.

1.6.2 Delusions

Two theories have been offered to explain the formation of delusions from a psychological perspective (Bentall and Kaney, 1989). The first, proposed by Maher (1974, 1988) suggests that delusions are a result of normal cognitive processes that are attempting to explain abnormal perceptual events (e.g. hallucinations). For example, it has been shown that deaf people may be more likely to be paranoid (e.g. Kay, Cooper, Garside and Roth 1976). This may be due to the fact that if you are unable to hear what people are saying there may be a tendency to believe that others are talking about you (Bentall 1990b). However, Bentall and Kaney (1989) argue that it is unlikely that perceptual abnormalities are the sufficient or necessary conditions

for holding delusional beliefs. The second approach has suggested that abnormal reasoning may be associated with the formation of delusional beliefs. This approach has focused on finding experimental evidence of reasoning biases in people with delusions. Its findings are specifically relevant to the present study and so these studies will be outlined in detail.

Huq, Garety and Hemsley (1988) examined the performance of deluded subjects on a probabilistic reasoning task. In its most simplistic form, this type of task involves two jars being filled with beads of two colours e.g. red and blue. The ratio of the number of beads in each jar is different (e.g. 70 red and 30 blue in one jar, 30 red and 70 blue in the other). The jars are then removed from sight and beads are then repeatedly drawn, shown to the participant and replaced. The participant must guess which jar the beads are being drawn from. Huq et al. (1988) found that deluded participants made a decision more quickly (i.e. required less evidence) and were more confident in their judgements. It was therefore suggested that this represented an abnormal reasoning bias, with deluded subjects being more likely to reach decisions with confidence based on very little evidence.

Dudley, John, Young and Over (1997) completed a probabilistic reasoning study where participants were given all the information that they needed prior to the experiment. In this experiment deluded participants reasoned in a similar way to normal participants. However when deluded participants were allowed to determine how much evidence they needed, they requested less evidence and showed a pattern similar to that found by Huq et al (1988). Dudley et al (1997) therefore concluded that deluded individuals do not have an inability to reason, but are willing to reach a

decision on the basis of less evidence. They suggest that this may be related either to an attempt to reduce their personal investment in the decision or that they may be less willing to entertain other hypotheses or tolerate ambiguity.

Kaney and Bentall (1989) examined the attributional style of deluded individuals. They note that studies have shown that depressed individuals tend to make internal, stable and global attributions about events, particularly negative events. Kaney and Bentall compared the attributional style of paranoid individuals, depressed individuals and normal controls. The depressed patients showed the pattern just described, but the deluded patients tended to make external attributions for negative events and internal attributions for positive events. Deluded participants also made significantly more external attributions for negative events than normal controls. The tendency to attribute negative events to an external source and positive events to oneself has been observed in the normal populations. However, this “self serving bias” was found by Kaney and Bentall to be more extreme in deluded participants than for normal controls. Although this study used individuals with persecutory delusions a study by Fear, Sharp and Healy (1996) showed a similar pattern for patients with non-persecutory delusions.

Bentall, Kaney and Dewey (1991) asked deluded, normal and depressed individuals to make attributions to explain social vignettes in which an actor behaves in a particular way towards a target person. Participants could chose from three possible attributions; person attributions (e.g. “Something about Sally caused her to say that she liked Kim”), circumstance attributions (e.g. “Something about the circumstance made Sally say that she liked Kim”) or stimulus attribution (e.g. “Something about Kim made

Sally say that she liked her”) (Bentall, Kaney and Dewey, 1991: pp. 16). Half the items were positively valued and half negatively (e.g. Sally says she likes Kim, Sally hits Kim). Participants were also given information about the situation. McArthur (1972) had shown that normal subjects are more likely to attribute to the target person not the actor if the information is *distinctive* to the target person (the actor does not exhibit that behaviour to other people), *consistent* with the actors previous behaviour to the target person and if there is a *consensus* about actions towards the target person (other people behave that way towards the target person). Bentall, Kaney and Dewey found that although all three groups were more likely to make person attributions in the presence of low information (behaviour not distinctive or consistent and there is not a consensus), deluded participants were more likely to make person attributions in the presence of high contextual information. In other words, the deluded participants were less likely to blame the victims than the other groups in the study, even when information suggested that the action of the actor was in some way justifiable. However, deluded subjects did make less person attributions in the presence of high contextual information than they did when contextual information was low. This shows that the deluded participants did take account for the differences in contextual information. Bentall, Kaney and Dewey suggest that this demonstrates that deluded subjects have a reasoning bias, not a deficit, as they were able to take account of the information. Furthermore, the deluded participants were more confident in their judgements. Bentall, Kaney and Dewey suggest that the unwillingness to blame the victim in social situations may suggest that this serves a protective function.

Studies examining attributions made by deluded individuals have therefore shown that deluded participants tend to make global, stable and external attributions for negative

events and internal attributions for positive events, and that in social situations that did not involve themselves they were less likely to blame the victim. Lyon, Kaney and Bentall (1994) further investigated the attributions of individuals experiencing persecutory delusions. Consistent with previous findings, when deluded participants' attributions for events were explicitly measured, they made external attributions for negative events. However, participants were also asked to make attributions on hypothetical vignettes that were presented as a memory test. It is argued that this implicitly measures attributional style. On this measure, deluded participants scored in a similar way to depressed participants, making more internal attributions for negative events and making external attributions for positive events. Thus when attributions are measured *explicitly*, deluded participants show an extreme form of a self serving bias that is found in normal participants (i.e. a tendency to blame others for negative events and to take credit for positive events). When attributions are *implicitly* measured, this is reversed and deluded individuals show the same pattern as depressed individuals. Lyon et al. (1994) argue that consistent with cognitive studies, explicit measures take effort and make demands on attention, whereas implicit measures are fast and effortless and do not make demands on attention. They suggest that this is similar to the distinction between conscious and unconscious processes outlined by psychoanalytic theory. This raises the possibility that persecutory delusions serve a defensive purpose that protects against a negative self-concept. This has been further investigated by the use of Stroop tests, outlined below.

Bentall and Kaney (1989) compared the performance of paranoid deluded, depressed and normal participants on an emotional Stroop test. In a Stroop test, lists of words are presented on a card in different colours. Participants must name the colour of each

word, and the time taken to do this for the whole list is measured. In Bentall and Kaney's study, the words were either a series of Os, emotionally neutral words, depressive words or threat related (paranoid) words. Studies have shown that depressive subjects take longer to complete the task when they are reading depressive words (e.g. Gotlib and McCann 1984), as the meaning of the words and the colours compete for attention (Bentall and Kaney, 1989). Bentall and Kaney found that depressed subjects took longer to complete the list of depressive words, and paranoid subjects took longer to complete the list of threat related words. This suggests that paranoid individuals show an attentional bias to threat related words. It is also interesting to note that the model of PTSD outlined earlier by Brewin et al (1996) suggested that premature inhibition of traumatic events is likely to lead to a bias towards threat related information.

In a further study by Kinderman (1994), participants were asked to state from a list of positive and negative words, whether they felt the words were like them or not. Deluded participants endorsed more positive words and less negative words than depressed individuals. Some of these words were then used to form positive and negative lists of words in a Stroop test. On the Stroop test, deluded participants showed a slower performance on positive and negative words than they did for neutral words. Depressed individuals were only slower for negative words and normal participants showed no differences. The Stroop test can be considered an implicit measure of whether words were personally meaningful, and the endorsement of words an explicit measure. Thus when asked explicitly deluded participants were less likely to endorse negative words, but the Stroop test suggests these words did have personal meaning for them. This study therefore shows a similar pattern to that shown by Lyon

et al. (1994) suggesting that persecutory delusions may defend against a negative self-concept.

The studies presented here have therefore demonstrated that deluded individuals have a tendency to jump to conclusions based on very little evidence. They have also demonstrated an explicit tendency to attribute negative events to external sources, positive events to themselves and to be less likely to blame the victim in situations that do not involve themselves. However, when attributions are measured implicitly, studies suggest that deluded individuals do make internal attributions for negative events.

Bentall, Kinderman and Kaney (1994) note that depression is characterised by a gulf between one's perception of oneself and an ideal view of oneself. They suggest that persecutory delusions may be a result of trying to reduce that gap. Bentall et al (1994) note that it is well established that self-concept develops during childhood and that parents have a crucial role in its development. They therefore suggest that the findings of the studies above imply that there is a need to research how family processes might be implicated in the development of the cognitive biases shown by deluded individuals.

1.7 Psychotic Symptoms as a Defence against Adverse Childhood Experiences

Hingley (1992, 1997) suggests that the findings from cognitive research into the nature of delusions and hallucinations presented above can be integrated with psychodynamic perspectives on psychosis. She highlights the findings that delusions may protect the individual from a low self-esteem and that hallucinations may help

the individual to externalise internally generated material that would otherwise be distressing to the individual. These are consistent with psychodynamic perspectives that suggest that psychotic symptoms may result from the use of defence mechanisms to protect the individual from unconscious conflict.

Hingley (1992) outlines the work of Vaillant (1971) who distinguishes between mature and immature defences. The defences seen as characteristic of the first five years of life are 'delusional projection' (which is equivalent to the experience of persecutory delusions), 'denial' of external reality and 'distortion', a defence which reshapes external reality to fit inner needs. Psychotic experiences are therefore seen to be part of all infants' development, but in normal development are replaced by "neurotic" defence mechanisms. She suggests that psychotic defences may persist if the early environment of the infant fails or traumatises the infant. This would leave the individual vulnerable to the use of psychotic defences later in life at times of emotional difficulty.

Hingley proposes a restatement of the vulnerability stress model to explain why mature defences might not develop in some individuals. Whilst not rejecting the idea that vulnerability to schizophrenia may have a purely traumatic origin, Hingley (1997) suggests that vulnerability is likely to be a result of a combination of genetic influences and the developmental environment that lead to problems in the capacity to use defence mechanisms. This then interacts with a personally meaningful triggering experience that generates intense affect and the use of reality distorting defence mechanisms.

1.8 Summary

Family environment and stressful life events can influence the onset of psychotic symptoms. Childhood abuse has been shown to influence the development and course of some psychiatric disorders, and there is emerging evidence that this may also be true in the case of psychosis. Psychological research into the symptoms of psychosis has helped to show ways in which traumatic experiences may influence the development of such symptoms.

1.9 Research Questions

The present research aims to compare the childhood experiences of people with psychosis to a control group. It aims to address the following questions:

- 1. Do people with psychosis have more difficult childhood experiences than the normal population?**
- 2. Is there a relationship between particular psychotic symptoms and particular types of experience in childhood?**

Chapter Two - Method

Overview

This study compared the childhood experiences of a group of thirty people with psychosis to a control group of thirty people with rheumatoid arthritis. All participants were administered the Childhood Experience of Care and Abuse Questionnaire (CECA-Q; Bernazzani, Moran, and Bifulco 1997) and comparisons were then made between these two groups scores on this measure. Both groups were given questionnaires relating to psychotic symptoms. This allowed within group comparisons to be made between childhood experiences and levels and types of psychotic symptomatology. As depression and substance abuse have been found to be affected by adverse childhood experiences, these factors were also measured to control for their effects.

2.1 Design

A between subjects design was used to examine research question one. A group of people with psychosis were compared with a group of people with arthritis using a measure of childhood experience described later in this section.

To answer research question two a within subjects design was used. Within each research group, levels of psychotic/schizotypal symptoms were measured and scores on these measures were compared to scores on the measure of childhood experience.

2.2 Participants

2.2.1 Recruitment

It was hoped to recruit thirty people to each experimental group. This would give a statistical power of 0.5, when examining differences between the two groups using t-tests looking for a medium effect size using a probability level of 0.05. Recruiting thirty people would therefore give an adequate level of power. Whilst it would have been desirable to recruit more participants to the study and thus increase the power of the study, it was felt that this would be unlikely given the time constraints on the study.

2.2.1a Psychotic Participants

Psychotic participants were recruited from inpatient psychiatric wards in two London NHS Trusts after gaining consent from the relevant Ethical Committees (see Appendix 8). Participants came from seven inpatient wards, six of which were acute wards and one was a long stay specialist unit.

In all cases, participants were recruited after liaison with ward staff, who advised on who would be most suitable to approach given the following criteria. All participants had to have a diagnosis of a psychotic illness. Furthermore, participants were not included if they had florid symptoms, as this may have made it difficult for them to concentrate and may also have affected the reliability of the data obtained. All participants had to be willing to sit for approximately forty-five minutes answering questions.

All participants gave informed consent, having been told beforehand the purpose of the study and the types of questions they would be asked (see Appendix 7). Following

the interview, information was gained from the patients file relating to diagnosis, first onset of psychotic illness, date of birth and date of current admission.

2.2.1b Control Group

A control group of thirty participants was recruited from the rheumatoid arthritis outpatient departments of two London hospitals, again after consent was given from the relevant Ethical Committees (see Appendix 8). Psychosis is generally speaking a long-term illness that can have an impact on an individual's ability to function at work, their relationships and various aspects of daily living (Fowler, Garety and Kuipers, 1995). The use of a psychiatric control group would have presented difficulties as it has already been shown that childhood factors are associated with some psychiatric difficulties. Patients with rheumatoid arthritis were recruited for the control group, as arthritis is also a long-term illness and can have a wide reaching impact on an individual's work and social life. Furthermore, it may be argued that traumatic events in childhood lead to a long-term illness, be it medical or psychiatric in origin, and so this group were included in the study to control for this factor.

Patients were selected by examining the patient lists and selecting on the basis of age. In general rheumatoid arthritis affects people in later life and so younger patients were selected so that the age of the control group would be more likely to match that of the psychotic group. Possible participants were contacted by telephone, after a letter had been sent to explain the nature of the study (see Appendix 7). They were given a full explanation of the study, and if they agreed to participate, an interview date was set. Participants were either seen at home or at the rheumatology outpatient clinic, depending on their preference. In addition, in one of the outpatient clinics, a nurse

gave patients an information sheet about the study and informed the researcher of people who had expressed an interest in taking part in the study.

2.2.2 Description of Participants

2.2.2a Psychotic Group

In all 43 people were approached and 34 people recruited. Of the nine who refused, reasons given were not wanting to talk (N=5) and not wanting to talk about their childhood (N=4). Four people agreed to the research but did not complete it. Two people left because they were uncertain about filling in the consent form, one became angry about questions relating to drug abuse and one interview was abandoned because the participant did not speak English well.

Of the thirty that completed the interview, 16 (53.3%) were male and 14 (46.7%) were female. The age range was 18-59 (mean = 35.9, s.d. 11.6). The ethnic backgrounds of the participants (described by themselves) are given in Table 1.

27 (90%) of psychotic participants were not in employment, 2 (7%) were students, 1 (3%) was in part time employment and no psychotic participants were in full time employment. Ten of the psychotic participants had partners (33%) and 20 (67%) did not.

Diagnoses, taken from patients medical notes, were as follows: schizophrenia 15 (50%), paranoid schizophrenia 9 (30%) and schizo-affective disorder 6 (20%). Mean duration of illness was 9 years (s.d. = 7.9).

2.2.2b Control Group

In all 55 people were approached and 30 people recruited. Of those that were not recruited, 14 stated that they were not interested, 2 did not speak English, 6 stated that they were too busy and 3 failed to attend the interview appointment.

Of the thirty that completed the interview, 11 (37%) were male and 19 (63%) were female. There were no significant differences between the two groups in terms of gender ($\chi^2 = 1.7$, d.f. = 1, $p = 0.3$). The age range was 30-83 (mean = 49, s.d. 13.4).

Arthritic participants were significantly older than psychotic participants ($t = 4.0$, d.f. = 58, $p < 0.001$) The ethnic backgrounds of the participants (described by themselves) are given in Table 2. A chi square analysis shows that the two groups were not significantly different in terms of ethnic background ($\chi^2 = 9.9$, d.f. = 8, $p = 0.3$)

Fourteen (47%) of arthritic participants were not in employment, 3 (10%) were students, 1 (3%) was in part time employment and 12 (40%) were in full time employment. Arthritic participants were significantly more likely than psychotic participants to be in full time employment ($\chi^2 = 16.3$, d.f. = 3, $p = 0.001$). Twenty-six arthritic participants (87%) had partners and 4 (13%) did not. Significantly more arthritic participants than psychotic participants therefore had partners ($\chi^2 = 17.8$, $df = 1$, $p < 0.001$).

Twenty-six arthritic participants had rheumatoid arthritis and four had psoriatic arthritis. Mean duration of illness was 8.6 years (s.d. = 10.3) and was not significantly different to the psychotic group ($t = 0.3$, d.f. = 58, $p = 0.8$).

Table 1: Ethnic background of psychotic participants

Ethnic Background	Frequency	Percentage
White UK	12	40
White Irish	4	13
White Other	4	13
Black African	1	3
Black Caribbean	2	7
Black Other	2	7
Indian	4	13
Other	1	3

Table 2: Ethnic background of arthritic participants

Ethnic Background	Frequency	Percentage
White UK	17	57
White Irish	1	3
White Other	3	10
Indian	5	17
Pakistani	1	3
Other	3	10

2.3 Measures

The measures used in this study are outlined below:

2.3.1 Childhood Experience of Care and Abuse Questionnaire (CECA-Q)

Childhood Experience of Care and Abuse Questionnaire (CECA-Q; Bernazzani, Moran, and Bifulco 1997; Appendix 1) is a retrospective questionnaire that asks participants about their relationships with their parents, physical punishment as a child and any unwanted sexual experiences. It was developed from the Childhood Experiences of Care and Abuse interview measure (CECA; Bifulco, Brown and Harris, 1994), which is a semi-structured interview in which the interviewer makes ratings of whether a particular experience meets the criteria for inclusion.

Although interview based measures offer a rich source of information, and allow for more independent ratings to be made, the CECA-Q was chosen in preference to the CECA because it was more practical for this particular study. The CECA involves an interview of approximately one and a half hours. The addition of the other measures that were used in this study would have meant that it would be likely further interviews would be needed in order to complete the measures. It was felt that this would make it difficult to recruit sufficient participants into the study within the timescale.

The CECA-Q includes four scales, “antipathy”, “indifference”, “physical abuse” and “sexual abuse”. *Antipathy* is a measure of the degree to which the participant’s parents were critical, hostile or expressed dislike for them. *Indifference* reflects to what extent participants’ parents were neglectful or disinterested in them as a child. *Physical abuse* includes such experiences as being punched, kicked, burnt or hit with a hand or

object by a member of the household. *Sexual abuse* is defined as sexual contact before the age of seventeen not including willing sexual contact with peers in teenage years.

Antipathy and indifference are scored by asking participants to rate how much they agree with particular statements about each of their parents (e.g. "My mother made me feel a nuisance"). Physical and sexual abuse are rated by asking participants whether they experienced either of these during childhood, and asking specific questions about these experiences.

Although the CECA-Q is still undergoing validation, the CECA has been shown to have good inter-rater reliability (Bifulco, Brown and Harris, 1994). Studies comparing the responses of sisters have also shown the CECA to be a valid instrument for the measurement of different factors that contribute to abuse (Bifulco, Brown, Lillie and Jarvis, 1997). The CECA-Q was chosen above other measures that have already been validated such as the Child Abuse and Trauma Scale (CATS; Saunders, and Becker-Launsen, 1995) for a number of reasons. Firstly, the CECA-Q asks for separate ratings for each parent, rather than for one global rating. Thus it is possible to look at the effect for example of having one neglectful parent and one caring parent. The CECA-Q was also considered to be more sensitive in its approach to difficult topics such as whether someone had been sexually abused. Furthermore, the CECA-Q also includes questions relating to parental loss or separation and also different family arrangements, i.e. a child may live with its parents, but then go to live with a relative for a long period of time. It was therefore felt that the CECA-Q would offer a richer source of data than other questionnaire based measures.

2.3.2 Measures of Psychotic Symptoms

Different measures of psychotic symptoms were used with the two groups. Direct comparisons are not being made between these groups on the basis of psychotic symptoms and so measures that were more appropriate to each group were selected. Comparisons will however be made within groups. As discussed in the Introduction, much of the research into specific symptoms of psychosis has focused on delusions and hallucinations, and this research has suggested that there may be an association between these symptoms and childhood experiences. Therefore within the psychotic group, these symptoms were of particular interest, and so questionnaires have been used that specifically measure these symptoms. Within the control group, the aim was to examine whether there is a link between schizotypal traits and adverse childhood experiences. For this reason, a measure that has been used to examine psychotic traits in the normal population has been selected.

2.3.2a Psychotic Group

Hallucinations

The Launay and Slade Hallucination Scale (Launay and Slade 1981; Appendix 2) was used to measure hallucinatory experiences in the psychotic group. This is a twelve-item self-administered questionnaire designed to measure hallucinatory predisposition. It aims to detect both sub-clinical and clinical predisposition to hallucinatory experiences. Participants are asked whether they have had a particular experience or not, giving a maximum score of 12. Five items measure overt auditory hallucinations and one item overt visual hallucinations. These six items are therefore concerned with overt clinical symptoms that are likely to be reported by clinical populations. The remaining six items are aimed at measuring sub-clinical phenomenon. Two items measure vivid thoughts, one item intrusive thoughts and

three items measure vivid daydreams. Thus lower scores represent sub-clinical levels of hallucinatory experiences, and higher scores represent clinical levels.

Delusions

Delusional experiences were measured using the Peters et al Delusions Inventory (PDI) (Peters, Day and Garety, 1996; Appendix 3). This is a 21-item, self-administered questionnaire in which participants are asked whether they have particular beliefs. If participants agree that they do hold a particular belief they are asked rate on a 1 to 5 scale the degree of distress, preoccupation and conviction associated with the belief. For each item, a participant scores one if they agree with the item, and then a maximum of a further 15 depending on the scores for the three further ratings. This gives a total possible score of 336.

2.3.2b Control Group

Schizotypal traits (a tendency towards psychotic experiences) were measured in the control group using the Oxford-Liverpool Inventory of Feelings and Experiences (O-LIFE; Mason, Claridge and Jackson, 1995; Appendix 4). This self-administered questionnaire includes 159 “yes” or “no” items that assess schizotypal traits in the normal population. It has been shown to be a reliable, valid and relatively quick measure of schizotypy (Burch, Steel and Hemsley, 1998; Steel, Hemsley and Jones, 1996). It includes seven scales, although three scales; *extraversion*, *lie* and *schizotypal personality (STA)* also contribute to the other four scales. Thus the four main scales are:

1. *Unusual Experiences*: These are described as unusual experiences of perceptual or cognitive nature as well as odd beliefs, related to positive symptoms of psychosis.
2. *Cognitive Disorganisation*: These include difficulties with concentration, attention and decision making.

3. *Introvertive Anhedonia*: This suggests a lack of enjoyment from social sources and other activities as well as a dislike of emotional and physical intimacy.
4. *Impulsive Nonconformity*: This scale measure tendencies towards violent, self-abusive and reckless behaviours.

2.3.3 Measures of Depressive Symptoms

2.3.3a Psychotic Group

Depressive symptoms in the psychotic group were measured using the Calgary Depression Scale (Addington, Addington and Schissel, 1990; Appendix 5). Most measures of depression were developed to measure depressive symptoms in a non-psychotic population, and many of these scales may overlap with negative symptoms of schizophrenia (Addington, Addington and Tyndale, 1993). The Calgary Depression scale is specifically designed to measure depression in people with psychosis controlling for negative symptoms. It has been shown to be both a reliable and valid measure for depression in schizophrenia (Addington, Addington and Tyndale, 1993). It consists of eight structured items (asked by the researcher) and one rater observation, made during the interview. All items require a rating on a four-point scale ranging from absent to severe.

2.3.3b Control Group

The Calgary Depression Scale is designed specifically for use with a psychotic population, and so was not used with the control group. In the control group depression was measured using the Beck Depression Inventory II (BDI-II, Beck, Steer and Brown, 1996; Appendix 6). This is a widely used, self-administered 21-item scale that asks participants to rate their agreement with particular statements on a 0-3 scale. The score is the sum of all the individual items, with a maximum score of 63. The

scale in its original form (BDI, Beck 1988) has been shown to be a valid measure of depression, to have high internal consistency and high test-retest reliability (Beck, Steer, and Garbin, 1988).

2.3.4 Drug Use

There is some evidence that drug abuse may sometimes be an attempt to “self-medicate” against stressful experiences and that this could be a result of difficult childhood experiences (Powell, 1992). It was therefore considered important to assess the histories of drug abuse in participants. In addition to the above measures, patients were asked whether they currently used illicit drugs, or whether they had done in the past. If so they were asked what drugs they had used, how frequently they had taken drugs, for how long and, if appropriate, when they had stopped taking drugs.

2.4 Procedure

2.4.1 Psychotic Group

All participants were interviewed while they were on an inpatient unit, in a private room on the ward. Ward staff were approached to ask which patients would be suitable for the research based on the criteria outlined earlier. Patients were then approached and asked whether they would like to take part in the research. They were given an information sheet (Appendix 7) that explained the purpose of the research and the sort of questions they would be asked. If they agreed to take part they were then asked to sign a consent form (Appendix 7), and to complete the ethnic monitoring form. The measures described above were then administered in the following order:

1. Calgary Depression Scale
2. Drug Usage
3. Launay and Slade Hallucination Scale

4. PDI
5. CECA-Q

The CECA-Q was administered last, as it contained perhaps the most sensitive material, and it was hoped that the participants would feel more comfortable towards the end of the interview. The Calgary Depression Scale was administered first, as the researcher always administered it and so it was hoped that this would help to develop rapport and to put the participant more at ease.

Although most of the questionnaires were self administered, it was found that most patients preferred the interviewer to read the questionnaires to them. As all participants were in-patients, they were generally in a more acute phase of their illness and so appeared to find it difficult to concentrate on written material.

2.4.2 Control Group

All participants were recruited through two rheumatology outpatient clinics as outlined earlier. Participants were either seen at home or at the rheumatology outpatient's clinic. They were given an information sheet that explained the purpose of the research and the sort of questions they would be asked. If they agreed to take part they were then asked to sign a consent form, and to complete the ethnic monitoring form. The above questionnaires were then administered in the following order:

1. BDI-II
2. Drug usage
3. O-Life

4. CECA-Q

This order was chosen to be similar to the order in which the types of measures were presented for the psychosis group. As most of the psychotic group had been administered the CECA-Q verbally by the researcher, the same approach was used with the control group.

Patients were also asked when they had first received a diagnosis of arthritis and whether they had ever received a psychotic diagnosis.

Chapter Three – Results

This chapter will first examine whether the current study has found evidence to support the hypothesis that people with psychosis have more difficult childhood experiences than the normal population. It will then go on to examine whether there is a relationship between particular psychotic symptoms and particular types of experience in childhood.

3.1 Research Question One: Do people with psychosis have more difficult childhood experiences than the normal population?

This section will examine whether there were significant differences between the psychotic and arthritic participants on the basis of the CECA-Q sub-scales of antipathy, indifference, physical abuse and sexual abuse. Prior to this, the possibility of CECA-Q scores being affected by depression and drug abuse will be examined.

3.1.1 Effects of Depression

3.1.1a Levels of Depression between Groups

As described in Chapter Two, depression in the psychotic participants group was measured by the Calgary Depression Scale (CDS, Addington, et al, 1990) which gives a maximum score of 27. The mean score for the psychotic group was 6.8 (S.D. = 4.2, range = 0 - 16).

Depression in participants in the arthritis group was measured using the Beck Depression Inventory II (BDI-II, Beck, Steer and Brown, 1996), which gives a maximum score of 63. The mean score for the arthritis group was 14.0 (S.D. = 8.8, range = 3-35).

To allow comparisons between the depression scores for the two groups to be made scores on the CDS and BDI-II were then grouped into four categories; minimal, mild, moderate and severe depression. For the BDI-II cut off points are given as minimal = 0-13; mild = 14-19; moderate = 20-28 and severe = 29-63 (Beck, 1988). Based on a receiver operator curve given in Addington, Addington, and Maticka-Tyndale (1993) CDS scores of eight or more were categorised as moderate depression. This offered the best compromise between correctly identifying those depressed and not including those who are not depressed (specificity = 85%; sensitivity = 91%). CDS scores of four or below were then categorised as minimal and 11 or above as severe. The frequencies of the scores in these categories for both groups are given in Table 3. A Chi Square analysis of the ratings for depression between these two groups showed that there were no significant differences in the levels of depression in psychotic participants when compared to controls ($\chi^2 = 4.6$, d.f. = 3, $p = 0.2$).

3.1.1b Association between Depression Scores and CECA-Q scores

As noted earlier, studies have shown that adverse childhood experiences are associated with depression in later life. It was therefore important to establish whether it was possible that any differences that were obtained in the present study were likely to have been influenced by the effects of depression. Depression scores were correlated with each of the CECA-Q sub-scales of indifference, antipathy, sexual abuse and physical abuse and the results are presented in Table 4. Pearson correlation coefficients are presented for correlations between depression scores and indifference/antipathy scores, and Spearman's rho for physical and sexual abuse as this data is ordinal.

Table 3: Depression Ratings for Psychotic and Arthritic Participants

Depression Rating	Psychosis Group (n=30)	Arthritis Group (n=30)
Minimal	10	16
Mild	7	5
Moderate	6	7
Severe	7	2

Table 4: Correlation between depression scores and CECA-Q sub-scale scores

	Psychosis Group		Arthritis Group	
	(CDS)		(BDI)	
	r/r_s	p	r/r_s	p
Indifference	r = 0.25	0.2	r = 0.2	0.3
Antipathy	r = 0.1	0.5	r = 0.2	0.3
Physical Abuse	r _s = 0.08	0.7	r _s = -0.01	1.0
Sexual Abuse	r _s = -0.4	0.1	r _s = -0.2	0.4

r = Person product moment

r_s = Spearman's rho

It can be seen from Table 4 that depression scores for either group were not significantly correlated with any of the sub-scales of the CECA-Q. This suggests that there was not an association between depression scores and scores on the CECA-Q.

3.1.2 Effects of Illicit Drugs

3.1.2a Use of Illicit Drugs between Groups

All participants were asked whether they currently used illicit drugs or had done in the past. Sixteen people in the psychotic group said they had used drugs in the past (of these, two stated they currently used drugs). In the arthritic group, seven people stated they had used drugs (none were currently using illicit drugs). The differences in drug use between these two groups was significant ($\chi^2 = 5.7$, d.f. = 1, $p < 0.05$). Participants were also asked how long they had taken drugs for and how frequently they had used drugs. These results are shown in Table 5 and Table 6.

Table 5 and Table 6 show that more people with psychosis had used drugs and that only psychotic participants had used drugs for more than five years. The most frequent drug users also belonged to the psychotic group.

Drug use for each individual was then categorised using the above data and the type of drugs used, into four categories: none, low, medium and high. For example occasional use of a Class B drug was classified as low drug use. Monthly use of a Class B drug, or occasional use of a Class A drug was classified as medium use, and weekly use of a Class B drug was classified as high levels of drug use, etc. The results of these classifications by group are presented in Table 7.

Table 5: Length of time for which drugs were taken

Length of time	Psychosis Group	Arthritis Group	Total
Once	4	3	7
Occasional	3	1	4
< 1 Year	1	1	2
1-2 Years	4	2	6
3-4 Years	0	0	0
5-10 Years	2	0	2
10-15 Years	2	0	2
> 15 Years	0	0	0
Total	16	7	22

Table 6: Frequency of Drug Use

Frequency of Drug use	Psychosis Group	Arthritis Group	Total
Daily	3	0	3
Weekly	3	2	5
Monthly	2	0	2
Occasional	4	2	4
Once	4	3	7
Total	16	7	22

Table 7: Category of drug use between groups

Drug Category	Psychosis Group	Arthritis Group
None	14	23
Low	7	4
Medium	4	2
High	5	1
Total	30	30

Consistent with the data presented in Table 5 and Table 6, Table 7 shows that more psychotic participants were categorised as high drug users.

3.2.2 Association between Illicit Drug Use and CECA-Q scores

As a result of the significant differences between the psychosis group and the arthritis group in the use of illicit drugs, separate analyses were conducted for the effects of drug use on the CECA-Q sub-scales. Because of the small numbers of participants in some of the cells, two point scales were used for both drug use and CECA-Q sub-scales. So for example none or low drug use categories were combined into one category (little/none) and minimal and mild indifference were classified as mild indifference. In this way the expected frequencies in the contingency tables were increased, making chi-square analysis more viable. However, significance values for Fisher's exact test are also given. The results are shown in Table 8.

The data in Table 8 suggests that CECA-Q sub-scale scores were not influenced by the use of illicit drugs, except for physical abuse in the arthritis group, where significantly more participants who had experienced physical abuse as a child were classified as having high levels of drug abuse. However the significance of this difference should be viewed with some caution. The low incidence of physical abuse in the arthritis group, coupled with the low frequency of drug use in this group resulted in three out of four cells in the contingency table having expected frequencies lower than five (violating one of the assumptions of the chi-square test). However, out of the 27 participants with arthritis who were rated as demonstrating little or no drug use only two had experienced

Table 8: Chi-square analysis of the effects of drug use on CECA-Q scores

CECA Scale	Psychosis Group			Arthritis Group		
	χ^2	d.f.	p (p*)	χ^2	d.f.	p (p*)
Indifference	0.2	1	0.6 (0.7)	0.7	1	0.4 (0.6)
Antipathy	0.2	1	0.6 (0.7)	1.7	1	0.2 (0.3)
Physical Abuse	0.7	1	0.4 (0.6)	8.2	1	< 0.05 (0.04)
Sexual Abuse	1.4	1	0.2 (0.5)	0.3	1	0.5 (1.0)

p* = exact significance (Fisher's exact test)

Table 9: Confiding relationships for psychotic and arthritic participants

	Adult Confidant		Child Confidant	
	Yes	No	Yes	No
Psychotic Group	16	14	22	8
Arthritic Group	26	4	21	9

moderate to marked physical abuse. In contrast, only three arthritic participants were classified as medium to high drug users and two had experienced moderate to marked physical abuse as a child.

3.1.3 Differences between groups on the CECA-Q subscales

3.1.3a Loss, Separation and Institutionalisation

Four psychotic participants lost a parent before the participant was seventeen years old. Eight arthritic participants lost parents before this age. There were no significant differences in parental loss between the two groups ($\chi^2 = 1.7$, d.f. = 1, $p = 0.2$). Equal numbers of arthritic and psychotic participants (three in each group) had been placed in an institution as a child. Again, an equal number of participants (ten in each group) had been separated from either or both of their parents for more than a year before the age of seventeen. The two groups did not therefore differ significantly in their experiences of loss, separation or institutionalisation.

3.1.3b Confiding

All participants were asked whether there were adults and children/teenagers of their own age to whom they could go to discuss their feelings or problems with. The number of participants in each group who did have people that they could confide in are presented in Table 9 (page 66).

Significantly more people with arthritis than with psychosis stated there were adults they could go to with their problems and feelings as a child or teenager ($\chi^2 = 7.9$, d.f. = 1, $p < 0.01$). There were no significant differences between the two groups in

having a child or teenager of their own age whom they could discuss their feelings or problems with ($\chi^2 = 0.8$, d.f. = 1, $p = 0.8$).

3.1.3c Indifference and Antipathy

The CECA-Q (Bifulco, Bernazzani and Moran, 1997) gives measures for indifference and antipathy for both parents. These are based on 5 point Likert scales. A response of 5 on the scale (after some items have been reversed), which indicated high antipathy or indifference is given a score of 2. A response of 4 is scored 1, and all other responses are scored 0. In all, for each parental figure there are eight items, giving a maximum score of 16. The results of the analysis of participant's scores on the scales of antipathy and indifference are given in Table 10.

The results presented in Table 10 indicate that there was a significant difference between the two groups in the amount of antipathy they experienced as children from their mother figures. Psychotic participants experienced more maternal antipathy than arthritic participants did. There was also a significant difference between the two groups in the level of indifference experienced from their fathers, with arthritic participants experiencing more paternal indifference. There were no significant differences between the groups in the amount of maternal indifference or paternal antipathy experienced, or in the overall indifference or antipathy from both parents combined.

Table 10: Differences in Indifference and Antipathy Between Groups

CECA-Q Scale	Psychosis Group Mean Score	Arthritis Group Mean Score	t	d.f.	p
Maternal Indifference	2.2 (S.D. = 3.7)	1.0 (S.D. = 1.8)	1.5	58	0.14
Maternal Antipathy	4.7 (S.D. = 4.7)	2.2 (S.D. = 3.5)	2.3	58	<0.05
Paternal Indifference	1.5 (S.D. = 2.6)	3.5 (S.D. = 4.2)	-2.1	58	<0.05
Paternal Antipathy	3.5 (S.D. = 3.9)	3.5 (S.D. = 4.4)	0	58	1.0
Total Parental Indifference	3.7 (S.D. = 5.0)	4.5 (S.D. = 5.4)	-0.6	58	0.55
Total Parental Antipathy	8.2 (S.D. = 7.0)	5.7 (S.D. = 6.7)	1.4	58	0.16

Table 11: Ratings for indifference and antipathy

		Psychosis Group	Arthritis Group
Indifference	Minimal	11	11
	Mild	7	6
	Moderate	7	3
	Marked	5	10
Antipathy	Minimal	6	9
	Mild	6	11
	Moderate	7	4
	Marked	11	6

Data for physical and sexual abuse was of a categorical nature. In subsequent analyses it was necessary to compare scores on CECA-Q sub-scales directly. Therefore the total antipathy and indifference scores (i.e. the combined maternal and paternal scores) were then classified into a four-point scale, which allowed comparisons to be made with the data on sexual and physical abuse. The cut off points for this scale are not fixed and are dependent upon the purpose of the questionnaire (e.g. whether it is used as a screening tool or to provide an estimate of prevalence in a population) and the likely prevalence of a factor within the group being studied. Sensitivity and specificity data were available for a depressed sample, but not for a psychotic sample. In choosing the cut-off points, attention was paid to the data available for depressed patients, and to the spread of scores within the present study. For the indifference scales, the cut-off points chosen were; minimal = 0, mild = 1-2, moderate = 3-7 and marked = 8 or more. For antipathy the cut-off points were minimal = 0, mild = 1-6, moderate = 7-9 and marked = 10 or more. The frequency of scores in each category are given in Table 11 (page 69).

3.1.3d Experiences of Indifference and Antipathy from both Parents

An important factor to examine when looking at the levels of indifference or antipathy that a child experiences from a particular parent is the characteristic of the relationship with the other parent. So for example, if a child is experiencing severe antipathy from their mother, do they experience similar levels of antipathy from their father? To analyse these factors, indifference and antipathy ratings were first reduced from a four point scale to a two point scale i.e. minimal and mild indifference were categorised as low indifference whilst moderate and severe indifference were categorised as high indifference, etc. The rationale for the re-categorising of these scales was to ensure there would be sufficient numbers in each category to fulfil the

criteria for a chi-square analysis. Parental indifference and antipathy were then separately categorised as low for both parents, low for one and high for another or high for both. The results are presented in Table 12 and Table 13.

There were no significant differences between the two groups on the basis of indifference ratings between parents ($\chi^2 = 0.75$, d.f. = 2, $p = 0.7$). Although a higher proportion of people with psychosis experienced high levels of antipathy from both parents than controls, these difference were not significant ($\chi^2 = 4.4$, d.f. = 2, $p = 0.1$).

3.1.3e Positive Ratings on the Indifference and Antipathy Scales

Antipathy and indifference scores were then re-coded to look at the effects of a lack of antipathy and indifference i.e. the degree to which participants rated their parents positively. Participants had rated how much they agreed with each statement in the CECA-Q related to antipathy or indifference, on a five point Likert scale. In the original scoring of the criteria only the two *highest* ratings on the five-point scale contribute to the antipathy and indifference scores. All other ratings are scored zero, but there may be considerable variability between the two groups on these ratings. In other words, although there may not have been significant differences between the psychotics and arthritics in the amount of antipathy they experienced, there may be differences between the groups in how *positively they rated their parents* on this measure. The ratings were therefore reversed, with only the two *lowest* scores, representing a *lack of antipathy or indifference*, being scored. Differences between the two groups on the basis of these measures are presented in Table 14.

Table 12: Differences in indifference from parents between groups

Parental Indifference	Psychosis Group	Arthritis Group
Low/Low	12	13
Low/High	12	9
High/High	6	8

Table 13: Differences in antipathy from parents between groups

Parental Antipathy	Psychosis Group	Arthritis Group
Low/Low	8	15
Low/High	11	10
High/High	11	5

Table 14: Comparisons between psychotic and arthritic participants in lack of indifference and antipathy

CECA-Q Scale	Mean Scores for Psychotics	Mean Scores for Arthritics	t	d.f.	p
No Maternal Indifference	12.3	13.4	-0.99	58	0.33
No Maternal Antipathy	8.8	11.6	-2.27	58	<0.05
No Paternal Indifference	11.2	11.0	0.13	58	0.9
No Paternal Antipathy	8.6	10.9	-1.57	58	0.12
Total Non – Indifference	23.5	24.4	-0.44	58	0.67
Total Non - Antipathy	17.5	22.5	-2.35	58	<0.05

As Table 14 shows, the only significant differences are that the mothers of arthritic participants showed significantly more non-antipathetic behaviour compared to those of psychotic participants, and consistent with this the scores for total non-antipathy were significantly higher for the arthritic group. This is as would be expected, as it has already been shown that psychotic participants experienced more maternal antipathy than arthritic participants. This may therefore reflect a tendency for participants to use the extremes of the scale, i.e. responding either yes or no, rather than using the whole of the five point scale.

3.1.3f Physical and Sexual Abuse

Participants were asked whether they had ever been hit repeatedly with an implement, or kicked, punched or burnt by someone in the household as a child. If so they were asked by whom were they hit, how old they were when it began, how they were hit, whether the hitting occurred on more than one occasion, whether they were ever injured and whether the person seemed out of control. From participant's responses the severity of abuse was rated as absent, some/mild physical abuse, moderate abuse or marked abuse based on the criteria given in the CECA (Bifulco, Brown and Harris, 1994).

Participants were also asked whether they had ever had any unwanted sexual experiences as a child. If so they were asked how old they were when the abuse began, whether the abuser was known to them or was a relative, whether the abuse occurred on more than one occasion, whether the abuse involved touching their own private parts and/or the other person's and whether the abuse involved sexual intercourse. Severity of abuse was then categorised as absent, some/mild, moderate or

marked, again based on criteria given in the CECA. Ratings for physical and sexual abuse in both groups are given in Table 15.

Table 15 therefore shows that there were no significant differences between the two groups in the level of physical or sexual abuse they experienced. Further analysis revealed that there were no significant differences in the age of onset of physical abuse between the two groups (mean age for psychosis = 10.1 [S.D. = 5.2], mean age for arthritis = 7.4 [S.D. = 4.1], $t = 0.95$, d.f. = 9, $p = 0.3$). Analysis of the relationship of the physically abusive parent to participants showed that there were no significant differences between the groups in terms of which parent was abusive ($\chi^2 = 5.8$, d.f. = 2, $p = 0.06$) although this almost reached significance (5 people with psychosis were abused by their mother, and only one person with arthritis). There were no significant differences in reports of whether the abuser appeared out of control or not ($\chi^2 = 0.3$, d.f. = 1, $p = 0.6$).

There were no significant differences between the age of onset of sexual abuse between psychotics ($\bar{X} = 9.0$, S.D. = 3.6) and arthritics ($\bar{X} = 9.8$, S.D. = 2.7) ($t = -0.4$, d.f. = 10, $p = 0.7$). There were no significant differences between whether the abuser was known to the participant or not ($\chi^2 = 1.1$, d.f. = 1, $p = 0.3$) but significantly more arthritics were sexually abused by a relative ($\chi^2 = 4.0$, d.f. = 1, $p < 0.05$). There were no significant differences between the two groups in terms of whether the abuse happened more than once or not ($\chi^2 = 1.1$, d.f. = 1, $p = 0.3$) or whether the abuse involved sexual intercourse ($\chi^2 = 0.02$, d.f. = 1, $p = 0.9$). However, it should be noted that the small numbers of people who were physically or sexually abused in this sample make the above findings somewhat tentative.

Table 15: Physical and sexual abuse in psychotic and arthritic participants

Severity Ratings		Psychosis	Arthritis	χ^2	p
		Group	Group	(d.f.)	
Physical Abuse	Absent	22	25		
	Some	1	1	2.0	0.6
	Moderate	4	1	(3)	
	Marked	3	3		
Sexual Abuse	Absent	23	24		
	Some	4	3	0.2	0.9
	Moderate	1	1	(3)	
	Marked	2	2		

3.1.3g Multiple Abuse

So far, analysis has looked at the effect of each CECA-Q variable separately. However these variables may have an additive effect (e.g. the experience of physical abuse may have different effects if a child's parents show high degrees of antipathy and indifference).

Using the two-point scales for each CECA-Q variable (i.e. physical abuse categorised as Little/None or Moderate/Marked etc.) participants were categorised as having 1, 2, 3, or 4 of the CECA-Q categories in the moderate/marked range. A chi-square analysis revealed there were no significant differences between the two groups based on the number of CECA-Q scales in the moderate/marked range ($\chi^2 = 7.6$, d.f. = 4, $p = 0.1$).

3.2 Research Question 2: Is there a relationship between particular psychotic symptoms and particular types of experience in childhood?

Most of the analyses of differences between the two groups did not reveal significant findings. However, it may be that there are differences *within* these two groups between childhood experiences and psychotic symptomatology. This was examined via stepwise multiple regression, the results of which are presented below.

3.2.1a Psychotic Participants

Psychotic symptoms in the psychosis group were measured using the Launay and Slade Hallucination Scale (Launay and Slade 1981) and the Peters et al. Delusions Inventory (PDI, Peters, Day and Garety, 1996). The mean score for participants on the Launay and Slade Hallucination Scale was 4.7 (S.D. = 2.7, N = 30, min. = 0, max. = 10). The mean score on the PDI was 73.6 (S.D. = 52.2, N = 28, min. = 0, max. = 188).

A multiple regression analysis was conducted with scores on the PDI as the dependent variable and the categorical scores for indifference, antipathy, physical abuse and sexual abuse as independent variables. However, there were no significant findings ($F = 2.4$, $p = 0.08$), suggesting that scores on the PDI were not predicted by CECA-Q scores. Analysis of the antipathy and indifference experienced from parents separately was also non-significant ($F = 1.3$, $p = 0.3$).

The same analysis was then conducted but with scores on the Launay and Slade Hallucination Scale as the dependent variable. Physical abuse significantly accounted for 14% of the variance on the Launay and Slade Hallucination Scale ($R^2 = 0.14$, overall $F = 4.5$, $p < 0.05$), but all other variables were not significant. Furthermore

there was no significant association between scores on the Launay and Slade Hallucination Scale and the individual parental ratings for antipathy and indifference ($F = 0.4, p = 0.7$)

3.2.1b CECA-Q Subscales and Psychotic Diagnoses

The psychotic group, as described in Chapter Two, comprised of three different diagnostic groups (schizophrenia 15 [50%], paranoid schizophrenia 9 [30%] and schizo-affective disorder 6 [20%]).

Table 16 shows that there were significant differences according to diagnosis on scores on the indifference and sexual abuse sub-scales. Further analysis showed that significantly more participants with schizo-affective disorder had been sexually abused compared to participants with schizophrenia ($\chi^2 = 9.1, d.f. = 3, p < 0.05$). The significant differences between diagnoses on the indifference scale were a result of significantly higher reports of parental indifference in people with paranoid schizophrenia compared to those diagnosed with schizophrenia ($\chi^2 = 9.2, d.f. = 3, p < 0.05$).

Table 16: Comparison of scores on CECA-Q sub-scales between diagnoses

CECA-Q Scale	Rating	Schizophrenia (N=15)	Paranoid Schizophrenia (N=9)	Schizo-affective Disorder (N=6)	χ^2 (df)	p
Indifference	Minimal	6	3	2	12.9 (6)	<0.05
	Mild	7	0	0		
	Moderate	1	4	2		
	Marked	1	2	2		
Antipathy	Minimal	4	1	1	1.7 (6)	0.9
	Mild	3	2	1		
	Moderate	3	3	1		
	Marked	5	3	3		
Physical Abuse	Absent	12	6	4	6.0 (6)	0.4
	Mild	0	0	1		
	Moderate	2	2	0		
Sexual Abuse	Marked	1	1	1	14.1 (6)	<0.05
	Absent	13	7	3		
	Mild	2	2	0		
Abuse	Moderate	0	0	1	(6)	
	Marked	0	0	2		

3.2.2 Arthritic Participants

Psychotic symptoms in the arthritis group were measured using the Oxford-Liverpool Inventory of Feelings (O-LIFE, Mason, Claridge and Jackson, 1995). The mean score was 67.8 (S.D. = 18.6, N = 29, min. = 40, max = 119). Table 17 depicts the mean scores on the sub – scales of the O-LIFE.

As discussed in Chapter Two, the sub-scales of social desirability, extroversion and STA all contribute to the other sub-scales of the O-LIFE. Thus, multiple regression analyses were conducted on the four main factors in the O-LIFE scale. CECA-Q sub-scale scores did not predict variance on either the unusual experiences ($F = 0.8, p = 0.6$), cognitive disorganisation ($F = 2.2, p = 0.09$) or introverted anhedonia factors ($F = 1.4, p = 0.3$). The only significant finding was that total parental indifference scores predicted 20% of the variance on the impulsive non-conformity scale ($R^2 = 0.2$, overall $F = 5.4, p < 0.05$). Furthermore, analysis of individual parental ratings for antipathy and indifference revealed these did not significantly contribute to variance on the O-LIFE scales of unusual experiences ($F = 1.1, p = 0.4$), cognitive disorganisation ($F = 1.8, p = 0.2$), introverted anhedonia ($F = 0.4, p = 0.8$) or impulsive non-conformity ($F = 2.4, p = 0.1$).

Table 17: Mean scores for O-LIFE sub-scales

O-LIFE Factor	Mean	S.D.
Unusual Experiences	7.4	5.8
Cognitive Disorganisation	10.6	5.1
Introverted Anhedonia	8.4	5.3
Impulsive Non-conformity	7.3	4.6
Social Desirability	9.6	4.9
Extroversion	11.4	5.1
Schizotypal Personality (STA)	12.9	6.4

Chapter Four - Discussion

Overview

This chapter will begin by summarising the main findings of this study. The findings will then be interpreted in the light of previous research. Methodological issues related to the current study will then be examined before the implications of the findings are discussed.

4.1 Summary of Findings

This section will review the findings of the study as they relate to the research questions.

4.1.1 Research Question One: Do people with psychosis have more difficult childhood experiences than the normal population?

In order to answer this question, comparisons were made between psychotic and arthritic participants on scores on the CECA-Q (Bernazzani, Moran and Bifulco, 1997). This questionnaire measures a variety of aspects of childhood, and the findings from this study for different factors measured by the CECA-Q are presented below.

4.1.1a Parental Indifference

Parental indifference measures the degree to which parental figures are neglectful or disinterested in the child's welfare. This includes factors such as material care, interest in the child's schoolwork and friendships, and emotional availability when the child is distressed (Bifulco, Brown, Lille and Jarvis, 1997).

The present study did not find any significant differences between psychotic and arthritic participants in their experiences of overall parental indifference. There were however significant differences between the two groups when the amount of indifference from each parental figure was examined separately. Arthritic participants experienced more indifference from their fathers than psychotic participants did. Neither group was more likely to have *both* parents scoring high on this scale.

Positive ratings for the indifference scale were also made (i.e. parents who showed interest in their child and were not neglectful of their child's material and emotional needs). There were no significant differences between the two groups on this measure.

Results of the analysis for measures of indifference therefore showed that although the two groups did not differ in overall measures of indifference, psychotic participants experienced less indifference from their fathers than arthritic participants, but were not more likely to rate their fathers positively on this measure.

4.1.1b Parental Antipathy

Parental antipathy reflects the degree of dislike, criticism and hostility that parental figures show towards the child (Bifulco, Brown and Harris, 1994). This also includes factors such as favouring other siblings and picking on the child unfairly.

There were no significant differences between psychotic and arthritic participants in the overall amount of antipathy they experienced from parental figures. Analysis of the antipathy experienced from individual parental figures revealed that psychotic participants were significantly more likely to experience antipathy from their mother

figures than arthritic participants. There were no significant differences between the two groups in the level of antipathy experienced from father figures. More than twice the number of psychotic participants experienced high levels of antipathy from both parents than arthritic participants, but this did not reach significance. Positive ratings for antipathy (i.e. the degree to which parents show liking for a child, and are not critical or hostile) showed that the mother figures of arthritic participants were more likely to score high on this measure than those of psychotic participants. However, it is possible that this is a reflection of the significantly higher levels of maternal antipathy experienced by psychotic participants and that these two analyses are measuring the same thing. This will be discussed in more detail later. There were no differences between father figures on this measure.

Analysis of participants' responses on measures of antipathy therefore indicate that psychotic participants in this study were more likely to experience antipathy from their mother figures than controls and conversely, the mother figures of arthritic participants were more likely to be rated positively on this measure. There were no other significant differences between the two groups on ratings of antipathy.

4.1.1c Physical Abuse

The CECA-Q defines physical abuse as violence by a member of the household. This includes being beaten with an object such as a belt or a stick, being kicked, punched or burnt or hit with an open hand (Bifulco, Brown and Harris, 1994). Measures are also made of the frequency of abuse and whether the child was injured as a result.

There were no significant differences between the two groups in the levels of physical abuse they experienced. There were no significant differences in the age of the child at the onset of the abuse. Although more people with psychosis experienced physical abuse from their mothers than controls, this did not reach significance. There were no differences between the two groups on ratings of whether the parent appeared to be out of control when they were physically abusing them. The results therefore suggest that psychotic participants in this study did not have significantly different experiences of physical abuse than arthritic participants.

4.1.1d Sexual Abuse

Sexual abuse was defined as sexual contact before the age of seventeen not including willing sexual contact with peers in teenage years. All instances of physical contact were included, but not verbal abuse or contact with exhibitionists (Bifulco, Brown and Harris, 1994).

Results revealed no significant differences between psychotic and arthritic participants in the level of sexual abuse they encountered as children. There were no significant differences in the age of onset of abuse, or whether the abuser was known to the child, whether the abuse happened more than once, or whether the abuse involved sexual intercourse. However significantly more participants with arthritis experienced abuse from a relative than did those with psychosis. The results therefore show that with the exception of the fact they were less likely to experience sexual abuse from a relative, psychotic participants did not have significantly different experience of sexual abuse as children than participants with arthritis.

4.1.1e Combined Effects of Abuse

Analysis of whether there were differences between the two groups in experiencing high levels of abuse on multiple scales (i.e. the same child experiencing high levels of parental antipathy and indifference, physical abuse and sexual abuse) revealed that there were no significant differences. Psychotic participants in this study were not therefore more likely to have experienced multiple forms of abuse than arthritic controls.

4.1.1f Parental Loss or Separation

Psychotic participants were not more likely to experience parental loss or separation than controls. Furthermore there were no significant differences between the number of participants who had received institutional care as children in each group.

4.4.1g Confiding

Participants were asked whether there were adults or children/teenagers of their own age that they could go to discuss their problems or feelings with. There were no significant differences between the two groups in having children/teenagers of their own age that they could confide in, but significantly more arthritic participants reported having adults they could confide in.

Summary

The findings related to question one mostly reveal that there were not significant differences between the childhood experiences of participants with psychosis and those with arthritis. However, significant differences were found that show that psychotic participants were less likely to experience indifference from their fathers but more likely to experience antipathy from their mothers. They were also less likely to be sexually abused by a relative and were less likely to have an adult in whom they could confide.

4.1.2 Research Question 2: Is there a relationship between particular psychotic symptoms and particular types of experience in childhood?

4.1.2a Psychosis Group

Delusions

Delusions were measured using the Peters et al. Delusion Inventory (PDI, Peters, Day and Garety, 1996). The score on the PDI gives an indication of whether a person has many delusional beliefs and the level of preoccupation, disturbance and the conviction with which they hold those beliefs. Analysis revealed that there were no significant associations between scores on the PDI and indifference, antipathy, physical abuse and sexual abuse. Delusions did not appear to be influenced by childhood experiences in this sample.

Hallucinations

Hallucinations were measured using the Launay and Slade Hallucination Scale (Launay and Slade 1981), which gives a measure of an individual's tendency to have auditory and visual hallucinations, as well as intrusive thoughts, vivid daydreams and vivid thoughts. A significant association was found between the presence of physical abuse in childhood and a tendency to hallucinate. There were no other significant findings.

Diagnosis

Individuals in the psychotic sample had one of three diagnoses; schizophrenia, paranoid schizophrenia or schizo-affective disorder. In the present study it was found that more participants diagnosed with schizoaffective disorder had been sexually abused as children than those diagnosed with schizophrenia. Participants diagnosed as

paranoid schizophrenic had experienced more parental indifference as children than those diagnosed with other forms of schizophrenia.

4.1.2b Arthritis Group

In arthritic participants a tendency towards schizotypal traits was measured using the Oxford-Liverpool Inventory of Feelings and Experiences (O-LIFE, Mason, Claridge and Jackson, 1995). The O-LIFE scale has four main factors, which are described here along with the findings for each factor.

Unusual Experiences

This measures experiences of a perceptual and cognitive nature, as well as odd beliefs, which relate to the positive symptoms of hallucinations and delusions. There was no significant association between scores on this scale and childhood factors.

Cognitive Disorganisation

This scale relates to difficulties with attention, concentration and decision making, a sense of purposefulness, moodiness and social anxiety (Mason, Claridge and Jackson 1995). There was no significant relationship between arthritic's scores on this scale and scores on the CECA-Q sub-scales.

Introvertive Anhedonia

This scale measures aspects related to the negative symptoms of schizophrenia. It measures a lack of enjoyment from social sources, a dislike of emotional and physical intimacy and a tendency towards independence and solitude (Mason et al. 1995). It was not related to participants' scores on the CECA-Q.

Impulsive Non-Conformity

This relates to poor self-control, mood swings and antisocial or destructive tendencies, although less extreme scores may relate to a non-conformist life style. It

was found that arthritics who had experienced high levels of indifference as children scored highly on this scale. There were no relationships with other variables.

4.2 Interpretation of the Findings

This section will relate the findings summarised in the preceding section to the previous research that has already been outlined in the Chapter One. Firstly, differences between the two research groups will be considered, followed by interpretation of the results of the within group analysis

4.2.1 Differences Between the Two Groups

There were not significant differences between the two groups on most of the measures in this study. However, analysis revealed four significant differences between the two groups. Psychotic participants experienced more maternal antipathy but less paternal indifference and were less likely to have an adult confiding figure than arthritic participants. Arthritic participants were more likely to be sexually abused by a relative than psychotic participants although were not more likely to be sexually abused overall. The interpretations of each of these findings will be discussed here. No other significant differences were found between the two groups and this will be discussed later in this chapter.

4.2.1a Antipathy and Indifference

Psychotic participants experienced significantly more antipathy from their mothers than controls. In other words, the mothers of psychotic participants expressed more dislike, were more critical and hostile to their children and were more likely to show favouritism towards siblings than was the case for participants with arthritis. Although psychotic participants experienced less indifference from their fathers than arthritics,

there were no differences on the positive ratings for this scale. This suggests that although psychotic participants did not feel that their fathers were disinterested or neglectful of them, they did not feel that their fathers were particularly interested or available to them either.

As outlined in Chapter One, Hingley (1997) argues that psychotic symptoms may be the result of early, immature defence mechanisms. She suggests that defence mechanisms may fail to develop as a result of the early childhood environment. Hingley (1997) states that psychoanalytic theorists posit that it is the relationship with the mother that normally influences the development of early defences. Hingley outlines the work of Mahler (1968) who states that initially the baby does not experience itself as separate from the mother. The healthy development of the infant relies on the mother being able to respond to the needs of the infant within this merged relationship. The mother's capacity to respond determines the infant's ability to differentiate and develop its own sense of self. Mahler suggests that infant psychosis is related to problems in this early symbiotic relationship.

It could therefore be argued that a high degree of antipathy from the mother at this stage of development might have a detrimental effect on the infant's capacity to develop mature defence mechanisms and to the persistence of psychotic defences. The findings of the present study would then be consistent with this view. However, any such conclusion must be considered with caution. Firstly, the measure of antipathy relates to childhood as a whole and not the early parental relationship. In particular it relies on the recall of the participant. The stage of development discussed above relates to early infancy and is therefore the period least likely to be recalled by

participants. Antipathy may not be a stable trait in a parent, and there may be times that they are more hostile to their children than others. It cannot therefore be assumed that psychotic participants in this study experienced more antipathy in their early childhood than controls.

Another important consideration is the lack of any significant differences between the two groups in the levels of maternal indifference. Mahler (1968) suggests that healthy development relies upon the mother responding to the infant's needs. Had the present study found that psychotic participants experienced higher levels of indifference than controls (i.e. their mothers were more neglectful and disinterested), as well as the high levels of antipathy, then there might be more justification for suggesting that the present study supports an association between maternal behaviour and psychosis. In fact the only difference between the two groups related to indifference was that psychotic participants experienced *less* indifference from their fathers. However, although less indifferent, it does not appear that the fathers of psychotic participants took a more active interest in them than the fathers of arthritic participants.

A final consideration is that while Mahler outlines the importance of the mother-infant relationship in the development of infant psychosis, it is essentially the primary care giver that is of importance. In the above discussion it has been assumed to be the mother. If antipathy from the primary caregiver in early infancy is an important factor in the failure to develop from early psychotic defence mechanisms, then it is important to establish who the primary care giver is and this cannot be assumed to be the mother. The finding that the fathers of arthritic participants were more indifferent than those of psychotic participants would take on an extra significance if they were

the primary care givers. Anecdotal evidence from the interview suggests that this was not the case, but future research should address the issue of who the primary care giver is directly.

The finding that psychotic participants were more likely to have experienced antipathy from their mothers is therefore not inconsistent with Hingley's (1997) hypothesis that failures in the early environment lead the adult vulnerable to the use of psychotic defences. However, whilst the findings are consistent with this hypothesis, given the cautions outlined above, they cannot be considered to offer support or confirmation of it.

4.2.1b Sexual Abuse by Relatives

Significantly more participants with arthritis were abused by a relative than were participants with psychosis. How might this be interpreted with reference to previous research, and what bearing might it have in relation to research question one? It is important to establish whether this difference between the two groups in the nature of the sexual abuse they experienced amounts to a difference in the severity of the abuse experienced by either group.

Herman, Russell and Trocki (1986) found that the experience of abuse by a father or stepfather was more likely to lead to severe and long-lasting effects. However Ussher and Dewberry (1995) note how this is not a consistent finding in the literature. Browne and Finkelhor (1986) in their review of the impact of sexual abuse find some support in the literature for the view that sexual abuse by a relative is more traumatic, although note that some researchers have not found such a relationship. They suggest that the fact that sexual abuse by a relative is not consistently found to be more

traumatic may be a result of other aspects of the abuse. They suggest that sexual abuse by a trusted neighbour involves more betrayal than abuse by a distant relative, and that abuse by a stranger may involve more fear. Ussher and Dewberry (1995) found that a univariate analysis of the effects of abuse tended to give misleading results. As Browne and Finkelhor suggest, there are many factors that impact upon abuse, and Ussher and Dewberry note that these often correlate with each other. They therefore performed a multivariate analysis on their results to predict the effects of each variable independently of others. They found that violence or the threat of violence and the method of coercion involved in the abuse, were the most important predictors of the negative effects of abuse. Other important predictors were the duration and frequency of the abuse, the age of onset, the presence of sexual contact, being told that nothing was wrong and whether the abuse was disclosed or not. The identity of the abuser did not predict the effects of the abuse.

Previous research therefore reports inconsistent findings of the effects of abuse by a relative. Clearly, there are many factors in the nature of the abuse that contribute to the severity of the outcome. This study has found that there were no significant differences between psychotic and arthritic participants in the age of onset of the abuse, whether the abuse happened on more than one occasion, whether the abuse involved sexual intercourse or not or whether the participant knew the abuser.

In the light of these findings, and the research presented above, it does not seem reasonable to conclude that the abuse experienced by participants with arthritis was more traumatic than that experienced by those with psychosis. Likewise, it cannot be concluded that psychotic participants experienced more severe abuse than controls. It

is therefore suggested that the finding that significantly more participants with arthritis experienced sexual abuse by a relative does not equate to likely differences in the outcome of the abuse between the two groups. It must therefore be concluded that in this sample, there was no evidence to suggest that people with psychosis were more likely to be sexually abused as children than the normal population, or that they were likely to experience more severe sexual abuse as children.

4.2.1c Lack of an Adult Confidant

This research has found that significantly more participants with psychosis did not have an adult to whom they could go to discuss their feelings or problems. There were however no differences between the two groups in having confidants of their own age. Having an adult in whom one can confide may be an important mediating variable in the effects of difficult or traumatic events as a child. For example, Brunngraber (1986) found that in victims of incest, having supportive relationships and being able to disclose that abuse had taken place helped the individual to overcome the trauma of their abuse. Fonagy, Steele, Steele, Higgitt and Target (1994) report that features of a child's immediate environment that may help in protecting them from the effects of adversity include a "good warm relationship with at least one primary care giver". The current study has not examined the nature of the relationship of adult confidants in detail. However the finding that significantly fewer participants with psychosis in this study had such a relationship when they were children suggests that this may warrant further investigation. It may be that the lack of an adult with whom a child can discuss difficulties increases the likelihood that traumatic events in childhood can lead to vulnerability to psychosis in later life. This therefore suggests that a combination of traumatic events and a lack of adult support may increase vulnerability to psychosis. However, if vulnerability is considered to be present from

birth it is equally possible that pre-psychotic traits present in childhood may make it less likely that a child will seek out adult figures to discuss their difficulties with. From the present findings, it is only possible to say that fewer participants with psychosis had adult figures that they could talk to when they were children. It is not possible to say whether having such a relationship may have mediated the effects of stressful events in childhood.

4.2.1d Lack of Other Findings

No other significant differences were found between the two groups. Psychotic participants were not more likely to have been physically or sexually abused, had not experienced more indifference from their parents, and had not experienced more antipathy from their fathers. There were no differences between these groups in the likelihood that they had experienced a combination of these factors. Furthermore psychotic participants were not more likely to have lost a parent or to have been separated from their parents. Given the lack of significant findings in this study, consideration must be given to whether there is any association between childhood experiences and the later development of psychotic symptoms. This will be discussed more fully later in this section, within the context of alternative explanations of psychotic symptoms.

The 23% incidence of sexual abuse in people with psychosis in this study is below that of previous research which has found incidence of sexual abuse between 44% and 53% (Beck and van der Kolk, 1987, Greenfield et al, 1994). This could mean that sexual abuse was over reported in previous studies, or that sexual abuse was less prevalent in the current sample or was under-reported. The assertion of Greenfield et al. (1994) that they felt the research was likely to be affected by under-reporting,

suggests that it is more likely that sexual abuse is either less prevalent in this study or has been under-reported, rather than other studies over reporting abuse. The possibility of under-reporting will be discussed in the next section.

4.2.1e Summary

Although in general this study did not find significant differences between the childhood experiences of participants with psychosis and participants with arthritis, it has found some differences. It is therefore neither possible to reject or accept the null hypothesis, that there are no differences between the childhood experiences of the two groups.

4.2.2 Differences Within Groups

Within group analysis revealed three significant findings. People with psychosis were more likely to hallucinate if they had been physically abused. Significant differences were found between some childhood factors and psychotic diagnosis. It was also found that people with arthritis who had experienced indifference as children scored significantly higher on the impulsive non-conformity scale of the O-LIFE. These significant findings will be discussed in the light of other, non-significant findings for each group.

4.2.2a Physical Abuse and Hallucinations

Within group analysis of the psychotic group found that psychotic participants who had been physically abused were more likely to hallucinate than those who had not. A post-hoc analysis revealed that of the five types of experiences measured by the Launay and Slade Hallucination Scale, (auditory hallucinations, visual hallucinations,

vivid thoughts, intrusive thoughts and vivid day-dreams), the only significant correlation was between vivid day dreams and physical abuse in childhood ($r_s = -3.64$, $p < 0.05$ [N.B. higher numbers in physical abuse rating indicated less abuse, hence the negative correlation]). In Chapter One evidence was presented of a link between auditory hallucinations and physical abuse. Although a significant association was found between scores on the Launay and Slade Hallucination Scale and physical abuse, the association was not, as would be predicted on the basis of previous studies, between physical abuse and *auditory* hallucinations. Furthermore, there was not an association between scores on the Launay and Slade Hallucination Scale and sexual abuse and a further analysis revealed no significant relationship between auditory hallucinations and sexual abuse ($r_s = 0.2$, $p = 0.2$). (It should however be noted that the Launay and Slade Hallucination Scale is a twelve item scale, and so the five types of experience measured by it are only assessed by 1-3 questions. Therefore analysis based on these five types of experience should be treated with caution.)

The present study has not therefore found a direct association between childhood physical and sexual abuse and the presence of auditory hallucinations in adult psychotics. However, it should be noted that two of the three questions that contribute to the “vivid day-dreams” factor on the Launay and Slade Hallucination Scale are concerned with auditory phenomena (hear tunes clearly in day dreams, and hearing sounds clearly and distinctly in day dreams). This would therefore appear to be consistent with an association between auditory hallucinations and physical abuse, even though a direct, unambiguous association has not been found.

4.2.2b Childhood Experience and Diagnosis

Analysis of the relationship between psychiatric diagnosis and childhood experience revealed two significant findings. Significantly more participants with a diagnosis of schizoaffective disorder had been sexually abused compared to those with a diagnosis of schizophrenia and significantly more people with a diagnosis of paranoid schizophrenia had experienced parental indifference than people diagnosed with other forms of schizophrenia.

The finding that more people with schizoaffective disorder had experienced sexual abuse than schizophrenics appears consistent with findings from the life-events literature and the hypothesis suggested by Hingley (1997). As discussed in Chapter One, Chung et al (1986) found that life events were more likely to be associated with schizophreniform psychosis than schizophrenia. They suggested that briefer psychotic illnesses might be more likely to be related to an increase in stressful life events than more chronic schizophrenic illnesses. Hingley (1997) also suggests that a traumatic early environment may be more likely to lead to a vulnerability to psychotic breakdown in later life, but this would be more likely to be the case for less severe psychotic illnesses such as schizophreniform disorder or schizoaffective disorder. The present findings may therefore suggest that less severe psychotic illnesses may be more likely to have traumatic origins than more severe illnesses such as schizophrenia.

The finding that people with a diagnosis of paranoid schizophrenia were more likely to have experienced indifference from their parents than people with other forms of schizophrenia is perhaps more difficult to explain. Bentall, Kinderman and Kaney (1994) claimed that persecutory delusions might arise as a result of a gap between

how an individual thinks they are perceived by others and how they would like to be perceived. Parents who are indifferent are less likely to give positive or negative feedback to their children. It is possible that this may result in the child having difficulties developing a sense of identity. This may then make it difficult for the individual to make judgements about how others perceive them. Unfortunately the present study did not study the relationship between childhood experience and types of delusional beliefs, but future research could examine whether there is a relationship between parental indifference and persecutory delusions.

4.2.2c Schizotypal Traits and Childhood Experience

It was hypothesised that schizotypal traits in arthritic participants would vary according to childhood experience, with those having more traumatic childhood experiences being more likely to exhibit schizotypal tendencies. The only significant relationship on individual O-LIFE sub-scales was that parental indifference predicted scores on the impulsive-non conformity sub-scale, which measures antisocial and non-conformist behaviour. The finding of only one childhood factor relating to only one sub-scale of the O-LIFE leads to the conclusion that the present study found little evidence of a relationship between schizotypy and childhood experience.

4.2.2d Summary

Whilst the present study has found some relationships between psychotic symptoms and childhood experience, the majority of the findings were not significant. There was some evidence in the present findings of a link between physical abuse and hallucinations. There was some confirmation for the theory that traumatic experiences may be more related to less severe psychotic disorders than to more chronic psychotic illnesses. The finding that participants diagnosed with paranoid schizophrenia had

experienced more parental indifference is not inconsistent with cognitive models of paranoid delusions, but requires further examination. However, on the whole it must be concluded that this study has not found sufficient evidence to either confirm or disconfirm that psychotic symptoms are related to childhood experiences.

4.3 Methodological Issues

There are a number of methodological issues that must be considered before the implications of the present findings can be discussed. Methodological issues discussed here can be grouped into the following areas; procedural issues relating to the administration of the questionnaires, measurement issues relating to the type of measures used, and design issues relating to the choice of control group.

4.3.1 Procedural Issues

Procedural issues in this study relate to recruitment of participants and how measures were administered to participants.

4.3.1a Recruitment

In a study that asks participants questions of such a sensitive nature as child abuse, it is important that potential participants are fully informed of what they are likely to be asked. For this reason, all participants were given an information sheet that told them that they would be asked about difficult childhood experiences, including their relationship with their parents, any physical abuse they may have received and any unwanted sexual experiences they may have had as a child.

Clearly, if a person has experienced traumatic events as a child, they may not want to be asked questions that remind them of these difficult events. Indeed four possible

psychotic participants declined to take part in the research because they did not want to talk about their childhood. The most common reason for not taking part was that people were “not interested”. People who refused were not questioned beyond this, though it is possible that some were not interested because of the nature of the study.

This therefore introduces a selection bias into the study that may mean that the people who agree to take part are on the whole those less likely to have experienced traumatic events as a child. It is not possible to quantify what effect this may have had on the present study. Only four people definitely gave as a reason for not taking part that they did not want to talk about their childhoods, and these were all possible psychotic participants. It could be argued that such considerations are more likely to affect people who are already under emotional distress to the extent that they have been hospitalised. This would suggest that psychotic participants who had experienced traumatic childhoods would be less likely to take part. Conversely, it could also be argued that there is more chance the psychotic participants, through their long-term contact with mental health professionals would have had more opportunity to discuss such events and would therefore feel more able to talk about them. However, traditionally treatment for schizophrenia has not generally included counselling or psychological therapies. In their study however, Bryer Nelson, Miller and Krol (1987) found that the more disturbed candidates for research were less likely to give consent but of those that did, it was found that the more severely disturbed were more likely to have been abused in childhood.

It seems likely therefore that people may have declined to take part in this study because they did not want to talk about difficult childhood experiences. It is not

possible to say whether this affected one group more than another, although more potential psychotic participants clearly stated this as a reason for not taking part.

4.3.1b Possible Order Effects

As outlined in Chapter Two, questionnaires were administered in a particular order, with the CECA-Q always being the last to be filled out. The justification for this was that this questionnaire asked sensitive and personal questions, and so it was felt that it was best completed after the participant had spent some time with the researcher. In addition, for psychotic participants, the Calgary Depression Scale was administered first as this was a slightly more open ended questionnaire and therefore offered an opportunity to quickly establish rapport with the participant. Initially, it was expected that participants would fill out the PDI and CECA-Q questionnaires by themselves and so participants were asked about drug use and the Launay and Slade verbally administered first, to further assist in establishing rapport. Although initial interviews suggested that psychotic participants preferred both the PDI and CECA-Q to be verbally administered, the initial ordering of questionnaires was maintained in subsequent interviews. As this pattern had been established with psychotic participants, the respective questionnaires for arthritic participants were administered in the same order (i.e. the BDI-II was administered in the same order as the Calgary Depression Scale).

A problem with always administering the questionnaires in the same order is that this may result in order effects. These might particularly be relevant at the beginning and end of the interview. For example, participants might be tired towards the end of the interview, and may then tend to respond quickly without thinking to finish the

interview as soon as possible. By always administering the CECA-Q last, it may have been consistently subject to such effects. However, this was not the impression of the researcher. Equally, people may feel more nervous at the beginning of the interview and may find it difficult to respond to questions, or they may feel more guarded and therefore less likely to divulge personal information.

Given the sensitive nature of some of the questions in the present study, it was felt that the need to establish rapport and help participants feel at ease outweighed the methodological problems that may have been caused by order effects. Clearly, people are far less likely to want to reveal or answer questions about sexual abuse they may have experienced as a child with someone they have just sat down to talk to. Whilst the chosen presentation of questionnaires may have given rise to order effects, it was felt this method improved the likelihood that people would be able to answer questions related to difficult experiences as a child.

4.3.1c Verbal Administration of Questionnaires

As mentioned above, after initial interviews it was found that psychotic participants preferred to be read questionnaires, often stating that they found written material difficult to concentrate on. For this reason questionnaires were generally verbally administered. In most questionnaires this would not have made a difference. However both the PDI and the CECA-Q incorporate Likert scales where participants rate the extent to which they agree with a statement on a one to five scale. Verbally administering such questions may bias the participant to use the extreme ends of the scale i.e. to say “yes” or “no” to statements rather than rate a response on the scale. Although attempts were made to direct participants to categorise their response along

the scale, it was noticeable that when participants requested to fill out the questionnaires themselves, there appeared to be a tendency to use the width of the scale rather than the extremes, which appeared to be used more for verbally administered questionnaires.

This may have had some effect on participants' scores for questionnaires. For example, when CECA-Q scores for antipathy and neglect were re-categorised to examine the effects of participants rating their parents positively on these measures, the results were the opposite of previous analysis of participants negative ratings on these measures. Whilst this is of course logical, it does not necessarily follow that because a participant does not rate their parent as being very critical of them, that their parents were not critical at all. A tendency for participants to say "yes" or "no" to questions, rather than "sometimes" reduces the quality of the data collected in that it can become somewhat dichotomised.

4.3.2 Measurement Issues

There are four main issues that must be considered here. The first is the selection of symptom ratings used for the psychotic group. The second is the validity of retrospective measures of childhood experiences. Thirdly, there are considerations about the likely under-reporting of experiences such as childhood sexual abuse. Finally, and related to the possibility of under-reporting, are concerns about the use of self-report questionnaire methods for examining childhood experiences.

4.3.2a Psychotic Symptom Measures

The symptom measures chosen to measure delusions and hallucinations in the psychotic group (the PDI and the Launay and Slade Hallucination Scale) were both measures of schizotypal traits. These were chosen in preference to actual symptom measures as they were deemed more practical for the current study. Symptom measures such as the Positive and Negative Syndrome Scale (PANSS, Kay, Fiszbein and Opler, 1987) requires a relatively lengthy interview with the participant, as well as corroboration from other sources such as relatives or staff. The use of such measures, combined with other measures used in this study, would be likely to make it necessary to conduct two interviews with each participant. This was felt unfeasible for the current study.

The use of quicker, schizotypal questionnaires may therefore have resulted in a less thorough assessment of psychotic participants' symptomatology. However the use of lengthy measures would have probably resulted in fewer completed interviews, given the time constraints on the current study.

4.3.2b Retrospective Measures of Childhood Experience

The CECA-Q is a retrospective measure of childhood experience. It relies on participants being able to recall experiences that may have happened as much as forty to fifty years ago. It can be argued that this method of collecting data about a person's childhood may not be reliable.

Brewin, Andrews and Gotlib (1993) state that objections to relying on patients' recall of their childhoods can be classified into three areas:

1. Normal limitations on memory: This argument states that recall of all individuals, whether they are psychiatric patients or not, is imperfect or unreliable.
2. General memory deficits associated with psychopathology: Psychiatric difficulties may have effects on memory and so patients' recall may be less accurate.
3. Mood congruent memory processes: Psychiatric conditions may bias the retrieval of memories. For example depressed patients may be more likely to remember negative rather than positive events.

Brewin et al., (1993) review literature from experimental psychology in relation to these three areas. They concluded that there was little evidence to suggest that adult memories of childhood experience were unreliable. Memories were especially reliable for experiences that could be considered unique, consequential and unexpected. Most of the research that has examined whether psychopathology affects memory has used depressed patients. Brewin et al., (1993) conclude that although there are limitations to the research that has been conducted in this area, evidence to support the claim that patients recall is impaired is inconsistent. Again, the claim that recall is affected by mood has most thoroughly been researched using depressed patients and research offers little evidence to support these claims.

Brewin et al. (1993) conclude that although retrospective research does have its limitations, claims that such research is unreliable are exaggerated. They note that its reliability is improved by collecting accounts from other informants and by using questions that enquire about specific events rather than global ones. Unfortunately, gaining accounts from other informants was beyond the scope of the current study,

but the CECA-Q is a measure that asks about specific events or specific parental behaviour.

Evidence therefore appears to suggest that there is no reason to assume that the data gained retrospectively in this study is unreliable. However, there is one important caveat that should be mentioned here. Howard (1993) reports on a case where a patient alleged physical abuse from her father during her childhood during an acute phase of paranoid psychosis. When her symptoms had reduced, she admitted that the abuse had not taken place. Howard warns of the need for corroboration when studying abuse in a psychotic population. As mentioned above, this was outside the scope of this study. Brewin et al. (1993) suggest that memories for real events can be distinguished from imagined events in the amount of sensory and contextual detail that is recalled. Whilst this was not specifically measured in this study, reports of abuse from participants were followed by specific questions about the nature of that abuse. It is felt that these questions improved the probability of distinguishing real from imagined events.

4.3.2c Under-Reporting of Adverse Childhood Experiences

Brewin et al. (1993) suggest that questionnaire methods may be more likely to pick up on positive events than negative ones. They cite evidence from Sheldon (1988) who found that women who were referred for psychotherapy were unlikely to admit to sexual abuse on a pre-therapy screening questionnaire. Beck and van der Kolk (1987) note that evidence has shown that incest victims are reluctant to disclose the incest and they found that disclosures of sexual abuse in chronically hospitalised women were made in psychotherapy and were not talked of openly to staff or patients.

Greenfield et al.(1994) suggest that errors in self report measures are likely to take the form of under-reporting rather than over reporting. Anecdotal evidence from the current research suggests that under-reporting of sexual abuse is likely. One person who disclosed sexual abuse said that she had only done so because she had recently disclosed the abuse for the first time in therapy. She stated that had she not done so she would not have told the researcher. Another participant stated that he felt more able to talk about sexual abuse he had experienced as a child because particular circumstances had required him to talk about it previously. Further evidence of the possible under-reporting of sexual abuse in the present study comes from the lower prevalence rates found compared to previous studies.

It seems likely therefore that the incidence of traumatic childhood events reported in the present study is an underestimate. There is no evidence to suggest that the under-reporting would affect one group more than another, and so it is not possible to say whether the likely under-reporting has affected differences between the two groups in any particular direction. It does however seem more likely that people who are emotionally distressed to the point of needing a hospital admission (i.e. the psychotic group) may be particularly reluctant to talk about painful emotional issues.

4.3.2d The Use of a Structured Self Report Questionnaire

Some of the issues related to self-report measures have already been discussed. However, this section will discuss specifically the choice of a questionnaire measure compared to a semi-structured interview.

Bifulco, Brown and Harris (1994) note shortcomings in the use of questionnaires compared to semi-structured interviews when studying childhood experiences. Under reporting is less likely with the more thorough questioning that an interview allows. Furthermore, interview based measures allow for the interviewer to question the participant in detail about particular incidents and then objectively decide whether the experience meets the criteria for inclusion in a particular category e.g. physical abuse. Bifulco et al (1994) note that this allows the interviewer to account for differences in the reporting style of the abuse. For example, one respondent might have a strong emotional response to relatively mild physical punishment as a child, whereas another person might unemotionally describe severe physical abuse as a child in such a way as to suggest that they were not abused at all.

In Chapter Two the rationale for the choice of the CECA-Q as a measure of childhood experience was discussed. It was felt that the CECA (Bifulco, Brown and Harris 1994), a semi-structured interview measure from which the CECA-Q was developed was not practical for the current study. The CECA-Q was chosen above other questionnaire measures as it was felt to be more sensitive and give a richer source of information. The CECA-Q also overcomes some of the shortcomings of other questionnaire measures in that it does give follow-up questions on reports of physical and sexual abuse that allow the interviewer to categorise the severity of abuse (as opposed to questionnaires that simply ask whether a person was abused or not). However, it is felt that the use of a semi-structured interview such as the CECA would be likely to be an improvement on the present study. It would be likely to give a more accurate reflection of participants' childhood experiences.

4.3.3 Design Issues

The main issue to be addressed in this section is whether people with arthritis represented a suitable control group for the current study.

4.3.3a The Selection of the Control Group

Psychosis is generally speaking a long-term illness that can have an impact on an individual's ability to function at work, their relationships and various aspects of daily living (Fowler, Garety and Kuipers, 1995). In selecting a control group to represent the normal population, it is important to consider the wide impact that psychosis has on an individual's life. People with psychosis are likely to differ from a selection of people from the normal population to such an extent that comparisons between the two groups on the basis of a particular measure would be difficult. Clearly, if two groups are very different on a whole number of psychosocial variables, it becomes more difficult to say with any certainty that differences between the groups are related to particular variables measured. It was for this reason that people with arthritis were chosen as a control group. Arthritis is a long-term illness that can also have a wide reaching impact on an individual's work and social life. Both groups were therefore coping with long-term illnesses that have an impact on many aspects of their lives.

It could be argued that a more logical choice of control group might be people who are chronically depressed. This would represent a group of people with a long-term mental health problem that also has far reaching consequences in a person's life. However, as discussed in Chapter One, there is already a considerable volume of research showing an association between depression and adverse childhood experiences. Comparing the childhood experiences of people with psychosis to those with depression therefore raises some difficulties. If it is found that the childhood

experiences of people with psychosis are similar to those with depression, then this leads to the conclusion that childhood experiences are equally important factors in both depression and psychosis. However, if people with psychosis do not experience the same level of childhood adversity as people with depression, this might not necessarily imply that childhood adversity is not an important factor for people with psychosis. People with psychosis might still experience more adversity in childhood than the normal population, but it would not be possible to make such a conclusion. It was for this reason that a non-psychiatric control group was used.

Despite the efforts of the researcher however, the arthritic group were not matched with the psychotic group on a number of variables such as age and relationship status, with arthritics being more likely to be older and to have a partner. Perhaps the most important consideration however, relates to psycho-social variables associated with arthritis, and whether childhood factors are also associated with arthritis. If people with arthritis are more likely to experience difficult childhoods than the normal population, then the lack of differences between the groups might be due to higher levels of childhood adversity in both groups. The research relating to this is summarised here, most of which relates to rheumatoid arthritis, rather than other forms of arthritis.

There has been much research into the possibility of a rheumatoid arthritis (RA) personality. The possibility that there are pre-morbid personality characteristics that might pre-dispose a person to arthritis would suggest that childhood factors might play a role in the development of arthritis. In a review of the research into this area Lerman (1987) reports that RA patients have been reported as being depressed, to

have dependent personality features and to show problems expressing feelings, particularly anger and hostility. However, many of these studies have compared RA patients to healthy volunteers. Lerman (1987) notes the need to compare RA patients to patients with other chronic diseases. Such studies have not found significant differences in personality variables between RA patients and other chronically ill patients. Lerman also notes that psychological disturbance is generally found in patients with severe, active disease, and that recent onset RA patients are not found to differ significantly from controls. Lerman concludes that evidence for pre-morbid personality factors in RA patients is lacking and that psychological characteristics observed appear to be related to coping with the disease.

Studies have shown a link between stress and RA. Lerman (1987) reports that studies have found that juvenile RA patients show an increased number of life events compared to controls, and that key events include separations from or loss of parents. Baker (1982) in a study of recent onset RA found that RA patients tended to have a higher frequency of stressful events than matched controls in the year prior to onset. The most significant stressors were family conflicts, particularly with a maternal figure. Lerman (1987) concludes that there is some support for an association between stressful life events and RA, and that family conflict, separation and loss appear to play the most critical role. He suggest that increased muscle tension in times of stress could be the mechanism for exacerbating symptoms.

Walker, Keegan, Gardener, et al (1997) compared the childhood experiences of patients with fibromyalgia (a chronic pain disorder) with those of people with RA. They found that patients with RA experienced significantly less childhood

maltreatment, based on a number of variables in a childhood maltreatment interview. They were less likely to experience physical assault, were less likely to have experienced repeated abuse, and were less likely to report unhappy childhoods, poor parental availability or emotional abuse. On a questionnaire of childhood trauma, RA patients had lower mean scores on measures of emotional, physical and sexual abuse and emotional neglect.

The above studies therefore suggest that although it appears that recent life events related to family conflict, loss and separation may play a role in the onset of RA, there is little evidence to support the existence of premorbid personality characteristics that are associated with the onset of RA. Furthermore, in the only study known to the present researcher into the relationship between childhood maltreatment and arthritis, RA patients were less likely to have experienced traumatic childhood events than a patient group with fibromyalgia. Taken together, these findings suggest that although psychological factors may be associated with RA, evidence does not suggest that childhood factors are associated with RA. This indicates that arthritis patients were not an unsuitable control group for the present study. The lack of significant differences between the two groups is unlikely to be the result of an increased incidence of adverse childhood experiences in both groups.

4.3.4 Summary of Methodological Issues

This section has suggested that there are a number of methodological issues that may have affected the findings of this study. Questionnaires were administered in a particular order, and although there is some justification for this, it may have resulted in order effects that may have affected participants' responses to some questionnaires.

Furthermore, some questionnaires were verbally administered, which may have resulted in a reduction in the variability of participants' responses.

It seems possible that abuse was under-reported in the present study, and this was possibly confounded by the likelihood that some potential participants refused to take part because they felt unable to talk about difficult childhood experiences. It is felt that the use of a semi-structured interview procedure would be likely to reduce the chance of the under-reporting of abuse.

Although the use of people with arthritis as a control group is not without difficulties, in that psychosocial factors appear to play some role in this disease, it was felt that they did constitute an appropriate control group. Finally, the retrospective nature of this study does have some limitations, although the research outlined above suggests that retrospective research is not as unreliable as some authors have suggested.

4.4 Implications of the Findings and Suggestions for Future Research

The present study identified two research questions:

1. Do people with psychosis have more difficult childhood experiences than the normal population?
2. Is there a relationship between particular psychotic symptoms and particular types of experience in childhood?

This study did not find that people with psychosis have more difficult childhood experiences than the normal population and did not find that psychotic symptoms were related to childhood experiences. However, it is felt that this does not necessarily mean that such associations do not exist. This study has found some significant findings that are consistent with previous research and it is also felt that methodological limitations in the present study may have resulted in the under-reporting of negative childhood experiences.

Hingley (1997) provides a framework in which the importance of the early infant relationships in the development of mature defence mechanisms is described. She suggests that a difficult relationship with the primary care giver may result in vulnerability in adults to use psychotic defences as a way of coping with difficulties in later life. The finding that psychotic participants experienced higher levels of maternal antipathy is consistent with this theory. Further research into whether antipathy is consistently expressed by the primary care giver would help establish whether there is an association between this variable and psychosis in adulthood.

The finding that people with psychosis were less likely to have an adult with whom they could discuss their feelings and problems suggests that future research should explore in detail the presence of supportive relationships in participants' childhoods. The presence of a supportive adult may prove to be a significant mediating variable in the outcome of adverse childhood experiences.

Previous research has found an association between auditory hallucinations and physical and sexual abuse in childhood. This study failed to find any significant

findings with respect to sexual abuse and auditory hallucinations, but did find an association between physical abuse and vivid daydreams, which are related to auditory hallucinations. This is consistent with previous research.

The increased prevalence of sexual abuse in people with schizoaffective disorder is consistent with findings from research into life events that suggest that the less severe psychotic disorders may be more likely to be related to stressful experiences than schizophrenia.

It was suggested that the findings of increased levels of parental indifference in paranoid schizophrenics might be a factor in difficulties related to developing a self-concept. Kinderman (1994) claims that persecutory delusions may be a manifestation of defence mechanisms used to deal with a core disturbance in self-concept. A possible link between these two factors could be explored by examining whether there is a link between parental indifference and self-concept in children. This finding also raises the possibility that there may be differences between the parental styles experienced by depressed and paranoid subjects. Kinderman (1994) found that compared to depressed individuals, paranoid individuals were less likely to agree that negative words were descriptive of them, even though their later performance on a Stroop test suggested that they were highly salient to them. He suggests that this is related to different uses of defence processes to deal with difficulties in self-concept. If the attitude of parents can be considered a factor in the development of self-concept then it is possible that differing defence mechanisms may reflect differing parental attitudes. If an individual's parents are highly critical (high on antipathy), then that individual may be more likely to use critical words to describe themselves, the pattern

observed in depressed individuals. However, if parents are indifferent, then this may be associated with the pattern described for paranoid individuals. Findings from Bifulco, Brown and Harris (1994) show that depressed women experienced high levels of maternal antipathy and indifference. However the role that antipathy might play in paranoid schizophrenia is not clear. Antipathy was not significantly higher between psychotic diagnoses, but was between the psychotic group as a whole and controls. Future research might explore the relationship between antipathy and indifference in depressed and psychotic individuals.

Although the present study has not therefore found a strong association between childhood variables and adult psychosis, it does suggest that this is an important area for future research. Given the methodological difficulties in the present study, there are a number of suggestions that can be made as to how such research might be conducted.

As described above, Hingley (1997) suggests that psychotic symptoms may result from the use of defence mechanisms to protect a child from the early childhood environment. The major methodological flaw in the current study is that it did not allow for a more detailed examination of participant's childhoods. The use of a questionnaire limited the opportunity to establish rapport and to explore childhood issues in more detail. It is felt that the use of a semi-structured interview measure like the CECA (Bifulco, Brown and Harris, 1994) would be a significant improvement on the current study.

Given that it is felt that the early childhood environment may be one of the factors that can influence the likely use of psychotic defence mechanisms, examining the childhood experiences of adolescents who experience psychotic symptoms may prove fruitful. It may also be possible to assess the behaviour of such a group's caregivers' behaviour directly, to explore whether factors such as indifference, antipathy and abuse are present.

The present study has therefore found some significant findings that are consistent with previous research, and it has been suggested that methodological limitations may have contributed to an under-reporting of childhood experiences. Therefore lack of significant differences in the childhood experiences between the two groups does not necessarily mean that there is not an association between adverse childhood experiences and psychosis. However, given the overall lack of a strong association between childhood experiences and psychosis in this study, explanations of psychotic symptoms that do not rely on the existence of such an association must be considered.

Hemsley (1993) outlines a model that accounts for schizophrenic symptoms in terms of a disturbance in information processing. Normal cognitive perception is dependent upon an interaction between sensory input and so called "stored regularities of sensory input". These are memories of previous input that allow the individual to quickly and automatically distinguish what is and is not relevant in the current sensory input. This allows the individual to ignore "redundant" sensory information and thus reduces the demands made on perception. Hemsley suggests that the influence of stored regularities of sensory input is weakened in people with schizophrenia. In other words, they are less able to use previous knowledge about the

regularities of sensory input to make sense of current sensory input, as if all sensory input is novel. This makes it more difficult for the individual to determine what is and is not relevant from their current perceptual awareness and also results in the intrusion of material that is normally below the level of awareness.

As described in Chapter One, unstructured sensory input has been shown to result in hallucinations in non-psychotic individuals. Hemsley (1993) argues that if the schizophrenic individual experiences a weakening of past regularities in their current perception, then the sensory input becomes unstructured under otherwise normal conditions, resulting in hallucinations.

Hemsley (1993) also outlines how such a model may account for the formation of delusional beliefs. Hemsley notes that individuals use causal reasoning to make sense of the world, and that this is more likely to happen when perceptions violate previous expectations. Under such circumstances, the individual is driven to make causal relationships between events. This is influenced by the perceptual experience and past regularities. Hemsley's model suggests that for a schizophrenic individual, the weakened influence of past regularities results in the intrusion of redundant information into awareness and a weakening of the influence of previous experience. Thus, undue emphasis is given to events in the perceptual experience without integrating this with previous experience. As such the individual may make abnormal causal relationships on the basis of a single event in perceptual experience. He notes that this failure to use previous knowledge of events in making causal relationships can therefore be considered an abnormal reasoning style. In Chapter One, evidence from Huq et al. (1988) and Dudley et al (1997) was outlined that showed that deluded

individuals exhibited a reasoning bias that led them to jump to conclusions based on little evidence and to be more confident in those judgements. Hemsley suggests that this reasoning bias may be a result of a tendency to respond to the immediate environment and to be less influenced by previous learning.

Hemsley (1998) has also outlined how this model can account for a disruption of a sense of self that is often associated with schizophrenia. He suggests that the action identification theory proposed by Vallacher and Wegner (1987) helps in understanding how the cognitive abnormalities outlined above can impact upon an individual's sense of self. This model suggests that actions performed by individuals can be defined in terms of low level action identities that describe how an action is performed, and higher levels of action identity that suggest why they are performed and what their likely outcomes are. Higher levels of action identification are influenced by past experiences and lead to a greater possibility of defining oneself. However such action identifications rely on the appropriate use of stored material in a given context. Hemsley (1998) suggests that the cognitive abnormalities that he has outlined in schizophrenia lead to a lower level of action identification. This then leads to a "gradual disruption of the individual's sense of personal identity" (Hemsley, 1998; pp 120). Hemsley's model therefore suggests that schizophrenic symptoms may be the result of abnormalities in information processing, and he also outlines a possible biological basis for this (Hemsley 1993). His model does not therefore imply that childhood factors are implicated in the formation of schizophrenic symptoms.

Much of the research into psychological models of psychotic symptoms has been focussed on the formation of delusional beliefs. A recent review by Garety and

Freeman (1999) has examined the evidence for cognitive approaches to delusions. Garety and Freeman outline the evidence that delusions may be the result of a reasoning bias, outlined by Garety and Hemsley (1994) which is accounted for by Hemsley's (1993) model as described above, and the possibility that delusions may serve a defensive function as described earlier in this chapter and in Chapter One. They conclude that there is strong evidence for a reasoning bias in people with delusions, although they suggest that it may best be described as a data gathering bias. However, they also found that there is strong evidence for an attributional bias in people with delusions, in which they tend to make external attributions for negative events. However, they suggest that evidence that this attributional bias defends against low self-esteem was less conclusive. However, Garety and Freeman suggest it is possible that the use of delusions as a defence may apply to a sub-group of people with persecutory delusions. Garety and Freeman conclude that delusions may be attempts to understand experiences or events and "develop against a background of a person's existing personality and beliefs and as a result of a combination of alterations or biases in perception, affect and judgement" (Garety and Freeman, 1999; pp. 150). Garety and Freeman therefore suggest that a multi-factorial account of delusions is perhaps the best available at present. This conclusion could also be considered to be applicable to explanations of other psychotic symptoms. Many factors have been implicated in the development of psychotic symptoms and accounts of psychotic symptoms should try to take account of these factors. It is not clear at present what role (if any) childhood factors may play in the development of psychotic symptoms. Although the present study has found little evidence that there is an association between childhood experiences and psychotic symptoms, methodological limitations prevent firm conclusions being made as to whether such associations may exist or not.

4.5 Summary

Few studies have looked at the childhood experiences of people with psychosis, and most of these have primarily looked for the presence or absence of physical or sexual abuse. However, cognitive research suggests that psychotic symptoms may have a defensive purpose, which is consistent with psychodynamic formulations of psychotic symptoms. This points to the importance of the childhood environment as a whole and the child's relationship with its caregivers. While factors such as physical and sexual abuse appear to be strongly associated with some psychotic symptoms (i.e. hallucinations) and may be associated with some psychotic diagnoses (e.g. schizo-affective disorder) it seems likely that there are many aspects of the childhood environment that play an important role in the development of such defences. The present study has not found strong evidence for an association between childhood experiences and psychotic symptoms. Methodological problems have been discussed that may have contributed to the lack of significant findings. However, other psychological models have been described that do not view psychotic symptoms as serving a defensive function and place little emphasis on the childhood environment. Suggestions for future research have been made that might enable a more thorough investigation of the likely role that childhood experiences may play in the development of psychotic symptoms.

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Table of Appendices

Appendix One	Childhood Experiences of Care and Abuse Questionnaire	141
Appendix Two	The Launay and Slade Hallucination Scale	146
Appendix Three	The Peters et al Delusions Inventory	147
Appendix Four	The Oxford Liverpool Inventory of Feelings and Experiences	153
Appendix Five	The Calgary Depression Scale	158
Appendix Six	The Beck Depression Inventory II	161
Appendix Seven	Participant Information Sheets and Consent Form	163
Appendix Eight	Ethical Consent	166

Appendix One

CECA-Q: Family Relationships in Childhood

1. **Who brought you up before age 17?**
2. **Were you ever in a children's home or institution prior to age 17?**
3. **Parental loss: Did either parent die before you were aged 17?**
 - a If yes, what age were you?
4. **Parental separation: Have you ever been separated from either parent for one year or more before age 17?**
 - a If separated: at what age were you first separated?
 - b How long was this separation?
 - c What was the reason for this separation? (please circle)
 - Parent's illness
 - Parent's work
 - Parent's divorce/separation
 - Abandoned by parent or never knew parent
 - Other reason

5. As you remember your mother figure in your first 17 years.

Please circle the appropriate number. If you had more than one mother figure, choose the one you were with the longest, or the one you found most difficult to live with.

Which mother figure are you describing below?

1. Natural Mother
2. Step-mother / father's live-in partner
3. Other relative e.g. aunty, grandmother
4. Other non-relative e.g. foster mother, godmother
5. Other (describe).....

	Yes Definitely	2	Unsure	3	No Not At All	4	5
She was very difficult to please	1	2	3	4	5		
She was concerned about my worries	1	2	3	4	5		
She was interested in how I did at school	1	2	3	4	5		
She made me feel unwanted	1	2	3	4	5		
She tried to make me feel better when I was upset	1	2	3	4	5		
She was very critical of me	1	2	3	4	5		
She would leave me unsupervised before I was 10 years old	1	2	3	4	5		
She would usually have time to talk to me	1	2	3	4	5		
She would hit me	1	2	3	4	5		
At times she made me feel I was a nuisance	1	2	3	4	5		
She often picked on me unfairly	1	2	3	4	5		
She was there if I needed her	1	2	3	4	5		
She was interested in who my friends were	1	2	3	4	5		
She was concerned about my whereabouts	1	2	3	4	5		
She cared for me when I was ill	1	2	3	4	5		
She neglected my basic needs (e.g. food and clothes)	1	2	3	4	5		
She did not like me as much as my brothers and sisters (leave blank if no siblings)	1	2	3	4	5		

Do you want to add anything about your mother?

6. As you remember your father figure in your first 17 years.

Please circle the appropriate number. If you had more than one father figure, choose the one you were with the longest, or the one you found most difficult to live with.

Which father figure are you describing below?

1. Natural father
2. Step-father / mother's live-in partner
3. Other relative e.g. uncle, grandfather
4. Other non-relative e.g. foster father, adoptive father
5. Other (describe).....

	Yes			No	
	Definitely		Unsure	Not At All	
He was very difficult to please	1	2	3	4	5
He was concerned about my worries	1	2	3	4	5
He was interested in how I did at school	1	2	3	4	5
He made me feel unwanted	1	2	3	4	5
He tried to make me feel better when I was upset	1	2	3	4	5
He was very critical of me	1	2	3	4	5
He would leave me unsupervised before I was 10 years old	1	2	3	4	5
He would usually have time to talk to me	1	2	3	4	5
He would hit me	1	2	3	4	5
At times he made me feel I was a nuisance	1	2	3	4	5
He often picked on me unfairly	1	2	3	4	5
He was there if I needed her	1	2	3	4	5
He was interested in who my friends were	1	2	3	4	5
He was concerned about my whereabouts	1	2	3	4	5
He cared for me when I was ill	1	2	3	4	5
He neglected my basic needs (e.g. food and clothes)	1	2	3	4	5
He did not like me as much as my brothers and sisters (leave blank if no siblings)	1	2	3	4	5

Do you want to add anything about your father?

7. Close relationships in childhood

- a When you were a child or teenager, were there any ADULTS you could go to with your problems or to discuss your feelings? YES/NO

If YES: Who was that? (Circle more than one if relevant)

1. Mother / mother figure
2. Father / father figure
3. Other relative
4. Family friend
5. Teacher, vicar etc.
6. Other (describe).....

- b Were there other CHILDREN / TEENAGERS your age that you could discuss your problems and feelings with? YES / NO

If YES: Who was that? (circle more than one if relevant)

1. Sister
2. Brother
3. Other relative
4. Close Friend
5. Other less close friend(s)
6. Other person (describe).....

- c Who would you describe as the TWO CLOSEST people to you as a child/teenager? (circle up to two)

1. Mother / mother figure
2. Father / father figure
3. Sister or brother
4. Other relative
5. Family friend (adult)
6. Friend your age
7. Other (describe).....

8. Physical punishment before age 17 by parent figure or other household member:

When you were a child or teenager were you ever hit repeatedly with an implement (such as a belt or stick) or punched, kicked or burnt by someone in your household?
YES / NO

If YES:	Mother Figure	Father Figure
How old were you when it began?	Age.....	Age.....
Did the hitting happen on more than one occasion?	YES/NO	YES/NO
How were you hit?	1. Belt or stick 2. Punched / kicked 3. Hit with hand 4. Other	1. Belt or stick 2. Punched / kicked 3. Hit with hand 4. Other
Were you ever injured e.g. bruises, black eyes, broken limbs?	YES/NO	YES/NO
Was this person so angry they seemed out of control?	YES/NO	YES/NO

Can you describe these experiences?

Did you experience this from anyone else in the household? YES / NO

If YES: describe below.....

9. Unwanted sexual experiences before age 17.

- a When you were a child or teenager did you ever have any unwanted sexual experiences? YES / NO / UNSURE
- b Did anyone force you or persuade you to have sexual intercourse against your wishes before age 17? YES / NO / UNSURE
- c Can you think of any upsetting sexual experiences before age 17 with a related adult or someone in authority e.g. teacher? YES / NO / UNSURE

If YES or UNSURE to above then complete the following:

	First experience	Other experience
How old were you when it began?	Age.....	Age.....
Was the other person someone you knew?	YES / NO	YES / NO
Was the other person a relative?	YES / NO	YES / NO
Did this person do it to you on more than one occasion?	YES / NO	YES / NO
Did it involve touching private parts of your body?	YES / NO	YES / NO
Did it involve touching private parts of the other persons body?	YES / NO	YES / NO
Did it involve sexual intercourse?	YES / NO	YES / NO

Can you describe these experiences?

10. Your current relationships and work

- a **Your partner:** Do you have a partner? YES / NO
 If YES: Are you currently living with your partner?
 1. No
 2. Yes, cohabiting
 3. Yes, married

- Does your partner work?
0. No
 1. Student only
 2. Part-time employment
 3. Full-time employment

If YES: What is your partner's job?

b **Your children:** Do you have children? YES / NO / EXPECTING FIRST BABY

If YES: How many children do you have?
 How many are currently living with you?
 How old is your eldest child?
 How old is your youngest child?
 Do any of your partner's children live with you? YES / NO

c **Your employment:** Are you currently in employment?

0. No
1. Student
2. Part-time employment
3. Full-time employment

If YES: What is your job?

11. Other information

Your gender: MALE / FEMALE

Your current age:

Appendix Two

The Launay and Slade Hallucination Scale

Please circle either YES or NO for each item

1. In the past I have heard the voice of God speaking to me.
Y N
2. Sometimes a passing thought will seem so real that it frightens me.
Y N
3. No matter how much I try to concentrate on my work, unrelated thoughts
always creep into my mind.
Y N
4. In the past I have had the experience of hearing a person's voice and then
found out that no one was there.
Y N
5. In my daydreams I can hear the sound of a tune almost as clearly as if I
were actually listening to it.
Y N
6. The people in my daydreams seem so true to life that I sometimes think
they are.
Y N
7. I often hear a voice speaking my thoughts aloud.
Y N
8. On occasions I have seen a person's face in front of me when no one was
in fact there.
Y N
9. I have heard the voice of the devil.
Y N
10. Sometimes my thoughts seem as real as actual events in my life.
Y N
11. I have been troubled by hearing voices in my head.
Y N
12. The sounds I hear in my daydreams are usually clear and distinct.
Y N

Appendix Three

P.D.I.

This questionnaire is designed to measure beliefs and vivid mental experiences. We believe that they are much more common than has previously been supposed, and that most people have had some such experiences during their lives. Please answer the following questions as honestly as you can. There are no right or wrong answers and there are no trick questions. **Please note that we are not interested in experiences people may have had when under the influence of drugs.**

IT IS VERY IMPORTANT THAT YOU ANSWER *ALL* THE QUESTIONS

For the questions you answer YES to, we are interested in: (a) how distressing these beliefs are; (b) how often you think about them; and (c) how true you believe them to be. On the right hand side of the page we would like you to circle the number which corresponds most closely to how distressing this belief is, how often you think about it, and how much you believe that it is true.

1) Do you ever feel as if people seem to drop hints about you or say things with a double meaning?	Not at all distressing	1	2	3	4	Very distressing
	Hardly ever think about it					Think about it all the time
	Don't believe it's true					Believe it is absolutely true
(Please circle) No Yes →		1	2	3	4	5

2) Do you feel as if things in magazines or on the TV were written especially for you?	Not at all distressing	1	2	3	4	Very distressing
	Hardly ever think about it					Think about it all the time
	Don't believe it's true					Believe it is absolutely true
(Please circle) No Yes →		1	2	3	4	5

3) Do you ever feel as if some people are not what they seem to be?	Not at all distressing	1	2	3	4	Very distressing
	Hardly ever think about it	1	2	3	4	5
(Please circle)	Don't believe it's true	1	2	3	4	5
No Yes →						Think about it all the time
						Believe it is absolutely true

4) Do you ever feel as if you are being persecuted in some way?	Not at all distressing	1	2	3	4	Very distressing
	Hardly ever think about it	1	2	3	4	5
(Please circle)	Don't believe it's true	1	2	3	4	5
No Yes →						Think about it all the time
						Believe it is absolutely true

5) Do you ever feel as if there is a conspiracy against you?	Not at all distressing	1	2	3	4	Very distressing
	Hardly ever think about it	1	2	3	4	5
(Please circle)	Don't believe it's true	1	2	3	4	5
No Yes →						Think about it all the time
						Believe it is absolutely true

6) Do you ever feel as if you are destined to be someone very important?	Not at all distressing	1	2	3	4	Very distressing
	Hardly ever think about it	1	2	3	4	5
(Please circle)	Don't believe it's true	1	2	3	4	5
No Yes →						Think about it all the time
						Believe it is absolutely true

7) Do you ever feel that you are a very special or unusual person?	Not at all distressing	1	2	3	4	Very distressing
						5
	Hardly ever think about it					Think about it all the time
		1	2	3	4	5
(Please circle) No Yes →	Don't believe it's true					Believe it is absolutely true
		1	2	3	4	5

8) Do you ever feel that you are especially close to God?	Not at all distressing	1	2	3	4	Very distressing
						5
	Hardly ever think about it					Think about it all the time
		1	2	3	4	5
(Please circle) No Yes →	Don't believe it's true					Believe it is absolutely true
		1	2	3	4	5

9) Do you ever think that people can communicate telepathically?	Not at all distressing	1	2	3	4	Very distressing
						5
	Hardly ever think about it					Think about it all the time
		1	2	3	4	5
(Please circle) No Yes →	Don't believe it's true					Believe it is absolutely true
		1	2	3	4	5

10) Do you ever feel as if electrical devices such as computers can influence the way you think?	Not at all distressing	1	2	3	4	Very distressing
						5
	Hardly ever think about it					Think about it all the time
		1	2	3	4	5
(Please circle) No Yes →	Don't believe it's true					Believe it is absolutely true
		1	2	3	4	5

11) Do you ever feel as if you have been chosen by God in some way?	Not at all distressing	1	2	3	4	Very distressing
	Hardly ever think about it	1	2	3	4	Think about it all the time
	Don't believe it's true	1	2	3	4	Believe it is absolutely true
(Please circle) No Yes →						5

12) Do you believe in the power of witchcraft, voodoo or the occult?	Not at all distressing	1	2	3	4	Very distressing
	Hardly ever think about it	1	2	3	4	Think about it all the time
	Don't believe it's true	1	2	3	4	Believe it is absolutely true
(Please circle) No Yes →						5

13) Are you often worried that your partner may be unfaithful?	Not at all distressing	1	2	3	4	Very distressing
	Hardly ever think about it	1	2	3	4	Think about it all the time
	Don't believe it's true	1	2	3	4	Believe it is absolutely true
(Please circle) No Yes →						5

14) Do you ever feel that you have sinned more than the average person	Not at all distressing	1	2	3	4	Very distressing
	Hardly ever think about it	1	2	3	4	Think about it all the time
	Don't believe it's true	1	2	3	4	Believe it is absolutely true
(Please circle) No Yes →						5

15) Do you ever feel that people look at you oddly because of your appearance?	Not at all distressing	1	2	3	4	Very distressing
						5
	Hardly ever think about it	1	2	3	4	Think about it all the time
						5
(Please circle) No Yes →	Don't believe it's true	1	2	3	4	Believe it is absolutely true
						5

16) Do you ever feel as if you had no thoughts in your head at all?	Not at all distressing	1	2	3	4	Very distressing
						5
	Hardly ever think about it	1	2	3	4	Think about it all the time
						5
(Please circle) No Yes →	Don't believe it's true	1	2	3	4	Believe it is absolutely true
						5

17) Do you ever feel as if the world is about to end?	Not at all distressing	1	2	3	4	Very distressing
						5
	Hardly ever think about it	1	2	3	4	Think about it all the time
						5
(Please circle) No Yes →	Don't believe it's true	1	2	3	4	Believe it is absolutely true
						5

18) Do your thoughts ever feel alien to you in some way?	Not at all distressing	1	2	3	4	Very distressing
						5
	Hardly ever think about it	1	2	3	4	Think about it all the time
						5
(Please circle) No Yes →	Don't believe it's true	1	2	3	4	Believe it is absolutely true
						5

19) Have your thoughts ever been so vivid that you were worried other people would hear them? (Please circle) No Yes →	Not at all distressing	1	2	3	4	Very distressing
	Hardly ever think about it	1	2	3	4	5 Think about it all the time
	Don't believe it's true	1	2	3	4	5 Believe it is absolutely true

20) Do you ever feel as if your own thoughts were being echoed back to you? (Please circle) No Yes →	Not at all distressing	1	2	3	4	Very distressing
	Hardly ever think about it	1	2	3	4	5 Think about it all the time
	Don't believe it's true	1	2	3	4	5 Believe it is absolutely true

21) Do you ever feel as if you were a robot or a zombie without a will of your own? (Please circle) No Yes →	Not at all distressing	1	2	3	4	Very distressing
	Hardly ever think about it	1	2	3	4	5 Think about it all the time
	Don't believe it's true	1	2	3	4	5 Believe it is absolutely true

THANK YOU FOR YOUR COOPERATION

Appendix Four

The Oxford – Liverpool Inventory of Feelings and Experiences (O-LIFE)

Please answer “yes” or “no” to the following questions.

1. Do you prefer reading to meeting people?
2. Do you often hesitate when you are going to say something in a group of people whom you more or less know?
3. Are you always willing to admit it when you have made a mistake?
4. Do you sometimes put off until tomorrow what you ought to do today?
5. Do you often overindulge in alcohol or food?
6. Do you often feel that people have it in for you?
7. Are the sounds you hear in your daydreams really clear and distinct?
8. Do you enjoy many different kinds of play and recreation?
9. Do your thoughts sometimes feel as real as actual events in your life?
10. Do you have many different hobbies?
11. Does it often happen that nearly every thought immediately and automatically suggests an enormous number of ideas?
12. When in a group of people do you usually prefer to let someone else be the centre of attention?
13. If you say you will do something do you always keep your promise no matter how inconvenient it might be?
14. Do you frequently have difficulty starting to do things?
15. Has dancing of the idea of it always seemed dull to you?
16. When you catch a train do you often arrive at the last minute?
17. Is trying new foods something you have always enjoyed?
18. Do you always wash before a meal?
19. Do you believe in telepathy?
20. Do you often change between intense liking and disliking of the same person?
21. Have you ever cheated at a game?
22. Are there very few things that you have ever really enjoyed doing?
23. Would you call yourself happy-go-lucky?
24. Do you at times have an urge to do something harmful or shocking?
25. Do you often worry about things you should not have done or said?
26. Are your thoughts sometimes so strong that you can almost hear them?
27. Do you usually take the initiative in making new friends?
28. Do your thoughts ever stop suddenly causing you to interrupt what you are saying?
29. Are you usually in an average sort of mood, not too high and not too low?
30. Do you often take on more activities than you have time for?
31. Would you take drugs which may have strange and dangerous effects?
32. Do you think you could learn to read other’s minds if you wanted to?
33. When in a crowded room, do you often have difficulty in following the conversation?

34. No matter how hard you try to concentrate do unrelated thoughts always creep into your mind?
35. Are you easily hurt when people find fault with you or the work you do?
36. Do you stop to think things over before doing anything?
37. Have you ever felt that you have special, almost magical powers?
38. Are you much too independent to really get involved with other people?
39. Do you ever get nervous when someone is walking behind you?
40. Do ideas and insights sometimes come to you so fast that you cannot express them all?
41. Do you easily lose courage when criticised or failing in something?
42. Can some people make you aware of them just by thinking about you?
43. Does a passing thought ever seem so real that it frightens you?
44. Do you always practice what you preach?
45. Would you dodge paying taxes if you were sure you could never be found out?
46. Have you ever blamed someone for doing something that you know was really your fault?
47. Are you a person whose mood goes up and down easily?
48. Does your voice ever seem distant or far away?
49. Do you think having close friends is not as important as some people say?
50. Do you like doing things in which you have to act quickly?
51. Are you rather lively?
52. Do you feel at times that people are talking about you?
53. Are you sometimes so nervous that you are blocked?
54. Do you find it difficult to keep interested in the same thing for a long time?
55. Have you ever insisted on having your own way?
56. Do you dread going into a room by yourself where people have already gathered and are talking?
57. Have you ever felt that you were communicating with someone telepathically?
58. Does it often feel good to massage your muscles when they are tired or sore?
59. Do you sometimes feel that your accidents are caused by mysterious forces?
60. Do you like mixing with people?
61. On seeing a soft thick carpet have you sometimes had the impulse to take off your shoes and walk barefoot on it?
62. Can you get a party going?
63. Do you often have difficulties in controlling your thoughts?
64. Do you feel that you cannot get "close" to other people?
65. Do the people in your daydreams seem so true to life that you sometimes think they are real?
66. Do other people think of you as being very lively?
67. Are people usually better off if they stay aloof from emotional involvement with other people?
68. Have you ever broken or lost something that belonged to someone else?
69. Are you mostly quiet when you are with other people?
70. Can just being with friends make you feel really good?
71. Do you enjoy meeting new people?

72. Is your hearing sometimes so sensitive that ordinary sounds become uncomfortable?
73. Have you often felt uncomfortable when your friends touch you?
74. When things are bothering you do you like to talk to other people about it?
75. Do you ever have the sensation that your body or part of it is changing shape?
76. Do you have many friends?
77. Are *all* your habits good and desirable ones?
78. Do you tend to keep in the background on social occasions?
79. Have you ever taken anything (even a button or a pin) that belonged to someone else?
80. As a child were you ever cheeky to your parents?
81. Would being in debt worry you?
82. Have you ever felt when you looked in the mirror that you face seemed different?
83. Do you think that people spend too much time safeguarding their future with savings and insurance?
84. Do you believe that dreams can come true?
85. Do you ever have the urge to break or smash things?
86. Do you often feel that there is no purpose to life?
87. Do things sometimes feel as though they were not real?
88. Do you worry about awful things that might happen?
89. Have you ever felt the urge to injure yourself?
90. Would it make you nervous to play the clown in front of other people?
91. Do you prefer watching television to going out with other people?
92. Have you felt that you might cause something to happen just by thinking about it?
93. Have you had very little fun from physical activities like walking, swimming or sports?
94. Have you ever been late for an appointment or work?
95. Have you ever said anything bad or nasty about anyone?
96. Do you feel so good at controlling other people that it sometimes scares you?
97. Are you easily distracted from work by daydreams?
98. Are you easily confused if too much happens at the same time?
99. Do you ever have a sense of vague danger or sudden dread for reasons that you do not understand?
100. Is it true that your relationships with other people never get very intense?
101. Do you feel that you have to be on your guard even with your friends?
102. Have you sometimes had the feeling of gaining or losing energy when certain people look at you or touch you?
103. When coming into a new situation have you ever felt strongly that it was a repeat of something that had happened before?
104. Do you worry too long after an embarrassing situation?
105. Do you love having your back massaged?
106. Do you consider yourself to be pretty much an average kind of person?
107. Have you ever taken advantage of someone?
108. Would you like other people to be afraid of you?

109. Have you ever though you heard people talking only to find out that it was in fact some nondescript noise?
110. Have you occasionally felt as though your body did not exist at all?
111. Do you often feel lonely?
112. Do you often have an urge to hit someone?
113. Do you often have an overwhelming sense of emptiness?
114. On occasions have you seen a person's face in front of you when no one was in fact there?
115. Do you feel that it is safer to trust nobody?
116. Is it fun to sing with other people?
117. Do you often have days when indoor lights seem so bright that they bother your eyes?
118. Have you wondered whether the spirits of the dead can influence the living?
119. Do people who try to get to know you better usually give up after a while?
120. Do you often feel "fed up"?
121. Have you ever felt as though your head or limbs were somehow not your own?
122. Do you ever become oversensitive to light or noise?
123. When you look in a mirror does your face sometimes seem quite different to usual?
124. Do you nearly always have a "ready answer" when people talk to you?
125. Do people who drive carefully annoy you?
126. Do you like telling jokes or funny stories to your friends?
127. Do you sometimes boast a little?
128. Are you very hurt by criticism?
129. Do you feel lonely most of the time, even when you are with other people?
130. Would you call yourself a nervous person?
131. Can you usually let yourself go and enjoy yourself at a lively party?
132. Do you ever feel that your thoughts don't belong to you?
133. Do you ever suddenly feel distracted by distant sounds that you are not normally aware of?
134. As a child, did you do as you were told immediately and without grumbling?
135. Do you sometimes talk about things you know nothing about?
136. When you are worried or anxious do you have trouble with your bowels?
137. When in the dark do you often see shapes and forms even though there is nothing there?
138. Can you easily get some life into a rather dull party?
139. Do you often have vivid dreams that disturb your sleep?
140. Do you like plenty of bustle and excitement around you?
141. Have you sometimes sensed an evil presence around you, even though you could not see it?
142. Is it hard for you to make decisions?
143. Do you find the bright lights of a city exciting to look at?
144. Does your sense of smell sometimes become unusually strong?
145. Do you usually have very little desire to buy new kinds of foods?

146. Are you often bothered by the feeling that people are watching you?
147. Do you ever feel that your speech is difficult to understand because the words are all mixed up and don't make sense?
148. Do you often feel like doing the opposite of what people suggest, even though you know they are right?
149. Do you like going out a lot?
150. Do you feel very close to your friends?
151. Are you sometimes sure that other people can tell what you're thinking?
152. Do you ever feel that something is about to happen, even though there does not seem to be any reason for you thinking that?
153. Do you often feel the impulse to spend money which you know you can't afford?
154. Are you easily distracted when you read or talk to someone?
155. Are you a talkative person?
156. Were you ever greedy by helping yourself to more than your fair share of anything?
157. Do everyday things sometimes seem unusually large or small?
158. Do you ever feel that making new friends isn't worth the energy it takes?
159. Have you ever taken the praise for something you knew someone else had really done?

Appendix Five

The Calgary Scale

1. Depression

How would you describe your mood over the last two weeks?

Do you keep reasonably cheerful or have you been very depressed or low spirited recently?

In the last two weeks how often have you (own words) every day? All day?

0	Absent	
1	Mild	Expresses some sadness or discouragement on questioning
2	Moderate	Distinct depressed mood persisting up to half the time over the last two weeks; present daily
3	Severe	Markedly depressed mood persisting daily over half the time interfering with normal motor and social functioning

2. Hopelessness

How do you see the future for yourself?

Can you see any future or has life seemed quite hopeless?

Have you given up or does there still seem to be some reason for trying?

0	Absent	
1	Mild	Has at times felt hopeless over the last week but still has some degree of hop for the future
2	Moderate	Persistent, moderate sense of hopelessness over the last week. Can be persuaded to acknowledge possibility of things being better
3	Severe	Persisting and distressing sense of hopelessness

3. Self depreciation

What is your opinion of yourself compared to other people?

Do you feel better or not as a good or the same as most?

Do you feel inferior or worthless?

0	Absent	
1	Mild	Some inferiority not amounting to feeling of worthlessness
2	Moderate	Subject feels worthless but less than 50% of the time
3	Severe	Subject feels worthless more than 50% of the time. May be challenged to acknowledge otherwise

4. Guilty ideas of reference

Do you have feelings that you are being blamed for something or even wrongly accused? What about? (Do not include justifiable blame or accusation: exclude delusions of guilt)

0	Absent	
1	Mild	Subject feels blamed but not accused less than 50% of the time.
2	Moderate	Persisting sense of being blamed and /or occasional sense of being accused
3	Severe	Persistent sense of being accused. When challenged acknowledges that it is not so.

5. Pathological guilt

Do you tend to blame yourself for little things that you have done in the past?
Do you think you deserve to be so concerned about this?

0	Absent	
1	Mild	Subject sometimes feels over guilty about some minor peccadillo, but less than 50% of the time
2	Moderate	Subject usually (over 50% of time) feels guilty about past actions, the significance of which he exaggerates.
3	Severe	Subject usually feels he is to blame for everything that has gone wrong, even when it is not his fault

6. Morning Depression

When you have felt depressed over the past two weeks; have you noticed the depression being worse at any particular time of the day?

0	Absent	No depression
1	Mild	Depression present but no diurnal variation
2	Moderate	Depression spontaneously mentioned being worse in the morning
3	Severe	Depression markedly worse in the morning, with impaired functioning which improves in the afternoon

7. Early Waking

Do you wake earlier in the morning than is normal for you?
How many times does this happen?

0	Absent	No early waking
1	Mild	Occasionally wakes (up to twice weekly) one hour or more before normal time to wake or alarm time
2	Moderate	Often wakes early (up to five times weekly) one hour or more before normal time to wake or alarm
3	Severe	Daily wakes one hour or more before normal time

8. Suicide

Have you ever felt that life wasn't worth living?

Did you ever feel like ending it all?

What did you think you might do?

Did you actually try?

- | | | |
|---|----------|---|
| 0 | Absent | |
| 1 | Mild | Frequent thoughts of being better off dead or occasional thoughts of suicide |
| 2 | Moderate | Deliberately considered suicide with a plan, but made no attempt |
| 3 | Severe | Suicidal attempt apparently designed to end in death (i.e. accidental discovery or inefficient means) |

9. Observed depression

Based on interviewer's observations during the entire interview

The question "Do you feel like crying?" used at appropriate times during the interview, may elicit information useful to this observation.

- | | | |
|---|----------|--|
| 0 | Absent | |
| 1 | Mild | Subject appears sad and mournful even during parts of the interview involving affectively neutral discussion |
| 2 | Moderate | Subject appears sad and mournful throughout the interview, with gloomy, monotonous voice and is tearful or close to tears at times |
| 3 | Severe | Subject chokes on distressing topics, frequently sighs deeply and cries openly, or is persisting in a state of frozen misery |

Appendix Six

BDI – II

Instructions: This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the one statement in each group that best describes the way you have been feeling during the past two weeks, including today. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite).

<p>1. Sadness</p> <p>0 I do not feel sad</p> <p>1 I feel sad much of the time</p> <p>2 I am sad all the time</p> <p>3 I am so sad or unhappy that I can't stand it</p> <p>2. Pessimism</p> <p>0 I am not discouraged about my future</p> <p>1 I feel more discouraged about my future than I used to be</p> <p>2 I do not expect things to work out for me</p> <p>3 I feel my future is hopeless and will only get worse</p> <p>3. Past Failure</p> <p>0 I do not feel like a failure</p> <p>1 I have failed more than I should have</p> <p>2 As I look back, I see a lot of failures</p> <p>3 I feel I am a total failure as a person</p> <p>4. Loss of Pleasure</p> <p>0 I get as much pleasure as I ever did from the things I enjoy</p> <p>1 I don't enjoy things as much as I used to</p> <p>2 I get very little pleasure from the things I used to enjoy</p> <p>3 I can't get any pleasure from the things I used to enjoy</p> <p>5. Guilty Feelings</p> <p>0 I don't feel particularly guilty</p> <p>1 I feel guilty over many things I have done or should have done</p> <p>2 I feel quite guilty most of the time</p> <p>3 I feel guilty all of the time</p>	<p>6. Punishment Feelings</p> <p>0 I don't feel I am being punished</p> <p>1 I feel I may be punished</p> <p>2 I expect to be punished</p> <p>3 I feel I am being punished</p> <p>7. Self-Dislike</p> <p>0 I feel the same about myself as ever</p> <p>1 I have lost confidence in myself</p> <p>2 I am disappointed in myself</p> <p>3 I dislike myself</p> <p>8. Self-Criticalness</p> <p>0 I don't criticise or blame myself more than usual</p> <p>1 I am more critical of myself than I used to be</p> <p>2 I criticise myself for all my faults</p> <p>3 I blame myself for everything bad that happens</p> <p>9. Suicidal Thoughts or Wishes</p> <p>0 I don't have any thoughts of killing myself</p> <p>1 I have thoughts of killing myself, but I would not carry them out</p> <p>2 I would like to kill myself</p> <p>3 I would kill myself if I had the chance</p> <p>10. Crying</p> <p>0 I don't cry anymore than I used to</p> <p>1 I cry more than I used to</p> <p>2 I cry over every little thing</p> <p>3 I feel like crying, but I can't</p>
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<p>11. Agitation</p> <p>0 I am no more restless or wound up than usual</p> <p>1 I feel more restless or wound up than usual</p> <p>2 I am so restless or agitated that it's hard to stay still</p> <p>3 I am so restless or agitated that I have to keep moving or doing something</p> <p>12. Loss of Interest</p> <p>0 I have not lost interest in other people or activities</p> <p>1 I am less interested in other people or things than before</p> <p>2 I have lost most of my interest in other people or things</p> <p>3 It's hard to get interested in anything</p> <p>13. Indecisiveness</p> <p>0 I make decisions about as well as ever</p> <p>1 I find it more difficult to make decisions than usual</p> <p>2 I have much greater difficulty in making decisions than I used to</p> <p>3 I have trouble making any decisions</p> <p>14. Worthlessness</p> <p>0 I do not feel I am worthless</p> <p>1 I don't consider myself as worthwhile and useful as I used to</p> <p>2 I feel more worthless as compared to other people</p> <p>3 I feel utterly worthless</p> <p>15. Loss of Energy</p> <p>0 I have as much energy as ever</p> <p>1 I have less energy than I used to have</p> <p>2 I don't have enough energy to do very much</p> <p>3 I don't have enough energy to do anything</p> <p>16. Changes in Sleeping Pattern</p> <p>0 I have not experienced any change in my sleeping pattern</p> <p>1a I sleep somewhat more than usual</p> <p>1b I sleep somewhat less than usual</p> <p>2a I sleep a lot more than usual</p> <p>2b I sleep a lot less than usual</p> <p>3a I sleep most of the day</p> <p>3b I wake up 1-2 hours early and can't get back to sleep</p>	<p>17. Irritability</p> <p>0 I am no more irritable than usual</p> <p>1 I am more irritable than usual</p> <p>2 I am much more irritable than usual</p> <p>3 I am irritable all the time</p> <p>18. Changes in Appetite</p> <p>0 I have not experienced any change in my appetite</p> <p>1a My appetite is somewhat less than usual</p> <p>1b My appetite is somewhat greater than usual</p> <p>2a My appetite is much less than before</p> <p>2b My appetite is much greater than usual</p> <p>3a I have no appetite at all</p> <p>3b I crave food all the time</p> <p>19. Concentration Difficulty</p> <p>0 I can concentrate as well as ever</p> <p>1 I can't concentrate as well as usual</p> <p>2 It's hard to keep my mind on anything for very long</p> <p>3 I find I can't concentrate on anything</p> <p>20. Tiredness or Fatigue</p> <p>0 I am no more tired or fatigued than usual</p> <p>1 I get more tired or fatigued more easily than usual</p> <p>2 I am too tired or fatigued to do a lot of the things I used to do</p> <p>3 I am too tired or fatigued to do most of the things I used to do</p> <p>21. Loss of Interest in Sex</p> <p>0 I have not noticed any recent change in my interest in sex</p> <p>1 I am less interested in sex than I used to be</p> <p>2 I am much less interested in sex now</p> <p>3 I have lost interest in sex completely</p>
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Appendix Seven

Information Sheet for Participants with Arthritis

Dear Participant

You are being asked to participate in a research study. This sheet explains exactly what you are being asked to do.

Title: The Childhood Experiences of People with Mental Health Difficulties Compared to those with Rheumatoid Arthritis

Explanation: This study, supervised by a Clinical Psychologist, aims to compare the childhood experiences of people with psychosis to those of people with rheumatoid arthritis. Difficulties experienced in childhood may continue to affect people in adulthood, and the present study suggests that this may have one of two effects:

1. People who experienced difficult childhoods may develop mental health difficulties later in life.
2. People who experienced difficult childhoods may develop a long-term illness later in life that may be either mental or physical in origin.

The aim of the present study is to determine which of these two possibilities is more likely, by comparing a group of people who have a long term medical condition with those with long term mental health difficulties.

Participation in this study will involve being interviewed by a clinical psychologist in training for approximately one hour. During this interview you will be asked whether you experienced particular experiences as a child. The sort of experiences you will be asked about will include questions about the relationship you had with your parents as a child, whether you had any unwanted sexual experiences as a child, and any physical mistreatment you experienced. You will also be asked questions about your current mood, feelings and experiences you may have had, and your use of drugs. All information collected will be confidential.

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

Your decision to take part in this study or not will in no way affect your care and management.

Thank you for your help. Please retain this sheet for your information.

Paul Osler
Clinical Psychologist in Training
Sub-division of Clinical Health Psychology
University College London
1-19 Torrington Place
London
Tel: 0171 380 7897

Information Sheet for Participants with Psychosis

Dear Participant

You are being asked to participate in a research study. This sheet explains exactly what you are being asked to do.

Title: The Childhood Experiences of People with Mental Health Difficulties Compared to those with Rheumatoid Arthritis

Explanation: This study, supervised by a Clinical Psychologist, aims to compare the childhood experiences of people with mental health difficulties to those of people with rheumatoid arthritis. There have been a number of studies of the association between difficult experiences in childhood and later life. However, very few have looked into how this might apply to particular mental health difficulties.

Participation in this study will involve being interviewed by a clinical psychologist in training for approximately one hour. During this interview you will be asked whether you experienced particular experiences as a child. The sort of experiences you will be asked about will include questions about the relationship you had with your parents as a child, whether you had any unwanted sexual experiences as a child, and any physical mistreatment you experienced. You will also be asked questions about your current mood, feelings and experiences you may have had, and your use of drugs. All information collected will be confidential.

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

Your decision to take part in this study or not will in no way affect your care and management.

Thank you for your help. Please retain this sheet for your information.

Paul Osler
Clinical Psychologist in Training
Sub-division of Clinical Health Psychology
University College London
1-19 Torrington Place
London
Tel: 0171 380 7897

Consent Form

Title: *The Childhood Experiences of People with Mental Health Difficulties Compared to those with Rheumatoid Arthritis*

Researcher: Paul Osler
Clinical Psychologist in Training
Sub-division of Clinical Health Psychology
University College London
1-19 Torrington Place
London
Tel: 0171 380 7897

Confidential

To be completed by the patient:

Tick if agree with statement

I understand that participation in this study is entirely voluntary and that I can withdraw at any time without explanation and without in any way affecting my care and management.

I have read the information sheet and I understand the aims of this study.

I have had the opportunity to ask questions and receive satisfactory answers.

I understand that the information I give during this study is confidential. However I also understand that if any information obtained during this study suggests that either myself or another person is in danger the researcher has a responsibility to inform a member of medical staff. The researcher will not do this without informing me first.

I agree to take part in this study.

Signed _____

Date _____

Name in block letters _____

Appendix Eight – Ethical Consent

THE MAUDSLEY

INSTITUTE OF
PSYCHIATRY

De Crespigny Park
Denmark Hill
London SE5 8AF

Telephone: (UK+44) 0171 703 5411
Facsimile: (UK+44) 0171 703 5796

ETHICAL COMMITTEE (RESEARCH)

Tel: (0171 919) 2892

9 November, 1998

Prof D Hemsley
Dept. of Psychology
Institute of Psychiatry

Dear Prof Hemsley

Re: The Childhood experiences of people with psychosis (163/98)

The Chair of the Ethical Committee (Research) has taken action to approve this study from an ethical point of view.

Please note that this approval is subject to confirmation by the full Committee when it meets on 20 November 1998. Initial approval is given for one year. This will be extended automatically only on completion of annual progress reports on the study when requested by the EC(R). Please note that as Principal Investigator you are responsible for ensuring these reports are sent to us.

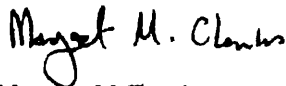
Please note that projects which have not commenced within two years of original approval must be re-submitted to the EC(R).

Please let me know if you would like to nominate a specific contact person for future correspondence about this study

Any serious adverse events which occur in connection with this study should be reported to the Committee using the attached form.

Please quote Study No. 163/98 in all future correspondence.

Yours sincerely,



Margaret M Chambers
Research Ethics Coordinator

ECR MC96



West London Healthcare
NHS Trust

Uxbridge Road, Southall, Middlesex UB1 3EU
Tel: 0181 574 2444 Fax: 0181 967 5002
Direct line: 0181 967 5105

Mr Paul Osler,
83 York Avenue,
Hanwell,
London W7 3HY.

Our Ref: SB/99/02

12th February 1999

Dear Mr Osler,

Re: Protocol: The Childhood Experiences of People with Psychosis:

Thank you for attending the Ethics Committee meeting on Friday, 22nd January 1999. The Committee considered your submission in full and had no ethical concerns with the study proceeding. However, they did make the following observations and requested that these be addressed as soon as possible:

- Modifications to the Patient Information Leaflet (PIL) and Consent Form to include:
 - ✓ *PIL change of text:* replace 'psychosis' with **mental health problems** and remove reference 'as far as the law allows';
 - ✓ *With reference to ethnic background,* it was recommended that standard OPCS definitions should be used;
 - ✓ *Consent Form:* change wording to state "Have you taken illicit drugs in the past.
- To liaise with an appropriate clinical psychologist on site;
- To discuss any potential problems with Dr Bullock.

Since the meeting, I note that you have already met with Dr Bullock and have arranged liaison meetings with Mr Stephen Coghill at Avenue House.

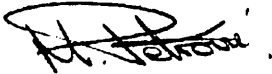
The following personnel represented the Committee:

Dr Ian Treasaden	-	Consultant Forensic Psychiatrist (chair)
Ms Jerzy Paszkiewicz	-	Clinical Pharmacist
Mrs Noreen Law	-	Lay Member
Dr Mary Leung	-	Clinical Psychologist
Mr Milan Petrovic	-	Senior Administrator
Mr Philip Sheldrake	-	Lay Member
Mr Sam Sohun	-	Practice Development Manager

In line with this Committee's Standard Operating Procedures, the following are requested:

- ❑ The need to comply, throughout the conduct of the study, with good clinical research practice standards;
- ❑ To enable the Committee to receive feedback of research approved, you are requested to provide six-monthly reviews. Where this is not provided, the Committee reserve the right to suspend approval of the protocol;
- ❑ The results of the research should be sent to the Chairman of the Committee, if necessary in draft form, pending a copy of the completed final report/publication, which will be made available in the Medical Library;
- ❑ Further research projects submitted to the Ethical Committee by researchers who fail to comply with these conditions will not be approved;
- ❑ If there are any further changes to the Protocol, these must be notified to the Committee for approval.

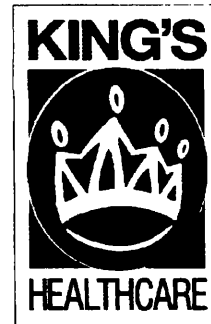
Yours Sincerely,



*Dr Ian Treasaden,
Ethics Committee Chairman*

25 March 1999

Mr P Osler
83 York Avenue
Hanwell
London
W7 3HY



King's Healthcare NHS Trust

King's College Hospital
Denmark Hill, London, SE5 9RS

Telephone: 0171-737 4000

Facsimile: 0171-346 3445

Direct telephone line

Dear Mr Osler

Re: Protocol Number: 99-022
The Childhood experiences of people with Psychosis

Further to my letter of 10 February 1999, I have now received a reply from Professor Scott with regard to your questionnaire study. I am pleased to approve your study by Chairman's action. This decision will be ratified at the forthcoming Research Ethics Committee meeting on Tuesday 13 April 1999.

Yours sincerely

A handwritten signature in black ink, appearing to read 'E R Howard', written in a cursive style.

Professor E R Howard
Chair Research Ethics Committee
King's College Hospital

LOCAL RESEARCH ETHICS COMMITTEE
Ealing Hospital NHS Trust
Level One, Uxbridge Road, Southall, Middlesex, UB1 3HW
Tel: 0181 967 5319 Fax: 0181 967 5768

Mr Paul Osler
Clinical Psychologist in Training
83 York Avenue
Hanwell
London, W7 3HY

17th February 1999

Dear Paul

**Re: Protocol 99/06 The Childhood Experiences of People with
Psychosis.**

Thank you for sending this study to the Ealing Ethics Committee. I understand that the study has already been passed by the West London Health Care NHS Trust (WLHCT). As we work as parallel Ethics Committees serving the same population, I am quite happy to accept Ethical approval from the WLHCT and take Chairman's action for you to conduct the study within the Ealing area.

Yours sincerely

 LREC Administrator.

Dr William Lynn
Chairman – LREC