The relationship between childhood abuse and delusions: An investigation based on delusional content

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Overview

This thesis examines the relationship between childhood abuse and delusions. It consists of three parts. Part one is a review of the literature regarding the contribution of childhood abuse to delusions in adulthood. It is argued here that current psychological models of delusions do not deal adequately with the impact of childhood abuse. The review looks to the abuse literature to suggest ways that psychological sequelae of abuse might fit with existing theories of delusions to offer a more comprehensive understanding of their origins.

Part two presents an empirical paper describing the research undertaken to investigate whether meaningful links can be identified between childhood abuse, schemas, and delusional content. The research compared delusional themes and schemas across three groups: individuals who have experienced a combination of childhood abuse types including sexual and/or physical abuse; purely emotionally abused individuals; and non-abused individuals. Eight major themes were identified in participant's delusional beliefs: seeing self as bad; others see as bad; defective body; spirituality/entities; loss of control; surveillance/conspiracy; other threat harm; and special abilities. This study did not find evidence of consistent meaningful relationships between childhood abuse, schemas and the content of delusions. The evidence pointed to a complex, possibly compensatory relationship in some instances, although further research is necessary.

The final part is a critical appraisal of the research process, guiding the reader through decisions made in the key areas of design, sample, recruitment, and analysis, and examines the implications of these for reliability and validity of the study.

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Part One

The Relationship between Childhood Abuse and Delusions:

A Literature Review

Abstract

Psychotic illness is associated in the literature with abuse in childhood (Read, van Os, Morrison, & Ross, 2005). This literature is reviewed, focussing on the relationship between childhood abuse and delusions. The review looks to the abuse literature to suggest ways that psychological sequelae of abuse might fit with existing theories of delusions to offer a more comprehensive understanding of their origins. It is argued that current psychological models of delusions do not deal adequately with the impact of childhood abuse. A greater appreciation of this relationship is theoretically important, but also has crucial implications for the accuracy of formulations and the appropriateness of treatment.

Introduction

Delusions have been described as 'the basic characteristic of madness' (Jaspers, 1963) and are amongst the most severe and debilitating of mental health problems. Many attempts have been made to understand the origins of delusions, with recent increasing contributions from psychological theories.

The following review will explore treatment in the psychological literature of the contributions of childhood abuse to delusions in adulthood. It will argue that current psychological models of delusions do not deal adequately with the high prevalence and lasting impact of childhood abuse. This argument will be developed in four stages. In the first stage current psychological models of delusions will be presented, focussing on cognitive models which have received the most empirical validation. Secondly, it will introduce a range of important issues when studying childhood abuse, and examine the implications of this literature for the relationship between abuse and delusions in adulthood. In the context of evidence linking abuse to positive psychotic symptoms, particularly hallucinations, the review will discuss the more provocative claim that this extends to delusions – both in *having* a delusion and the specific *content* of the delusion. Thirdly, it will consider the extent to which this relationship can be explained through existing psychological theories, and will suggest that whilst these theories are beginning to acknowledge a possible contribution of early experience to delusions they require further development to account for the relationship with childhood abuse. Finally it will look to draw lessons from psychological models of the sequelae of abuse that may elucidate our understanding of the origins of delusions. The theoretical and clinical implications of

the relationship between abuse and delusions are discussed along with wider implications and recommendations for future research.

1. Delusions

Delusions have been defined as:

> A false personal belief based upon an incorrect inference about external reality and firmly sustained in spite of what almost everyone else believes and in spite of what constitutes incontrovertible and obvious proof or evidence to the contrary (American Psychiatric Association, 1987, p. 356).

There are widely acknowledged concerns around definitions of delusions. These include difficulties in determining whether an individual's belief is 'false' and evidence indicating common fluctuation in the level of conviction with which delusional beliefs are held (Oltmanns, 1988). Indeed debates continue around whether there is in fact a qualitative difference between delusional beliefs and 'normal' beliefs (e.g. Bentall, 2003).

Delusional beliefs are commonly classified into different types according to their content, for example the Diagnostic and Statistical Manual (American Psychiatric Association, 1994) divides them into persecutory, grandiose, erotomanic, jealous, somatic and mixed. However, these are labels of convenience rather than scientific entities with separate psychological status. At the broadest level paranoid delusions appear to have particular clinical relevance given their frequent occurrence and associated distress, and have consequently their supposedly unique features have been studied in greater detail than other sub-types.

Historically psychiatric practice has understood delusions as one symptom within a larger syndrome - commonly schizophrenia or another psychotic disorder. Consequently much research has focussed on understanding the whole syndrome, instead of it's constitute parts or symptoms. In contrast, recent psychological theories have taken a 'single symptom' approach – focussing on understanding the aetiology of delusions as a separate entity (e.g. Bentall, 2003). This approach has hinged on evidence for the heterogeneous nature of the construct 'schizophrenia', and on the argument that the psychological processes underlying psychotic symptoms are not qualitatively different from general processes of perception or cognition.

Having introduced the field of delusions this review will turn its attention to considering psychological models of delusions, highlighting the paucity within this literature of references to childhood abuse.

1.1 Psychoanalytic theories

Freud (1958) viewed delusions as the result of conflicting desires and drives concerning unacceptable people or objects. These conflicts are understood to create anxiety, which is managed by employing defence mechanisms (e.g. paranoid projection or splitting), the consequence of which however is the emergence of psychotic symptoms such as delusions. For example, paranoid delusions might be understood as relating to (unacceptable) repressed homosexual desires whereby the resulting projection transforms the object of desire into a persecutor. Psychodynamic accounts generally argue that the underlying conflict results from a core sense of insecurity derived from adverse childhood experiences. Thus, psychoanalytic theory

can be credited with theorising a central role to early experience in the origins of delusions.

Psychodynamic theories have, however, received relatively little empirical investigation, and research that has occurred has been criticised for relying on case studies and for an absence of reliable measures for concepts such as 'unconscious homosexuality'. Furthermore, psychodynamic formulations have been in decline because therapeutic strategies based on these formulations were not found to be effective (Mueser & Berenbaum, 1990).

1.2 Cognitive models

Over the last two decades there has been growing agreement that delusions are best understood by investigating the relationship between social, psychological, and neurobiological levels of explanation (Garety, Kuipers, Fowler, Freeman, & Bebbington, 2001). Cognitive models play a vital role in this approach by investigating cognitive processes leading to the formation and maintenance of delusions. They have also been credited with introducing hypothesis testing and quantification into a field dominated by speculation (Roberts, 1992).

One of the earliest cognitive models put forward by Maher (1988) understood delusions as the result of an individual's attempt to make sense of anomalous experiences (such as perceptual abnormalities or 'unintended' actions common to psychosis). The anomalous experiences themselves are understood as primarily biological in nature and triggered by a precipitating event or emotional disturbance. Central to Maher's argument is the assertion that delusions are explanations

developed by the individual through normal cognitive mechanisms and *not* the result of any impairment in reasoning ability.

Support for this theory comes from evidence that delusions can occur in response to anomalous experiences associated with certain medical conditions (Maher & Ross, 1984), and can be induced in unusual experimental circumstances, for example through hypnotically induced hearing loss (Zimbado, Anderson, & Kabat, 1981). Maher's theory is not comprehensive enough to account for all delusions however, particularly those known to occur without any preliminary anomalous experiences (Roberts, 1992). Furthermore, recent evidence suggests there are systematic cognitive biases in those who experience delusions (Garety et al., 2001).

Theory of mind deficit. Frith (1992) proposes that delusions of reference and persecution arise from a meta-representation (or 'theory of mind') deficit which causes the individual to mistakenly interpret other people's beliefs, thoughts and intentions as referring to them. Some support for this hypothesis was identified by Garety and Freeman (1999) who reviewed seven recent studies and found that participants with a diagnosis of schizophrenia performed consistently worse on theory of mind tasks than non-psychiatric controls. This appears to be a deficit which cannot be accounted for by impairments in general cognitive functioning (Harrington, Siegert, & McClure, 2005). However, the literature suggests that theory of mind deficits cannot be consistently linked to specific symptoms such as delusions. For example, one study found no differences in meta-representation skills between paranoid and passive participants, and found that the depressed/anxious control group also performed more poorly on the tasks than normal controls

(Corcoran, Cahill, & Frith, 1997). In a review of 30 studies, Harrington et al (2005) found there was evidence pointing to theory of mind impairment in relation to negative symptoms but that the relationship with positive symptoms (including delusions) was inconclusive. However, studies in this area can be criticised for failing to control for illness chronicity and the contribution of other symptoms to the findings, and few studies distinguish between persecutory delusions and other 'paranoid' symptoms (Harrington et al., 2005).

The association between theory of mind and delusions is, therefore, a complex one and little has been consistently found in the literature. It seems plausible that theory of mind deficits may be a factor in the emergence of delusions, however the evidence linking this deficit specifically to persecutory delusions is unconvincing and continued research is necessary.

Data-gathering biases. As cognitive models have been more widely considered psychological understandings of delusional beliefs have focused increasingly on evidence for systematic errors or biases in reasoning. Garety and Freeman (1999) reviewed many experimental studies and concluded that individuals with delusions may have a rapid 'jump-to-conclusions' thinking style which limits the amount of data gathered to support an explanation. These studies typically investigate probabilistic reasoning skills using basic modifications of the following data gathering experimental paradigm: participants are shown two jars full of beads in a particular colour ratio (e.g. 85 green and 15 red beads and visa versa), which are then hidden and beads are drawn sequentially from one. The participant is required to work out which jar is being drawn from. Participants with delusions were found to

make a decision earlier based on less information than controls in seven from the eight studies reviewed by Garety and Freeman. This was not found to be a consequence of a memory deficit or impulsiveness.

Later research using different experimental paradigms has however provided less consistent results; with some studies finding no difference between deluded and control groups ability to test hypotheses or estimate probabilities (Bentall & Young, 1996). Increasingly studies indicate that the problem is a tendency not to seek information as opposed to a lack of ability to use it (John & Dodgeson, 1994). Garety and Freeman (1999) conclude that people with delusions have a data-gathering bias rather than a probabilistic reasoning bias.

Attributional defence. Bentall (1994) suggests that persecutory delusions reflect an attributional defence against low-self esteem thoughts reaching consciousness. By blaming others rather than themselves or the situation for negative events, it is argued that negative thoughts about the self are prevented form reaching awareness, however the penalty is the activation of beliefs about others as threatening. This model draws on cognitive theory and analytic ideas of defense, and has proved to be difficult to test empirically. Using the Attributional Style questionnaire, Kaney and Bentall (1989) found paranoid individuals make excessively external attributions for negative events and excessively internal attributions for positive events. Bentall argues that these cognitive abnormalities reflect exaggerated forms of the self-serving bias observed in non-deluded individuals. This cognitive bias has also been found in individuals with grandiose beliefs but not in other types of delusions (Sharp, Fear, & Healy, 1997).

In a review of six studies Garety and Freeman (1999) found little evidence of high or even normal self-esteem in those with persecutory delusions. Furthermore, in a longitudinal study Freeman et al. (1998) found a reduction in the conviction of delusions was not associated with a corresponding fall in self-esteem as would be expected. These are, however, measures of overt self-esteem and not implicit negative self-schemas as proposed in the model.

Thus, a second set of studies investigated discrepancies between overt and covert levels of self-esteem using an emotional stroop test (which is a measure of attentional bias towards emotionally salient words). Kinderman, Prince, Waller and Peters (2003) measured changes in self perception as a consequence of processing threat-related information. They found that individuals with persecutory delusions experienced a significant *reduction* in self actual: self ideal discrepancy following the Stroop test (i.e. began to view themselves as more similar to their ideal), and a significant *increase* in self actual: other actual discrepancies (i.e. increasingly believed that others viewed them differently from how they viewed themselves). Thus, the administration of a threat to self-concept led to altered self representation in paranoid individuals. This is consistent with the attributional model of paranoia. Limitations of this study include the small sample size of 37 participants across the three groups, which may reduce validity and reliability of the findings. Garety and Freeman (1999) agree with the role of an attributional bias in the formation of persecutory delusions, but argue that there is little evidence of a discrepancy between implicit and explicit self schemas, and therefore it is unlikely that persecutory delusions function to prevent low self esteem thoughts reaching consciousness.

When considering the applicability of cognitive theories generally one issue which emerges is that of specificity, with some researchers attempting to understand delusions in general (e.g. Garety, Hemsley, & Wessely, 1991) whilst others have focussed narrowly upon persecutory delusions (e.g. Bentall, 1994). Greater attention has been paid to the content of persecutory delusions because these are frequently occurring and distressing delusions, and often present the most risk associated with acting on persecutory beliefs (Freeman, Garety, Kuipers, Fowler, & Bebbington, 2002). However, no one theory has proved comprehensive enough to account for all types of delusional beliefs, perhaps due to the fact that many of the theories were developed in isolation rather being located within the wider understanding of delusional development (Roberts, 1992). It appears unlikely that any one factor can account for the development of delusions, and the need for a comprehensive model was identified (Garety & Freeman, 1999).

Multifactorial approach. Garety, Kuipers, Fowler, Freeman, & Bebbington (2001) have produced an influential multifactorial model for the origins and maintenance of positive symptoms of psychosis. This builds upon previous work by several authors whose work has been reviewed here (notably Garety and colleagues, Frith, Bentall and Maher). The model is unique in that it considers both delusions and hallucinations in one framework and posits a central role for emotion. Significantly, it also introduces the notion of early experiences including potential traumas (such as childhood abuse) as contributing to the emergence of delusions.

Garety et al. propose that a triggering event (e.g. a significant life event; drug use; isolation) leads to a disruption in cognitive processes. This disruption can be understood as a decline in the influence of memories on current perception, or difficulties monitoring one's own intentions or actions. Both entail a 'breakdown in willed activity' (although for different reasons) that results in the anomalous experiences common to psychosis (heightened perception, actions experienced as unintended etc). Emotional changes in response to the triggering event and anomalous experiences feed into the processing and transform these experiences into psychotic phenomena. The example used is a person experiencing anxiety and depression in response to losing their job (triggering event) and as a direct result of hearing voices (anomalous experience). Their emotional state then feeds into the content of the voices, which develop a critical, or threatening content (e.g. 'your useless', 'we're after you'). The individual attempts to make sense of the unusual experiences, but biases in appraisal processes such as jumping to conclusions and externalising attributional biases lead to distortions in their conclusions (e.g. paranoid beliefs that 'someone is after me'). Delusions are maintained by the same biased cognitive processes and social isolation which prevents the person accessing evidence that might disconfirm their appraisal of anomalous experiences.

Garety and colleagues (2001) suggest that early adverse experiences effect this process by creating an enduring cognitive vulnerability characterised by negative schematic models of the self and the world that facilitate external attributions. Thus, it is only here that reference to early experiences is explicitly acknowledged in a cognitive model.

1.3 Summary

This section has reviewed psychological understanding of delusions, focussing on cognitive theories that have received the most empirical attention. These contemporary models have evolved to acknowledge the possibility of a role for early adverse experiences (Garety et al., 2001); however they make no explicit reference to childhood abuse, and, as with the psychodynamic literature, the models' hypotheses about the role of early experience has not been empirically evaluated. It is argued here that it is crucial for psychological theories of delusions to address this relationship at theoretical and empirical levels if they are to be considered accurate and comprehensive. This will be demonstrated in the following section where the association between childhood abuse and delusions in adulthood will be discussed more directly.

2. Childhood abuse and delusions

The second step in this review is to examine the literature on childhood abuse to identify the implications of this for psychotic symptoms such as delusions. It will begin by presenting the area of childhood abuse generally, before moving on to examine the prevalence of childhood abuse histories in individuals with psychosis, finally focussing on delusions. There are two separate but related issues being addressed in this section: firstly, how childhood abuse relates to *having* a delusion, and secondly how the specifics of the abuse relate to the *content* of the delusion.

2.1 Forms of abuse and neglect

Childhood abuse is generally understood to take three forms – sexual, physical and emotional. Similarly childhood neglect is categorised as emotional or physical. Researchers commonly use different definitions of these concepts, and studies often refer to 'abuse' when they investigate only one type (predominantly sexual), or incorporate a measure of neglect into the study. This ambiguity confuses evidence in this field, and so for clarity the present review will use the generic term of 'abuse' for abuse and neglect, and will clarify what a particular author means by it and the measure used.

Accurately identifying the prevalence of abuse in the general population is challenging because much of this goes unreported or unnoticed. A large-scale population survey of adults by Doyle (1997) found 29% reported childhood emotional abuse compared to 14% reporting physical abuse and 9% reporting sexual abuse. As regards neglect, Gauthier et al. (1996) found 28% of their large sample of

undergraduates could be categorised as experiencing some form of neglect in childhood.

Emotional abuse has been referred to as the 'most hidden and underestimated form of child maltreatment' (Evans, 2002). This is partly due to difficulties in operationally defining emotional abuse along with a lack of associated physical injury. The number of children on the child protection register under 'emotional abuse' has however been steadily increasing over recent years, and at the end March 2001 they accounted for 18% of the total number of children on the register for all categories (Department of Health, 2001). This was the second commonest category after neglect.

2.2 Prevalence of childhood abuse in those with severe mental illness

There have been a number of recent studies considering the association between childhood abusive experiences and severe mental illness in adulthood. In a recent review of 43 studies, Read, Goodman, Morrison, Ross and Aderhold (2004) calculated that 66% of female and 60% of male psychiatric inpatients and outpatients have suffered childhood physical or sexual abuse. Fifty percent of females reported childhood sexual abuse, 48% reported childhood physical abuse, and 35% reported both. Males reported similar rates of childhood physical abuse (51%), 28% reported sexual abuse, and 19% reported experiencing both types of abuse. Read et al. reviewed only those studies where participants were asked directly about their early experiences, thus excluding research relying on medical notes which have been found to be unreliable (Dill, Chu, Grob, & Eisen, 1991), and he only included studies where at least 50% of patients had a diagnosis of a psychotic illness.

There is, however, much variation in estimates between studies, much of which is the result of different operational definitions of abuse being employed. For example, Read found the lowest rate of sexual abuse (22%) was identified in a study which included only 'genital contact' as abuse (Jacobson & Richardson, 1987), whereas most studies included non-genital contact, and some included non-contact abuse. Furthermore, the prerequisite of informed consent possibly excludes participation by those most disturbed individuals who may also be highly abused, leading to underestimations of abuse rates. Conversely, however, the possibility also exists that those who had been abused are more motivated to participate in such studies.

Despite problems in establishing exact figures this body of research suggests that a large proportion of people with severe mental health difficulties have experienced childhood abuse, which is approximately twice as high as found in the general population (Jacobson & Herald, 1990; Palmer, Bramble, Metcalf, Oppenheimer, & Smith, 1994). Research also suggests a link between childhood abuse and overall severity of disturbance. Compared with other psychiatric patients, those who had been abused as children have earlier first admissions, have longer and more frequent hospitalisations, are more likely to receive psychotropic medication, spend more time in seclusion, relapse more frequently, and are more likely to attempt suicide (Read, 1997; Read, 1998; Schenkel, Spaulding, DiLillo, & Silverstein, 2005).

2.3 Emotional abuse and psychopathology

The adverse effects of childhood physical and sexual abuse have been investigated much more extensively than the effects of childhood neglect or emotional abuse. This is despite these being the two most common types of maltreatment according to

the child protection register and prevalence studies (Doyle, 1997; Gauthier, Stollak, Messe, & Aronoff, 1996). This may reflect an assumption that emotional abuse and neglect are less damaging than other forms of abuse. Some research suggests on the contrary, however, that emotional abuse and neglect may have *stronger* links to adult psychopathology. A history of emotional abuse has been found to increase the likelihood of suicide attempt by 12 times, compared to a 5 fold increase associated with physical abuse (Mullen, Martin, Anderson, Romans, & Herbison, 1996). Gauthier, Stollak, Messe and Aronoff (1996) compared the impact of neglect and physical abuse in 512 undergraduates and found that individuals reporting a history of neglect were significantly more likely to report current symptoms of anxiety, depression, somatisation, paranoia and hostility than those reporting only physical abuse.

2.4 Childhood abuse and psychotic symptoms

There are few long-term prospective studies specifically investigating the relationship between childhood abuse and psychosis, however one such influential study was carried out by Janssen, Bak, Vollebergh, de Graaf and van Os (2004). This was a large-scale prospective study of 4045 individuals from the general population in the Netherlands. The results indicated that early childhood abuse (emotional, physical, sexual and psychological) significantly increases the risk of developing positive psychotic symptoms in adulthood. Furthermore, a correlation was observed between severity of abuse and the severity of psychotic symptoms, indicating a possible 'dose-effect'. The relationship between childhood abuse and positive symptoms was maintained after controlling for a broad range of possible mediating

variables including ethnicity, poverty, marital status, unemployment, urbanicity, marital violence, and parental substance abuse or psychiatric history.

The reliability of this study is enhanced by its prospective design and large sample size, but it employed an unsophisticated measurement of childhood abuse which may have limited its identification of abuse. Furthermore, from the sample only 55 people were identified as having psychotic symptoms of which 21 reported childhood abuse, thus the study's conclusions are based on a relatively small sample that also prevented investigation of the differential impact of different forms of abuse. This study is nevertheless important here as it raises the possibility of a distinct relationship between childhood abuse and the positive symptoms of psychosis including delusions. This relationship has been noted by others.

2.5 Childhood abuse and symptom expression

The literature shows childhood abuse is not only a significant predictor of later psychotic disorders but that it also impacts upon the *form* and *content* of psychotic symptoms. This aspect of the literature is particularly significant with regards to our understanding of delusions.

Read, Agar, Argyle and Alderhold (2003) examined the relationship between the hallucinations, delusions and thought disorder, and sexual and physical abuse among 200 outpatients. Their study found that the presence of hallucinations was significantly related to childhood abuse but produced weaker support for a relationship between this and the presence of delusions. Although 40% of the childhood sexually abused sample experienced delusions compared to 27% of the

non-abused, this difference was not found to be statistically significant. It is also important to note that the data for this study was obtained from case notes, which may affect the reliability and validity of reports of symptoms and abuse. For example, in 25 cases there was evidence that abuse may have occurred but 'no clear conclusion had been reached', although only those cases which were rated as 'highly probable' abuse-histories were included. Furthermore, emotional abuse and neglect were not investigated. These findings have, however, been replicated in the afore-mentioned longitudinal research project by Janssen et al.

Paranoid delusions have been found to be more likely in individuals who have a history of childhood abuse. Read and colleagues (2003) identified paranoid delusions in 40% of their sample of people who had experienced childhood sexual abuse, compared to only 23% of the non-abused participants. This supports findings by Ross, Anderson and Clarke (1994) who also identified a significant relationship between paranoid ideation and childhood abuse. Goff Brotman, Kindlon, Waites, & Amico (1991) found individuals with a delusion of possession were significantly more likely to have experienced childhood sexual abuse than other psychotic individuals. The authors speculate that these delusions could be understood as a symbolic representation of earlier trauma. Whilst this study benefits from a relatively large sample of 61 a subgroup of only 15 experienced delusions of possession, of which 10 reported childhood abuse compared to five who did not. This relatively small sub-sample size may impact upon the validity and reliability of the findings.

Read and his colleagues (2003) found sexualised content of delusions and hallucinations was seven times more likely (14%) in those who had experienced

sexual and physical abuse than in the non-abused group (2%). Reference to evil or the devil was statistically more common in the child sexual abuse group (13%) than in non-abused (3%). Case examples identified included one person who suffered childhood sexual abuse and believed they were being tortured by people getting into the body, for example 'the devil' and 'the beast'. Another, whose chart reported childhood sexual abuse, also documented 'olfactory hallucinations (smells sperm)'. Although case studies they provide a rich source of data they can be criticised for relying on an interpretation which introduces subjectivity and reduces the extent to which results can be generalised.

2.6 Validity of retrospective research

Most studies of the effects of childhood abuse are retrospective and therefore rely upon the availability of memories or the individual's willingness to discuss (or disclose) abuse. The accuracy of retrospective research methodology in this area has therefore been hotly debated. Femina, Yeager & Lewis (2005) carried out a prospective study investigating the validity of adolescent reports of physical abuse. Of 69 adults interviewed, 26 gave histories of abuse discrepant with histories obtained from interviews in adolescence, with 18 of these denying or minimising abuse. However this study used interviews, which have been found to produce less reliable accounts of abuse than confidential questionnaires (Dill et al., 1991). In contrast, Brewin, Andrews and Gotlib (1993) reviewed evidence for three commonly cited reliability issues surrounding retrospective reports of abuse by patients: reliability of autobiographical memory; memory impairment associated with psychopathology; and mood-congruent memory biases. They concluded that concerns surrounding retrospective reports of abuse are exaggerated, and 'there was

little reason to link psychiatric status with less reliable or less valid recall of early experiences' (p. 82).

2.7 Summary

The evidence presented above indicates that there is a relationship between childhood abuse and positive psychotic symptoms. Most evidence has focussed on hallucinations although it seems plausible that this relationship extends to delusions, and the evidence suggests, although cannot as yet conform this. There are two aspects to this relationship: the quantitative impact of childhood abuse upon the experience of delusions and the abuse characteristics upon the content of delusions. Evidence of the first type exists most clearly with regards to having persecutory or paranoid delusions, whilst there are mainly clinical case materials and their interpretation to support the second. An important question concerns the extent to which this emerging relationship can be understood by drawing on current psychological theories of delusions.

3. To what extent can psychological theories account for this relationship?

Contemporary cognitive models acknowledge the possibility that adverse early experiences may underlie cognitive deficits and biased processing associated with delusions, predominantly through the mechanism of maladaptive schemas. This process is most clearly outlined by Garety et al. (2001) in their multifactorial cognitive model which integrates several theories.

Garety and colleagues propose that early adverse experiences create a cognitive vulnerability characterised by negative schemas of the self and the world. These schemas are understood to encourage faulty interpretations of ambiguous events such as those believed to underpin delusions and also influence psychotic content (Garety et al., 2001). For example, abuse may lead people to believe they are vulnerable, that others cannot be trusted and the world is dangerous, beliefs that may then emerge in the form of paranoid delusions in psychosis (Morrison, Frame, & Larkin, 2003). In this model, therefore, emotional disturbance is understood as having the potential to contribute to the emergence of delusions, particularly those of a persecutory or grandiose nature (Fowler, Garety, & Kuipers, 1995).

Contemporary models can be commended for explicitly acknowledging the possible role of early experience and related emotional issues in the emergence of delusions. Significantly they also offer a hypothesis for links between abuse and delusional content by reference to schemas. This increased focus on the personal meaning of delusions is reflected at an individual level in cognitive behavioural therapy (e.g. Moorhead & Turkington, 2001), and is particularly important given the content links

that have been observed empirically (and noted above) between childhood abuse and delusions.

However, this theory is general and underdeveloped. It identified few specific hypotheses regarding the types of schemas emerging as a consequence of childhood deprivation, and the authors only make explicit reference to paranoia or grandiosity as a delusional consequence. Whilst some clinical case studies suggest there may thematic links between personal experience, schemas and psychotic content (Brabban & Turkington, 2002), the hypothesised pivotal role of schemas in the theories requires further theorisation and empirical investigation.

An alternative account of this relationship emerges from the psychoanalytic literature where delusions have historically been understood to emerge as a defense against underlying conflict, including that which arises from adverse childhood experiences (Freud, 1958). The content of delusions may symbolise the individual's abuse experiences (for example with parasitosis or delusions of possession) and may develop as a defence to protect the person from the horrific reality of their experiences (Oruc & Bell, 1995). There is, however, little empirical evidence to support or refute these hypotheses beyond single case studies.

There has, however, been a resurgence of interest in psychoanalytic ideas and defense mechanisms are being researched within the cognitive domain through research into attributional bias. Researchers investigating the cognitive processing abnormalities associated with paranoid delusions in particular have found evidence to suggest that these may result from an explanatory bias towards attributing negative

outcomes to external causes in order to protect self-esteem (Bentall, Kinderman, & Kaney, 1994). It has been suggested by Bentall (2003) that these emotional processing biases may result from early experiences, although the specific details of this remain unclear.

3.1 Summary

Contemporary models have evolved to acknowledge early experience as possibly underlying cognitive deficits and biased processing, predominantly through the mechanism of negative schemas or as a protective mechanism against low self-esteem. However, these theories appear tentative and undeveloped. They do not make specific reference to childhood abuse, and therefore cannot address empirical evidence suggesting that approximately 40% of those with delusions may have been abused (Read, Agar, Argyle, & Alderhold, 2003). Furthermore they only make reference to grandiose or persecutory delusions as a possible outcome of adverse early experiences. Lastly, as with the psychodynamic literature, there is an absence of evidence for the specific mechanisms proposed to underlie this relationship. It is fundamental for psychological theories of delusions to be able to explain this relationship if they are to be considered accurate and comprehensive, and this is important not only theoretically but also clinically, since formulations should be underpinned by psychological theory. Perhaps by drawing on general psychological sequelae of abuse it may be possible to shed light on mechanisms underlying the influence of abuse on delusions, and on this basis develop existing cognitive models or psychoanalytic perspectives to offer a more comprehensive account of this relationship. It is this task which provides the focus of the next section.

4. Long-term psychological sequelae of childhood abuse

Abuse and neglect in childhood can have a profound impact on adult functioning, and has been associated with increased risk for a variety of psychiatric disorders. Rather than consider specific diagnostic outcomes, this section will review general psychological sequelae of abuse in order to shed light on the possible mechanisms of their influence for delusions.

Not all survivors of childhood abuse experience lasting distress or require treatment. Whilst some of this variation in impact might be explained by characteristics of the abuse itself (Steel, Sanna, Hammond, Whipple, & Cross, 2004; Browne & Finkelhor, 1986), much of the outcome appears to depend on the way survivors process and cope with the abuse experience. Researchers have attempted to formulate explanatory models which explain the full range of symptoms and observed affects in order to account for the adverse long-term affects of childhood abuse.

4.1 Traumagenic dynamics.

Early adverse experiences feature heavily in psychodynamic theories of psychopathology as far back as Ferenczi (1949). They propose that abuse has a profound effect on the developing personality and lead to a propensity for anxiety, depression or dissociative phenomena. A more detailed theory has been put forward by Finkelhor and Browne (1985) who argue that abuse 'alters children's cognitive and emotional orientation to the world, and creates trauma by distorting children's self-concept, world view and affective capacities' (p. 531) via four 'traumagenic dynamics' – traumatic sexualisation, betrayal, stigmatisation and powerlessness. Empirical evaluation of the traumagenic dynamics model by Coffey, Leitenberg,

Henning, Turner, and Bennett (1996) found the relationship between childhood sexual abuse and adult adjustment was indeed mediated by perceptions of stigmatisation, but found little influence of perceptions of powerlessness and betrayal.

4.2 Attachment

Attachment has been given considerable attention as a possible mechanism by which childhood abuse leads to adulthood mental health problems Abused and neglected children are more likely to have insecure attachments (Crittenden & Ainsworth, 1989). Attachment theorists propose that the parent (who should be the main source of safety) is at the same time the source of danger or harm (Hesse & Main, 2000). This may be particularly significant in emotional abuse which commonly occurs in the caregiver-child relationship.

Attachment disorders have been directly associated with later psychopathology, possibly mediated by the development of maladaptive detached and avoidant coping strategies (Crittenden, 1992). Although Shapiro and Levendosky (1999) found the quality of attachment determined the levels of psychological distress irrespective of coping style. This study had a large sample of 80 adolescent females (26 of whom had been abused) and did investigate all forms of childhood abuse and neglect; however the focus was on sexual abuse, and any non-sexual abuse types were encompassed into one variable. For this reason the research was not able to investigate the possibility of distinct relationships between attachment and different forms of maltreatment.

4.3 Representations of self and others

Abused and neglected children have been found to have negative mental representations (i.e. internal working models) of the self and others. Freedenfeld, Ornduff and Kelsey (1995) found that children who had suffered physical abuse had a more malevolent object world, less accurate attributions of causality in their understanding of human interactions, and a lower level capacity for emotional investment in relationships (factors considered to be interrelated but distinct dimensions of object relations concepts). Wolfe (1987) also found that abused children have difficulty mentalizing (understanding others' thoughts and feelings) which they attribute to distorted internal working models of attachment. Fonagy, Gergely, Jurist and Target (2004) argue that 'maltreatment presents a powerful emotional disincentive for taking the perspective of others because of the actual hostility of the intentional stance of the abuser' (p. 64). Negative mental representations are also perceived as providing the propensity for more grossly pathological functioning in adulthood (Freedenfeld, Ornduff, & Kelsey, 1995).

In progressing from psychodynamic to cognitive accounts the literature draws on schema theory, and factors such attributional style, in seeking to explain how abuse leads to deep-rooted cognitive changes and altered perceptions of oneself, others and the world.

4.4 Schemas

Schemas are broad, pervasive themes regarding oneself and one's relationship with others. At the core of Young's (1997) schema-focused theory is the proposition that childhood maltreatment leads to the development of early maladaptive schemas. The

consequence of abuse as related to schemas has been most extensively investigated within the personality disorders literature. There is evidence of a specific link between all forms of childhood abuse and borderline personality disorder (Paris, Zweig-Frank, & Guzder, 1993; Zanarini, Williams, Lewis, & Reich, 1997). In a moderate sample of people with a diagnosis of borderline personality disorder Lobbestael, Arntz and Sieswerda (2005) identified the most common schema modes as the 'Detached Protector' (e.g. 'it is best to keep a distance from other people), the 'Angry Child' (e.g. 'I have to ventilate my feelings'), the 'Abandoned and Abused Child' (e.g. 'I am helpless and powerless') and the 'Punitive Parent' (e.g. I am bad and deserve punishment'). Significantly, however, not all the sample reported childhood abuse.

4.5 Shame and attributional style

Related to the role of cognitive processing is attributional style, which refers to an individual's inferences about events. Adult survivors of childhood sexual abuse are significantly more likely to have a negative attributional style when compared to non-abused individuals. This is associated with poorer adjustment and psychological problems of anger, PTSD, suicidal ideation and paranoid ideation (Steel et al., 2004).

Attributional style has also been related to the presence of shame, which is reliably identified as a consequence of childhood abuse (Andrews, 1998). Shame is a powerful negative emotion resulting from a view of oneself as inadequate and inferior, and is understood to be located in actual memories, such as childhood abuse (Gilbert, 1997). In shame the 'bad thing' is experienced as a reflection of a 'bad self', and the entire self is negatively evaluated (Tangney, Wagner, & Gramzow, 1992).

Feiring, Taska and Lewis (1996) propose that childhood abuse leads to shame through the mediation of cognitive attributions about the abuse, where internal, stable and global attributions for the abuse (e.g. 'this happened because I'm a bad person') are most likely to lead to shame and subsequent maladjustment. Large-scale community studies have shown that shame is reliably related to adult psychopathology (Andrews, 1995; Andrews, 1997).

Much of the research has investigated psychological mechanisms believed to impact upon the long-term effects of childhood abuse; however it has been difficult to establish a literature base identifying differential impacts of abuse types. It is possible that these mechanisms may take on varying levels of significance according to the type or characteristics of the abuse. For example, emotional abuse within the parent-child relationship might lead to greater attachment difficulties or maladaptive schemas than a situation where sexual abuse is occasionally perpetrated by someone outside of the family. Similarly, one might hypothesise that shame is more likely to be the core schema associated with childhood sexual abuse than, for example, emotional neglect. This is partly supported by evidence indicating differential impacts of different abuse types where physical abuse was linked to later aggression, emotional abuse was linked to low self-esteem, and sexual abuse was related to maladaptive sexual behaviour (Briere & Runtz, 1990).

4.6 Summary

This section reviewed the major mechanisms believed to account for the long-term impact of childhood abuse, focussing on traumagenic dynamics, poor attachment, negative mental representations, schemas, shame and attribution style. These

mechanisms may shed light on the relationship between childhood abuse and psychosis and contribute to the emerging theoretical developments in the area of delusions. The next section will offer ways that factors identified in the childhood abuse literature may fit with existing psychological theories of delusions.

5. Integrating literature on childhood abuse and delusions

A recent review of cognitive psychological theories of delusion formation found support for three processes which may interact, these were a tendency to gather less information in drawing conclusions about a set of circumstances, a tendency to ascribe blame for undesired events (or feelings) to other people, and an impaired ability to gain an accurate understanding of others' mental states (Garety et al., 1999). These have been influential in developing psychological treatments for delusions. Significantly, cognitive models have evolved to acknowledge the possible role of adverse early experiences, however this is general and underdeveloped and the models do not appear able to explain the relationship between childhood abuse and delusions. Whilst psychodynamic theories in general have put forward the idea that psychosis and its symptoms are a result of adverse early experiences, they do not refer to abuse specifically and they lack empirical support.

However, both cognitive and psychodynamic accounts offer promising leads, both in formulating individual cases and providing understanding at a more theoretical level. One could hypothesis that similar 'abuse related' factors play a role in delusions as have been found to be at work in other forms of psychopathology. It seems appropriate, therefore, to look to the abuse literature described to identify whether any of these prominent factors can shed light on the possible mechanisms of their influence for delusions.

5.1 Shame

A reliable finding is that childhood abuse victims often view themselves as worthless or inferior. These beliefs are also strongly associated with feelings of shame

(Tangney et al., 1992). The possibility of a specific link between shame and psychosis is not new. Erikson (1950) suggested that paranoid ideation can develop from shame related problems emerging from early childhood (stage II - autonomy versus shame and doubt). A recent large scale study by Tangney, Wagner and Gramzow (1992) identified a significant positive correlation between shame and paranoid ideation as measured on The Symptom Checklist (SCL-90), however the study used a non-clinical sample and therefore a different pattern of results may have emerged in a clinical population.

This, albeit limited, evidence suggests shame may be most reliably associated with paranoid delusions. One possibility is that paranoid delusions reflect an attributional defence which protects the person from the realisation of their shameful perceptions of themselves in order to maintain self esteem (Bentall et al., 1994). Building on this approach, Trower and Chadwick (1995) propose that different types of paranoia emerge as a result of different early experiences. Individuals whose parents were unavailable or neglectful develop 'poor me' paranoia, where the threat is neglect or abandonment, and the defense is to blame the other and see the self as victim. In contrast, those who experienced criticism, hostility or intrusive control develop 'bad me' paranoia where the threat is to have the self labelled as flawed and the defense is to escape the other. It seems possible that both types of paranoia could be related to childhood abuse, although neglect may be more strongly associated with poor me paranoia. Indeed, this defense is likely to apply to abuse-related self-concept problems more generally rather than just to shame per se.

Feelings of shame, subordination or inferiority are likely to take on increased significance in adolescence when autonomy is a key developmental task, thus explaining why individuals resort to protective psychological mechanisms at this developmental stage (Harrop & Trower, 2001). In addition, Birchwood Meaden, Trower and Gilbert (2002) propose that feelings of shame and subordination may be directly reflected in the content of delusions, for example where there are issues around control.

5.2 Attachment and mentalisation

Advances in understanding deficits in mentalization are equally relevant when it comes to links between abuse and psychosis. Abused children have been found to have difficulties in mentalization (or 'theory of mind') which has been understood as a consequence of distorted attachment (Fonagy, Gergely, Jurist, & Target, 2004). Mentalisation deficits have been linked to the emergence of persecutory delusions in particular (Frith, 1992), and psychosis generally (Garety and Freeman, 1999). This has been explained by an increased propensity to mistakenly interpret other people's beliefs, thoughts and intentions as referring to them.

Object relational theorists also propose that attachment difficulties lead to the development of negative internal working models of oneself and others, where malevolence is seen to be probable in interpersonal relationships (Freedenfeld et al., 1995). Such an individual may be increasingly likely to attribute a malevolent interpretation to others and consequently feel paranoid and persecuted. However, these theories are conjectural at this stage and require empirical investigation.

5.3 Is there evidence for a causal relationship?

It has been suggested that the relationship between childhood abuse and the symptoms of psychosis is so significant that childhood abuse plays a causal role (Read, 1997). There is, however, little comprehensive empirical investigation of this possibility. Studies demonstrating a link are predominantly correlational and cannot, therefore, prove a causal relationship. Furthermore, abuse has a high base rate amongst the normal population who do not develop delusions, and also a heightened rate amongst individuals with other types of psychiatric problems, which makes it difficult to argue for a specific causal relationship. One possible avenue is through the neurobiology of abuse. Brain changes associated with childhood abuse are not inconsistent with biological abnormalities associated with schizophrenia (Read, Perry, Moskowitz, & Connolly, 2001). However, the changes implicated are predominantly those of the stress response systems which are not changes specific to psychosis.

The most frequently proposed hypothesis is that psychosis and its symptoms are a combination of biological, psychological and social factors, possibly with their roots in a biological vulnerability which is triggered by stressful experiences – the stress-vulnerability model (e.g. Zubin & Spring, 1977). This is by no means a revolutionary idea and is hotly debated. Some argue there is no evidence for the traditionally held view that biology takes causal precedence over experience and reciprocal causation is likely to be the most valid framework (Harrop, Trower, & Mitchell, 1996). The traditional stress-vulnerability model states that trauma triggers delusions but does not contribute to the experience. More recent vulnerability-stress models proposed by Perris (1989) and (Ciompi, 1988) argue specifically for a transaction between

biological factors and dysfunctional schemas as a result of disadvantages in early life. In accordance with a stress-vulnerability model an underlying vulnerability may be triggered by early experiences (possibly as a distal trigger) leading to cognitive distortions or defences associated with delusions. One emerging suggestion is that there may be several different pathways to developing psychosis, one of which may be the through the early experience of trauma such as childhood abuse (Ross, Anderson, & Clarke, 1994).

5.4 Summary

There seem to be various ways in which child abuse sequelae may fit with existing theories of delusions, and only some of them have been discussed here. Many of the known consequences of childhood abuse are likely to feed into delusion formation and maintenance, including maladaptive schemas, shame, poor attachment and negative mental representations. These factors may underlie some of the cognitive biases associated with delusions, namely mentalisation deficits, maladaptive schemas and attributional defences.

It has been possible to suggest ways in which we can develop existing theories of delusions drawing on evidence form the abuse literature, particularly establishing possible links with paranoid delusions which would fit with literature suggesting this is the most prominent delusional types in people who have suffered abuse (Read et al., 2003; Ross et al., 1994). It is unlikely that a single factor can explain this relationship, and a more integrative interpersonal theory is necessary to place the cognitive, emotional and behavioural aspects of delusions within a broader context of the person (Trower & Chadwick, 1995).

6. Theoretical and clinical implications

If there is clear relationship between childhood abuse and delusions then treatment emphasis will be upon the importance of understanding individual's early experiences and how they might relate to their delusions. This should begin at assessment. The majority of abuse is not identified and patients are unlikely to spontaneously disclose childhood abuse (Read & Ross, 2003). Thus, clinicians working with those experiencing symptoms of psychosis should routinely ask about childhood abuse. This is particularly important given significantly higher suicide rates in those with symptoms of psychosis and childhood abuse (Mullen et al., 1996; Read, 1998). Failing to ask can obstruct the implementation of appropriate treatment. In relation to this, however, evidence suggests that staff responses to disclosure (particularly from in-patients) are frequently inadequate (Read & Fraser, 1998). This suggests the need for staff training in when and how to ask about abuse and effective responses.

Current research demonstrates CBT to be effective in working with delusions (e.g. Kuipers, Garety, & Fowler, 1997). This approach posits a central role to accurate formulation which should include attempts to understand a person's difficulties in the context of their life experience. Understanding the links between personal experience, schemas and delusions is central to accurate treatment (Brabban et al., 2002). Brewin, Andrews and Gotlib (1993) argue generally that many influential psychological treatments such as CBT do not explicitly incorporate information about early traumatic experience into treatment. One reason for this in relation to delusions may be the absence of a comprehensive clinical model on which clinicians can appeal to when formulating the development of delusions. Establishing the most

relevant theories in the literature surrounding delusions will help clinicians draw on the most appropriate models. The previous section has shown that one possibility may be to combine psychological understanding of the impact of abuse with existing theories of delusions, however it may not be possible (or indeed necessary) to generate an all-encompassing theoretical model, and individual formulations are considered vital in CBT. The literature suggests that clinicians working with individuals reporting childhood abuse should give due consideration to the role of negative schemas, poor attachment and shame as possibly underpinning delusions, including looking to delusional content for indicators. Where relevant these factors should provide a substantial focus for the therapeutic work.

6.1 Wider implications

The idea of 'meaningful symptoms' raises a wider argument about the distinction between psychosis and neurosis. Historically psychosis was defined as such because of the 'un-understandability' of symptoms such as delusions. For example, Jaspers (1963) wrote how delusions could not be understood in terms of the person's experience, and much more recently Berrios (1991) described delusions as 'empty speech acts, whose content refers to neither self nor world' (p.627). Thus, if the content of psychotic symptoms such as delusions are understandable on the basis of earlier experiences perhaps the qualitative distinction between psychosis and neurosis is less valid (Freeman & Garety, 2003).

7. Future research

This review has shown that there have been few attempts to understand the nature of the relationship between childhood abuse and delusions, and no research to date has systematically investigated the relationship between childhood abuse and delusional content. This is important as to shed light on links between these phenomena may show something about the development of delusions. It will be important for research to be methodologically rigorous whilst also retaining some sensitivity to the clinical material.

If a link is established between abuse and delusions than it will be important to identify key influences, for example the possible mechanism of schemas in the emergence and content of delusions requires empirical evaluation. One hypothesis stemming from cognitive models is that different abuse experiences lead to different schemas, and thus varying delusional content. Other possibly influential factors emerging from the abuse literature include the role of shame, attributional style, and attachment difficulties. Future research should investigate the role of these factors in relation to psychosis and consider whether they can shed light on the emergence of delusions, particularly those of a persecutory nature as seems to be suggested in the literature. Establishing the most relevant theories for delusions will help clinicians draw on the most appropriate treatment models, or indeed it may be true that different theories are appropriate in different clinical contexts.

Finally research in this area should investigate a range of maltreatment experience, particularly emotional abuse and neglect which are frequently ignored in the literature and may have unique relationships with psychotic symptoms.

Conclusion

This paper has reviewed recent literatures regarding psychotic delusions, and regarding childhood abuse, to determine whether a relationship between them is a plausible hypothesis and indeed whether this link has as yet been theorised or indeed tested empirically.

The literature shows that there is evidence of a relationship between childhood abuse and positive psychotic symptoms (Read & Argyle, 1999). Most research has investigated hallucinations, although it seems plausible that this relationship extends to delusions, and the evidence strongly suggests, although cannot yet confirm this. There are two possible aspects to this relationship, the quantitative impact of childhood abuse upon the experience of delusions and the abuse characteristics upon the content of delusions. Evidence of the first type exists most clearly with regards to having persecutory delusions (Read et al., 2003; Ross et al., 1994), whilst there are mainly clinical case materials and their interpretation to support the second (Brabban et al., 2002).

Significantly, however, this review has shown that literature on delusions largely ignores the possibility of a relationship with childhood to abuse. Contemporary theories have evolved to hypothesis a role for early experiences as underlying cognitive deficits and biased processing associated with delusions, possibly through the mechanism of negative schemas (Garety et al., 2001), however they make no explicit reference to childhood abuse per se and the pivotal role of schemas requires empirical evaluation. Thus, although psychological theories do accord with

childhood abuse as being a relevant factor in the emergence of delusions they require much development if they are to be considered accurate and comprehensive.

This review has attempted to shed light on the relationship between abuse and delusions by drawing on literature from the child abuse field which shows the significant role of factors such as traumagenic dynamics, shame, attributional style, poor attachment and negative mental representations in later psychopathology. It has been possible to suggest ways that such psychological sequelae of abuse accord with existing psychological theories of delusions to offer a more comprehensive understanding of their origins.

Finally areas for future research have been suggested in order to further develop understandings of the relationship between childhood abuse and delusions. This is theoretically important, but also has crucial implications for the accuracy of formulations and the appropriateness of treatment.

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Part Two

The relationship between childhood abuse and delusions: An investigation based on delusional content

Abstract

Objectives: Childhood abuse has been associated with psychotic symptoms in adulthood (Janssen, Bak, Vollebergh, de Graaf, & van Os, 2004), and case examples suggest there may be specific content links between abuse and hallucinations (Read & Argyle, 1999), however the relationship to delusions remains largely unexamined. This study investigates whether meaningful links can be identified between childhood abuse, schemas, and delusional content.

Method: 41 participants completed the Bernstein Childhood Trauma Questionnaire and the Young's Schema Questionnaire, and were interviewed about the content of their delusions using the SCAN. Participants were reliably divided into three groups: those who reported a combination of childhood abuse experiences, including sexual and/or physical abuse; purely emotionally abused individuals; and non-abused individuals. A thematic analysis was carried out on the content of delusions, and the groups were compared in terms of the presence of delusional themes and schemas.

Results: The thematic analysis revealed eight major themes in the delusional beliefs: seeing self as bad; others see as bad; defective body; spirituality/entities; loss of control; surveillance/conspiracy; other threat harm; and special abilities. No reliable group differences were found in delusional themes. There were several associations between schemas and some aspects of abuse and delusions though these are based on a limited and perhaps selective sample.

Conclusions: Though there was little evidence of strong and consistent relationships between childhood abuse, schemas and the content of delusions, several findings deserve further investigation. Clinical implications are discussed along with methodological limitations and recommendations for future research.

Introduction

Delusions have been described as 'the basic characteristic of madness' (Jaspers, 1963) and are a core diagnostic feature of schizophrenia and other psychotic disorders. Historically delusions were considered to be 'empty speech acts', the content of which was not related to a person's experiences (Jaspers, 1963). Recently, however, there has been increasing evidence for a relationship between the content of psychotic symptoms and early traumas, such as childhood abuse.

Relationship between childhood abuse and psychosis

There have been a number of studies considering the statistical association between childhood abusive experiences and later psychotic disorders. In a review of 43 studies, Read, Goodman, Morrison, Ross and Aderhold (2004) calculated that over 60% of psychiatric patients have suffered childhood physical or sexual abuse. These rates are approximately twice as high as found in the general population (Jacobson & Herald, 1990; Palmer, Bramble, Metcalf, Oppenheimer, & Smith, 1994).

Read, Agar, Argyle and Alderhold (2003) reviewed the case notes of 200 community patients and found that individuals who have experienced sexual abuse are significantly more likely to endorse two or more of the characteristic symptoms of schizophrenia. This is consistent with large scale longitudinal research conducted by Janssen *et al.* (2004) which also indicated that child abuse was highly predictive of positive psychotic symptoms (including delusions) in adulthood. This study also revealed evidence of a 'dose-effect' whereby a correlation existed between the severity of abuse and the severity of the psychotic symptoms.

The association with early abuse is not specific to psychosis, and has been shown to exist in a number of conditions, including personality disorders (Johnson, Cohen, Brown, Smailes, & Bernstein, 1999), eating disorders (Grilo & Maseb, 2002) and depression (Read, Agar, Barker-Collo, Davies, & Moskowitz, 2001). Some, however, maintain that child abuse displays the strongest association with psychosis (Bryer, Nelson, & Miller, 1987; Read et al., 1999).

Relationship between abuse and symptom content

The literature shows childhood abuse is not only a significant predictor of psychotic symptoms, but that it might also impact upon the *type* and *content* of symptoms.

Paranoid delusions have been identified at a higher rate in individuals who have a history of childhood abuse compared to those who do not (Read, Agar, Argyle, & Alderhold, 2003; Ross, Anderson, & Clarke, 1994), and individuals with a delusion of possession have been found to be more likely to have experienced sexual abuse than other psychotic individuals (Goff, Brotman, Kindlon, Waites, & Amico, 1991).

In terms of symptom content, Read and Argyle (1999) examined the relationship between hallucinations, delusions and thought disorder, and childhood sexual and physical abuse among psychiatric inpatients. They found that half of the symptoms for which content was recorded appeared to be directly related to the abuse. It is important to note, however, that data was obtained from case notes, symptom content could only be analysed for 13 participants, and no comparisons were made between abused and non-abused patients. This result is, however, consistent with research by Hardy et al. (2005) which found evidence of an (indirect) thematic association

between trauma and hallucinations in 45% of their sample, and identified childhood sexual abuse to be the most common type of trauma linked thematically to hallucinations.

Case examples in particular have been drawn on to provide evidence of direct content links between the experiences of abuse and the content of delusions and little evidence is systematic. For example, Read and his colleagues (2003) found sexualised content of delusions and hallucinations, and reference to the devil or evil was more likely in those who had experienced sexual abuse. Some case examples, such as those discussed by Read et al., refer to direct content associations in delusions, whilst some refer to indirect, possibly symbolic, associations (e.g. Goff et al., 1991). Although case studies provide a rich source of data they can be criticised for relying on interpretation and associations may be subjective on the part of the researcher.

Emerging research suggests, therefore, that the *content* of psychotic symptoms may be qualitatively different in those who have and have not suffered childhood abuse. Whilst this is currently most clear in relation to hallucinations, plausibly it extends to delusions although it is this relationship that remains largely unexamined in a methodologically rigorous way. Furthermore, research in this area has focussed predominantly on childhood *sexual* and *physical* abuse, paying much less attention to the relationship between psychotic symptoms and *emotional* abuse. This is despite evidence suggesting emotional abuse is the most common form of abuse (Doyle, 1997; Gauthier, Stollak, Messe, & Aronoff, 1996), and may have *stronger* links to

adult psychopathology than other forms of abuse or neglect (Mullen, Martin, Anderson, Romans, & Herbison, 1996).

Underlying mechanisms

One possible account of the relationship between childhood abuse and the content of delusions might be drawn from the psychoanalytic literature where delusions have historically been understood to emerge as a defense against underlying conflict, including that which arises from adverse childhood experiences (Freud, 1958). Here the content of delusions symbolises the individual's abuse experiences (for example with parasitosis or delusions of possession) and may develop as a defence to protect the person from the reality of their experiences (Oruc & Bell, 1995), although there is little empirical evidence to support or refute these hypotheses beyond single case studies. More recently, however, defense mechanisms have been researched within the cognitive domain, particularly in relation to delusions with paranoid or grandiose content which have been understood to be the result of an attributional bias towards attributing negative outcomes to external causes in order to protect self-esteem (Bentall, Kinderman, & Kaney, 1994).

Contemporary cognitive models suggest that the *content* of delusions may be linked to the content of earlier abusive experiences through the mechanism of individual's schemas (Garety, Kuipers, Fowler, Freeman, & Bebbington, 2001). In this model early adverse experiences create negative schemas of the self and the world, which make faulty interpretations of events more likely and lie beneath psychotic symptoms. For example, childhood abuse may lead people to believe they are vulnerable, others cannot be trusted, and the world is dangerous, beliefs that may

then translate into paranoid delusions in psychosis (Morrison, Frame, & Larkin, 2003). Other negative self-schemas associated with childhood abuse are self-blame (Brewin, Frith-Cozens, Furnham, & McManus, 1992), subordination (Birchwood, 2003), and beliefs about oneself as 'bad' which strongly relate to feelings of shame (Andrews, 1995; Andrews, 1997). Once again, clinical observations have received little empirical investigation

Garety et al's (2001) model aims to explain both the presence and content of positive symptoms so offers an explanation for possible thematic links between abuse and delusions (Brabban & Turkington, 2002). Correspondingly, the meaning of delusional content has been increasingly recognised on an individual level in cognitive behaviour therapy (e.g. Moorhead & Turkington, 2001). Overall the model leads one to predict clear links between early experience, schemas and psychotic content (both in form and content) (Brabban et al., 2002). Therefore, the association of schemas with delusional content forms a subsidiary topic of enquiry for the current study.

Summary

The literature shows that while there appears to be a relationship between abuse and the content of positive psychotic symptoms, the relationship specifically to delusions remains largely unexamined in a methodologically rigorous way. Case examples indicate many plausible links to delusional content, and psychological theory highlights the role of schemas, however neither has received systematic evaluation across a range of patients. Furthermore, no research to date has specifically investigated the relationship between *emotional* abuse and the content of delusions.

A greater understanding of whether such a relationship exists is theoretically important, but also has crucial implications for the accuracy of formulations and treatment.

Research aims

This study investigates whether meaningful links can be identified between childhood abuse, schemas, and delusional content. It employs a larger sample than previous research, and compares delusional themes and schemas across three groups: individuals who have experienced a combination of childhood abuse types including sexual and/or physical abuse; purely emotionally abused individuals; and non-abused individuals.

In accordance with shame literature (Andrews, 1998) participants in either of the abused groups may be more likely to have delusional themes around being 'bad' than participants who have not been abused. They may also experience more paranoia or persecutory type delusions (Read et al., 2003; Ross et al., 1994). Participants in the mixed-abuse group who have experienced sexual abuse may also be more likely to have themes around their body being invaded or infested, or around being possessed as indicated in other studies (Read et al., 2003; Goff et al., 1991). In terms of schemas, participants in the abused groups may hold more beliefs that they are vulnerable to being abused or hurt by others (Morrison, Frame & Larkin, 2003), and are defective or 'bad' (Andrews, 1995; 1997) than individuals in the non-abused group.

Method

Participants

The participants were 41 individuals who experienced delusions as described by their key-worker and later confirmed by the SCAN (see below). Participants were divided into three groups: a mixed-abuse group reporting more than one type of childhood abuse (n = 18); an emotionally abused group (n = 9); and a non-abused group (n = 14). Data from 16 participants had been obtained during a previous research project (using the same measures), and the remaining 26 were recruited by the present researcher. This was a purposeful sample recruited from inpatient and outpatient populations of a London NHS mental health trust. All participants had a current diagnosis of a psychotic disorder and were aged 16 to 65 years. Participants were excluded if they were unable to speak fluent English, or if they had a learning difficulty that would prevent them being able to complete the measures. Participants would have also been excluded if they disclosed significant abuse in adulthood, and if their psychosis appeared to be primarily driven by substance abuse (as assessed through preliminary screening questions), although in practice this did not occur.

Measures

Data was gathered using two questionnaires and a semi-structured interview.

Childhood Trauma Questionnaire – short form (CTQ; Bernstein & Fink, 1998). This is a 28-item self-report questionnaire that screens for childhood histories of abuse and neglect. The reliability and validity of the CTQ in measuring abuse in childhood has been demonstrated in adolescent and adult samples and across community and

clinical samples (Fink, Bernstein, Handelsman, Foote, & Lovejoy, 1995; Bernstein, Ahluvalia, Pogge, & Handelsman, 1997; Paivio S.C. & Cramer, 2004; Bernstein et al., 2003; Wright et al., 2001). The CTQ investigates five types of maltreatment – emotional, physical and sexual abuse, and emotional and physical neglect. It consists of a series of statements about childhood events, which are endorsed on a 5-point Likert scale according to frequency, ranging from 'never true' to 'very often true'. Thresholds are provided for indicating severity of abuse ('none', 'low', 'moderate', and 'severe'). The CTQ also includes a minimisation/denial scale (zero to three) for detecting possible false-negative abuse reports. Only those whose scores classified them at the 'moderate' or 'severe' level were included in either of the abuse groups, and those who scored at the 'none' or 'low' levels were included in the non-abused group. Two participants were not included in the analysis as they reported no childhood abuse on the CTQ and scored two on the minimisation/denial scale suggesting possible under-reporting of maltreatment. The CTQ questions can be seen in Appendix E.

Young Schema Questionnaire – short form (YSQ; Young, 1990). The YSQ is a 75-item self-report tool used to assess the extent to which an individual holds a range of early maladaptive schemas. Early maladaptive schemas are broad, pervasive themes regarding oneself and one's relationship with others, which develop through childhood, and are considered significantly dysfunctional. The YSQ measures 15 schemas which are grouped into 5 domains (see Appendix G). The YSQ is a clinical tool and does not have a formal scoring criterion. For the purposes of this research a participant was seen to highly endorse a schema if they scored over 75% of the highest possible score. This cut-off resulted in 0 to 9 schemas (M = 2.6) being

endorsed by each participant, suggesting reasonable selectivity as a criterion. The YSQ is provided in Appendix F.

Schedules for Clinical Assessment in Neuropsychiatry – Version 2.1 (SCAN; Wing et al., 1990). Subsections of the SCAN were used to obtain descriptions of delusions. This is a standardised assessment schedule designed to assess, measure and classify the psychopathology and behaviour associated with a range of adult psychiatric disorders. This study used sections 16 to 19 which investigate hallucinations, thought disorder and delusional ideas (see Appendix H for interview protocol). This allowed the researchers to systematically obtain descriptive information around delusional beliefs and related anomalous experiences. These descriptions were used to create a summary of the main features of the delusion which was checked with the participants at the end of the interview for accuracy. The SCAN also categorises delusions by content into 29 empirically validated 'types' (see Appendix I) and was scored accordingly for each participant.

Procedure

Potential participants were approached with a member of their care team and provided with an information sheet detailing the nature of the research. Consenting participants then completed the CTQ. If their scores clearly indicated suitability for one of the groups, and they did not score on the CTQ minimisation scale, they were invited to a second appointment during which they completed the YSQ and were interviewed about their delusions using the SCAN. Interviews were audio taped with the consent of participants. The questionnaires took approximately 30 minutes in

total to complete and the interview lasted approximately 1 hour. Participants care coordinators were informed that they were taking part (Appendix C).

Ethical Considerations

Barnet, Enfield & Haringey NHS Trust approved this study (Appendix D). Informed consent was obtained from all participants (see information sheet and consent form in Appendix A and B respectively). Only those individuals perceived by their care team to be in a stable state of mental health were referred. Participating in the research did not interfere with any part of that individual's routine care. Participants were monitored throughout their involvement, and in the event that they had shown signs of distress, their participation would have stopped immediately. Follow up at the Psychological Therapies Service was made available to participants if they wanted to discuss issues raised by taking part in the research, although none chose to do this. All data obtained was anonymous and confidential to the researchers, and findings were not communicated to the care team unless at the participant's request.

Analysis

Delusional summaries were analysed in two ways: by a thematic analysis of delusional content; and by categorising the delusions into 'types' according to the classifications provided in the SCAN (.g. persecution, reference. See Appendix I).

The thematic analysis progressed through three key stages as detailed by Barker, Pistrang and Elliot (2002): (1) identifying meaning; (2) categorising; and (3) integrating. Identifying meaning involved the researcher distinguishing the main (manifest) ideas expressed in the content of each delusion summary. These were then

categorised, producing a set of eight key themes, or a 'code' (Boyatzis, 1998). Finally integration involved attempting to draw connections between the themes. For an example of the process of thematic analysis and the resulting themes see Appendix J and K.

Data was analysed to investigate whether relationships emerged between the type of abusive childhood experiences, delusional themes or 'types', and maladaptive schemas. Due to the exploratory nature all possible relationships were tested. During the data collection it was noted that the participants frequently reported anomalous experiences. Consequently the analysis also considered the relationship between childhood abuse and anomalous experiences, which may be linked to the content of delusional beliefs. Frequency data was analysed using the Chi-Squared test, unless the expected frequencies indicated otherwise in which case the Fishers Exact Test was used.

Reliability checks

To check the reliability and validity of the thematic analysis another researcher also analysed four of the delusion summaries using the established themes. Comparison with the original analysis showed very good agreement, with the researchers agreeing on 89% of themes (see Appendix L). Similarly, another researcher familiar with the SCAN scored four delusion summaries, with the researchers agreeing on 74% of categories, increasing to 89% agreement after discussion.

Results

Demographic and clinical data

Forty-one individuals participated, of which two were excluded for possible minimisation. The remaining 39 participants fell into three groups; a *mixed abuse* group (n=18); an *emotionally abused* group (n=9); and a *non-abused* group (n=12). The mixed abuse group reported more than one childhood abusive experience, with 17 (94%) experiencing physical abuse, 15 (83%) experiencing emotional abuse, and 10 (56%) experiencing sexual abuse.

Participants were aged between 19 and 60 (x=37, SD=10.65). Twenty-three (59%) were males. Ten (26%) were inpatients at the time of interview, the remaining were outpatients. Participant's history of psychosis ranged from 3 months to over 15 years, with 44% having a history of less then five years and 26% having a history of longer then 15 years. Nineteen (49%) participants described themselves as White-British; eight (21%) as Black-African; six (15%) as Black-British; and the remaining six were split between White-Irish and Asian. According to participant's medical files 28 (72%) had a current diagnosis of schizophrenia, five (13%) had a diagnosis of delusional disorder, and the remaining six (15%) had been diagnosed with bipolar disorder or depression with psychotic features. There were no significant group differences according to age, gender, ethnicity, inpatient/outpatient status, problem time, or diagnosis.

Confirmation of group differences by abuse

Statistical analyses were carried out on the CTQ scores to confirm that the groups were significantly different in terms of childhood abuse experiences. A MANOVA

comparing the CTQ scale scores for the three groups found a significant main effect of group ($F(2, 36) = 25.01$, $p = .01$) so Scheffé post-hoc tests were performed to investigate differences further. The mixed abuse group reported significantly more physical and sexual abuse than the other two groups ($p = .01$). The mixed and emotional abuse groups reported a similar level of emotional abuse, which was significantly higher than the non-abused group ($p = .01$).

Both the mixed and emotionally abused groups scored significantly higher than the non-abused group on physical neglect ($p = .02$) and emotional neglect ($p = .01$). The mean CTQ scores for each group can be seen in Table 1. These results clearly support the group allocation.

Table 1 Mean scores (S.D.) for the groups on the CTQ scales

CTQ scales	**Group**		
	Mixed abuse *n=18*	**Emotional Abuse** *n=9*	**Non-abused** *n=12*
Sexual abuse	***12.33 (8.59)***	5.56 (.88)	5.17 (.58)
Physical abuse	***16.78 (4.70)***	6.56 (1.13)	6.08 (1.43)
Emotional abuse	***17.94 (5.13)***	***15.56 (1.33)***	8.00 (2.41)
Physical neglect	***11.39 (4.05)***	***9.67 (3.12)***	5.50 (1.17)
Emotional neglect	***16.61 (6.15)***	***12.44 (5.98)***	8.33 (3.53)

Significantly raised scores compared to non-abused in italics

Group differences by delusional themes

The thematic analysis established eight delusional themes: 'seeing oneself as bad'; 'others seeing you as bad'; 'defective body'; 'spirituality/entities'; 'loss of control';

'surveillance/conspiracy'; 'threat of harm from others'; and 'special abilities' (Appendix J). Across the whole sample, themes of surveillance and spirituality/entities were the most common (54%) and seeing oneself as bad (15%) was least frequent. The percentage of participants experiencing each delusional theme can be seen in Table 2, and as a bar chart in Figure 1.

The association of each theme (present/absent) with group membership was tested using Chi-Square tests. The presence of these themes did not differ significantly between the three groups (see Table 2 below). Nevertheless, five themes appeared to occur more frequently in the emotionally abused group and these were further examined using Chi-Square tests restricted to two groups. The theme of 'special abilities' was most prominent in the emotionally abused group (56%) compared to the mixed abuse group (17%), however this difference did not achieve statistical significance (X^2=4.35; p=.07). 'Spirituality/entities' was twice as prevalent in the emotionally abused group (67%) than the non-abused group (33%), and 'others seeing you as bad' appeared most frequently in the emotionally abused group (56%) compared to the mixed abuse group (28%) and the non-abused group (33%), however neither of these comparisons achieved statistical significance. The presence of these themes did not appear to overlap in any consistent way, in fact, conversely 'others seeing you as bad' and 'special abilities' occurred separately in seven out of the nine emotionally abused participants.

It is perhaps surprising that those who reported childhood abuse (mixed or emotional) were no more likely to have themes around 'seeing oneself as bad' or 'threat of harm from others' than those who were not abused, and that participants in

the mixed abuse group (who experienced sexual abuse) were no more likely to have the 'defective body' theme in their delusions.

Table 2 Percentage of participants in each group experiencing each delusional theme

Delusional themes	**Group**			**X^2 / p-value**
	Mix abuse	**Emot. abuse**	**Non-abused**	
Badness self (see self)	6	22	17	1.99/.48
Badness self (others see)	**28**	**56**	33	2.00/.39
Defective body	22	22	25	.21/1.0
Spirituality/entities	61	**67**	**33**	2.91/.25.
Loss of control	28	11	17	1.03/.68
Surveillance	50	67	50	.81/.77
Threat of harm	44	44	58	.71/.77
Special abilities	**17**	**56**	25	4.22/.55

Numbers in bold are those comparisons selected for testing.

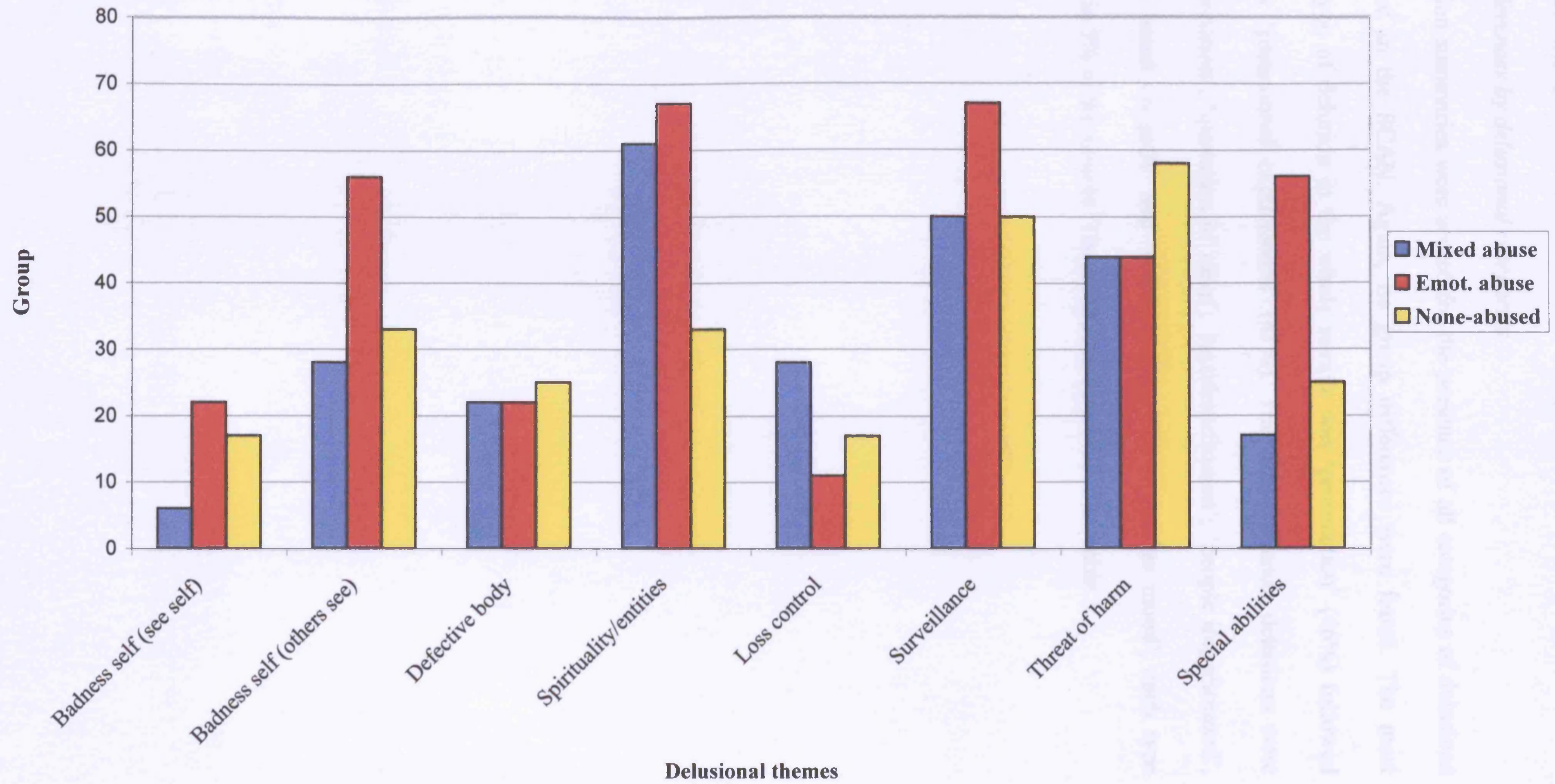


Figure 1. Percentage of participants in each group experiencing each delusional theme
80
70
60
50
40
30
20
10
0
Group
Mixed abuse
Emot. abuse
None-abused
Badness self (see self)
Badness self (others see)
Defective body
Spirituality/entities
Loss control
Surveillance
Threat of harm
Special abilities
Delusional themes

Group differences by delusional categories

The delusion summaries were scored for the presence of all categories of delusions investigated in the SCAN. Again, no group differences were found. The most frequent type of delusion in the whole sample was 'persecution' (46%) followed closely by 'paranormal explanations' (41%). The least common delusions were 'misinterpretation', 'quotation of ideas', 'misidentification', 'people impersonated', 'reference based on guilt' and 'reference based on expansive mood', each type identified in 5% of the sample. The results are summarised in Table 3.

Table 3 Percentage (and frequency) of participants experiencing each type of delusion as identified from the SCAN

SCAN categories	Group			X^2 / p-value
	Mix abuse	**Emot. abuse**	**Non-abused**	
Being spied on	33(6)	11(1)	33(4)	1.63/.49
Reference	33(6)	44(4)	33(4)	.49/.83
Misinterpretation	6(1)	11(1)	17(2)	1.27/.80
Quotation of ideas	0(0)	0(0)	8(1)	2.15/.54
Misidentification	0(0)	11(1)	0(0)	2.73/.23
People impersonated	0(0)	11(1)	0(0)	2.73/.23
Ref. – guilt	0(0)	11(1)	0(0)	2.73/.23
Ref. – Expansive mood	6(1)	0(0)	0(0)	1.34/1.0
Persecution	39(7)	44(4)	58(7)	1.15/.65
Conspiracy	22(4)	33(3)	33(4)	.77/.73
Accused homosexuality	11(2)	0(0)	8(1)	.92/.79
Fantastical	6(1)	11(1)	0(0)	1.50/.71
Religious	6(1)	22(2)	0(0)	2.99/.22
Paranormal explanations	44(8)	44(4)	33(4)	.51/.84
Physical explanations	6(1)	0(0)	8(1)	.93/1.0
Hypocondriacol	0(0)	11(1)	8(1)	2.31/.28
Grandiose abilities	22(4)	44(4)	25(3)	1.58/.54
Others think smell	6(1)	22(2)	17(2)	1.99/.48
Somatic sensations	11(2)	11(1)	0(0)	1.49/.59

Only those categories experienced by at least one participant are presented.

Group differences by maladaptive schemas

The mixed and emotionally abused groups endorsed a greater number of schemas (x=3.0 and x=3.2 respectively) than the non-abused group (x=1.6). The most frequently endorsed schemas for the whole group were 'insufficient self-control', 'vulnerability to harm' and 'emotional deprivation' with 28% of the whole sample endorsing these. The least common were 'enmeshment' and 'defectiveness/shame' with endorsement from only 8% of the whole sample. The percentage of participants endorsing each schema and significant differences can be seen in Table 4, and as a bar chart in Figure 2.

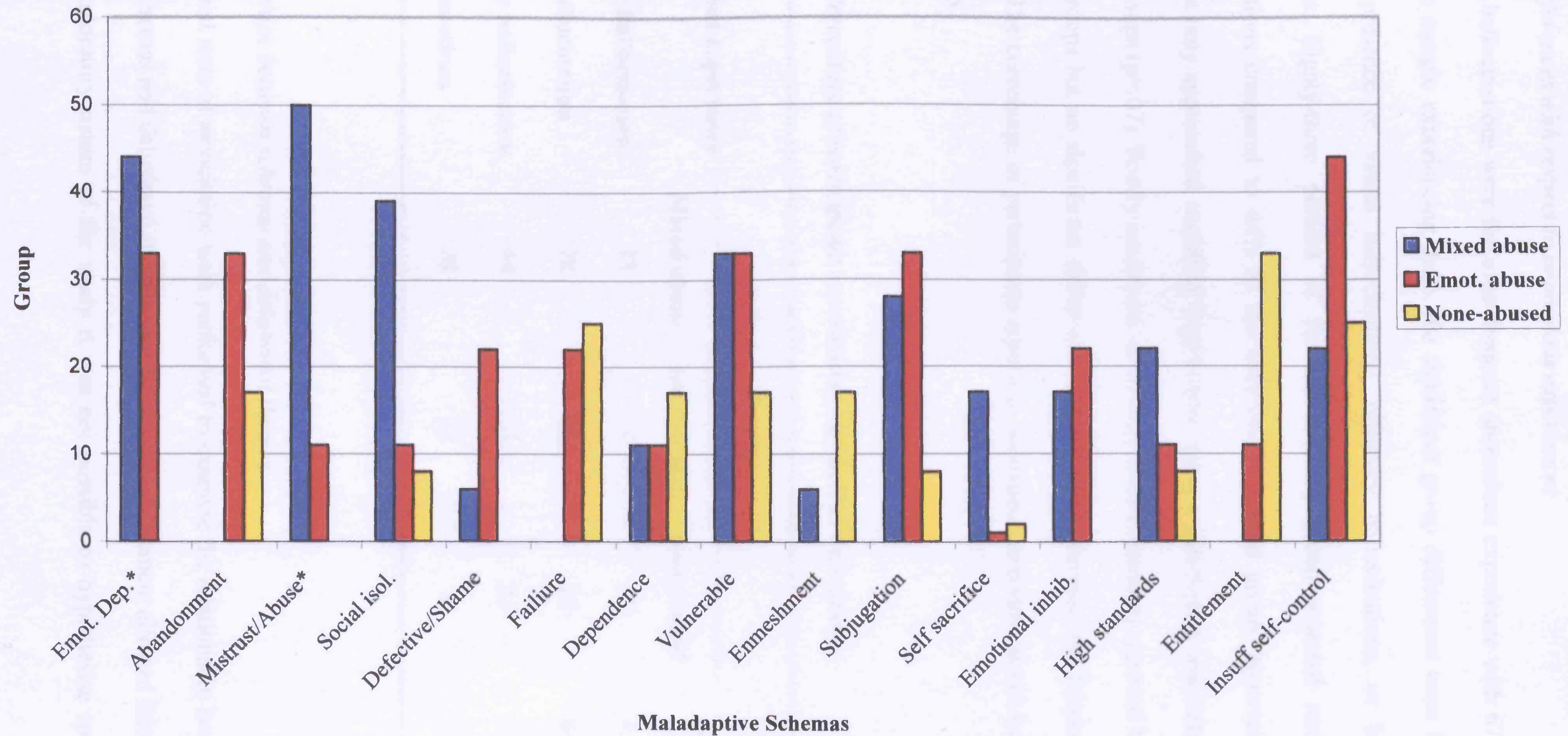
The association of group with presence/absence of schemas was also tested with two significant results. The mixed abuse group were significantly more likely than the non-abused group to endorse the 'emotional deprivation' schema (X^2=7.18; p=.02) and the 'mistrust/abuse' schema (X^2=10.29; p=.01). Differences with observed values beneath five were discounted as they involve too few numbers to be considered reliable.

Table 4 Percentage (and frequency) of participants endorsing each schema

Maladaptive Schemas	Group			X^2 / p-value
	Mix abuse	Emot. abuse	Non-abused	
Emot. deprivation	*44(8)*	33(3)	*0(0)*	7.85/.02
Abandonment	0(0)	33(3)	17(2)	6.08/.03
Mistrust/ Abuse	*50(9)*	11(1)	*0(0)*	10.29/.01
Social Isolation	39(7)	11(1)	8(1)	4.12/.10
Defectiveness/ Shame	6(1)	22(2)	0(0)	3.00/.22
Failure	0(0)	22(2)	25(3)	5.37/.04
Depend./ Incomp.	11(2)	11(1)	17(2)	.49/1.0
Vuln to Harm	33(6)	33(3)	17(2)	1.19/.65
Enmeshment	6(1)	0(0)	17(2)	1.79/.44
Subjugation	28(5)	33(2)	8(1)	2.27/.37
Self Sacrifice	17(3)	22(2)	0(0)	2.75/.22
Emotional Inhibition	17(3)	22(2)	0(0)	2.75/.22
High Standards	22(4)	11(1)	8(1)	1.07/.63
Entitlement	0(0)	11(1)	33(1)	6.52/.02
Insuf. Self-Control	22(4)	44(4)	25(3)	1.58/.54

Significantly raised scores compared to non-abused in italics

Figure 2. Percentage of participants in each group endorsing each maladaptive schema



*sig. group difference

Group differences with respect to anomalous experiences

Auditory hallucinations were the most frequent anomalous experience with 67% of the whole sample experiencing them. No significant group differences were found for the presence of visual hallucinations, olfactory hallucinations, or bodily sensations. Eighty-three percent of the mixed-abuse group reported auditory hallucinations compared to 44% of the emotionally abused group, however this difference only approached statistical significance using a Chi-Square test restricted to two groups (p=.07). Bodily sensations were much more commonly reported by the abused groups but no significant differences arose, perhaps because the frequencies are low. The percentage of participants reporting anomalous experiences can be seen in Table 5.

Table 5 Percentage of participants experiencing anomalous experiences

Anomalous experience	Group			X^2 / p-value
	Mixed abuse	**Emot. abuse**	**Non-abused**	
Auditory hallucination	83	44	58	4.63/.10
Visual hallucination	28	11	25	0.92/.79
Olfactory hallucination	44	33	25	1.21/.58
Bodily sensations	28	22	8	1.66/.52

Relationships between schemas and delusional themes

Chi squared tests of association were performed to examine the relationship between certain schemas and delusional themes where rates of endorsement allowed this. Due to the exploratory nature of the study it was not possible to hypothesise specific

associations and many tests were performed introducing risk of false positives. However, there is no appropriate correction for multiple chi-square testing (without removing the opportunity for significance entirely) (Everitt, 1977) and the findings should be treated cautiously.

Participants experiencing delusions involving the 'special abilities' theme were significantly less likely to report 'mistrust/abuse' schemas (X^2=5.28, p=.04), in fact no participant had both. Conversely those reporting the 'failure' schema always experienced 'threat of harm from others' delusional theme (X^2=6.04, p=.02), and those reporting the 'self-sacrifice' schema always had delusional themes of 'spirituality/entities' (X^2=4.92, p=.05). Finally the emotional inhibition schema and loss of control delusional theme frequently co-occurred (X^2=5.49, p=.05).

It is perhaps surprising that relationships were not found between the 'vulnerability to harm' or 'mistrust/abuse' schemas and the delusional theme of 'threat of harm from others', or between the 'defectiveness/shame' schema and 'defective body' or either 'badness of self' theme, or, finally, between the 'entitlement/grandiose' schema and the 'special abilities' delusional theme.

Discussion

This study investigated whether meaningful links could be established between childhood abuse, maladaptive schemas, and delusional content. Participants frequently reported auditory hallucinations, thus an additional query concerned group differences in this respect. This discussion section will begin by findings relating to each of these questions, before examining important limitations of this study, and

finally consider wider clinical implications and recommendations for further research.

Relationships between childhood abuse and delusional themes and types

Eight themes were identified in participant's delusions from the thematic analysis: 'seeing oneself as bad'; 'others seeing you as bad'; 'defective body'; 'spirituality/entities'; 'loss of control'; 'surveillance/conspiracy'; 'threat of harm from others'; and 'special abilities'. The analysis did not reveal any reliable differences between the delusional content of participants who reported a mixture of abusive experiences, purely emotional abuse, or no abuse. This may, however, be the result of small numbers.

Some themes appeared to occur more frequently in the emotionally abused participants, in particular 'others see you as bad', 'special abilities' and 'spirituality/entities' which all occurred approximately twice as frequently as in the other groups. Themes around others seeing you as bad were expected to be more common in the delusions of those who have experienced abuse, possibly emerging as a direct response to early experiences where these individuals were made to feel bad, although (as discussed below) this theme might also be expected to be high in the mixed abuse group. Interestingly, 'others see you as bad' and 'special abilities' occurred separately within the emotionally abused participants, suggesting they may be the result of different underlying psychological mechanisms.

The theme of 'spirituality/entities' occurred almost twice as frequently in the emotionally abused and mixed-abuse participants than the non-abused participants.

This theme includes ideas around black magic/witchcraft, possession, and presence of evil. Although the group difference was not significant the trend is in accordance with existing research showing delusions around possession and references to evil or the devil are more common in individuals who have experienced sexual abuse (Read et al., 2003; Goff et al., 1991). This research is unique in finding a high presence of these themes in emotionally abused individuals, which has not been studied before. One understanding drawn from the psychodynamic literature is that these individuals are resolving intrapsychic conflict by externalisation (Seltzer, 1983).

It was perhaps surprising that the mixed abuse participants did not experience more delusional themes around badness of self (either as how they see themselves or how others see them), in fact the 'seeing oneself as bad' theme was identified in only 6% of the mixed abused sample's delusions (of whom nearly half reported moderate or severe sexual abuse). A higher rate was expected in the light of research reliably identifying shame as a consequence of childhood abuse (Andrews, 1998). In shame the 'bad thing' (i.e. the abuse) is experienced as a reflection of a 'bad self', and the entire self is negatively evaluated (Tangney, Wagner, & Gramzow, 1992). It is associated both with beliefs about how others see the self (external shame) and how one sees oneself (internal shame) (Gilbert, 1997), which may correspond with the themes of 'others seeing you as bad' and 'seeing oneself as bad' which emerged in this analysis. Similarly, 'threat of harm from others' was found to emerge less frequently in the abused groups than the non-abused group. This is again surprising since these participants *have* experienced harm from others in the form of abuse. Furthermore, existing research suggests that childhood abuse is associated with a malevolent object world (Freedenfeld, Ornduff, & Kelsey, 1995) and paranoia (Read

et al., 2003; Ross et al., 1994). The absence of these themes in the abused groups is striking and precisely the reverse of what was anticipated, suggesting delusional themes may not be *directly* related to early abusive experiences.

The most frequent *type* of delusion in the whole sample was persecutory, which is consistent with surveys of psychotic populations (e.g. Jorgensen & Jensen, 1994). There were no group differences with regards delusional types, possibly as a result of a large number of delusional categories and a relatively small sample.

Relationship between childhood abuse, schemas and delusional themes

The abused participants (i.e. the mixed and emotionally abused groups) endorsed twice as many maladaptive schemas than the non-abused participants. This is consistent with schema-focussed theory whereby childhood maltreatment is understood to lead to the development of maladaptive schemas, indicating a degree of psychopathological vulnerability (Young, Klosko, & Weishaar, 2003). Furthermore, the similarity between the mixed and emotionally-abused participants with regards this point supports emerging research suggesting that emotional abuse may be equivalent to physical or sexual abuse in leading to psychopathology in adulthood (Mullen et al., 1996). This is important as the impact of emotional abuse is considerably less well understood than other forms of maltreatment, and, therefore, possibly overlooked by clinicians. This also suggests the YSQ is reliable in capturing something about these groups.

The mixed-abused participants were significantly more likely to endorse the 'mistrust/abuse' schema than the emotionally and non-abused participants, indicating

a greater expectation that others will hurt, abuse, or take advantage of them (Young, 1990). The mixed-abuse participants were also more likely to endorse the 'emotional deprivation' schema than the non-abused participants, suggesting a greater history of deprivation of nurturance, empathy or protection as would be expected. Surprisingly, only one of the mixed abuse participants endorsed the 'defectiveness/shame' schema. Higher rates of these beliefs would be expected in the light of the strong relationship between childhood abuse and shame, as discussed above.

Associations were found between certain schemas and delusional themes. Due to the exploratory nature of the study many statistical tests were conducted. Reducing the probability values was considered too conservative therefore there are increased chances of false-positive results and the findings should be treated with caution. Individuals reporting the 'failure' schema always experienced delusions involving 'threat of harm from others'. This could be understood within the attributional defense theory whereby delusions with paranoid features are understood to be the result of an attributional bias towards attributing negative outcomes to external causes in order to protect self-esteem (Bentall et al., 1994). Thus, by blaming others for their sense of failure, it is argued that negative thoughts about the self are prevented from reaching awareness. However, the fact that these individuals were aware of painful beliefs of themselves suggests a defensive understanding of delusions may be inaccurate as this model would predict high self-esteem (not failure cognitions) to be associated with delusions involving threat of harm. The same defensive processes have been identified in grandiose delusions (Sharp, Fear, & Healy, 1997), however had this relationship existed here one might have expected

individuals who reported the 'mistrust/abuse' schema to also experience delusions involving 'special abilities', which was not found.

The 'emotional inhibition' schema and 'loss of control' delusional theme also co-occurred. Emotional inhibition is 'the inhibition of spontaneous action, feeling, or communication, usually to avoid disapproval by others, feelings of shame, or losing control of one's impulses' (Young, 1990). One could speculate a relationship whereby a person who believes they cannot express their feelings develops delusions that convey their fears about losing control. In this way this delusion may be symbolic communication of an individual's fears. The relationship between the 'self-sacrifice' schema and 'spirituality/entities' delusional theme is more difficult to understand in terms of an existing theory as neither a direct or compensatory role is evident.

There were, however, a number of delusional themes which appeared to have similarities to Young's schema descriptions but did not occur together: the 'mistrust/abuse' schema and the delusional theme of 'threat of harm' from others; the 'defectiveness/shame' schema and both 'badness of self' themes; the 'entitlement/grandiose' schema and the 'special abilities' theme. Contemporary cognitive models propose a direct relationship between childhood adversity, schemas, and the content of delusions. For example, Morrison, Frame and Larkin (2003) state that 'sexual and physical abuse may lead people to believe they are vulnerable, others cannot be trusted, and the world is dangerous, which could make paranoid interpretations of ambiguous events more likely' (p. 14), suggesting links between childhood abuse and the content of delusions through the mechanism of

schemas. The lack of correspondence found between schemas and delusional beliefs in this study suggests the relationship may not be so linear.

Auditory hallucinations

The mixed abuse participants reported auditory hallucinations at a very high rate (83%) almost twice that of the emotionally abused group. Although this difference only approached significance it supports existing large-scale research which found that the presence of hallucinations is significantly related to sexual and physical abuse and identified a similarly high prevalence rate of 71% in these individuals (Read et al., 2003). Hallucinations are understood as relating to delusional content, for example hostile voices have been linked to a perception of threat, possibly because the individual's search for the meaning of anomalous experiences leads to a delusional belief system (Maher, 1988). However, the prevalence of hallucinations was only a subsidiary topic of enquiry for the current study and the relevance to delusional content was not investigated.

Limitations of the study

Whilst the overall sample of 39 participants is reasonable, the emotionally and non-abused groups comprised of only nine and 11 participants respectively. This has the effect of reducing statistical power and therefore the chances of finding group differences. The groups were also fairly heterogeneous, both demographically and diagnostically, but also in terms of abuse as there was considerable overlap between self-reports of physical and sexual abuse (hence the formation of a combined 'mixed-abuse' group), therefore the specificity of either abuse type in relation to delusional themes remains uncertain. This may have been further compounded by high levels of

neglect in the abused groups. Indeed some research suggests that childhood neglect may lead to more psychopathological vulnerability than forms of abuse (Gauthier et al., 1996).

Although screening questions enquired about significant abuse in adulthood, general adult traumas were not investigated. This is potentially significant as the lifetime prevalence rate of traumatic events in people with psychosis is known to be high, with patients being exposed to an average of 3.5 different types of trauma in their lifetime (Mueser et al., 1998). Thus trauma in adulthood may confound the relationship between abuse and delusions.

The use of self-report questionnaires to assess childhood abuse and schemas was considered appropriate because they are standardised, place low demands on participants, and have been found to be more reliable than interviews when asking about abuse (Dill, Chu, Grob, & Eisen, 1991). However, questionnaires that require forced-choice format are restrictive, especially when measuring personal attributes such as schemas. They are also subjective, in that the participant rates the extent to which a statement describes them. In respect of the YSQ, some respondents appeared to endorse many items where others endorsed very few and the degree of extreme scoring (using the ends of Likert scales) may confound the variables of interest.: research by Stopa and Waters (2005) found variations in individual's responses on the YSQ according to mood. The retrospective nature of the study relied upon the availability of memories or the individual's willingness to discuss (or disclose) abuse. The possibility exists, therefore, that some participants in the non-abused comparison group may have a history of childhood abuse but did not disclose it.

The mean age of participants was 37 years; therefore in many cases the childhood abuse occurred several years prior to the study. It is possible, indeed probable, that connections across the developmental lifespan are highly complex and events from childhood alter in their influence over time. Additionally, the processes maintaining delusions may alter their nature and content over time. These variables may, therefore, have confounded the relationship between childhood abuse and delusional content. Given evidence from other studies suggesting thematic links between life events and delusions (Rhodes & Jakes, 2000) it is possible that delusional themes are more likely to *directly* relate to manifest problems at the time.

Clinical implications

The results of this study suggest clinicians should not expect simple direct relationships between abusive experiences and patients' clinical presentations: if present, links may emerge in a more compensatory way. Formulation of individual's psychological problems is, therefore, vitally important so that the individual's delusions can be understood in the context of their history.

The significant presence of abuse which enables research such as this to be possible highlights the importance of enquiring about childhood abuse in patients with psychotic symptoms. This research is also novel in identifying a group of participants with delusions who report purely childhood emotional abuse. Although this group formed only 23% of this sample, it suggests that there are a proportion of patients with delusions who have experienced purely emotional abuse with some neglect. This is important as the impact of emotional abuse appears under-appreciated

compared to sexual or physical abuse. In fact, the similarities in maladaptive schemas found suggest emotional abuse may be equivalent to physical or sexual abuse in leading to psychopathology in adulthood.

Further research

It may be that patterns of relationship between childhood abuse and delusions are so individual that idiographic research such as single case or qualitative methods are more suitable. Alternatively, repetition of this mixed quantitative and qualitative study could involve larger samples of emotionally and non-abused participants to produce greater statistical power, enabling reliable differences to emerge if they exist. This may shed light on the possible trend identified here between some delusional themes and childhood emotional abuse. Future research could investigate possible compensatory relationships between schemas and delusions for which some limited evidence was found here. It would also be interesting to examine associations in prodromal or first episode psychosis before other variables and the muddying passage of time and illness disrupt or disguise the relationship.

Conclusion

This study did not find evidence of consistent meaningful relationships between childhood abuse and the content of delusions. It appeared possible that some delusional themes emerged more frequently in emotionally abused individuals; however this requires further research with a larger sample. There was also little suggestion of a *direct* link between schemas and delusions as suggested in some contemporary cognitive theories, instead the evidence pointed to a complex, possibly compensatory relationship in some instances, although further research is necessary.

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Part Three

Critical Appraisal

Introduction

This paper will present a critical reflection of the research. It guides the reader through decisions made in the key areas of design, sample, recruitment, and analysis, and examines the implications of these for reliability and validity of the study. The researchers' personal reflections on the research process will be discussed throughout. Finally, wider clinical and theoretical implications raised by the research process are considered, particularly in relation to enquiring about abuse, and methodological pluralism.

It is important at this stage to acknowledge that this research project expanded on a previous study carried out by two trainee clinical psychologists for their major research projects in 2005. A necessary preliminary step, therefore, is to summarise this original research design before considering implications for the current project.

Design

The previous research project investigated the relationship between childhood abuse, schemas and delusions; firstly in participants reporting physical abuse (with no comparison group), and secondly comparing those with and without sexual abuse. Five delusional themes were identified in each of the physically and sexually abused groups, however these were not reflected in the content of their schemas, and differences were not evident between those who had and had not experienced sexual abuse. They also found that an expert panel of clinicians could not match vignettes of abuse, schemas and delusions beyond chance level. The researchers highlighted the possibility that insignificant results were due to a small sample size (18 participants in total), and the heterogeneity of participant's abuse histories where all described

physical abuse, and over half reported sexual and emotional abuse along with some form of neglect. They also had feedback from the expert panel that the vignette task was too complex, perhaps explaining their chance-level responding.

The current research used data obtained in the original study by combining the participants into one 'mixed-abuse' group. Then, using the same methodology, it investigated schemas and delusions in purely emotionally abused and non-abused participants, thus producing a large overall sample, and three distinct groups according to abuse type to facilitate statistical comparisons. The vignette methodology was not used due to the aforementioned concerns. It was hoped that these changes would improve the reliability of the study and enable group differences to be found, whilst also investigating the previously unexamined area of emotional abuse and delusions.

The research was, therefore, a mixed quantitative-qualitative design. Designing and carrying out an original study taking a purely qualitative phenomenological approach was considered. This would have allowed greater exploration of the content and perceived meaning of abusive childhood experiences, and the associations between this and the content of delusions. However, the (limited) existing literature already relies predominantly on case examples and therefore continuing in the pursuit of a more systematic measurement of delusions and abuse across a larger sample was important. Using mixed methodology allowed the research to benefit from the systematic measurable elements of the quantitative elements (e.g. closed-answer questionnaires; quantifiable themes), whilst also retaining sensitivity to the clinical

material by using thematic analysis of participants' delusions and, therefore, maintaining a discovery orientated focus.

Sample characteristics

The original research found considerable overlap between self-reports of physical and sexual abuse. This is consistent with other research suggesting that these forms of abuse commonly occur together (Cawson, Wattam, Brooker, & Kelly, 2000), therefore combining these participants into one 'mixed-abuse' group was considered representative of the way that abuse co-occurs. However, this meant that the specificity of either type of abuse in relation to delusional themes remains uncertain.

Initially the research intended to focus on comparing the delusional content of only mixed- and non-abused individuals. On reflection, however, it was felt important to avoid repeating a prevalent pattern in the literature of ignoring emotional abuse. There are many possible reasons why emotional abuse receives less attention than other forms of maltreatment; it may reflect an (incorrect) assumption that it is less damaging, or be due to difficulties operationally defining and measuring it. Conversely, however, some research suggests that childhood emotional abuse leads to significant adulthood psychopathology (Mullen, Martin, Anderson, Romans, & Herbison, 1996) and the CTQ is validated for assessing it. Furthermore, in the original research 14 out of 18 participants reported moderate to severe levels of emotional abuse (although only co-occurring physical or sexual abuse was the topic of interest). It was in the light of this clinical significance and frequent occurrence that we decided to expand our target population to include a sample of individuals reporting purely emotional abuse.

It was with reasonable consistency that the researchers were able to form three distinct groups according to childhood abuse as reported on the CTQ: mixed abuse, emotionally abused, and non-abused. These differences were confirmed statistically. The sample was not intended to be representative of the general clinical population suffering from delusions (though it undoubtedly contains much of the range in this population), and the researchers were aware that it would not be valid to generalise beyond the population studied to all those who suffer abuse and/or delusions.

Measures

As this research was an expansion of, and used data from, an earlier study it was important to use the same measures to allow group comparisons. However, there was a concern the existing measures were inadequate. In particular it was possible that participants may have experienced traumatic experiences in *adulthood* which were not investigated, or therefore controlled, and which may impact upon the content of delusions.

The prevalence rate of exposure to traumatic events in people with psychosis is high. Mueser et al. (1998) found patients were exposed to a lifetime average of three different types of trauma. Measures of adult trauma were not used by the previous researchers because childhood abuse was perceived to be the overriding trauma. However, it is unlikely to be as simple as this. Hardy et al. (2005) investigated the association between lifetime trauma and the content of hallucinations in a sample of 75 participants. Over half the sample reported a subjectively significant lifetime trauma. After childhood abuse, bullying and adult sexual abuse were the most

common types of trauma linked thematically to hallucinations. This suggests that both child and adult events are likely to impact upon the content of psychotic symptoms. The importance of investigating adult trauma is possibly more significant when using a none-abused comparison group as a higher proportion of general trauma in this group would invalidate any comparison.

The possibility of incorporating an additional measure to screen for adult trauma was rejected for several reasons; it was not possible to administer this to the existing sample of abused participants and we would not be able to establish if group differences exist; a 'no trauma' requirement may be too stringent and result in a very small sample; and finally systematic differences in trauma rates across the three groups was unlikely.

Elliot et al (1999) argues that it is important for researchers to acknowledge their theoretical orientation, and including a measure of maladaptive schemas suggests a cognitive theoretical orientation of the researcher. In fact, the researcher would not orientate themselves with any one theory. There is, however, a good evidence base for cognitive theories of delusions, and this study undertook a (modest) attempt to investigate the accurateness of contemporary models such as Garety et al (2001) where the schemas are given paramount attention. However, the thematic analysis was not theory-driven and the researchers overarching aim was to conduct an exploratory study with no theoretical agenda.

Reliability of abuse reports

This study is retrospective and therefore relied upon the availability of memories or the individual's willingness to discuss (or disclose) abuse. The validity and reliability of retrospective reports of abuse by psychiatric patients has a long history of debate. Brewin, Andrews and Gotlib (1993) reviewed evidence for commonly cited reliability issues surrounding retrospective reports of abuse by patients and concluded that 'there was little reason to link psychiatric status with less reliable or less valid recall of early experiences' (p. 82). The current study used confidential questionnaires which have been found to be more reliable than interviews when asking about abuse (Dill, Chu, Grob, & Eisen, 1991). The CTQ has a minimisation score found effective for detecting possible false-negative abuse reports, and two potential participants were not included because they scored on this scale. The possibility remains, however, that there were participants in the non-abused group who chose not to disclose their abuse, perhaps due to intense shame about there experiences (Andrews, 1998).

Recruitment issues

Recruitment for this study was difficult. The researchers took a two-pronged approach, recruiting patients from the in-patient and out-patient populations of the hospital in order to ensure a reasonable sized sample. All new referrals to the psychological therapies department were given the CTQ as part of the standard initial assessment, and this proved to be the most fruitful strategy. In addition all psychiatrists and ward based staff were informed about the research and asked to refer appropriate in-patients. However, not one referral was received in this way and it was necessary for the researcher to frequently visit the wards, speak to key-

workers and look through files in order to recruit. This process was very revealing as key-workers usually did not know whether their patients had experienced childhood abuse, and there was a striking absence of any information in their medical files. Consequently staff would refer patients who they believed not to have been abused and the results if the CTQ along with an initial meeting with the patient would reveal a lifetime of abuse and neglect. This was incredibly frustrating from a recruitment perspective, but more importantly it was clinically concerning as the absence of an accurate history has significant negative implications for patient care (Read & Ross, 2003).

This raised the important question of why mental health professionals do not routinely ask about early abusive experiences, particularly in the light of research consistently demonstrating a relationship between childhood abuse and later psychosis (see Read, 1997 for a review), and links to severity of disturbance (Read, 1998). This lack of enquiry has been the focus of recent research (e.g. Read & Fraser, 1998) which has identified many possible factors and seem applicable here. The medical model is often prominent on inpatient wards, as is perhaps evident in the name 'ward'. Traditionally this approach is inconsistent with the idea that early experiences might play a role in psychosis, therefore perhaps medical professionals do not see the relevance of asking. However, even when enquires into childhood abuse are compulsory on admission forms staff still avoid asking (Read et al., 1998). This may, therefore, be a reflection of their anxiety about how to respond to an affirmative response. Finally, professionals might not ask psychotic patients about abuse because of misperception that their responses may not be reliable. This highlights the importance of providing staff with training in how to ask patients

about childhood abuse and how to deal with affirmative responses. It is hoped that in the course of conducting this study awareness was raised about the importance of routinely asking about childhood abuse.

The research process changed how the researcher themselves felt about asking about abuse. Initially they were concerned about managing patient's distress, however they were not upset about being asked, quite the opposite - the overwhelming response was one of wanting to tell their story. This in itself raised a dilemma as the researcher needed to reach a balance between allowing the participants to discuss basic details about their abusive experiences (to supplement the questionnaire and for rapport), and not allowing them to divulge to much unnecessary information with a researcher they would not see again, which may in itself have felt abusive. The possibility also exists that this anonymity was attractive for those who were ashamed of their experiences.

It was sometimes difficult not to slip into therapeutic interactions with participants who described very upsetting abusive experiences, particularly those who appeared to have internalised responsibility for the abuse. It was also these situations which evoked a sense of helplessness in the researcher, and it was important to access support from research supervision at these times. Participants were also offered follow up at the Psychological Therapies Service if they wanted to discuss issues raised by the research, although none chose to do this.

This also raises the issue of what motivated patients to participate in the study. The researcher was at times concerned that patients volunteered because they wanted an

opportunity to discuss these events, often for the first time. On one occasion where this revealed itself to be accurate it was important that the researcher made other more appropriate avenues available to the individual, and a referral was made for psychological therapy. It was also important to be mindful of patient's vulnerable, often powerless situation, in case they felt they could not refuse participation. This was particularly important within in-patient settings where compliance may be generally encouraged, and it was important to be very clear that issues relating to their treatment (such as leave or discharge) were in no way contingent on their participation.

Analysis

Construction of delusional summaries

The thematic analysis was conducted using delusional summaries (rather then using the verbatim interview data). Reducing the raw information in this way is a key process in thematic analysis (Boyatzis, 1998). It allows systematic analysis of an otherwise overwhelming amount of data, and avoids 'qualitative overload'.

The delusional summaries were reached by condensing what participants said, using their own words with very little translation. They were also written during the interview and checked with the participants for accuracy, which gives testimonial validity and constitutes a credibility check (Elliott, Fischer, & Rennie, 1999). For some participants this process was straightforward, where as for others it was challenging to reduce such rich data into a few lines of text. Although the researcher was at great pains to ensure that the richness of the data was not lost through this process, it is inevitable that some meanings will have been trivialised.

Identifying themes

This research was exploratory and therefore the thematic analysis was data-driven as opposed to theory-driven (Boyatzis, 1998). Delusional themes were identified at a manifest level i.e. directly observable in the delusional summaries without interpretation. Whilst this had the advantage of increased objectivity and reliability, it also meant that the analysis took place at a surface level and underlying meanings of participant's delusional descriptions were not examined. For example, 'smell from self' frequently appeared to have an underlying meaning consistent with 'badness of self', and therefore it was difficult to decide whether it should go into this thematic category. This would, however, constitute interpretation of the data, and therefore it was felt most accurate to put it in the 'defective body' category. In evaluating qualitative research it is important to consider whether the interpretation oversimplifies the data (Elliott et al., 1999). Delusions are complex phenomena and therefore it is possible that this process of analysis did oversimplify delusional content, and impacted upon the validity of themes identified.

This trade-off between validity and reliability is one which is well-recognised in methodological debate. As Boyatzis (1998) states 'the challenge is to use thematic analysis to draw the richness of the themes from the raw information without reducing the insights to a trivial level for the sakes of consistency of judgement' (p.14). It was hoped that by conducting a combined qualitative-quantitative thematic analysis involving a quantitative description of the frequency of themes that an appropriate balance between validity and reliability could be achieved.

The current research reanalysed the original data (from the mixed-abuse group) along with the new data rather than attempting to expand the previous researcher's thematic analysis. As expected the eight delusional themes identified were very similar to those found by the previous researchers, which provided an important reliability check. Some additional themes were identified; however these were a product of the researcher observing the themes occurring independently where they had previously been identified together. For example, the previous 'surveillance and conspiracy' theme was split into two distinct themes as they were observed to occur separately in this study with a larger sample. Unfortunately, the researcher was not blind to the original themes, and, although they attempted to be objective when analysing the data, it is possible that they were influenced by their knowledge of previous findings. However, in accordance with Boyatzis' (1998) suggestions, the impact of the researcher's projections were reduced by including reliability checks and sticking close to the raw information when developing the themes.

Wider implications – methodological orientation

Conducting this research raised a wider argument about combining qualitative and quantitative methodology, and many of the reflections discussed appear to revolve around the issues raised by this. Historically qualitative and quantitative research methodologies have been perceived to be quite distinct and separate: qualitative methods lend themselves to understanding participants' perspectives and to defining phenomena in terms of meanings, whereas quantitative methods lend themselves to objectivity and testing hypothesised relationships (Elliott et al., 1999). These differences extend back to the differing philosophies of positivism and relativism which underpin the approaches.

However, commonalities exist between all qualitative and quantitative research methods, for example 'explicit scientific context and purpose' and 'appropriate methods' are criteria proposed for evaluating both (Elliott et al., 1999). In fact, these methods are perhaps best conceptualised as lying at either end of a continuum, and combining them allows researchers to combine the richness and uniqueness of qualitative information and the precision of quantitative methods. The benefits of this have been demonstrated elsewhere (Elliott, 1984), and hopefully also by this study. As Boyatsiz states, perhaps the challenge now is 'to transform the qualitative-quantitative debate into a challenge to our creativity' (1998; p. 107).

Conclusion

This paper has presented a critical reflection of the research, focussing on issues relating to the broader design, measures, the realities of recruitment, and analysis. It has paid particular attention to the implications of these decisions on the reliability and validity of the study in accordance with recent guidelines by Elliot, Fischer and Rennie (1999). Wider clinical and theoretical implications raised by the research process have been considered, particularly in relation to professional's difficulties enquiring about childhood abuse in patients, and combining qualitative and qualitative research methodologies.

This study has pointed to several possible findings in the relationship between childhood abuse and the content of delusions. The challenge now is for further research to continue the exploration.

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Appendices

Appendix A - Information Sheet for Participants

The relationship between early experience and difficulties in adulthood.

Thank you for agreeing to hear about the work that we are trying to do.

What is the purpose of the study?
I am interested in how people's experiences in childhood affect them later in life. This study aims to look into the possibility of a link between early childhood experience and difficulties developed later in life.

We hope that a better understanding of this potential link will provide information to help develop better treatments for those who use mental health services.

Why have I been chosen?
I would like to interview around 40 people who have experienced difficult childhood environments due to physical or sexual abuse and who have had at some time mental health difficulties.

Who is organising the study?
I am a trainee clinical psychologist at University College London (UCL), working with the psychology department at St Ann's Hospital. This study is supervised by Dr John Rhodes (Clinical Psychologist) at St Ann's, and Dr Oliver Mason (Clinical Psychologist) at UCL.

This study will be finished in June 2007.

What will happen to me if I take part?
If you would like to take part, I will ask you to fill in two questionnaires in your own time. We will then meet (probably at St Ann's Hospital) and I will explain the study, you can ask any questions, and I will ask for your consent to participate. In the meeting, I will ask some questions about your childhood experiences and your current mental health. I will ask you if we can tape-record the interview or if you would prefer us to take notes by hand. If you would like to meet again to discuss your interview, or if you would like to be interviewed in more detail about your experiences we will contact you again to offer you a time.

As part of the project I will need to show some of this information to 2 other psychologists, but before I do I will remove any mention of your name or other information that would allow anyone to guess who you are.

If I ask you to travel to St Ann's at a time when you would not normally be attending an appointment we would like to give you £6 towards your travel expenses.

Are there disadvantages to taking part in the study?
You may be concerned that answering questions about your childhood might bring up painful memories. However, most people find it helpful to have the chance to discuss their childhood experiences, even if these were not always positive. If you choose you can be offered counselling at the Psychology Department at St Ann's if the interview raises issues which you would like to discuss further.

What are the possible benefits of taking part?
It may be that for you there is no benefit from taking part in the study. However, some people find it helpful to talk about difficult childhood experiences and we hope that the information from this study may help us treat people in the future.

What if something goes wrong?
If you have any concerns or cause to complain about any aspect of the way you have been approached or treated during the course of this study, the normal National Health Service complaints mechanisms are available to you.

Confidentiality - who will know I'm taking part in the study?
Apart from yourself and the researchers, we would ask your permission to tell your care team that you're taking part. Any notes we take or taped interviews will be kept in a secure location only accessed by the researchers. This information will be destroyed at the end of the study.

LREC approval
This study was reviewed by Barnet, Enfield and Haringey LREC (Local Research Ethics Committee).

What will happen to the results of the study?
Arrangements will be made to inform you of the results of the study when it is complete. The finished study may be published but anything that might allow somebody to guess who you are would be taken out. For example we could change your name, age and where you live.

Contact for further information
If you have any questions about the project I would be glad to answer them for you.

Miriam Collinge (Trainee Clinical Psychologist) ....
John Rhodes (Supervisor and Clinical Psychologist)...............................

Appendix B - Consent Form

Centre Number:

Study Number:

Participant Information Number for this study:

CONSENT FORM

Title of Project

Name of Researcher

Please initial box

1.	I confirm that I have read and understood the information sheet	
2.	I understand that my participation is voluntary and that I am free to withdraw at any time without my medical care or legal rights being affected	
3.	I am willing to allow access to my medical records but understand that strict confidentiality will be maintained. The purpose of this is to ensure that the study is being carried out correctly	
4.	I agree to take part in the above study	

Name of patient Date Signature

I have explained the nature, demands and foreseeable risks of the above research to the subject.

Name of person taking consent if different from researcher Date Signature

Name of researcher Date Signature

1 for participant, 1 for researcher, 1 to be kept with hospital notes.

Appendix C - Letter to care teams to confirm participation.

Information sheet for lead clinicians: The relationship between life history and psychosis

I have been given the name of .... as a potential participant in a study being undertaken in the Psychology Department at St. Ann's. Since .... is under your care I would like to provide you with some information regarding the nature of this research.

This study aims to look into the possibility of a link between early childhood experience and the content of individual delusional beliefs developed later in life. We would like to interview around 40 participants with a diagnosis of psychosis, some who have experienced difficult childhood environments due to physical, sexual or emotional abuse, and some who have not.

Barnet, Enfield and Haringey LREC (local research ethics committee) have approved this study and it will be completed by June 2006.

We hope to find out about three main areas of participants lives: Firstly their childhood, focussing on the abusive experiences; secondly, their core beliefs or schemas which may have developed as a result of this early experience; finally, the content of their delusional beliefs. The information will be gathered from interview with the participants, including questionnaires and checklists (the Childhood Trauma Questionnaire and the Young Schema Questionnaire and the SCAN). In addition we hope to access relevant information in the medical notes. Some of this information will be shown to three other psychologists, but any identifying information will be removed to preserve participant's anonymity.

Before taking part, we will meet all participants to provide them with information about the study, answer any questions and to ask for their consent.

Current research suggests that many people will welcome the opportunity to discuss their abusive experiences in childhood, and are unlikely to be distressed by the questions asked. However all participants will be offered subsequent appointments at the Psychology Department should the interview raise issues which they would like to discuss further. If you have any concerns about the individual named above participating in this project I would be grateful if you would contact myself or my colleagues as soon as possible,

If you have any questions about the project I would be glad to answer them for you.

Miriam Collinge (Trainee Clinical Psychologist)
John Rhodes (Supervisor & Consultant Clinical Psychologist).

Barnet, Enfield and Haringey NHS
Mental Health NHS Trust

R & D DEPARTMENT
ST. ANN'S HOSPITAL
ST. ANN'S ROAD
LONDON N15 3TH

E-mail: researcl

20 July 2004

Mr J. Rhodes
Clinical Psychologist
Psychology Department – Block G2
St Ann's Hospital
St Ann's Road,
London N15 3TH

Dear Mr. Rhodes,

Childhood Abuse and Delusions

I am pleased to note that you have received the favourable opinion of the Research Ethics Committee for your study.

All projects must be registered with the Research Department if they use patients, staff, records, facilities or other resources of the Barnet, Enfield and Haringey NHS Mental Health Trust.

The R&D Department on behalf of Barnet, Enfield and Haringey NHS Mental Health Trust is therefore able to grant approval for your research to begin, based on your research application and proposal reviewed by the ethics committee. Please note this is subject to any conditions set out in their letter dated 24 May 2004. Should you fail to adhere to these conditions or deviate from the protocol reviewed by the ethics committee, then this approval would become void. The approval is also subject to your consent for information to be extracted from your project registration form for inclusion in NHS project registration/management databases and, where appropriate, the National Research Register.

You are obliged to adhere to the research governance framework as set out by the Department of Health Research Governance Framework for Health and Social Care*.

NHS

Barnet, Enfield & Haringey Local Research Ethics Committee

R&D Office
RNOH NHS Trust
Brockley Hill,
Stanmore
HA7 4LP.

24[t] June 2005

Mr. J. Rhodes,
Clinical Psychologist,
Psychology Department – Block G2
St. Ann's Hospital,
St. Ann's Road,
London N15 3TH.

Dear Mr. Rhodes,

Child Abuse and Delusions

Thank you for recent correspondence notifying the committee that

Miriam Collinge
Anna Campbell
Louise Healy

would like to join the research team for the above project and enclosing their respective CVs.

The proposal has been considered by the Chair.

The Committee does not consider this to be a "substantial amendment" as defined in the Standard Operating Procedures for Research Ethics Committees. The amendment does not therefore require ethical review by the Committee and may be implemented immediately, provided that it does not affect the management approval for the research given by the R&D Department for the relevant NHS care organisation.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

Yours sincerely,

Alison O'Kane
Administrator

Appendix E - Childhood Trauma Questionnaire Items

Emotional Abuse

3. People in my family called me things like "stupid" or "lazy" or "ugly".
8. I thought my parents wished I had never been born
14. People in my family said hurtful or insulting things to me
18. I felt that someone in my family hated me
25. I believe that I was emotionally abused

Physical Abuse

9. I got hit so hard by someone in my family that I had to see a doctor or go to the hospital
11. People in my family hit me so hard that it left me with bruises or marks
12. I was punished with a belt, a board, a cord or some other hard object
15. I believe that I was physically abused
17. I got hit or beaten so badly that it was noticed by someone like a teacher, neighbour, or doctor.

Sexual Abuse

20. Someone tried to touch me in a sexual way, or tried to make me touch them
21. Someone threatened to hurt me or tell lies about me unless I did something sexual with them
23. Someone tried to make me do sexual things or watch sexual things
24. Someone molested me
27. I believe that I was sexually abused.

Emotional Neglect

5. There was someone in my family who helped me feel that I was important or special ←
7. I felt loved ←
13. People in my family looked out for each other ←
19. People in my family felt close to each other ←
28. My family was a source of strength and support←

Physical Neglect

1. I did not have enough to eat
2. I knew that there was someone to take care of me and protect me←
1. My parents were too drunk or high to take care of the family
6. I had to wear dirty clothes
26. There was someone to take me to the doctor if I needed it ←

NB: ← indicates a reversed scored item

Appendix F- Young Schema Questionnaire – Short form

YSQ - S2

Name
____Date_____________

INSTRUCTIONS:

Listed below are statements that a person might use to describe himself or herself. Please read each statement and decide how well it describes you. When there you are not sure, base your answer on what you emotionally **feel**, not on what you **think** to be true. Choose the **highest rating from 1 to 6** that describes you and write the number in the space before the statement.

RATING SCALE:

1 = Completely untrue of me

2 = Mostly untrue of me

3 = Slightly more true than untrue

4 = Moderately true of me

5 = Mostly true of me

6 = Describes me perfectly

1. _____ Most of the time, I haven't had someone to nurture me, share him/herself with me, or care deeply about everything that happens to me.

2. _____ In general, people have not been there to give me warmth, holding, and affection.

3. _____ For much of my life, I haven't felt that I am special to someone.

4. _____ For the most part, I have not had someone who really listens to me, understands me, or is tuned into my true needs and feelings.

5. _____ I have rarely had a strong person to give me sound advice or direction when I'm not sure what to do.
*ed

6. _____ I find myself clinging to people I'm close to, because I'm afraid they'll leave me.

7._____I need other people so much that I worry about losing them.

8. _____ I worry that people I feel close to will leave me or abandon me.

9. _____ When I feel someone I care for pulling away from me, I get desperate.

10. _____ Sometimes I am so worried about people leaving me that I drive them away.
*ab

11. _____ I feel that people will take advantage of me.

12._____I feel that I cannot let my guard down in the presence of other people, or else they will intentionally hurt me.

13._____It is only a matter of time before someone betrays me.

14. _____ I am quite suspicious of other people's motives.

15. _____ I'm usually on the lookout for people's ulterior motives.
*ma

16. _____ I don't fit in.

17. _____ I'm fundamentally different from other people.

18. _____ I don't belong; I'm a loner.

19. _____ I feel alienated from other people.

20. _____ I always feel on the outside of groups.
*si

21. _____ No man/woman I desire could love me one he/she saw my defects.

22. _____ No one I desire would want to stay close to me if he/she knew the real me.

23. _____ I'm unworthy of the love, attention, and respect of others.

24. _____ I feel that I'm not lovable.

25. _____ I am too unacceptable in very basic ways to reveal myself to other people.
*ds

26. _____ Almost nothing I do at work (or school) is as good as other people can do.

27. _____ I'm incompetent when it comes to achievement.

28. _____ Most other people are more capable than I am in areas of work and achievement.

29. _____ I'm not as talented as most people are at their work.

30. _____ I'm not as intelligent as most people when it comes to work (or school).
*fa

31. _____ I do not feel capable of getting by on my own in everyday life.

32. _____ I think of myself as a dependent person, when it comes to everyday functioning.

33. _____ I lack common sense.

34. _____ My judgment cannot be relied upon in everyday situations.

35. _____ I don't feel confident about my ability to solve everyday problems that come up.
*di

36. _____ I can't seem to escape the feeling that something bad is about to happen.

37. _____ I feel that a disaster (natural, criminal, financial, or medical) could strike at any moment.

38. _____ I worry about being attacked.

39. _____ I worry that I'll lose all my money and become destitute.

40. _____ I worry that I'm developing a serious illness, even though nothing serious has been diagnosed by a physician.
*vh

41. _____I have not been able to separate myself from my parent(s), the way other people my age seem to.

42. _____ My parent(s) and I tend to be overinvolved in each other's lives and problems.

43. _____ It is very difficult for my parent(s) and me to keep intimate details from each other, without feeling betrayed or guilty.

44. _____ I often feel as if my parent(s) are living through me--I don't have a life of my own.

45. _____I often feel that I do not have a separate identity from my parent(s) or partner.
*em

46. _____ I think that if I do what I want, I'm only asking for trouble.

47. _____ I feel that I have no choice but to give in to other people's wishes, or else they will retaliate or reject me in some way.

48. _____ In relationships, I let the other person have the upper hand.

49. _____ I've always let others make choices for me, so I really don't know what I want for myself.

50. _____ I have a lot of trouble demanding that my rights be respected and that my feelings be taken into account.
*sb

51. _____ I'm the one who usually ends up taking care of the people I'm close to.

52. _____ I am a good person because I think of others more than of myself.

53. _____ I'm so busy doing for the people that I care about, that I have little time for myself.

54. _____ I've always been the one who listens to everyone else's problems.

55. _____ Other people see me as doing too much for others and not enough for myself.
*ss

56. _____ I am too self-conscious to show positive feelings to others (e.g., affection, showing I care).

57. _____ I find it embarrassing to express my feelings to others.

58. _____ I find it hard to be warm and spontaneous.

59. _____ I control myself so much that people think I am unemotional.

60. _____ People see me as uptight emotionally.
*ei

61. _____ I must be the best at most of what I do; I can't accept second best.

62. _____ I try to do my best; I can't settle for "good enough."

63. _____ I must meet all my responsibilities.

64. _____ I feel there is constant pressure for me to achieve and get things done.

65. _____ I can't let myself off the hook easily or make excuses for my mistakes.
*us

66. _____ I have a lot of trouble accepting "no" for an answer when I want something from other people.

67. _____ I'm special and shouldn't have to accept many of the restrictions placed on other people.

68. _____ I hate to be constrained or kept from doing what I want.

69. _____ I feel that I shouldn't have to follow the normal rules and conventions other people do.

70. _____ I feel that what I have to offer is of greater value than the contributions of others.
*et

71. _____ I can't seem to discipline myself to complete routine or boring tasks.

72. _____ If I can't reach a goal, I become easily frustrated and give up.

73. _____ I have a very difficult time sacrificing immediate gratification to achieve a long-range goal.

74. _____ I can't force myself to do things I don't enjoy, even when I know it's for my own good.

75. _____ I have rarely been able to stick to my resolutions.
*is

Appendix G - Schema descriptions

1. Abandonment/Instability (AB)

The perceived instability or unreliability of those available for support and connection. Involves the sense that significant others will not be able to continue providing emotional support, connection, strength, or practical protection because they are emotionally unstable and unpredictable (e.g., angry outbursts), unreliable, or erratically present; because they will die imminently; or because they will abandon the patient in favour of someone better.

2. Mistrust/Abuse (MA)

The expectation that others will hurt, abuse, humiliate, cheat, lie, manipulate, or take advantage. Usually involves the perception that the harm is intentional or the result of unjustified and extreme negligence. May include the sense that one always ends up being cheated relative to others or "getting the short end of the stick."

3. Emotional deprivation (ED)

Expectation that one's desire for a normal degree of emotional support will not be adequately met by others. The three major forms of deprivation are:
A. Deprivation of Nurturance: Absence of attention, affection, warmth, or companionship.
B. Deprivation of Empathy: Absence of understanding, listening, self-disclosure, or mutual sharing of feelings from others.
C. Deprivation of Protection: Absence of strength, direction, or guidance from others.

4. Defectiveness/Shame (DS)

The feeling that one is defective, bad, unwanted, inferior, or invalid in important respects; or that one would be unlovable to significant others if exposed. May involve hypersensitivity to criticism, rejection, and blame; self-consciousness, comparisons, and insecurity around others; or a sense of shame regarding one's perceived flaws. These flaws may be private (e.g., selfishness, angry impulses, unacceptable sexual desires) or public (e.g., undesirable physical appearance, social awkwardness).

5. Social Isolation/Alienation (SI)

The feeling that one is isolated from the rest of the world, different from other people, and/or not part of any group or community.

6. Dependence/Incompetence (DI)

Belief that one is unable to handle one's everyday responsibilities in a competent manner, without considerable help from others (e.g., take care of oneself, solve daily problems, exercise good judgment, tackle new tasks, make good decisions). Often presents as helplessness.

7. Vulnerability to harm or illness (VH)

Exaggerated fear that imminent catastrophe will strike at any time and that one will be unable to prevent it. Fears focus on one or more of the following: (A) Medical Catastrophes: e.g., heart attacks, AIDS; (B) Emotional Catastrophes: e.g., going crazy; (C): External Catastrophes: e.g., elevators collapsing, victimized by criminals, airplane crashes, earthquakes.

8. Enmeshment/Undeveloped self (EM)
Excessive emotional involvement and closeness with one or more significant others (often parents), at the expense of full individuation or normal social development. Often involves the belief that at least one of the enmeshed individuals cannot survive or be happy without the constant support of the other. May also include feelings of being smothered by, or fused with, others OR insufficient individual identity. Often experienced as a feeling of emptiness and floundering, having no direction, or in extreme cases questioning one's existence.

9. Failure (FA)
The belief that one has failed, will inevitably fail, or is fundamentally inadequate relative to one's peers, in areas of achievement (school, career, sports, etc.). Often involves beliefs that one is stupid, inept, untalented, ignorant, lower in status, less successful than others, etc.

10. Entitlement/Grandiosity (ET)
The belief that one is superior to other people; entitled to special rights and privileges; or not bound by the rules of reciprocity that guide normal social interaction. Often involves insistence that one should be able to do or have whatever one wants, regardless of what is realistic, what others consider reasonable, or the cost to others; OR an exaggerated focus on superiority (e.g., being among the most successful, famous, wealthy) -- in order to achieve power or control (not primarily for attention or approval). Sometimes includes excessive competitiveness toward, or domination of, others: asserting one's power, forcing one's point of view, or controlling the behaviour of others in line with one's own desires---without empathy or concern for others' needs or feelings.

11. Insufficient self-control/Self-discipline (IS)
Pervasive difficulty or refusal to exercise sufficient self-control and frustration tolerance to achieve one's personal goals, or to restrain the excessive expression of one's emotions and impulses. In its milder form, patient presents with an exaggerated emphasis on discomfort-avoidance: avoiding pain, conflict, confrontation, responsibility, or overexertion---at the expense of personal fulfilment, commitment, or integrity.

12. Subjugation (SB)
Excessive surrendering of control to others because one feels coerced - - usually to avoid anger, retaliation, or abandonment. The two major forms of subjugation are:
A. Subjugation of Needs: Suppression of one's preferences, decisions, and desires.

B. Subjugation of Emotions: Suppression of emotional expression, especially anger.
Usually involves the perception that one's own desires, opinions, and feelings are not valid or important to others. Frequently presents as excessive compliance, combined with hypersensitivity to feeling trapped. Generally leads to a build up of anger, manifested in maladaptive symptoms (e.g., passive-aggressive behaviour, uncontrolled outbursts of temper, psychosomatic symptoms, withdrawal of affection, "acting out", substance abuse).

13. Self-sacrifice (SS)
Excessive focus on voluntarily meeting the needs of others in daily situations, at the expense of one's own gratification. The most common reasons are: to prevent causing pain to others; to avoid guilt from feeling selfish; or to maintain the connection with others perceived as needy. Often results from an acute sensitivity to the pain of others. Sometimes leads to a sense that one's own needs are not being adequately met and to resentment of those who are taken care of.

14. Emotional Inhibition (EI)
The excessive inhibition of spontaneous action, feeling, or communication -- usually to avoid disapproval by others, feelings of shame, or losing control of one's impulses. The most common areas of inhibition involve: (a) inhibition of anger & aggression; (b) inhibition of positive impulses (e.g., joy, affection, sexual excitement, play); (c) difficulty expressing vulnerability or communicating freely about one's feelings, needs, etc.; or (d) excessive emphasis on rationality while disregarding emotions.

15. Unrelenting standards/Hypercriticalness (US)
The underlying belief that one must strive to meet very high internalized standards of behaviour and performance, usually to avoid criticism. Typically results in feelings of pressure or difficulty slowing down; and in hypercriticalness toward oneself and others. Must involve significant impairment in: pleasure, relaxation, health, self-esteem, sense of accomplishment, or satisfying relationships.
Unrelenting standards typically present as: (a) perfectionism, inordinate attention to detail, or an underestimate of how good one's own performance is relative to the norm; (b) rigid rules and "shoulds" in many areas of life, including unrealistically high moral, ethical, cultural, or religious precepts; or (c) preoccupation with time and efficiency, so that more can be accomplished.

Appendix H - Interview protocol (including SCAN)

Background Information

Initials

Age

Marital Status

Years of Education

Occupational status

Diagnosis

Drug / Alcohol Misuse

Any other mental health difficulties

Approximate duration of history of psychosis

Number of Psychiatric Admissions

Current Medication / Treatment

Previous Psychology Involvement

Date Interviewed:

Interviewer:

Place:

Checklist

Consent Form CTQ

YSQ

Written Account Travel expenses

Contact information given Consent to further research?

Preferred means of contact Address Phone

Introduction

Hi ……… I'm ………… Thanks for coming in today and agreeing to be part of our project.

Did you get the information we sent you about the project?
Did you have a chance to have a look through it?
Do you have any questions about it?

What I am hoping to do today is three things

- Firstly I would like to explain more about why I wanted to speak with you and what the project is about
- Secondly I would like to collect your questionnaires and we can look at them together if you haven't had time to fill them in.
- Next I would like to ask you some questions about your beliefs and experiences recently, and finally we can discuss any questions you have at the end and sort out your travel expenses etc.

Intro & Explanation

I am .... and I'm a trainee clinical psychologist based at St Ann's Hospital and I am doing this project with another trainee (.........) and John Rhodes who has worked here for a while.

Whilst we have been working here we have been interested in listening to people who have had difficult childhoods to see whether there is a link between the types of experiences that people had in childhood and some of the difficulties that they have then experienced when they are older.

What we mean by difficult childhood is people who were hurt during their childhood, usually in their home, for example people who have been hit or beaten as a child / people who were sexually abused by which we would mean that you had unwanted sexual experiences when you were younger.

Questionnaires

We gave you 2 questionnaires, one which asked about what life was like for you when you were younger and one which is more about what life is like for you now.

Did you get a chance to fill them in –

- Yes – Were there any that you couldn't answer?
    - Were there any that were hard to answer / or that you would like to tell me a bit more about?

- No - Would it be OK if I helped you to look through them now, and you can fill them in with me...

CTQ
This is a questionnaire that asks about people's early life, before they were 16. One of the reasons we hoped to talk to you was because ....said this was a difficult time for you? Could we go through these questions to clarify that ...?

Overall summary of childhood experiences? Main difficulties / perpetrators / frequency of abuse, duration of abuse.

Any abuse in adulthood?

YSQ
These questions are a little different because they ask more about how you view things today as an adult. Some of them ask about how you see things, or feel about other people. We hope this will help us have a better idea about what is important to you now that you are older

Tape Recording Interviews
We would like to tape record interviews today, because it is easier for me to be able to listen without making notes. All the tapes and notes will be kept in a locked filing cabinet and no one who is not working with me would be able to listen to them. I would also not write your name on the tape so there shouldn't be any way for anyone to know who it is. Is it OK to use this recorder?

Use of data
The tapes and data will be kept whilst we are still finishing the project in a locked cupboard, and will be destroyed when we finish the project. Although we would like to publish the research in the future, anything we wrote about would have all the information about who you are removed, so for example we would change your name, and details like how old you are, where you live so that no-one could make a guess at who we had been talking to.

Info to care team
Your care team will know that we are meeting today, but they will not be allowed to listen to the tapes or see my notes that I take. It is up to you how much or how little you would like to tell them about what we talk about today. But, if I am worried about you I will have to talk to your care team about that.

SCAN

This interview will ask you about lots of different beliefs that you might have. For most people they will have a lot to say about some questions and not so much about others. Sometimes the questions might ask about things that might have been true a while ago, such as when you were younger, or before you came into hospital, but we would like to hear about those times too, so please let me know.

DELUSIONS

Initial screening questions – section 14

14.001 Change in appearance of things
Some people occasionally get a feeling that the appearance of things, or people, or even themselves, has changed. That things look or sound or smell unusual or that time has become distorted. Have you had any feelings like this?

Sec 16

14.002 Delusional and mood perplexity
Have you had the feeling that something odd is going on that you can't explain?

Sec 19

14.003 Interference with thoughts
Can you think quite clearly, or does there seem to be some kind of interference with your thoughts?

Sec 18

14.004 Second sight / Strange presences
What about other unusual experiences that some people have, such as seeing things that others cannot see, having second sight, or being aware of strange presences.

Sec 16

14.005 Hearing Voices
We ask this question of everyone and would like to ask you. Do you ever seem to hear noises or voices when there is nobody about and no ordinary explanation seems possible?

Sec 17

14.006 People too interested in R
Have you had a feeling that people were too interested in you?

Sec 16, sec 19

14.007 Odd or unpleasant experiences
Have there been any other odd or unpleasant experiences of any kind recently

Sec 17

Sections to be completed –

Section 16
Section 17
Section 18

Section 19 to be completed for all

Section 16 Perceptual disorders other than hallucinations

16.002 For example, do things seem to change in size or shape or colour in a puzzling way?

What is that like?

16.003 Have things looked grey and flat; lacking their usual colour and detail?

Can you describe that?

16.004 Do sounds seem unnaturally clear or loud or objects look vividly coloured or patterns seem particularly detailed and interesting?

16.005 Does your experience of time seem to have changed?

Does it go too fast or too slowly or do you seem to live though events exactly as you have had them before?

16.006 Have you felt recently as though the world was unreal, or only an imitation of reality, like a stage set, with cardboard cut-outs instead of real house or trees?

What was that like?

16.007 Did other people seem to be acting a part, like actors in a play, or like puppets, or even dead?

16.008 Have you felt that you yourself were not a real person, not really part of the living world?

Like being in a dream? "Not really here"?
Like acting in a play with all the lines laid down?

16.009 Do you seem unreal to yourself when you look in a mirror?

16.009 Do you find that you seem to be seeing yourself from outside your body, like a stranger?

16.010 Have you felt that part of your body did not belong to you, looked unfamiliar or the wrong size?

16.011 Does your appearance seem to have changed?

Are your features the same as usual?
Is there really a change that other people can see or is it just a feeling?

16.013 Do you think that part of your body is missing?

Like no head, no brain, no thoughts or no mind

Section 17 Hallucinations

From screening questions

You said you have heard noises or voices when there is nobody about and no ordinary explanation, so I was hoping to hear more about this

17.004 How often do you hear it/them?

Rarely, every week or so, every day, most of the time?
Has there been a time when you were free for at least a week?

17.005 What does it (they) say?

Do you know who the voice belongs to?
Can you give me some examples?
Do they just say a few words or is there a long monologue (or conversation between voices)?
Are they just repeating the same brief sentences over and over?

17.006 What are the voices like? Are they like a real voice? Can you tell them from my voice, for example?

Is there a special quality to them? What is it like?

17.007 Do you hear them in your head or mind, or in your ears, or as though coming from outside?

Where do they seem to come from?

17.008 Does a voice comment on your thoughts?

Does a voice repeat things you have thought?

Do you hear a voice saying what you are reading, or describing what you are seeing on television as you see it?

How often does it happen?

17.009 Do you hear voices talking to each other or directly to you?

What do they say to each other?
Do they talk about you between themselves?
Do you ever hear a single voice talking about you?

What about a voice or voices talking directly to you?

If both, which kind of voice is more common, the one talking to you or the one talking about you?

17.012 Are there any other characteristics of the voices?

Do you hear them only though other noises? E.g. through aeroplane noises or in the cries of birds
Do you hear the voice from a part of your body?
Does the voice ever come out of your own mouth?

17.013 How do you explain the voices? Where do they come from?
Why do you hear them?

How powerful is the voice?
Content & meaning?

Visual Hallucination

17.014 Have you had visions or seen things that other people couldn't? What did you see?

Was it flashes or shadows, or formed people or objects
Was it whole scenes or only particular people or objects (with your eyes or in your mind)
Were you half asleep at the time
Has it occurred when you were fully awake
Did you think the visions were real

If a person – did you recognise the person
Did he / she say anything
Could you hold a two way conversation
Do you know anyone else who has had this kind of experience

Detail drug effects, bereavement etc

17. 022 Olfactory hallucinations
Have you noticed unusual smells that you cannot account for?

17.003 What is the explanation for the smell

17.024 Do you think that you yourself give off a smell?

Even when you know you are quite clean
Can you describe what that is like?
What is the explanation?

17.025 Do other people think that you give off a smell?

Even when you do not?
How do they show this – what do you notice?
How do you explain it?

Do you experience things which other people do not think are there?

17.026 Sexual hallucinations
Do you have any unusual sexual sensations?

Can you describe

17.027
How do you explain these sensations?

17.028 Do you notice other strange sensations or inexplicable sensations of touch, or temperature, or pain or floating? Or like a crawling sensation under the skin?

What is the explanation for these sensations?

Section 18 – Thought disorder and experience of replacement of will

You said that you had the feeling that something odd was going on that you can't explain, could you tell me a little more about that now?

What is it like
Do you feel puzzled by strange happenings
Do familiar surroundings seem strange

18.002 Can you think quite clearly or does there seem to be some interference with your thoughts

What is that like
Are you fully in control of your thoughts / actions

18.003 Has it seemed that your thoughts were read by other people?

Can you describe that?

18.004 Do your thoughts seem to sound aloud in your head, almost as though someone standing near you could hear them?

What is that like?

18.005 Does a thought in your mind seem to be repeated over again, like an echo?

Can you describe it for me?

What is it like?

18.006 Do there seem to be thoughts in your mind which are not your own; which seem to come from elsewhere?

How do you think they get in your mind?

18.007 Do your thoughts seem to be somehow public; not private to yourself, so that others can know what you are thinking?

Can you describe that?

18.008 Does there seem to be another stream of thoughts in your mind, not under your control, which might, for example, comment on your thoughts, or on something you are reading or something you have seen or done?

Is that like a voice or is it another kind of thought?
What is that like?

18.009 Do your thoughts sometimes stop suddenly, so that your mind is a complete blank, although you have not yourself wanted to stop thinking

Can you describe that?
When it stops, do you pick up your thoughts where they left off?
(differentiate from lapse of attention or distraction or anxiety)

18.010 Are your thoughts actually taken out or sent out of your mind? Do they actually feel like that? So that they are outside your head?

What is that like?

18.011 Is there any other kind of interference with your thoughts?

18.012 Do you feel that your will has been replaced by that of some force or power outside yourself?

Can you describe that?
Is it like being a robot or zombie or puppet, controlled from elsewhere, without a will of your own?
That your intentions have actually been replaced by those of....

18.013 Does....actually speak with your voice? You hear yourself saying things that you don't recognise and you didn't intend?

Does the voice seem to come from your own mouth?

18.014 What about your handwriting - do you seem to write things that you have not intended because it is under the control of ....?

18.015 Do you actually seem to be a different person altogether, because your actions are outside your control?

Can you describe that?
For example, were you made to walk, or run by....?

18.016 Are your emotions/feelings under the control of....so that you do not recognise your emotions/feelings as your own?

18.017 Is there any other kind of control, for example of your impulses? Or of your sensations?

2.041 Have you had fatigue after mental effort, for example, reading or other kind of mental activity?

Is it a distressing effort to concentrate your attention on anything?

Section 19 Delusions

19.001 Have you ever felt that people are unduly interested in you?

Or that things are arranged to have a special meaning?

Or that harm might come to you

Can you describe that
Can you tell me a bit more about this

19.002 What about any unusual abilities or talents that some people have, such as second sight, or being aware of strange powers or presences?

Are you superstitious?
Do you have any special powers that most people lack?
What is that like?
Do you belong to a group of people who also have these experiences / power?

19.003 Do people seem to talk about you, check up on you to find out where you are, or follow you about, or record your movements?

Do they take a special interest or try to photograph you
How do you know this?

19.004 Do people seem to drop hints meant for you, or say things with double meanings?

19.005 Do you see coded messages or a special significance in the way objects are arranged, or in colours, or in the way things happen?

Can you give me an example?

19.006 Do you find that something that you have previously thought or discussed is quoted on TV or in the newspapers or used to refer to you?

19.007 Are there people about who are not what they seem?
Who are perhaps in disguise?

19.007 Do you see people around who you recognise from earlier in life?

Can you give an example?

19.008 Do you feel that the appearance of people that you know well has changed in ways that suggest that someone might be impersonating them?

19.012 Does anyone seem to be trying to harm you (trying to poison or kill you)?

Are they particularly singling you out?
How do you experience this?

19.013 Does there seem to be a conspiracy or plot being what is happening?

How do you recognise it?

19.014 Do people say that you are the jealous type?

Are you jealous / do you think its true?
What do you do to check up on whether anything is going on?

19.017 Are you loved by someone who does not publicly acknowledge it?

Who is it?
Was he/she the first to try to begin the affair?
What evidence do you have of these advances?
Do you try to make contact? In what way?

19.018 Do people seem to suggest that you are gay?

Can you describe them?
How do you explain them?

2.058 Have you had the experience of being taken over by some other power?

By what? A spirit, deity, person?
Did you lose your sense of personal identity?
Can you describe the experience?
Did you want it to happen?
Was it troublesome for you?

If possession initially welcomed:

Did it continue without your wishing it?
Did it start off at a religious or social occasion?
Have you had that possession experience without being in or going into a trance?

6.013 Do you tend to blame yourself for something you have done or thought; to feel guilty or ashamed of yourself?

What is it that you think you have done wrong?
How often do you feel guilty?

6.014 Do you have the feeling that you are being blamed or accused by others because of some action or lapse or deficiency that you yourself feel was blameworthy?
How often have you had the feeling that you were being blamed for something really serious?

Do you believe you have any physical problems which doctors cannot find any cause for?
Have the symptoms changed over time or have they stayed more or less the same throughout?
How many doctors have you consulted in the past 2 years?
What investigations were made?
With what results?
Were the doctors reassuring?
Why do you think something is physically wrong?
Have you been told the complaint is a nervous complaint?
Have you been taking any medications for that?

Do you have any beliefs about your appearance that other people do not agree with?

Do you believe that there is something wrong with your environment / society / the world that other people do not seem to notice or do not believe is happening?

EXPLANATIONS

Could we go over the explanations for what is happening?

19.021 Do you think there is a religious explanation for what is happening?

19.022 Is anything like hypnotism or telepathy going on?

19.023 Are you influenced or affected by x-rays, radio waves, neutrons, electrons, or machines or anything like that?

Do you think these things are happening for a particular reason?

Are you at fault for what is happening to you / guilty / being punished / worthless?

PERCEPTION

19.009 When this happened, how did you know what it meant?

19.009 Are you quite sure or could you have been mistaken?

19.009 Is there any other possible explanation?

19.009 Have you had any experiences previously that made you think something like this might happen?

19.009 Did this come out of the blue?

Have you had different explanations in the past and changed your mind?

Impact / Coping / Interference with Activities

19.043 You have mentioned ....(summarise symptoms). Overall, how much interference has there been with your everyday activities because of these problems?

Can you give me some examples?

How do you cope with what is happening to you

What sort of an impact does this have on the people around you?

Appendix I – Categories of delusions on the SCAN

17.023 Delusion associated with smell

17.025 Delusion that others think smell

17.029 Delusion associated with somatic sensations

19.003 Delusions of being spied on

19.004 Delusions of reference

19.005 Delusional misinterpretation

19.006 Quotation of ideas

19.007 Delusional misidentification

19.008 Familiar people impersonated

19.009 Delusional perception

19.010 Delusions of reference based on guilt

19.011 Delusional ideas of reference based on expansive mood

19.012 Delusions of persecution

19.013 Delusions of conspiracy

19.014 Delusional jealousy

19.016 Delusions of pregnancy *

19.017 Delusional lover

19.018 Delusion that others accuse homosexuality

19.019 Delusional memories and fantastic delusions

19.020 Preoccupation with previous delusions *

19.021 Religious delusion

19.022 Delusional paranormal explanations

19.023 Delusional physical explanations

19.024 Specific local syndrome *

19.025 Delusions of guilt in context of depression

19.026 Delusions of catastrophe in context of depression

19.027 Hypochondriacal delusions in context of depression

19.028 Hypochondriacal delusions without depression

19.029 Delusions of grandiose abilities

19.030 Delusions of grandiose identity

19.031 Delusions concerning appearance

19.032 Delusions of depersonalisation – no brain or no head

* not included

Appendix J – Themes

Descriptions	Themes
Punishment/retribution (deserved) Destructive powers (as badness of self) Self as stupid/incompetent	Self as bad
Seen as unimportant/worthless Seen as stupid/incompetent Seen as homosexual (as badness of self) Seen as criminal Seen as pervert/paedophile Punishment/retribution (undeserved)	Others see as bad
Dirty/rotten/parasites Smell from self Disease (undetected/imagined)	Defective/diseased body
God Devil/Evil Possession Contact with spirit world Black magic/witchcraft	Spirituality / entities
Control taken Powerless feeling Unreality/programmed	Loss of Control
Conspiracy Others disguised (to monitor) Surveillance/monitored Monitoring thoughts Others talking	Surveillance / conspiracy
Threat harm/attack Others intend suicide Generic threat	Other threat of harm
Connection to technology Guided/protected by special power In position of power Membership of powerful organisation General special gifts	Special Abilities / Status

Appendix K - Example of thematic analysis

	Initial Codes	**Grouping**
O believes he is controlled by spirits from the planets Venus and the moon. Sometimes O feels programmed to walk in a certain direction or sit in a certain place when O does not want to.	Controlled Programmed	Loss of control
O thinks the spirits may make something bad happen, such as make O go blind.	Threat of harm/attack	Threat of harm
O would see demons or the devil around (e.g. on the train, in the mirror, on the hospital ward) and would think it was something from the underworld coming to haunt O and that O was in danger.	Devil/evil	Spirituality/occult
O notices nasty smells which he believes come from himself. Sometimes they appear linked to the voices so the voice says 'your dog shit' and then J smells faeces.	Smell from self	Defective/diseased body

Appendix L - Reliability Checks for thematic analysis

Participant 4

	Self bad	Others bad	Defective body	Spirit.	Loss control	Surveil.	Other harm	Special abilities
First Coder	√	√		√		√	√	√
Reliability check	√	*X*		√		√	√	√

Participant 7

	Self bad	Others bad	Defective body	Spirit.	Loss control	Surveil.	Other harm	Special abilities
First Coder	√	√	√		√	√		
Reliability check	√	√	√		√	√		

Participant 17

	Self bad	Others bad	Defective body	Spirit.	Loss control	Surveil.	Other harm	Special abilities
First Coder				√		√		√
Reliability check				√		√		√

Participant 31

	Self bad	Others bad	Defective body	Spirit.	Loss control	Surveil.	Other harm	Special abilities
First Coder	√				√	√	**X**	
Reliability check	√				√	√	√	

√ = agreement *X* = disagreement