SEALING OVER AS A RECOVERY STYLE – A RESPONSE TO THE TRAUMA OF PSYCHOSIS?

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DECLARATION

I hereby declare that this thesis has been composed by myself and that the work therein is my own.

Signed : Sean F. Hayes

ABSTRACT

Integration and sealing over have been described as clinically distinct coping styles after psychosis. An integrative recovery is characterised by the patients awareness of the continuity of their mental activity and personality before and through recovery from psychosis. Patients who seal over at recovery tend to isolate the psychotic experience. They view it as alien and disruptive to their lives and consequently seek to encapsulate it (McGlashan, 1975). These descriptions represent opposite ends of a continuum where people who tend to seal over generally have poorer long term functional outcomes (McGlashan, 1987). The symptomatic aspects of psychosis could be described as traumatic as could the experiences often associated with a psychotic episode, e.g. involuntary hospitalisation, seclusion or sedation. Further, sealing over appears to parallel the avoidance component of post traumatic stress disorder (PTSD). This study is an attempt to investigate possible links between recovery style after psychosis and experience of psychosis as a traumatic event. It is hypothesised that people who seal over after psychosis are more likely to have experienced their psychosis as traumatic, to have low perceived control over illness, and be more likely to be depressed. Subjects who had experienced a psychosis within the last year were given four self report questionnaires to complete: the Impact of Event Scale (Horowitz, 1979), the Personal Beliefs about Illness Questionnaire (Birchwood, Mason, MacMillan and Healy, 1993), the Recovery Styles Questionnaire (Drayton, Birchwood and Trower, 1998), and the Beck Depression Inventory (Beck & Beamesderfer, 1974). Integration and sealing over was also measured by an independent rater using the Integration/Sealing Over Scale (McGlashan, 1987). Statistical analysis was completed. Results indicated that intrusions were predictive of a tendency towards sealing over; intrusions, avoidance and low perceived control over illness were predictive of depression. Conclusions were drawn and discussed in the context of the relevant literature.

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SECTION A

1. Conceptual Origins of Psychosis

1.1 History

Eugen Bleuler is generally regarded as being responsible for the first psychological conceptualisations of psychosis which he initially described as dementia praecox, prior to the later usage of the term schizophrenia. Resultantly, Bleuler is regarded as having been highly influential in freeing people with psychosis from the inhumane treatments of the 19th century. Despite this commonly held viewpoint on the conceptual origins of psychosis, Bleuler's theories and writings were more the culmination of a historical process which started with Royer Collard, Moreau de Tours, Falret, Magnan, Brentano, Jackson and Freud, all of whom had been seeking ways to introduce psychological concepts into the definition of madness (Berrios, 1984).

Bleuler's *The Fundamental Symptoms of Dementia Praecox or the Group of Schizophrenias* was published in 1911 but commissioned probably as early as 1906. This was not however Bleuler's first collection of writings on psychosis and indeed seems more to have been the result of a collective intellectual effort which took place in the Burgholzli Hospital in the first decade of the twentieth century (Bleuler, 1951). For example, Jung's *Psychology of Dementia Praecox* (1907) contains concepts which were later to appear in Bleuler's 1911 book. Bleuler was however one of the first asylum psychiatrists to apply Freudian concepts to the psychoses.

There are many factors which shaped Bleuler's conceptualisation of schizophrenia: early on, Bleuler (1902) had acknowledged that both the concept and definition of schizophrenia had come from another well known theorist, Emil Kraepelin.

Bleuler went on to justify the use of the term schizophrenia, in his 1911 book, arguing that the term dementia praecox had become too fatalistic and was often taken literally (i.e. as dementia affecting the young). This change in name also led to a change in descriptive metaphor. The concept of 'splitting' mental functions became very popular at this time and was used by Bleuler in his concept of the aetiology of schizophrenia (1911). The mind was viewed by Bleuler as a harmonious set of functions and any disharmony would create disorder and result in madness (Berrios, 1985).

According to Bleuler there are fundamental and accessory symptoms in schizophrenia: the former are caused by organic factors, the latter by psychological mechanisms and hence are understandable, as discussed in 'Eugen Bleuler and Schizophrenia' (Bleuler, M. 1984). Eugen Bleuler defines the fundamental symptoms of schizophrenia in terms of 'simple' and 'compound' constructs. The term simple, already used in psychiatric practice, e.g. 'simple dementia', Bleuler leaves undefined. However these simple functions relate to mental states belonging to different levels of psychological organisation. Associations are hypothetical constructs that explain how thoughts are glued together; affectivity refers to the traditional mental faculty and ambivalence to a particular pathological state affecting all three faculties. Bleuler's main psychopathological mechanisms were 'splitting' and 'indifference.'

The former was described as being responsible for the production of association disturbances and the latter for the pathology of affectivity (Bleuler, 1911). The status of these mechanisms remains unclear and their existence can only be observed in their behavioural manifestations. The second set of fundamental symptoms Bleuler called compound functions and includes autism, attention, will, person, schizophrenic dementia, and activity and behaviour. Bleuler's writings have undoubtedly been influential. He offered a compromise to a psychiatric community who at the time were

loyal to the old neuropsychiatry movement and yet were interested in the new psychodynamic movement which made most symptoms understandable (Jaspers, 1963) and offered an optimistic prognosis for the illness. He also emphasised the role of environmental factors ' but nowhere as much as in schizophrenia are all symptoms to be evaluated in terms of their entire psychic environment' (Bleuler, 1916).

These early concepts of schizophrenia which acknowledged the influence of psychological factors on the aetiology and course of the illness, carried considerable weight throughout most of the twentieth century. However more recently, particularly since the 1960's and 1970's, much of the research in schizophrenia has turned to the search for biological and genetic factors that might be implicated. Hence there has been a powerful drive to find biological and genetic factors that might influence the aetiology and course of schizophrenia. The origins and development of biological and genetic research, and how this type of study has more recently begun to be considered in the context of psycho-social and environmental factors, will now be discussed.

1.2 Interaction between biological, genetic and environmental factors in psychosis

Certain properties of schizophrenia have convinced researchers that abnormal biological mechanisms are associated with the disorder. In particular, the finding that symptoms associated with schizophrenia, such as hallucinations and delusions, occur under circumstances where normal biology is disrupted by the use of certain drugs or by organic diseases such as tumours or epilepsy. These observations have led researchers to search, without success, for a biological abnormality that is common to sufferers of schizophrenia. Although no specific abnormality has been identified, much

has been learned about the kind of biological factors which seem to make people more prone to develop this illness.

A large body of evidence suggests that people inherit a vulnerability to schizophrenia. This is supported by studies that show that relatives of individuals with schizophrenia are much more likely to develop the condition than the general population. Whilst the lifetime risk of developing schizophrenia in the general population is about one percent in most population studies, the sibling or offspring of a person identified as having schizophrenia, has about a ten percent chance of developing the condition (Gottesman, 1978).

However this evidence does not exclude or reduce the importance of environmental factors in the development of schizophrenia. The weight of evidence supports an interaction between environmental and genetic factors. For example, the higher concordance for schizophrenia in monozygotic as opposed to dizygotic twins, Gottesman & Shields (1976), is additional evidence for the genetic transmission of schizophrenia. However if only impaired genes were both necessary and sufficient for the development of schizophrenia, the concordance rates would approach 100 percent, whereas the actual reported rates of 35 - 38 percent indicate that other factors (i.e. environmental) play a role in the development of the illness.

It is also clear that there is no environment that is necessary and sufficient for the development of schizophrenia. Earlier work on the development of schizophrenia has focused on disturbed family environments (e.g. Gottesman, 1978). However adoption studies (e.g. Kety, Rosenthal, Wender, Schulsinger & Jacobsen, 1975) demonstrated that adoptees with a biological schizophrenic patient are not protected from schizophrenia when they are adopted. Furthermore, being raised by a parent who has schizophrenia does not appear to raise the possibility that the adoptee will develop

schizophrenia, if the child does not have a genetic vulnerability. It therefore appears that people inherit through their genes a particular potential to develop schizophrenic symptoms given sufficient social and environmental stress (Cancro, 1982).

1.3 Biology of schizophrenia

The discovery of drugs that have a clearly anti-psychotic effect has led to an approach to research that attempts to understand the neurochemical effects these drugs have on people with schizophrenia. Biochemical hypotheses have therefore arisen based on the neuropharmacological effects of drugs that either exacerbate or ameliorate psychosis. The most important theory regarding a biochemical mechanism underlying schizophrenia is the dopamine (DA) hypothesis. In its simplest form the DA hypothesis contends that schizophrenia is related to an over activity of central nervous system DA. The main evidence for this comes from observations that drugs that increase DA activity in people with schizophrenia tend to exacerbate psychotic symptoms and can cause psychotic symptoms in those who do not have a psychotic illness. Further, it is also known that drugs which decrease DA activity improve schizophrenic symptoms. However, despite a huge amount of research looking for abnormalities in DA metabolism in people with schizophrenia, no differences have been discovered between schizophrenic and non-schizophrenic subjects. Acknowledging the lack of evidence for an impaired DA system in schizophrenia, Davis (1978) proposed a two factor theory to explain the convincing evidence that neuroleptics work by blocking DA receptors and the lack of evidence of abnormal DA mechanisms in the aetiology of schizophrenia. This theory contends that rather than the DA system being the single mechanism accounting for vulnerability to schizophrenia, neural malfunctioning may be modulated by drugs through the DA system. Thus whatever the

biological determinants of schizophrenia , drugs may exert their influence through regulating the DA system such as a control knob modulates volume on a radio.

1.4 Anatomical abnormalities in schizophrenia

There is some evidence to suggest that enlarged cerebral ventricles are common in schizophrenia. Weinberger, Bigelow, Klein, Rosenblutt & Wyatt (1979) found a significant difference in ventricular size between chronic schizophrenic patients and controls. Fifty three percent of those with chronic schizophrenia had ventricle sizes more than two standard deviations larger than those of controls. Such patients with enlarged ventricles respond poorly to anti psychotic medication relative to matched control group of schizophrenics with normal sized ventricles. Further, enlarged ventricles appear to be more common in patients who perform poorly on cognitive and neuropsychological testing. Taken together, these studies suggest that structural brain abnormalities may be useful in forming clinical subtypes of schizophrenic patients.

1.5 Information processing in schizophrenia

Later writings on psychosis from Bleuler (1951) described the lack of cognitive control displayed by patients with schizophrenia when he noted that they were 'incapable of holding the train of thought together in the proper channel'. Contemporary theorists have made a distinction between cognitive processes that are automatic and those that are conscious, effortful or controlled. This distinction has been very important for the development of theories of information processing deficits in schizophrenia. Recent theorists have argued that schizophrenia is characterised by deficits in controlled, serial processing whereas automatic processing of information is not seen to be affected, or at least not as markedly affected, Neale & Oltmanns (1980).

Research has evidenced this theory, for example Oltmanns (1978) asked subjects to recall short, random sequences of words or digits soon after their auditory presentation. Items that are recalled from near the end of word lists (recency effect) are considered to reflect mainly passive, automatic processes, whereas recall of items at the beginning of sequences (primacy effect) demands effortful, controlled processes such as rote rehearsal. Oltmanns found that auditory distraction interfered with schizophrenic short term recall primarily by reducing recall for items early in each word string. Thus it was concluded that effortful, controlled processes appear to be especially susceptible to interference in schizophrenia.

However an alternative suggestion by Frith (1979) proposes that the components of information processing that require little attention among normal individuals, are those that are problematic in schizophrenia. Frith argues that the mental operations that are normally completed automatically require conscious attention in schizophrenia. Frith describes how such deficits in automatic parallel processing could underlie schizophrenic hallucinations, delusions and thought disorder. He posits that a person with schizophrenia does not automatically select the appropriate meaning from long term memory during the normally parallel process of encoding very familiar stimuli. Instead, alternative meanings intrude into consciousness as information is processed.

1.6 Family deviance in communication - attitudes and affect.

During the mid 1950's clinical and conceptual research began to consider the effects of intrafamilial attributes in the development of schizophrenia. Much of the research in this area has been cross sectional and has examined whether certain characteristic behaviours of key family members co-exist with the presence of a family

member diagnosed as psychiatrically ill. During this time several theories emerged that implicated the whole family in the aetiology of schizophrenia. However in more recent times there has been a shift in the emphasis in research of the family's role in schizophrenia. Rather than searching for family attributes that are implicated in the aetiology of schizophrenia, recent research has tended to study to what extent the family environment serves as a positive influence or a negative stressor on the course and outcome of schizophrenia in the vulnerable family member. These studies have tended to look at communication patterns of key relatives (parents or spouse) of schizophrenics. The underlying assumption of these studies is that enduring patterns of attitudes, communication styles, and characteristic ways of behaving, sampled in tests, interviews, or direct interaction tasks, are reflective of the relative's behaviour when they are with the patient on a day to day basis.

This work has focused on two areas, communication deviance and expressed emotion. The hypotheses of researchers in this field is that deviance in the family environment can operate as non-specific stressors for the vulnerable family member and therefore may exert a significant influence on the course of the disorder once it has emerged. Communication deviance reflects an inability of the parent to establish and maintain a shared focus of attention during transactions with another person (Singer & Wynne, 1963). Repeated interactions between parent and child, characterised by high levels of parental communication deviance, may contribute to disturbed thinking and communication in the vulnerable offspring. Previous studies have found communication deviance to be characteristic of parents of schizophrenics (e.g. Doane, West, Goldstein, Rodnick & Jones, 1981).

1.7 Deviant emotional attitudes

The work of Brown, Birley & Wing (1972) provided empirical evidence that family environments may have a crucial impact on the course of schizophrenia once it has developed in a family member. Criticism, hostility and over involvement with the schizophrenic family member from other key relatives were assessed in a structured fashion during interviews. Families were then rated as high or low on expressed emotion (EE) depending on the level of criticism, hostility or over involvement displayed towards the vulnerable family member during the interview. Patients discharged from hospital to high EE families have been found in several replication studies (e.g. Vaughn, Snyder, Jones, Freeman & Fallom, 1982) to have approximately a 55 percent chance of relapse during the first nine months after discharge, whilst those returning to low EE families have only a 15 percent chance.

Research in this area has helped develop therapeutic interventions which attempt to modify intrafamilial behaviour through psychosocial family education. Results have suggested that maintenance neuroleptic medication and family based psychosocial interventions are effective in preventing relapses in the vulnerable family member (Falloon, Boyd, McGill, Razani, Mess & Guilderman, 1982).

1.8 Social and community factors

As well as family factors, much theoretical and experimental evidence has pointed toward other interpersonal and socio-economic features of the environment that serve as antecedents or precipitants of acute schizophrenic reactions. Birley & Brown, (1970) investigated the influence of life events on relapse in psychosis by considering the frequency of life events in schizophrenics during a three month period preceding a psychotic breakdown that required hospitalisation. Life events were

determined by having the patient and significant others describe disappointments, losses, damages and fulfilments that could be specifically dated. Life events were both positive, e.g. getting married or finding a new job, or negative e.g. suffering a drop in income or losing a friend, and included events that were outside the control of the patient as well as those that were linked with the patient's behaviour. Comparisons were made for the same three month period with a sample of people who did not have schizophrenic illness. Results showed that for the control group, the number of life events remained constant over the three month period, whereas in the schizophrenic group there was a marked increase in life events in the three weeks prior to the onset of a psychotic episode. Sixty percent of the schizophrenic group had an abrupt change in their social environment during the three week breakdown period, compared to only 14 percent of the control group. Birley & Brown (1970) found that this increase in life events was found prior to first episodes of psychosis in young schizophrenics and also prior to repeated relapses in more chronic schizophrenics.

1.9 Social networks

The social environment and the support it offers determines to a large extent the impact of life stressors and economic problems on the individual vulnerable to schizophrenia. It has been found that patients experiencing close social relationships were more likely to remain in the community irrespective of their living environment (Wing, 1978). In particular, unstimulating, deprived, and custodial living environments tend to be associated with social breakdown which may be observed in the individual by apathy, social withdrawal, loss of self care skills and other so called negative symptoms of schizophrenia.

One of the few empirical studies which looked at social networks and their impact on psychiatric outcome was conducted by Tolsdorf (1976), who interviewed ten hospitalised schizophrenics and ten matched patients hospitalised for medical reasons. Quantitative and qualitative information about the social network was gathered through lengthy interviews and validated by telephone calls to people from each patients designated social network. Results showed that while both groups had similar numbers of social contacts, the psychiatric patients reported fewer intimate relationships, fewer more powerful figures in their network, and fewer relationships with individuals other than family members. Qualitatively the schizophrenic patients had a much more pessimistic and negative view of the ability and interest of their social networks to assist them in times of need, a view that reportedly developed long before the onset of schizophrenic symptoms.

The impact of life events and stressors are therefore often dependent on the patients social environment and, in addition, often vary from patient to patient. The limitations of stress research is that it tends to be limited to a two step process whereby a life event occurs and then symptoms of schizophrenia are observed. Whilst such an approach has highlighted the impact of stressors on the process of schizophrenia, it does not consider enough of the stress response process which could lead us to higher levels of understanding. Thus, individual responses to stressors may be as, or even more important than the stressors themselves. Responses to stressors include perceptual filtering, cognitive labelling and processing, defensive reactions, coping style, and problem solving efforts. It is these stress response processes and responses to the experience of psychosis itself that this study concerns. As a background to the focus of this study, a brief discussion of the kinds of difficulties experienced by people with psychosis will follow.

2. Psychosis : Complexity of Problems

2.1 Response to treatment

The problems experienced by people with psychosis are extremely complex and heterogeneous. Apart from the problems associated with the psychotic symptoms themselves, many people with psychosis will also suffer emotional distress and some degree of social disability. In terms of the problems associated with psychotic symptoms it appears that many people will experience symptoms which are drug resistant and may often be of a chronic nature. Lieberman, Mayeroff & Loebel (1991) reported that around 14 percent of people in their first episode of schizophrenia did not respond adequately to antipsychotic drugs, and of those who had experienced many previous episodes, at least 25 percent failed to respond. Although many people with psychosis benefit from neuroleptic medication, they may often still experience very distressing and disabling positive psychotic symptoms. Harrow, Carone and Westermeyer (1985), in their study of 34 people with delusions, found that 55 - 60 percent still had delusional beliefs, despite the use of neuroleptic medication, at a one year follow up. Johnstone, Owens, Frith,and Leavy (1991), in a follow up of 500 people who had received a diagnosis of schizophrenia, reported that over 30 percent had moderate to severe levels of hallucinations and around 50 percent described moderate to severe delusions. Curson, Barnes, Bamber, Platt, Hirsch and Duffy (1985), in a follow up study of 40 patients seven years after their first admission to hospital, found that 23 percent still reported positive symptoms. Generally it appears that somewhere between 25 - 50 percent of people who experience an episode of psychosis are likely to continue to experience positive psychotic symptoms which can be extremely distressing and disruptive to their lives, despite the use of neuroleptic medication. It would seem clear that, for those who experience such severe and

enduring difficulties, there is an inevitably large impact on their psychological health and well being. Possible psychological influences on the persistence or maintenance of psychotic symptoms, as well as the psychological impact such symptoms may have, would therefore seem worthy of further exploration.

2.2 Relapse

One of the major concerns for people with psychosis is the risk of relapse and the consequential likelihood of re-admission to hospital. Goldberg, Schooler, Hogarty& the collaborative study group (1977) found that risk of relapse is highest amongst those who continue to experience positive psychotic symptoms and associated emotional distress. Kuipers & Bebbington (1990) summarise that many studies have found that risk of relapse is increased with the incidence of interpersonal difficulties and with disruptive life events. Taking neuroleptic medication seems to reduce the risk of relapse by as much as 50 percent (Leff & Wing, 1971), but amongst those who are maintained on neuroleptic medication around 25 percent may still relapse over a two year period, and between 40 - 60 percent may relapse over a five year period (Remington & Adams, 1994).

Concern about, and indeed fear of, relapse is understandable from the patients perspective. Although some people who experience psychosis may experience pleasant and possibly euphoric feelings during an acute episode, the greater proportion of people will have aversive experiences during psychosis which 'may be described retrospectively as having a terrifying and nightmarish quality' (Wing, 1975). Apart from the psychosis itself, the impact of such an experience may have many other aversive aspects such as hospitalisation, deprivation of liberty and problems in interpersonal relationships, all of which may constitute a severe threat to a persons

sense of personal identity. Risk of relapse and fear of relapse in psychosis are therefore likely to be major problems for people trying to cope with such conditions. Possible psychological factors contributing to risk of relapse in psychosis would therefore also appear worthy of further exploration.

2.3 Social disability

Of equal importance are the social disabilities which very often occur after psychosis. Studies suggest (e.g. Johnstone *et al.*, 1991) that up to 60 percent of patients with schizophrenic syndromes, as well as substantial minorities of people with other psychotic syndromes may show signs of moderate to severe social disability. These problems include inability to function at work, difficulties in relationships and general difficulties with activities of daily living. The reasons for the presence of severe social disabilities are complex but may include factors such as the presence of chronic impairments (e.g. cognitive neuropsychological impairments); acute psychosis; adverse social circumstances; and attitudes to self and recovery (Wing, 1983). Whilst the pattern of factors influencing social disability is likely to vary depending on the individual case, it is clear that the psychological adaptation and coping style adopted by the individual will greatly influence such outcomes.

2.4 Summary

In summary, psychosis is for many people an extremely debilitating disorder. A significant proportion of people continue to experience very distressing psychotic symptoms despite the use of neuroleptic medication. One of the greatest concerns to people with psychosis is the fear of relapse which for most, continues to be a prominent aspect of the course of illness. Many people with psychosis experience

severe disruption to their social and interpersonal lives as a result of their condition. It appears that the difficulties associated with psychosis may be attributable, at least in part, to psychological processes involved in adapting to, and coping with psychosis. It would therefore appear to be important to try to investigate these psychological processes and their origin in order to begin to conceptualise and develop appropriate therapeutic approaches to alleviate such problems. This study involves investigation of one such area relating to coping and adaptation to psychosis. Specifically an attempt is made to investigate recovery styles used by people with psychosis and the possible psychological origin of these styles.

3. Coping Styles

3.1 Denial and lack of awareness of psychosis

Fowler, Garety and Kuipers (1995) suggest that the psychological processes involved in coping with psychosis can be separated into three main styles. The first style is referred to as denial and lack of awareness of psychosis. Many people with psychosis may not agree with the views held by mental health professionals regarding psychosis, and in extreme circumstances may not recognise problems associated with strange experiences, bizarre beliefs and dangerous or irresponsible actions which may seem obvious to others. Such individuals may become a danger to themselves or to others, and may be highly disorganised (e.g. they may fail to eat properly or maintain self care). This coping style is often of great concern to health professionals as the client may fail to co-operate with actions regarded by professionals as important in the management of psychotic disorder, such as the need to take medication, recognition of the need for hospitalisation, or attending day care.

3.2 Resignation or engulfment into the social role of a chronic mental patient

A second style is described as resignation or engulfment into the role of a chronic mental patient. This may be associated with acceptance of psychotic illness and co-operation with health professionals. However, it may also have adverse results in that people adopting this style may become engulfed into a sick role, and be submerged in the personal identity of a person with severe mental illness as well as the associated negative effects on self esteem. Such individuals may have difficulty taking personal responsibility for their lives and may present with associated clinical problems such as depression, demoralisation and suicidal ideation.

3.3 Acceptance of psychotic illness

The third coping style described by Fowler *et al.* (1995) is that of acceptance of psychotic illness. This type of strategy appears to be associated with the best outcomes according to health professionals. The pattern involves an ability to adopt a sick role when necessary. This may involve making adjustments to lifestyle and behaviour, taking medication and using the services of mental health professionals, whilst otherwise trying to maximise independence and maintain a personal identity that is separate from that of a person with severe mental illness.

The patterns described above are rarely stable and an individual may present with different patterns at different times over the course of their illness, cycling between denial, acceptance and resignation. Whilst these patterns of coping styles may be very useful in describing retrospectively the ways people cope with psychosis and their likely resultant outcomes, there appears to be little to suggest factors that might influence the adoption of these differing coping strategies.

3.4 Recovery styles

The present study is an attempt to make some sense of the psychological processes which may underlie these coping styles. In particular, this study is concerned with investigating recovery styles soon after psychotic episodes. It may be that the coping styles adopted by people soon after psychosis influence their longer term coping style and subsequent outcome. Distinct recovery styles of integration and sealing over after psychotic episodes have been described by McGlashan, Levy and Carpenter (1975). These recovery styles may overlap with the coping styles described above but refer more specifically to individual recovery styles adopted in the period directly after a psychotic episode.

3.5 Integration

"An integrative recovery style is characterised by the patients' awareness of the continuity of their mental activity and personality from before the psychotic experience, during psychosis, and through recovery. The patient takes responsibility for their psychotic productions, even though their concepts of cause may not be dynamic in nature. They have an awareness of both pleasure and pain involved in the psychotic experience and use their experience as a source of information, not ordinarily available to them regarding their conflicts, relationships and behaviour. They are curious about the experiences and elicit the help of others in an attempt to understand these experiences. At recovery their ideas about psychosis are flexible." McGlashan (1987). The term 'integration' probably overlaps with the description of 'acceptance of psychotic illness' described above, but has also been used by other clinicians in several different ways. Among them Nunberg (1948) discuss integration as a synthetic ego function, McPherson, Buckley & Draffan (1971) describe integration as a

differentiation of ego boundaries, and perhaps more in keeping with general usage; Mosher, Reifman & Menn (1973) define integration as general intactness of personality. In clinical practice patients who tend towards integration can be recognised as those who are motivated to explore the nature of their symptoms and are keen to try to make sense of their experience, in association with their therapist.

3.6 Sealing over

"Patients who seal over during recovery tend to isolate the psychotic experience. They view it as alien and interruptive to their lives and consequently seek to encapsulate it. Cause is presumed separate from personal problems. The patient is disinclined to any investigation of their symptoms. Once over the psychosis, the patients maintain an awareness of the negative aspects of their experiences and fail to become emotionally invested with others in an exploration of these experiences. Sealing over describes a process by which psychotic experiences and symptoms are isolated from non-psychotic mental events and then made unavailable by both conscious suppression and repression." (McGlashan, 1987).

Sealing over is a term which appears to be used exclusively by McGlashan, but clearly overlaps with the concept of denial as a response in recovery after psychosis (see previous section). However, most clinicians working in the field of severe and enduring mental health problems will recognise the description of sealing over, as they will have worked with people who are reluctant to discuss the detail of their psychotic experiences, and who prefer to avoid such issues. Whilst sealing over can be frustrating for the clinician, as they may consider such avoidance to be contrary to the therapeutic interests of the patient, this coping style is likely to be functional for the patient. It is

therefore of interest to try to understand the psychological mechanisms which may account for sealing over as a recovery style after psychosis.

The definitions presented here represent opposite ends of a spectrum of recovery styles and it is recognised that for any single psychotic episode the patient may integrate certain aspects of their experience and seal over others. It is argued that the dichotomies presented allow for the examination of different treatment approaches depending on the recovery style. McGlashan (1987) describes a treatment programme which generally encourages integration and has found that on long term follow up, those people who have successfully integrated their psychotic experiences into the rest of their lives have appeared to have benefited from the process and have better functional outcomes than those who seal over. Further, McGlashan suggests that these differing recovery styles are likely to be related to relatively enduring personality characteristics evident across long periods of an individuals life. Is is clear however, that people who integrate their experience are more likely to have better outcomes and that there are a significant minority of people who seal over and are likely to have poorer outcomes (McGlashan, 1987).

As noted above, it is acknowledged that recovery style can change over the course of psychosis, yet McGlashan proposed that recovery style is influenced by relatively enduring personality characteristics. If recovery style relates to enduring personality characteristics, it seems difficult to understand why recovery style fluctuates over the course of illness. The idea of recovery style reflecting enduring personality characteristics also implies that there is little that can be done to influence the way people might cope with psychosis. Consequently McGlashan suggests that treatment approaches should be tailored to suit the recovery style presented. Whilst this may be helpful for people who tend to integrate their experience, little is suggested

with regard to the treatment of people who seal over, except to involve others in the monitoring of mental state and the initiation of medically oriented early interventions. It would seem that such strategies are likely to do little to encourage people who seal over to feel in any way in control of their psychosis. This in turn could reinforce feelings of helplessness, which, evidence suggests (e.g. Birchwood, Mason, Macmillan and Healy, 1993), can have a negative influence on psychological well being generally and have a major impact on ability to cope with psychosis. It is therefore postulated that recovery style may be influenced not only by personality characteristics but also by psychological adaptation to the experience of psychosis.

4. Psychosis and Post Traumatic Stress Disorder (PTSD)

4.1 Incidence

One possible psychological process which might influence adaptation to psychosis and the presentation of different recovery styles, is the individual's personal reaction to the psychosis. It has been suggested that for some people the experience of psychosis is extremely traumatic. Support for this assertion comes from literature which has attempted to compare some people's experience of psychosis to that of Post Traumatic Stress Disorder (PTSD). McGorry, Chanen, Mccarthy, Van Riel, McKenzie and Singh (1991) found evidence of PTSD symptoms in 46 percent of a group diagnosed with schizophrenia, primarily as a result of hospitalisations for psychotic episodes. Although it is recognised that these figures might be exaggerated due to false positives arising from the overlap of symptoms of schizophrenia and PTSD, this figure lends some support to an association between these conditions.

4.2 Psychosis as a traumatic event

The first criterion of PTSD is the experience of a traumatic event in which "the person experienced, witnessed or was confronted with an event that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others and that the person's reaction involved intense fear, helplessness or horror"(American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM IV), 1994). Psychotic symptoms described in DSM IV (1994) criteria for schizophrenia, seem by definition to fulfil criteria for an extreme psychosocial stressor and include :

" . . .bizarre delusions (i.e. involving a phenomenon that the person's culture would regard as totally implausible, e.g. thought broadcasting, being controlled by a dead person); simple persecutory delusions involving the belief that others are spying on, spreading false rumours about, or planning to harm the person; hallucinations like burning flesh and the sensation of crawling inside the abdomen . . ."

Patients commonly suffer from auditory hallucinations in which they are constantly insulted or threatened. Some hallucinations involve gross and unpleasant distortions in the perception of the patient's own body. Clearly psychosis can be terrifying and the first reaction that is likely to be common to people who experience psychosis is intense fear. Consequently many people describe their experience of psychosis as 'torture' or 'punishment' as exemplified by the following first person accounts of psychosis taken from Shaner & Eth (1989) :

"I closed my eyes to escape the surrounding turmoil of which I was the centre. But I could find no rest, for horrible images assailed me, so vivid that I experienced actual physical sensation. I cannot say that I really saw images; they did not represent anything. Rather I felt them. it seemed that my mouth was full of birds which I

crunched between my teeth, and their feathers, their blood and broken bones were choking me"

"I am frightened too when every whisper, every laugh is about me; when newspapers suddenly contain curses, four-letter words shouting at me; when sparkles of light are demon eyes . . . My illness is a journey of fear, often paralysing, mostly painful."

It clearly seems that for some people the experience of psychosis may be extremely traumatic. Although there are these apparent similarities between experience of psychosis and of traumatic events involved in PTSD, one difference is that the fearful stimuli in psychosis are created by the individual's own mind and therefore are not restricted by natural physical laws and thus may reflect the person's worst fears which, it might be argued, increase vulnerability to PTSD.

Apart from the acute symptoms of psychosis, the circumstances surrounding the individual's experience of psychosis are likely to be extremely stressful. These circumstances commonly include involuntary admission, often involving law enforcement agencies, duress or coercion, forced sedation, restraint and seclusion and finding oneself in an closed environment with a number of other psychotic or disturbed individuals (McGorry *et al,*. 1991). The considerable effects of these circumstances are stressful primarily because they may involve considerable impact on the individual's basic assumptions about themselves and the world in general; such assumptions may be being challenged for the first time (Janoff-Bulman, 1985).

Further, McGorry (1991) goes on to suggest that people recovering from psychotic episodes are likely to experience the kind of symptomatology that has been described in PTSD. This includes the re-experiencing of traumatic aspects of their illness and hospital experiences (particularly seclusion and forced sedation), avoidance

and denial of these issues, emotional numbing and unresponsiveness, and non specific features including depression and a fragility or reduced resilience to stress. Despite these similarities between experience of psychosis and PTSD some authors (e.g. Breslau & Davis, 1987) suggest that some of the associated features of PTSD such as anxiety and depression, and even some of the defining symptoms such as re-experiencing the trauma and numbing of responsiveness, can be reinterpreted or dismissed as examples of syndromal overlap or as features common to both syndromes.

However, if the diagnosis of PTSD is considered in detail, one of the main criteria is 'persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma)' (DSM IV, 1994). This avoidance component of PTSD appears to be very similar to the description of sealing over as a recovery style after psychosis (see description of sealing over, section 3.2). Thus it is postulated that sealing over may, in part, be a coping strategy in response to an extreme traumatic event, namely the experience of psychosis.

McGorry *et al.* (1991) went on to investigate this issue further by firstly examining the prevalence of PTSD in the first year after discharge in a cohort of people with psychotic disorders of recent onset, and secondly exploring the relationship between PTSD phenomena and other post psychotic phenomena, namely negative symptoms and depression. Results showed that for people with a psychotic illness of recent onset, 46 percent of subjects at 4 months after discharge, and 35 percent of subjects at 11 months after discharge, meet criteria for PTSD. Interestingly, no relationship was found between PTSD and first admission or between PTSD and involuntary status which were assumed to be extremely stressful. McGorry suggests that this may be because a ceiling effect occurs in that admission to psychiatric hospital

is fairly uniformly stressful regardless of how many admissions an individual may have had. It may be that the mental state of individuals at admission may be highly relevant making people more vulnerable to stress. Further it was found that PTSD was more often related to people's experience of hospitalisation (e.g. recurrent nightmares about forced sedation or seclusion), rather than to the psychotic symptoms themselves. Neither was a relationship found between the level of negative symptoms and PTSD, and avoidance did not correlate with negative symptoms score.

However, in the McGorry study a strong correlation was found between PTSD scores and depression scores at four and eleven month follow up. The following conclusions were drawn with regard to depression and PTSD: the finding of a significant relationship between levels of depression and post traumatic symptoms at follow up is consistent with descriptions of both syndromes after severe physical illness (Kutz, Garb, and David, 1988). Some features may be due to persisting or resolving components of the psychosis itself; however the truly comorbid aspects, including the phenomena of PTSD and depression, are open to a number of interpretations. Firstly, depression is one of the commonest concurrent diagnoses in other studies of PTSD and there appears to be some degree of symptom overlap in formal criteria for depressive and PTSD symptoms (limited largely to the non defining symptoms of PTSD). It could therefore be that these phenomena are aspects of a single latent disturbance considered from different perspectives. However such a theory fails to account adequately for the defining symptoms of PTSD. Alternatively two syndromes may have a hierarchical association or relationship, Kolb (1989). It is suggested that due to the rarity of depressive symptoms at follow up these are likely to be secondary to the PTSD syndrome, McGorry *et al.* (1991). It therefore appears that for some people the experience of psychosis may well be traumatic and that this may in turn

influence the formation of further secondary psychological problems, such as depression.

However parallels between psychosis and PTSD can also be seen in more recent conceptualisations which divide symptoms of both disorders into positive and negative clusters. Some of the features of PTSD, particularly emotional numbing, affective constriction and estrangement from others, overlap significantly with the negative symptoms of psychosis e.g. those described as affective flattening, alogia or avolition (DSM IV, 1994). The importance of this similarity between the negative symptoms of schizophrenia and PTSD is that at least some aspects of these symptoms may be brought about by the extreme stress experienced by the individual, and therefore may in part represent a stress response syndrome (Horowitz, 1974).

4.3 PTSD and negative symptoms

Stampher (1990) develops this theory further by suggesting that negative symptoms and chronic PTSD are similar in terms of the clinical phenomena and underlying physiological disturbance. He proposes that negative symptoms and chronic PTSD are both manifestations of a 'biological' response to a psychologically overwhelming trauma. Further, Stampher notes that it has long been considered that depression, which follows an acute episode of schizophrenia, may well be a response to the psychotic experience, especially with the return of insight. However this approach does not consider the possibility that the depression may be the affective component of a PTSD. Similarly to PTSD, depression after psychosis is atypical and difficult to treat.

Stampher continues to compare the conceptual constructs of PTSD and negative symptoms in schizophrenia. Broadly speaking, in PTSD a severely traumatic

event overwhelms an individual's defences or coping mechanisms resulting in severe anxiety relating to the traumatic event. Mastery of the event facilitates a return to normality. However persistent failure to master the event results in persistent anxiety which can progress to a chronic PTSD. It is hypothesised that a similar sequence occurs in the development of negative symptoms, except that because the trauma is less severe and cumulative, it is not as easy to see a dramatic onset clinically. Rather it is suggested that the individual would experience, but not obviously manifest, anxiety that may be engendered by quite variable trauma e.g. serious and persisting problems in family and other relationships, chronic insecurity and poor self image. Negative symptoms would only emerge when the accumulation of trauma or conflict began to overwhelm the individual and hence threaten his or her functional integrity or hold on life. Thus Stampher contends that hypothetically negative symptoms and the chronic stage of PTSD are similarly symptomatic of a persisting failure to master an overwhelming trauma.

Stampher concedes that post traumatic impairment of higher affective and executive regulation is a manifestation of pre frontal dysfunction and failure to recover from overwhelming experiences. Stampher notes that the symptoms that most strongly characterise PTSD, avoidance of reminders of the traumatic event and intrusive recollections of the traumatic event, are not evident in schizophrenia. It is also clear that the more bizarre behaviour, magical thinking and unusual perceptions in schizophrenia are not generally evident in PTSD. However Stampher argues that people with schizophrenia may find that coping with everyday life may be an unstable and emotionally traumatic experience and as a result of these 'minor' traumas the individual may find coping with the world increasingly difficult. If at some point the individual's coping mechanisms begin to fail more comprehensively, it seems quite

possible that a person may develop a PTSD as a fundamental response to being overwhelmed, either suddenly or gradually. If PTSD can develop insidiously it need not be expected, for instance, that intrusive recollections of some major trauma would be found because there were none.

Stampher continues: descriptions of events likely to induce PTSD in DSM IV are confined to unusual, sudden and catastrophic experiences. This may well have meant that the kind of experiences considered necessary to precipitate a trauma have been somewhat limited. It seems likely that the response to a cumulative trauma, especially if occurring during the developmental years before adulthood, may have a more severe effect than the consequences of a sudden, acute trauma in people who had consolidated developmental stages. Stampher therefore proposes that the more bizarre behavioural aspects of schizophrenia may be an insidious response to cumulative trauma during developmental years. Further, he suggests that cumulative trauma may result in greater instability of brain information processing which then adds to the bizarre nature of the behavioural response and also lowers the threshold for the emergence of other symptom constellations such as acute positive symptoms, depression or mania.

Stampher contends that the concept of negative symptoms as comparable to chronic PTSD also helps explain why negative symptoms may not respond to drug interventions. It is suggested that in negative symptoms and chronic PTSD there is a traumatic erosion of confidence and competence that has existed for a long time and cocooned the person in a protective but unstable and self defeating state that tends to be self perpetuating. Whilst drugs may help, it is argued that they alone cannot ameliorate the pervasive distortions of information processing that have developed over the passage of time.

4.4 Summary

In summary, coping styles after psychosis seem to be correlated with outcome. In particular sealing over, as a recovery style after psychosis, appears to be associated with poorer outcomes. The question was therefore raised as to what might influence or underlie a sealing over recovery style. It has been argued that for some people psychosis may have been experienced as a traumatic event, and that this might influence recovery style and consequent outcome. Evidence is offered firstly to support a comparison between the avoidance component of PTSD and sealing over as a recovery style after psychosis. Also, in both PTSD and psychosis, the individual has experienced what could be described as a traumatic event and previous research has shown that PTSD symptoms are often prevalent after psychosis. In addition, it has been suggested that negative symptoms in psychosis may be the result of a cumulative PTSD. It is thus hypothesised that sealing over as a recovery style after psychosis may be comparable to the avoidance component of PTSD and as such might represent a coping style in response to having experienced an extreme psychosocial stressor, namely the psychosis. If this is the case it is possible that unresolved trauma in relation to psychosis may have a cumulative effect resulting in negative symptoms (Stampher, 1990) and / or what Fowler *et al.* (1995) describe as engulfment into the role of a chronic mental patient. It would therefore seem important to identify people who have experienced psychosis as a traumatic event, and develop appropriate therapeutic interventions, as this could potentially have a major impact on their ability to cope with psychosis over the long term.

5. Psychological Appraisal of Psychosis

Another major factor in the emergence of PTSD is that events precipitating PTSD are not only threatening to the person's integrity or life, but that the event is perceived to be outwith the individual's control. Again this seems to be analogous to some people's experience of psychosis in that for many people the onset of a psychotic episode is often perceived to be outwith their control. It is therefore suggested that those people who believe that they have little control over their condition are therefore more likely to experience psychosis as a traumatic event. It was therefore deemed pertinent in this study to consider people's perceived control over their psychosis.

5.1 Perceived Control

Whilst the importance of perceived control has been demonstrated with regard to understanding the processes of coping and recovery with somatic conditions, and the effects of life events and depression, there has been little research conducted in relation to severe mental illness. However, Birchwood *et al.* (1993) conducted some associated research exploring psychological appraisals relating to mental illness, made by people with psychosis, including perceived control over illness, and the subsequent impact such appraisals might have on depression in psychosis. This research relating perceived control and depression will be considered later after firstly reviewing the prevalence and significance of depression in psychosis and considering some of the more traditional theories of depression in psychosis.

5.2 Depression in Psychosis

The importance of exploring depression in psychosis is clarified by Siris (1991) in his review of studies indicating that the incidence of depression in psychosis ranges from 20 percent in the year following an acute episode (Johnson, 1988) to as much as 45 percent concurrent with an acute episode (Leff, Tress and Edwards, 1988). Further, a suicide rate of 10 percent amongst this group is associated with a history of depression (Drake & Cotton, 1986), and that relapse risk is increased if the depression persists into the second year following an acute episode.

Clearly the link between depression and psychosis is of great concern. Parasuicidal risk in psychosis runs at around 20 - 30 percent (Birchwood & Preston, 1991). Completed suicide occurs in approximately 10 percent of cases of schizophrenia (Department of Health, 1992). It is generally agreed that it is extremely difficult to predict suicide in psychosis. Although it is suggested that people with psychosis, who are severely unhappy with the debilitating effects the psychosis has on their lives, are more likely to commit suicide, the risk factors which have been identified as influencing such a position, e.g. age, gender, high educational level, unfortunately are able to predict suicide little better than chance.

However, it is known that for people with psychosis, depression is one of the main precursors to suicide, along with hopelessness and suicidal ideation. Drake and Cotton (1986) concluded that it was depressed mood and the psychological aspects of depression (unresponsiveness, guilt and hopelessness) and not the vegetative symptoms (reduced motivation, fatigue, loss of energy) which were important precursors to suicide; for example depression in the absence of hopelessness was not predictive of later suicide. Birchwood & Iqbal (1998) conclude that depression, hopelessness and suicidal ideation during and following an episode of acute psychosis

are necessary but not sufficient conditions for suicide, which shows that suicide often occurs in the context of a distressed mental state. It is thus clear that depression in psychosis is relatively prominent and can be associated with suicide. It seems important to explore factors which may contribute to the presentation of depression in association with the occurrence of psychosis. Firstly it might be important to consider some of the various theories regarding the nature of depression in psychosis.

There are varying theories with regard to the nature of depression in psychosis. Firstly there is evidence to suggest that depression is intrinsic to psychosis. It is argued that the relationship between positive symptoms of psychosis and depression is upheld by studies that show the existence of depression observed prior to (Hirsch & Jolley, 1989), during (Knight & Hirsh, 1981), and following (McGlashan & Carpenter, 1976) the onset of acute psychosis. However, Green, Nuechterlein, Ventura and Mintz (1990) investigated the relationship between psychotic symptoms and depression at two - weekly intervals over one year and found that although depressive pathology existed prior to the onset of psychosis, no significant relationship existed for the onset of depression over the span of the psychotic episode. This suggests that recovery from psychosis is not the only factor in determining the onset of depression. Also, Johnson (1981) argues that depression is a separate entity from the acute phase of psychosis which is helpful in explaining the emergence of depression without prevailing acute psychosis in long term maintained patients.

It has also been suggested that depression in psychosis may in part be a side effect from the use of neuroleptic medication. A neuroleptic syndrome has been described by Rifkin, Quitkin and Klein (1975) as a 'behavioural state of diminished spontaneity characterised by few gestures, unspontaneous speech, apathy and difficulty with initiating usual activities', which has a high association with depressive type

symptoms. Other side effects such as anhedonia, akathisia and motor symptoms may also lead to the development of depression. However, although this may be the case in some people, evidence suggests that such theories are fundamentally flawed. For example Leff, Tress and Edwards (1990) produced evidence showing that depressive symptoms reduced, as neuroleptics were administered to reduce positive psychotic symptoms. Further studies of depressed psychotic people have not found the administration of neuroleptics to be a discriminating factor, Hirsch & Jolley (1989).

It has also been suggested that depression in psychosis is an erroneous concept that arises only as a result of there being a lack of complexity in the available diagnostic systems to provide a clear picture of the different disorders. For example Munro (1987) highlights three different ways in which errors occur in differentiating between affective disorders and schizophrenia: (a) 'mistaken identity', as affective and psychotic symptoms can be observed in both disorders; (b) "interbreeds" as some patients have a long standing mixture of psychotic and affective disorders; and (c) 'distinct syndromes' which resemble schizophrenia or affective disorder e.g. delusional disorder or brief reactive psychosis. Although this argument may provide an answer to the different stated incident rates for depression in psychosis, it is unlikely that diagnostic uncertainty is the whole explanation.

It has also been suggested that depression could be a reaction to the psychosis itself. Many people who experience psychosis find that their personal lives are effected hugely, commonly resulting in feelings of alienation and loss of self esteem. Roy, Thompson and Kennedy (1983) suggest that those people who suffer negative symptoms are at higher risk as these symptoms make continuing in their usual lifestyles very difficult, which may also lead to further adverse life events. Comparative studies of depressed and non depressed schizophrenic subjects have suggested that the

experience of psychosis is a major factor in the development of depression (Chintalapudi, 1993). Depressed psychotic subjects were found to have significantly longer duration of acute phase of psychosis, better pre-morbid adjustment, i.e. good social and sexual adjustment prior to onset of psychosis, and an excess of stressful life events.

In summary, depression in psychosis is not adequately explained by the more traditional theories presented above, although they may all contribute to the understanding of depression in individual cases. Rather, evidence from cognitive and psychosocial research may prove more useful as early work indicates that the individual perceives his or her psychosis as a major life event which carries with it many potential disabilities. It would appear that the conditions that are necessary for depression to arise in psychosis, relate to the psychological adaptation and appraisals an individual might make with regard to the experience of psychosis. Research which has investigated psychological appraisals involved with adaptation to psychosis and how they might link with depression, will now be considered in more detail.

5.3 Appraisals of psychosis and depression

Birchwood *et al.* (1993) investigated the relationship between personal reactions to psychosis and depression. Several researchers (e.g. Davidson & Strauss, 1992) have highlighted the importance of self image and identity as part of the process in adjusting to long term illness, which could then impact on the development of depression. Strauss & Estroff (1989) argue that as well as the illness itself and its controllability, there are several social or scientific beliefs associated with mental illness in the West, that provide a challenge to the individual's pre-morbid self image. These include: 1. that the person is the disorder (as implied by psychoanalytical theory) as

opposed to a person with a disorder; 2. that the illness is a social judgement, hence stigmatising; 3. that the mentally ill should be segregated or contained, and; 4. that mental illness and the capacity for independence are incompatible. It is argued that incorporation of these beliefs is likely to contribute to the development of depression.

Birchwood *et al.* (1993) attempted to explore these hypotheses by discerning a relationship between depression in chronic psychosis and (a) acceptance or rejection of the mental illness label, (b) perceived controllability of illness and (c) acceptance by the patient of these cultural stereotypes of mental illness. The reasoning applied to their study was that if such processes were relevant to the development of depression in schizophrenia, then they should contribute to the difference between depressed and non-depressed subjects. The main thread running through the results of this study is that people who were depressed tended to perceive their illness as outwith their control. This accounted for the statistical difference between the depressed group and the non-depressed group. The acceptance of the mental illness label was associated with lower perceived control over illness and an external locus of health control. Also, depression was associated with acceptance of cultural stereotypes of mental illness. These results are all correlational so it is acknowledged that it cannot be concluded that psychological factors are necessarily causal. Nonetheless these results do give some support to the theory that depression following an acute episode of psychosis, may be viewed as a psychological response (demoralisation) to an apparently uncontrollable life event (the psychosis) and all the associated disabilities.

Rooke & Birchwood (1998) in a follow-up paper go on to suggest that the application of 'ranking theory' to unipolar depression (Brown, Harris and Hepworth, 1995) is useful in providing a framework to help understand the link between psychosis and depression. This line of enquiry has clearly indicated that it is the appraisal of a life

event that is of primary importance, particularly where the event involves loss, e.g. of status or a cherished ideal, or threat, and its associated appraisal as humiliating or entrapping (a perceived loss of control). Whereas earlier cognitive theory implies that lowering of self regard has its origins in early development, more recent ideas based on social ranking and power from ethology (e.g. Price, Sloman, Gardner, Gilbert and Rohde, 1994), argue that some situations are likely to be depressogenic, including a direct attack on the individual's self esteem linked to the acceptance of a forced subordinate role (loss); events which undermine the persons rank, attractiveness or status (humiliation); and entrapment (loss of control) in a punishing situation or a disbelief in the ability to re-establish an identity or sense of belonging (entrapment or defeat).

Rooke & Birchwood (1998) go on to argue that, if mental illness is considered from the individual's perspective, psychosis is a major life event and can include appraisals involving all of the above elements. The onset of psychosis can limit achievement and activity in interpersonal areas resulting in loss of valued roles or goals; the social and cultural stereotypes of mental illness may be viewed as a direct attack on the individual's attractiveness and rank; and finally individuals may feel a loss of control with regard to their symptoms or in relapsing psychotic illness resulting in desired roles and goals being restricted and feelings of entrapment. It is therefore suggested that it is the appraisals of events which are vital to the development of depression in psychosis.

Rooke & Birchwood (1998) go some way to testing this theory out by following up a cohort of people with psychosis 2.5 years after initial assessments to determine: (a) the stability of depression and these key appraisals of psychosis, (b) whether any changes in depression are linked to changes in these appraisals and (c)

whether an individual's sense of entrapment in psychosis has any links with psychiatric management which could be considered disempowering and reinforcing of a sense of helplessness. The most striking of the results was that depression was extremely stable over the 2.5 year period, indeed the mean Beck Depression Inventory (B.D.I). scores had increased significantly from 19.6 (borderline depression) to 25.0 (moderate depression), indicating that a core group continue to be vulnerable to depression. Self ratings of loss of social role / autonomy and attribution for causality for illness were also fairly stable whereas those attributions regarding devaluation of self showed no stability at all. Entrapment (perceived loss of control) was only moderately stable, although the regression analysis indicated that the intervention of a compulsory admission impacted significantly on this appraisal, to the point at which the entrapment score at follow up was strongly predictable on the basis of a prior assessment of entrapment 2.5 years previously, in combination with information regarding compulsory admission. This supports the idea that sense of entrapment is linked to appraisal of events such as compulsory admission, in the context of this long term condition, the psychosis. Entrapment, a greater loss in employment status, high insight and loss of social role were found to be independently linked to depression when other factors involved in illness e.g. negative symptoms and delusions, were controlled for in analysis. Changes in appraisals of entrapment were also found to be important in tracking changes in depression.

The conclusion is reached that the link between psychosis - related events, in particular compulsory admission, and changes in entrapment, and events such as unemployment and later depression, indicate that depression in psychosis is rooted in the 'objective' realities of the illness. These could be construed as analogous to the life events which are identified in unipolar depression; but further that the individual's

appraisals present a further independent contribution. The authors state that they were left with the impression that these objective events were seen as hard evidence for these appraisals (Rooke & Birchwood, 1998).

The proposal is made that it is the events that are periodically involved in a long term difficulty such as psychosis (e.g. compulsory admissions, loss of job, persistent voices), that are appraised as signifying loss and entrapment and confirm the absence of a way forward in terms of core roles, relationships or autonomy. Such events are likely to confirm an individual's lack of belief in his/her ability to reaffirm a sense of identity and belonging (Price *et al.*, 1994) and to encourage engulfment in theidentity of a mentally ill individual as a defensive manoeuvre (Birchwood *et al.*, 1993).

5.4 Depression and hearing voices

In a related paper, Soppit & Birchwood (1997) investigated a number of factors, namely voice topography, positive symptoms, voice content and beliefs about voices, and their impact on depression in schizophrenia. The hypothesis was that people who experienced derogatory verbal hallucinations would more often be depressed and with greater severity than those who experienced non-derogatory hallucinations. It was also postulated that voice topography, positive symptoms and beliefs about voices would also be important in this process. Indeed results showed that depression is associated significantly with derogatory voice content in verbal hallucinators as 62 percent of this group were depressed. Also, those who believed that their voices were malevolent and / or had resistant coping strategies (which appear to be analogous to a sealing over recovery style) were significantly more depressed than those with benevolent voices and / or engaging coping strategies (which appear to be analogous to an integrative recovery style). The greater the voice intrusiveness and loudness, the more likely an

individual was to be depressed. Also, the greater the number of psychotic symptoms present, the greater the depth of depression.

There are several explanatory models offered for these findings. Firstly, certain specifics of voice content and topography may lead to distress and subsequent depression (Soppit & Birchwood, 1997). Secondly, the voices themselves may lead to beliefs about the identity, authority and power of the voices, which in turn may lead to distress and depression (Chadwick Birchwood, 1994). Thirdly, as direction of causality has not yet been established, it may be depression itself that generates negative voice content and related topography. Fourthly, researchers such as Benjamin (1989) argue that a cognitive formulation of depression in psychosis must consider life experience and resulting schemata. It could also be that critical life events trigger a negative appraisal of hallucinations which lead to symptoms of depression. Finally, there could be a neurobiological explanatory model whereby hallucinations themselves may originate from a mislabelling of negative automatic thoughts. McGuire, Silbersweig, Wright, Murray, Frackowiak and Frith (1996) suggest that auditory hallucinations may be the result of a disintegration of activity between areas concerned with the generation and monitoring of inner speech. Hence automatic thoughts may be mislabelled as alien and perceived as external voices. This highlights the need to screen for depression in people who experience derogatory voices and also shows a series of important bivariate relationships between the dependent variable of depression, and the independent variables of voice content, voice topography, beliefs about voices and positive symptoms, (Soppit & Birchwood, 1997).

5.5 Summary

In summary it appears that for people with psychosis, the appraisals made with regard to their condition generally, the specific symptoms they experience, and the associated events and stigmas which tend to surround mental illness, are extremely important in terms of ability to cope with illness. Avoidant coping strategies after psychosis, which are deemed to be comparable to a sealing over in recovery, appear to be correlated with depression. Entrapment or perceived control over illness is seen as a central appraisal which appears to link directly to ability to cope with mental illness. Low perceived control over illness appears to correlate with depression and poorer functional outcomes. The current study is an attempt to develop this area of enquiry in suggesting that avoidant, or sealing over, recovery styles after psychosis might be in part a response to experience of psychosis as traumatic, which might relate to appraisals of low perceived control over psychosis, which might lead in turn to perceived helplessness and subsequent depression.

6. Overview

Many people with psychosis continue to experience a range of what have been referred to as positive symptoms (e.g. delusions, auditory hallucinations, and paranoia), and also what have been referred to as negative symptoms (e.g. poor motivation, anhedonia, affective flattening). These symptoms may persist for many people with psychosis despite the use of neuroleptic medication. Consequently such residual symptoms can be extremely disruptive to normal functioning in many areas of everyday life from daily living skills, to the formation and continuation of social and personal relationships. Clearly such disruption can be extremely damaging to an individual's confidence and self regard and outcomes from psychosis are likely to be

dependent on the individual's adaptation to psychosis. One area which has been researched in relation to outcome after psychosis, involves the recovery styles people adopt after psychotic episodes. Distinct recovery styles of integration and sealing over after psychosis have been described by McGlashan (1975). Integration is described generally as the ability to see the continuity of mental experience before, during and after the psychosis and an interest in exploring and managing the condition and associated problems. Sealing over is characterised by the tendency to isolate self from the psychotic experience and avoidance of exploration or discussion about the condition. Research indicates that individuals who seal over are likely to have poorer functional outcomes and are more likely to be depressed than people who tend to integrate their psychotic experience. It is also recognised that these descriptions lie at opposite ends of a continuum and that individuals may fluctuate between integration and sealing over at different points over the course of their illness. However as there are known to be a significant minority of people who seal over in their recovery after psychosis and thus tend to have poorer outcomes, it was considered pertinent in the current study to explore possible reasons or psychological mechanisms which may underlie a sealing over recovery style.

In particular, sealing over appeared to be a similar construct to the avoidance component of post traumatic stress disorder (PTSD). PTSD can arise when a person is exposed to a situation or event that is perceived to be a threat to that individual's life or integrity. It is in part characterised by extreme avoidance of any discussion or reminder of the traumatic event, which appears to be a similar coping process to sealing over after psychosis. Further, it has been argued that for many people the experience of psychosis is a frightening and traumatic experience. This might relate to the traumatic effects of experiencing frightening psychotic symptoms, appraisals

relating to psychosis such as losing one's mind or being out of control, or possibly the experiences which might be associated with psychosis such as involuntary hospitalisation or involuntary sedation. It was therefore considered that sealing over as a recovery style after psychosis may be a coping style in response to a traumatic event, namely the psychosis.

It is common for people who present with PTSD to have considered the traumatic event they experienced to have been outwith their control. If, as suggested above, sealing over is a coping style in response to the trauma of psychosis, then it might be expected in a similar way to PTSD, that sealing over might be correlated with low perceived control over psychosis.

Further, research has also shown that people who have low perceived control over psychosis, are more likely to be depressed and have poorer functional outcomes. It has also been demonstrated that depression in psychosis when associated with hopelessness, is correlated with suicide which has a disproportionately large incidence in psychosis. It would therefore appear that appraisals associated with the experience of psychosis are correlated with depression and functional outcome. Further, depression is also often associated with PTSD and it therefore might be expected that depression may be correlated with experience of psychosis as a traumatic event.

The current study was therefore an attempt to explore four main areas relating to coping with psychosis. These areas are as follows: (a) to investigate the incidence of people experiencing psychosis as a traumatic event; (b) to explore the hypothesised link between sealing over as a recovery style after psychosis and experience of psychosis as a traumatic event; (c) to assess perceived control over psychosis as a further correlate of the experience of psychosis as traumatic and (d) to assess depression as a hypothesised consequence of the other factors described above.

The overall hypothesis of this study is as follows: sealing over as a recovery style after psychosis results from the trauma associated with the experience of psychosis. This being the case it is hypothesised that people who seal over will have low perceived control over psychosis and consequently will be depressed.

METHOD

SECTION B

DESIGN

1. **Subjects**

Thirty four subjects were recruited for this study all of whom had experienced an acute episode of psychosis requiring hospitalisation within the last year. Exclusion criteria were diagnoses of bi-polar disorder, psychotic depression and organic/drug induced psychosis.

Subjects were recruited in several ways. In an attempt to access appropriate referrals, the study was discussed with ten Consultant Psychiatrists A further six Consultant Psychiatrists and three Senior House Officers were contacted by telephone or in writing, and the project was also presented in four multi-disciplinary team meetings. Additionally subjects were identified through the acute admission wards and also through clinical records.

2. Measures

Four self report measures were completed by each subject and a further independently rated measure was completed by a professional who worked closely with each individual subject.

Self Report Measures

2.1 The Recovery Styles Questionnaire (RSQ), Drayton, Birchwood & Trower (1998). This measures subject's recovery styles after psychosis in terms of Integration and Sealing Over (see appendix 6). There are 39 items on this questionnaire, each

question requiring a simple yes/no response which will either suggest a tendency to integrate or seal over. Responses are then combined to give an overall score which indicates the degree to which an individual integrates or seals over after psychosis. A few examples of these questions are shown below:

"My illness has helped me to find a more satisfying life"

" I am not frightened of mental illness"

"My illness has had a strong impact on my life"

Positive responses to these examples would indicate a tendency towards integration recovery after psychosis.

In terms of test-retest reliability the authors report (r = 0.81), internal reliability (Chronbachs' alpha, = 0.73). Construct validity was established by comparison with the interview measure (McGlashan, 1987) yielding a correlation of r = 0.92, and classification concordance of 88% (Drayton et al, 1998).

2.2 Personal Beliefs about Illness Questionnaire (PBIQ), Birchwood et al (1993). This 16 item measure has five scales (see appendix 7). Each item contains a statement with four response options ranging from strongly disagree to strongly agree, numerically equating to scores of one to four. Total scores are then combined for each scale of the questionnaire.

Examples of the questions are: firstly, belief in 'self as illness' assesses the extent to which the subject believes the origins of their illness lies in their personality or psyche, for example:

"There is something about my personality that causes my illness."

Second, 'control over illness' assesses the extent to which subjects feel they have control over their illness, for example,

"I find it difficult to cope with my current symptoms"

Third, 'stigma' assesses whether subjects believe their illness is a social judgement on them, for example,

"I am embarrassed by my illness."

Fourth, 'social containment' assesses subjects belief in social segregation and control of the mentally unwell, for example,

"People like me must be controlled by Psychiatric services."

Fifth, 'expectations' assesses whether subject's feel illness affects their capacity for independence, for example,

"I will always need to be cared for by professional staff."

In terms of test-retest reliability the PBIQ was subject to psychometric analysis. The reliability of each sub-scale was as follows; control over illness 0.92, stigma 0.84, self as illness 1.00, social containment 0.77, expectations 0.81, n = 10, (Birchwood et al, 1993).

2.3 The Impact of Event Scale (IES), Horowitz et al (1979) was used to measure subjective stress resulting from exposure to a traumatic event in terms of two main components, avoidance and intrusions, which are characteristic experiences of people who suffer Post Traumatic Stress Disorder (PTSD). This 15 item measure was adapted (see appendix 3) by altering the wording of each question, to clarify that subjects should consider their recent psychosis as the pertinent stressful event when completing the questionnaire. For example from the intrusions sub-set of the IES question 1 states:

"I think about it when I didn't mean to"

This was adapted to:

" I think about having been ill when I don't mean to"

From the avoidance sub-set of the IES question 7 states:

"I stayed away from reminders of it"

This was adapted to:

"I stay away from reminders of my illness"

The reliability or validity of the adapted version of the IES was not assessed as this questionnaire can be used to measure any stressful event. The adaptations were slight and were only considered necessary for ease of administration. Horowitz et al, (1979) who wrote the original version of the IES report test-retest reliability of 0.87 for the total stress scores, 0.89 for the intrusion sub-scale, and 0.79 for the avoidance sub-scale. The validity of the scale was tested by administering this measure to 32 patients before and after brief therapy aimed at relief of their stress response syndromes. About 80% of these patients achieved beneficial improvements from therapy which were reflected in significant changes in IES scores. This supports the validity of this measure (Horowitz et al, 1979).

2.4 The Beck Depression Inventory (BDI), Beck et al (1974), was used to measure subject's levels of depression (see appendix 8). This 21 item inventory is one of the most common measures of depression and requires respondents to indicate how they have been feeling over the last week by circling one of four statements on each question. For example question one states:

0 I do not feel sad

1 I feel sad

2 I am sad all the time and I can't snap out of it

3 I am so sad or unhappy that I can't stand it

In terms of the stability of this measure, Lightfoot & Oliver (1985) reported a test-retest correlation of 0.90 over a two week interval with 204 undergraduates, suggesting that scores are stable over time for non patients.

There have been numerous studies of the construct validity of the BDI. For example the BDI has been found to be significantly related to the Symptom Checklist (SCL-90-R's Depression-Dejection scale (Derogatis, 1977) and Beck, Weissman, Lester and Trexler (1974) found that scores on the Hoplessness scale were positively related to the BDI in six normative samples. Full details of the validity of this measure can be found in the manual of the BDI, (Beck & Steer 1987).

2.5 The Integration / Sealing Over Scale (ISOS), McGlashan et al (1987), is an independent clinician's rating of recovery style which, like the RSQ, is scored on a six point continuum depending on the degree to which a subject integrates or seals over in their recovery after psychosis (see appendix 5). Professionals who referred subjects to the study or agreed to subjects being approached were asked to complete this measure. With the exception of four of the ISOS questionnaires, which were completed by Community Psychiatric Nurses, all were completed by Consultant Psychiatrists.

This measure has good reliability (intraclass correlation coefficient = 0.80, $p < 0.01$). Reliability was rated on 23 simultaneously interviewed patients (McGlashan, 1987).

3. Procedure

Subjects were interviewed either in their own homes, at the Clinical Psychology Department in Royal Cornhill Hospital (R.C.H.), or in interview rooms on acute wards at R.C.H., depending on individual preferences. Potential subjects were initially given an information sheet (see appendix 4) detailing the project and its purpose, which was

then discussed and any questions were answered. At this stage people were then asked if they would consider taking part in the study. Those who agreed completed a consent form (see appendix 2). Subjects were then asked to complete the self report questionnaires in their own time which took approximately 30 minutes.

4. Analysis

Variables measured

1. Integration/Sealing Over recovery style after psychosis (R.S.Q.).

2. Subjective stress in response to a traumatic event (I.E.S.), namely the psychosis.

3. Perceived control over psychosis, from the P.B.I.Q.

4. Levels of depression from the B.D.I.

5. Objective measure of Integration/Sealing Over from the I.S.O.S.

5. Hypotheses

1. That subjects' recovery styles after psychosis can be measured subjectively on a continuum previously described as the Integration/Sealing Over Scale (McGlashan, 1975). This was assessed using the R.S.Q.

2. That subjective measures of recovery style are not comparable to objective measures of recovery style, as assessed by close professionals. This was assessed by comparing R.S.Q. scores with I.S.O.S. scores.

3. That there are significant levels of subjective stress experienced by people who have psychosis. This was measured using the I.E.S.

4. That Sealing Over as a recovery style after psychosis reflects a response to the experience of psychosis as a traumatic event. This was assessed by comparing R.S.Q. and I.E.S. scores.

5.That Sealing Over, as a response to the trauma of psychosis, will therefore correlate with low perceived control over illness. This was considered by assessing correlation's between scores on the R.S.Q., I.E.S. and 'control over illness' scale of the P.B.I.Q.

6. That Sealing Over, as a response to the trauma of psychosis, and low perceived control over illness will therefore correlate with higher levels of depression. This was considered by assessing correlation's between scores on the R.S.Q., I.E.S., 'control over illness' scale of the P.B.I.Q., and the B.D.I.

6. Statistical Methods

Descriptive statistics, Correlational analysis, Independent samples T-Tests and Multiple Regression analyses were conducted.

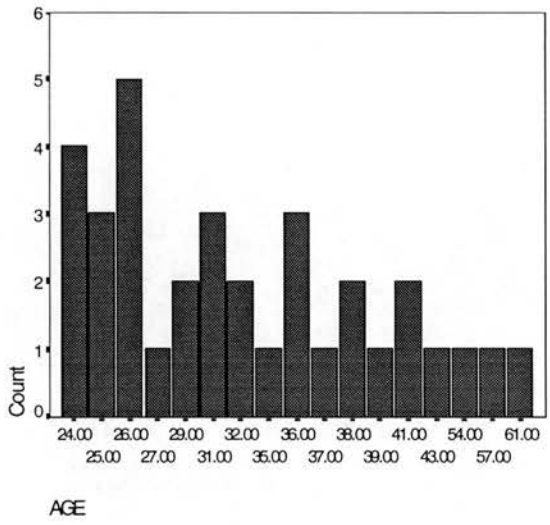
RESULTS

SECTION C

1. Demographics

Thirty four people took part in the study. The distribution of age in this sample can be seen in Figure 1 which indicates that the mean age of this sample was 33.4 years. The modal age of this sample was 26 and the median age was 31. Twenty five of the sample were male and ten were female. Twenty six people in this sample were single, five were married, one co-habited, one was divorced and one widowed.

FIG 1



1.1 Exploratory analysis

Exploratory data analysis was conducted and the data were found to be normally distributed and could thus be used for parametric statistical analysis. Details of the descriptive statistics can be seen in Table 1.

TABLE 1. Exploratory Data Analysis

VARIABLE	MEAN	STD. DEV.	SKEW.	KURTOSIS
AGE	33.4	9.5	1.4	1.784
DEPRESSION	13.1	9.8	0.566	-0.505
AVOIDANCE	20.1	4.7	-0.034	-0.833
INTRUSIONS	16.0	5.5	0.174	-0.790
CONTROL OVER ILLNESS	9.6	2.5	0.018	0.926
STIGMA	7.1	2.0	-0.122	-0.762
SELF AS ILLNESS	9.1	2.6	0.714	1.123
CONTAINMENT	1.0	1.0	0.896	0.153
EXPECTATIONS	6.5	2.2	0.178	-0.762

1.2 Descriptives

The main variables that were measured for this study are described below:

1.3 Recovery style

This was measured using the Recovery Style Questionnaire (RSQ) (Drayton et al, 1998). The total RSQ scores for the sample are shown in figure 4 with a mean score of 54.1. The distribution of scores in terms of their specific recovery style can be seen in figure 3 which shows that 2.9% were integrators; 35.3% tended toward integration; 42.2% showed a mixed picture with integration predominating; 20.1% showed a mixed picture with sealing over predominating.

FIG 2

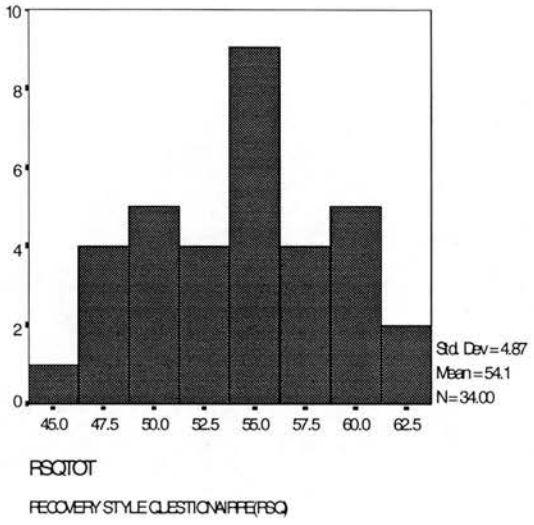
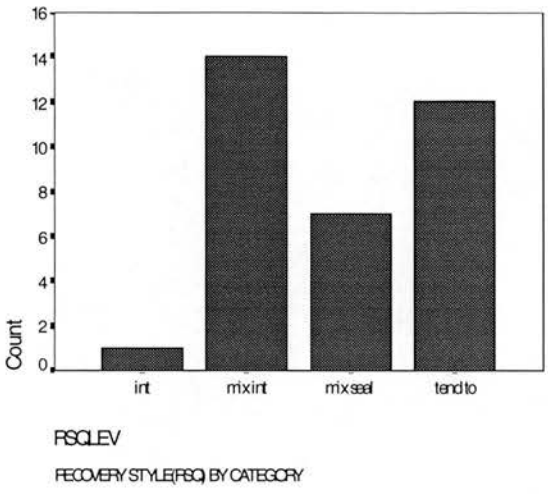


FIG 3



1.4 Personal beliefs about illness

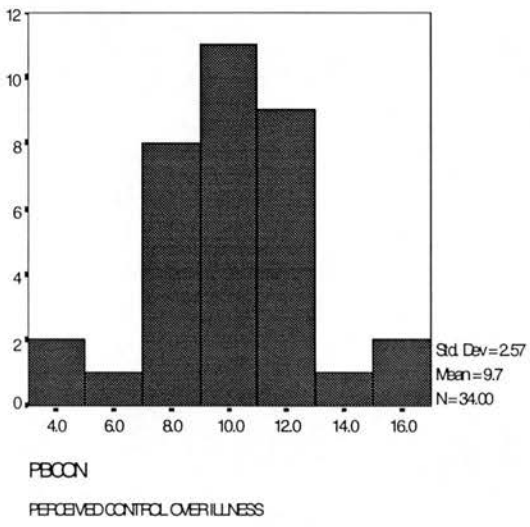
Personal beliefs about mental illness were assessed by using the Personal Beliefs about Illness Questionnaire (PBIQ)-Birchwood *et al.* (1993). The five sub-scales of the PBIQ (described in the Measures section) were considered in the analysis. Table 2 summarises the results of the PBIQ.

TABLE 2 Personal Beliefs About Illness

VARIABLE	MEAN	STANDARD DEVIATION
BELIEFS IN:		
CONTROL OVER ILLNESS	**9.7**	**2.57**
EXPECTATIONS	**6.6**	**2.29**
STIGMA	**7.2**	**2.10**
SOCIAL CONTAINMENT	**1.1**	**1.10**
SELF AS ILLNESS	**7.2**	**2.10**

For the purposes of the main hypotheses in this study the most relevant variable to be considered was Perceived Control Over Illness. Details of this variable are therefore described in figure 4.

FIG 4



1.5 Depression

Figure 5 shows the distribution of total depression scores for this sample from the Beck Depression Inventory (BDI) which indicates a mean depression score of 13.1. The scores on the BDI were then divided in terms of degree of depression using the BDI scoring criteria (see Figure 6) which indicates that 88.2% of the sample could be considered as having some degree of depression, from mild to severe. However if the cut off point of 15 is used, as is common with the BDI, 35.3% of the sample would be considered depressed.

FIG 5

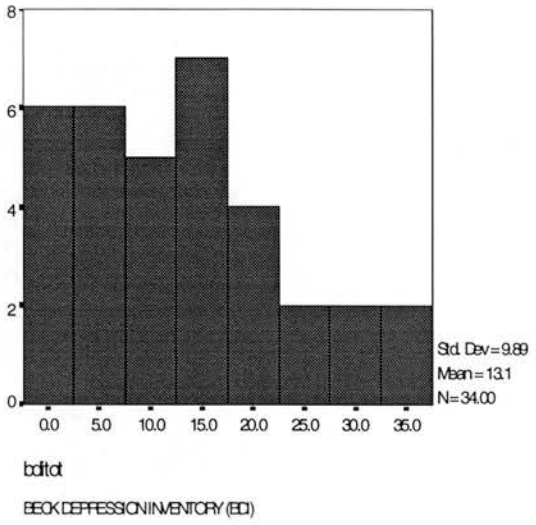
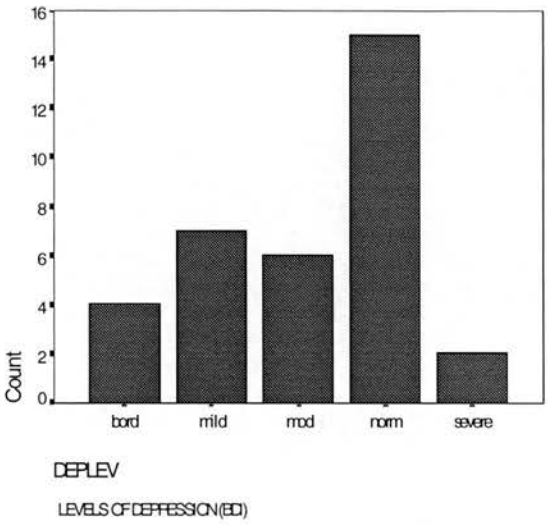


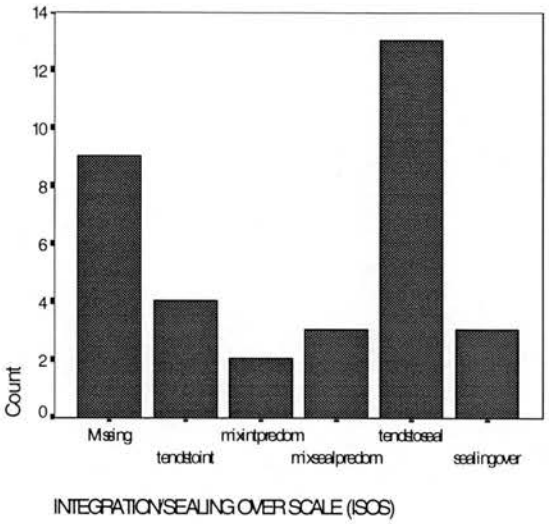
FIG 6



1.6 Recovery style – independent clinicians rating

Figure 7 indicates scores from the Integration / Sealing Over Scale (ISOS) which is a measure of subject recovery style as rated by an independent clinician. Only 25 of the ISOS ratings were returned. The distribution of those returned are shown in figure 7 and indicate that 16% were rated as tending toward integration; 8% were rated as showing a mixed picture with integration predominating; 12% were rated as showing a mixed picture with sealing over predominating; 52% were rated as tending toward sealing over; and 12% were rated as sealing over.

FIG 7



1.7 Traumatic impact of psychosis

The impact of psychosis on the individual was measured with the IES which has two sub-scales, avoidance and intrusions. Figures 8 and 9 indicate the total scores for avoidance and intrusions respectively.

FIG8

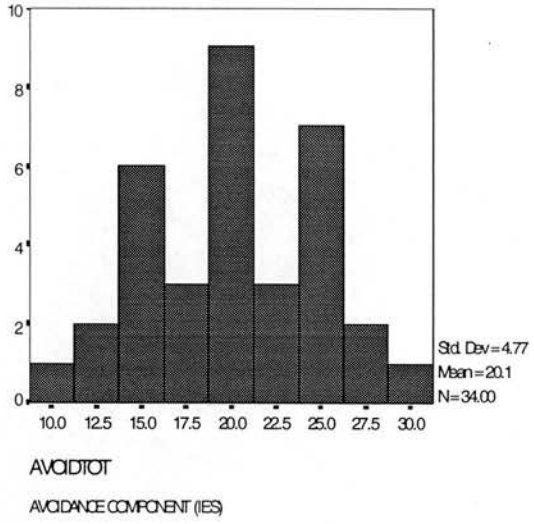


FIG 9

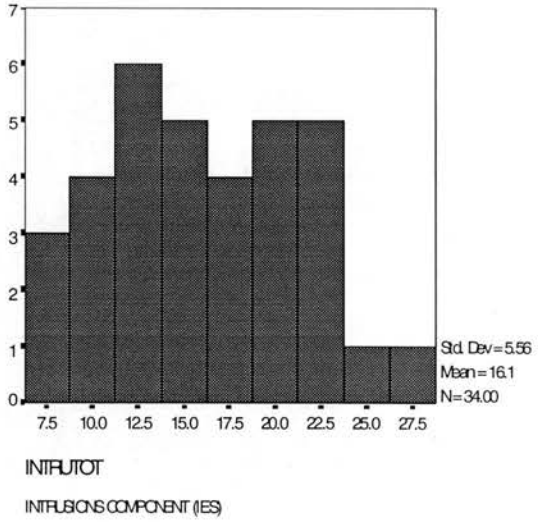


Table 3 shows the norms for the Impact of Event Scale (IES) as described by Horowitz et al, (1979) and also the mean scores for the IES from the present study.

TABLE 3. IES Norms and IES Scores from the Current Study

Medical Student Controls Subjects			**Post Traumatic Stress Disorder (PTSD)**	
	Men	**Women**		
Intrusions	**2.5**	**6.1**	**Intrusions**	**21.4**
Avoidance	**4.4**	**6.6**	**Avoidance**	**18.2**
Total	**6.9**	**12.7**	**Total**	**39.5**

Current Sample	
Intrusions	**16.1**
Avoidance	**20.1**
Total	**36.2**

An independent samples T-Test was carried out in order to ascertain if there were any significant differences between the PTSD group and the current sample. Results were as follows:

Intrusions **t = 0.104** **Avoidance** **t = 0.127**

Total IES scores **t = 1.245**

From this analysis it appears that none of the t values are significant which indicates that there is no significant difference between the two groups on measures of intrusions, avoidance or total IES scores (see appendix 1 for details of these

calculations). This suggests that the current sample was not significantly different from the PTSD group.

It would therefore appear from these results that for many people in this study the experience of psychosis was extremely traumatic, comparable to that of a Post Traumatic Stress Disorder (PTSD).

2. Correlative Data

2.1 Correlations relating to recovery style (RSQ)

As can be seen from Table 4 there was a low positive correlation between Recovery Style (RSQ) as measured from the subjects perspective and the independent rating of Recovery Style (ISOS). This suggests that these measures are reasonably reliable in measuring recovery style from both perspectives.

TABLE 4. Correlations Relating to Recovery Style

VARIABLE	N	PEARSON (r)	SIG.2-TAILED) (p)
ISOS	**34**	**0.474**	**< 0.05**

2.2 Correlations relating to depression

As can be seen from Table 5 there were several correlations relating to depression. Firstly, there was a moderate positive correlation between depression and perceived control over illness, suggesting that the less a subject perceived they had control over their illness, the more likely they were to be depressed.

Secondly, there was a moderate positive correlation between intrusions and depression, suggesting that the more a subject experienced Intrusions regarding their psychosis the more likely they were to be depressed.

Thirdly, there was a low positive correlation between expectations and depression, suggesting that the more a subject believed their capacity for independence was limited by their illness, the more likely they were to be depressed.

Fourthly, there was a low positive correlation between self as illness and depression, suggesting that the more a subject believed the origin of their illness lay in their personality or psyche, the more likely they were to be depressed.

TABLE 5. Correlations Relating to Depression

VARIABLE	N	PEARSON (r)	SIG. (2-TAILED) (p)
CONTROL OVER ILLNESS	34	0.693	< 0.01
INTRUSIONS	34	0.608	< 0.01
EXPECTATIONS	34	0.366	< 0.05
SELF AS ILLNESS	34	0.427	< 0.05

2.3 Correlations relating to perceived control over illness

As can be seen from Table 6 there were several correlations relating to perceived control over illness. Firstly, there was a moderate positive correlation between intrusions and control over illness, suggesting that the more intrusions a subject experienced, the less they perceived they had control over their illness.

Secondly, there was a low positive correlation between expectations and control over illness, suggesting that the more a subject believed that their capacity for

independence was limited by their illness, the more likely it was that they would have a low perceived control over illness.

Thirdly, there was a low positive correlation between self as illness and perceived control over illness, suggesting that the more a subject believed their illness was part of their personality or psyche, the more likely they were to have a low perceived control over illness.

TABLE 6. Correlations Relating to Perceived Control Over Illness

VARIABLE (p)	N	PEARSON (r)	SIG. (2-TAILED)
INTRUSIONS	**34**	**0.608**	**< 0.05**
EXPECTATIONS	**34**	**0.471**	**< 0.01**
SELF AS ILLNESS	**34**	**0.427**	**< 0.01**

2.4 Correlations relating to avoidance

As can be seen from Table 7 there was a moderate positive correlation between Stigmatisation and Avoidance, suggesting that the more subjects believed their illness is a social judgement on them, the more likely they would be to avoid issues relating to their psychosis.

TABLE 7. Correlations Relating to Avoidance

VARIABLE (p)	N	PEARSON(r)	SIG. (2-TAILED)
STIGMATISATION	**34**	**0.564**	**< 0.01**

2.5 Correlations relating to intrusions

As can be seen from Table 8 there was a moderate positive correlation between stigmatisation and intrusions, suggesting that the more subjects believed their illness is a social judgement on them, the more likely they were to experience intrusions relating to their psychosis.

TABLE 8. Correlations Relating to Intrusions

VARIABLE (p)	N	PEARSON (r)	SIG. (2-TAILED)
STIGMATISATION	**34**	**0.511**	**< 0.01**

3. Differences Between Groups (T-Tests)

3.1 Recovery style

For the purposes of this analysis the sample was initially divided into two groups; those scoring between 39 and 58.5 on the RSQ equating to a tendency toward Integration in recovery after psychosis and those scoring between 58.6 and 78 on the RSQ equating to a tendency towards sealing over in recovery after psychosis. This division mirrored the rationale used by McGlashan, (1987). However these groups were very unevenly split with only seven in the sealing over group and twenty five in the integration group (see Figure 3). As can be seen from Table 9 there were no significant differences between the two groups using this procedure.

TABLE 9 Independent Samples T-Test for Recovery Style

DEPENDENT VARIABLE – RECOVERY STYLE

INDEPENDENT VARIABLES	t	df	(p) sig (2 tailed)
AGE	0.498	32	0.622
SEX	0.053	32	0.958
DEPRESSION	0.380	32	0.707
CONTROL OVER ILLNESS	0.867	32	0.393
SELF AS ILLNESS	0.037	32	0.594
EXPECTATIONS	0.721	32	0.476
STIGMATISATION	0.854	32	0.7619
CONTAINMENT	0.539	32	0.594
AVOIDANCE	1.259	32	0.217
INTRUSIONS	1.958	32	0.059

As can be seen from table 9 none of the independent variables were significant in predicting differences between subjects tending toward sealing over and those tending toward integration. However it does seem that the intrusions variable was approaching significance, suggesting that had the sample been more evenly divided this variable may have been significant. It has also been suggested that recovery style can vary throughout the course of an episode of psychosis or between episodes (McGlashan, 1975). Taking this possibility into account along with the evidence of the variable of intrusions approaching significance, it was considered reasonable to take a median measure of this sample to allow further analysis.

An independent samples T-Test was then conducted to ascertain whether there was any difference between subjects tending toward integration and subjects tending toward sealing over having divided the recovery styles using the median score. Results indicated that there was one variable which significantly accounted for the differences between the two groups, namely intrusions (see table 10).

TABLE 10 Independent Samples T-Test Recovery Style (Median Measure)

DEPENDENT VARIABLE – RECOVERY STYLE

INDEPENDENT VARIABLE	t	df	(p) SIG (2 TAILED)
AGE	2.735	32	0.010
SEX	1.512	32	0.140
DEPRESSION	0.882	32	0.385
CONTROL OVER ILLNESS	0.595	32	0.556
EXPECTATIONS	0.074	32	0.942
STIGMATISATION	1.324	32	0.195
CONTAINMENT	0.934	32	0.357
SELF AS ILLNESS	0.508	32	0.615
AVOIDANCE	1.347	32	0.187
INTRUSIONS	2.035	32	0.050

The significant variables were therefore:

1. **Intrusions : t (32) = 2.035; p = 0.050, two tailed test.**

2. **Age : t (32) = 2.735; p = 0.010, two tailed test**.

These results suggest that:

1. There was a significant difference between the groups on the intrusions component of the Impact of Events Scale (IES), suggesting that those subjects who showed a tendency towards sealing over were significantly more likely to experience a greater number of intrusions than those subjects who showed a tendency toward integration.

2. There was also a significant difference between the groups with regard to the age of subject. This suggests that those subjects who showed a tendency toward sealing over were significantly older than the group who tended toward integration.

4. Multiple Regression

4.1 Predictors of recovery style

To ascertain which variables were significant in predicting recovery style, a multiple regression analysis was conducted with Recovery Style (RSQ) as the dependent variable (see table11).

TABLE 11 Multiple Regression Analysis

DEPENDENT VARIABLE – RECOVERY STYLE (RSQ)

INDEPENDENT VAR.	MULT. R	r^2	Final eq. Beta	t	p
INTRUSIONS	0.416	0.173	0.440	1.593	0.014
CONTROL OVER ILLNESS	0.462	0.213	0.654	2.087	0.217
AVOIDANCE	0.463	0.214	0.146	0.614	0.844
AGE	0.465	0.216	0.192	0.873	0.799
DEPRESSION	0.466	0.217	0.044	0.123	0.902
SEX	0.518	0.269	0.128	0.702	0.177
EXPECTATIONS	0.537	0.288	0.233	0.862	0.404
STIGMATISATION	0.547	0.299	0.141	0.497	0.543
CONTAINMENT	0.562	0.316	0.064	0.229	0.450
SELF AS ILLNESS	0.645	0.416	0.459	1.988	0.059

When the variables were removed in a hierarchical manner from the regression equation results indicated that intrusions were the only significant variable in the prediction of Recovery Style:

Mult. R	r^2	Final eq. Beta	t	p
0.416	**0.173**	**0.416**	**t = 2.257**	**0.014**

This suggests that the greater the level of intrusions a subject experienced relating to their psychosis, the greater the likelihood that they would tend towards sealing over in recovery after psychosis.

4.2 Predictors of clinicians' rating of recovery style

Independent clinician ratings of recovery style were also collected and it was therefore considered pertinent to ascertain if there were any differences between the variables which predict recovery styles from the RSQ and those which predict the independently assessed recovery styles (ISOS). A further multiple regression analysis was conducted, this time with the ISOS scores as the dependent variable. Results are shown in Table 12.

TABLE 12 Multiple Regression Analysis

DEPENDENT VARIABLE – INDEPENDENT RATING OF RECOVERY STYLE (ISOS).

INDEP. VAR	MULT R	Final Eq. Beta	r2	t	p
INTRUSIONS	0.013	0.143	0.000	0.419	0.950
AVOIDANCE	0.269	0.165	0.072	0.559	0.205
DEPRESSION	0.310	-0.191	0.096	- 0.431	0.463
AGE	0.317	-0.136	0.100	- 0.500	0.769
SEX	0.448	0.406	0.201	-0.500	0.138
CONTROL OVER ILLNESS	0.538	0.687	0.289	1.774	0.153
EXPECTATIONS	0.551	- 0.149	0.304	-0.446	0.559
STIGMATISATION	0.656	-0.603	0.431	-1.716	0.077
CONTAINMENT	0.667	- 0.152	0.445	-0.439	0.540
SELF AS ILLNESS	0.675	-0.152	0.456	-0.534	0.602

The variables were again removed from the regression equation in a hierarchical manner finally indicating that none of the variables measured in this study were significant predictors of the independently rated recovery style (ISOS) scores.

4.3 Predictors of depression (BDI)

As depression was one of the main variables of interest in this study and was found to be prevalent within the current sample, it was decided to assess which of the other variables measured were predictive of depression. A multiple regression analysis was therefore carried out with depression as the dependent variable. Results are shown in Table 13

TABLE 13 Multiple Regression

DEPENDENT VARIABLE-DEPRESSION

INDEP. VAR.	MULT.R	r2	Final Eq. Beta	t	p
AGE	0.378	0.143	-0.183	-0.906	0.062
SEX	0.379	0.143	-0.094	0.542	0.908
CONTROL OVER ILLNESS	0.741	0.549	0.623	2.315	0.000
SELF AS ILLNESS	0.742	0.551	0.056	0.254	0.789
STIGMA	0.746	0.556	-0.373	-1.401	0.636
EXPECTATIONS	0.769	0.591	-0.095	-0.386	0.233
AVOIDANCE	0.793	0.629	0.276	1.343	0.202
INTRUSIONS	0.830	0.688	0.430	1.731	0.101
RECOVERY STYLE (RSQ)	0.830	0.688	0.090	0.427	0.988
RECOVERY STYLE (ISOS)	0.842	0.708	-0.207	-0.973	0.347

Variables were removed from the regression in a hierarchical manner and results indicated that age, perceived control over illness, avoidance and intrusions were significant in predicting depression in subjects recovering after psychosis (see below).

VARIABLE	MULT R	r2	Final Eq. Beta	t	p
AGE	0.378	0.143	-0.160	-1.305	0.028
CONTROL OVER ILLNESS	0.741	0.549	0.577	4.788	0.000
AVOIDANCE	0.784	0.615	0.150	1.214	0.030
INTRUSIONS	0.811	0.657	0.272	1.888	0.069

These results suggest firstly, that the younger a subject was in this study, the more likely they were to be depressed.

Secondly, the less control subjects perceived they had over their psychotic illness, the more likely they were to be depressed.

Thirdly, the more subjects avoided issues relating to their psychosis, the more likely they were to be depressed.

Finally, the more intrusions relating to psychosis, a subject experienced the more likely they were to be depressed.

5. Summary of Findings

It seems that for many subjects in this sample the experience of psychosis was extremely traumatic. This was indicated from the high mean scores on both the **Avoidance** and the **Intrusions** components of the Impact of Events Scale (IES). The mean scores from the current sample are comparable to those which are predictive of Post Traumatic Stress Disorder (PTSD). It was also found that both **Avoidance** and **Intrusions** were correlated with the **Stigmatisation** sub-scale of the Personal Beliefs About Illness Questionnaire (PBIQ). This suggests that the more subjects believed that that their psychosis was a **Social Judgement** on them, the more likely they were to be **Traumatised** by their illness.

Intrusions were also found to be linked with **Recovery Style**. Subject **Recovery Styles** after psychosis were grouped into those tending toward **Integration** and those tending toward **Sealing Over**. Results indicate that these groups were differentiated by the incidence of **Intrusions**, suggesting that the more a subject

experienced **Intrusions**, the more likely they were to tend toward **Sealing Over** in their recovery after psychosis.

Further, the **subject rated** measure of **Recovery style** from the **RSQ** was found to correlate with the **independent rating** of **Recovery Style** from the **ISOS**, indicating that there was no significant difference between the subject ratings and the independent ratings of recovery style.

There was also a significant incidence of **Depression** in the current sample. The most powerful predictor of **Depression** was found to be **Perceived Control Over Illness** which suggests that the less a subject perceived that they had **Control Over** their psychotic **Illness**, the more likely they were to be **Depressed**. Also **age** was found to be a significant predictor of **Depression** indicating that the younger subjects were in this study the more likely they were to be depressed. Also both the **Intrusions** and **Avoidance** components of the Impact of Events Scale (IES) were predictive of **Depression**, suggesting that the more subjects experienced intrusions relating to their psychosis, or avoided issues relating to their psychosis, the more likely they were to be depressed. In considering the IES as a measure of trauma it might be considered that therefore that the more traumatised people were by their psychosis the more likely they were to be depressed.

Correlative evidence also suggested that the **Expectations** and **Self as Illness** sub-scales of the PBIQ were also linked with **Depression**. These links may suggest that the more subjects believed that their **Capacity for Independence** was limited by their psychosis, the more likely they were to be **Depressed**, and also that the more subjects believed that the origin of their illness lay in their **Personality or Psyche** the more likely they were to be **Depressed.**

Finally there is correlative evidence to suggest that **Intrusions** were also linked to **Perceived Control Over Illness**, suggesting that the more subjects experienced **Intrusions** relating to their psychosis, the less they were likely to **Perceive Control over** their psychotic **Illness.**

DISCUSSION

SECTION D

1. Review of hypotheses

1. That subjects recovery style after psychosis can be measured subjectively. This was done by asking subjects to complete the Recovery Styles Questionnaire (RSQ), Drayton *et al.* (1998). The purpose of this questionnaire is to identify recovery style on the continuum from sealing over to integration as described by McGlashan (1975).

2. That subjective measures of recovery style are not comparable to objective measures of recovery style. This was done by asking a professional, usually a psychiatrist, who knew the subject well, to make an independent rating of integration and sealing over using the Integration / Sealing Over Scale (ISOS) devised by McGlashan (1987). The idea was to compare these independently rated measures of integration and sealing over with the subject rated measure, the RSQ.

3 That there are significant levels of subjective stress experienced by people who have psychosis. This was done by asking subjects to complete an adapted version of the Impact of Event Scale (IES), which is a measure of subjective stress used in the prediction of Post Traumatic Stress Disorder (PTSD).

4. That Sealing Over as a recovery style after psychosis reflects a response to the experience of psychosis as a traumatic event. Correlation's between sealing over (RSQ) and high levels of subjective stress (IES) were therefore predicted.

5. That Sealing Over, as a response to the trauma of psychosis, will therefore correlate with low perceived control over illness. Correlation's were therefore predicted between scores on the R.S.Q., I.E.S. and 'control over illness' scale of the P.B.I.Q.

6. That Sealing Over, as a response to the trauma of psychosis, and low perceived control over illness will therefore correlate with higher levels of depression. Correlation's were therefore predicted between scores on the R.S.Q., I.E.S., 'control over illness' scale of the P.B.I.Q. and the B.D.I.

Each of the hypotheses will be considered in turn in light of the results, before a discussion of the implications of the findings from this study.

2. <u>Examination of hypotheses in light of results</u>

1. Results from the RSQ indicated that the subjects who agreed to take part in this study were mostly those who could be considered to tend toward an integrative recovery style after psychosis. Only 20 percent of subjects could be considered to have a tendency toward sealing over after psychosis.

It was therefore unfortunate from the point of view of this study that so few subjects who took part could be described as tending toward sealing over in their recovery style. Given the small size of this sample, this is perhaps not surprising. Also, people who tend to seal over in recovery after psychosis, are by definition likely to avoid exploration or discussion of their illness. It is therefore probable that those who seal over are less likely to take part in this type of research voluntarily. People who tend to seal over after psychosis may have constituted at least some of the large number of subjects, (approximately 40) who were contacted, but declined to take part in the project during the data collection period. The RSQ was therefore successful in identifying distinct recovery styles after psychosis, but the current sample did not provide sufficient numbers of people who tend towards sealing over in recovery after psychosis.

2. The independently rated measure of recovery style (ISOS) was compared with the subject rated measure of recovery style (RSQ). It was found that the scores from these measures were correlated, and were not significantly different. This suggests that the independent raters, who were nearly all psychiatrists, were able to assess recovery style reliably, paralleling the recovery style information taken from the subjects' self report questionnaire (RSQ).

The RSQ was replaced with the ISOS in the multiple regression analysis in order to determine whether there were any differences between the variables which predicted each measure of recovery style. Results showed that there were no variables which significantly predicted recovery style from the ISOS, thus conclusions cannot be drawn regarding possible factors influencing these different measures of recovery style.

3. Assessment of the traumatic impact of psychosis, using the Impact of Events Scale (IES), indicated that a large proportion of the subjects used in this study appeared to have found the experience of psychosis to be very traumatic. Results indicated that most of the sample scored much higher on the IES compared to normal controls, and indeed statistical analysis indicated that the scores from the current study were not significantly different from those which are considered predictive of Post Traumatic Stress Disorder (PTSD). Generally it can be concluded that the experience of psychosis appears to have been traumatic for significant proportion of the people in this study.

4. Investigation into possible links between recovery style and the traumatic impact of psychosis, revealed that there were no significant associations between recovery style and total measures of trauma. The measure stress response to trauma that was used in this study was the Impact of Events Scale (IES) which has two components, avoidance and intrusions. Further analysis indicated that the intrusions sub-scale of the

IES was a significant predictor of recovery style. This suggests that the higher the levels of intrusions in relation to psychosis experienced by subjects in this study, the more likely they were to tend towards sealing over in their recovery style after psychosis. There are problems of cause and effect with this interpretation which will be considered later, however it can be concluded that although overall trauma scores were not significantly linked to recovery style, subjects who experienced higher levels of intrusions were more likely to tend toward sealing over in their recovery style.

5. Perceived control over illness was not found to link significantly with either recovery style or experience of psychosis as a traumatic event. However perceived control over illness was found to be the strongest predictor of depression in this study. This suggests that the lower the subject's perceived control over their psychotic illness, the more likely they were to be depressed.

6. A significant number of the subjects in this study were found to have some degree of depression. Depression was not found to relate to recovery style after psychosis. However depression was predicted by both the intrusions and the avoidance components of the IES. This suggests that the more traumatic the experience of psychosis, the more likely subjects were to be depressed. Further, as stated earlier, perceived control over illness was found to be a strong predictor of depression, indicating that subjects who had lower perceived control over their psychosis were more likely to be depressed. Age was also found to be a significant predictor of depression in this study, indicating that the younger the subjects, the more likely they were to be depressed. Finally, there was also evidence from correlational analysis which indicated that expectations and self as illness components of the PBIQ were related to depression. This would suggest that the more subjects expected their capacity for independence to be limited by their illness, or that their psychosis was pert

of their personality or psyche, the more likely they were to be depressed. As direction of causality cannot be assumed from simple correlations such as these, it is also possible that these negative beliefs could be a consequence of being depressed rather than necessarily preceding depression.

More detailed interpretation of these results and their possible implications is discussed in the following section.

3. Implications of the Results of this Study

3.1 Recovery style

As stated earlier, recovery styles of the subjects in this study were not very evenly distributed using the categorisation described by McGlashan *et al.*(1975). Most subjects presented with recovery styles which indicated a tendency toward integration. Only 20 percent of subjects could be described as tending toward sealing over in their recovery style. Given that one of the main aims of this study was to investigate possible links between sealing over and the other variables that were measured, it was clear that this method of identifying distinct integration and sealing over recovery styles did not provide a sufficient sample of sealing over subjects to allow further useful analysis.

It is known that recovery style can vary over the course of a single episode of psychosis and also from one episode to the next, McGlashan *et al.* (1975). It was therefore considered that those subjects in this study who showed some tendency towards sealing over, might at some stage be more likely to develop this tendency during their recovery or during a future episode. It was thus decided to divide the current sample in terms of the median score, which would provide a group tending

toward integration and a group tending toward sealing over. These groups could then be used for further comparative analysis.

Using this criteria, the results indicated that there was only one variable, namely the intrusions component of the IES, which was significantly predictive of recovery style. This suggests that the higher levels of intrusions experienced by subjects with regard to their psychosis, the more likely they were to tend towards sealing over in their recovery style. The influence of intrusions was the strongest theme running throughout the results of this study. Intrusions were predictive of recovery style and depression and were also correlated with perceived control over illness. The nature and relevance of intrusions in the context of this study, is considered in the next section.

3.2 Recovery style and intrusions

Intrusions, were the main variable which predicted recovery style in this study. Generally it appears that the more subjects experienced intrusions relating to their psychotic experience, the more likely they were to tend toward sealing over in their recovery style after psychosis.

However the significance of intrusions in predicting recovery style requires some further consideration. The main difficulty in the interpretation of this information involves the definition of sealing over. Sealing over is defined as an active avoidance of any reminders, discussion or exploration of the psychotic experience. It is also known that avoidance can serve to maintain intrusions. Thus it is very difficult to know whether intrusions precede sealing over or whether sealing over precedes the experience of intrusions. This quandary is considered by Wegner (1994) in his discussion of what he describes as the ironic processes of mental control.

Ironic process theory holds that processes which undermine the intentional control of mental states are inherent in the process of attempting such control. The theory states that attempts to influence mental states require monitoring processes that are sensitive to the failure of these attempts, and that these processes act subtly yet consistently in a direction precisely opposite to the intended control. This means that when efforts to implement the intended mental control are undermined in any way, the monitoring process surfaces and ironically overwhelms the intended control, to produce the opposite of the mental state that is desired (Wegner, 1994).

The theory of ironic processes suggests that the central variable dividing successful control from ironic effects is the amount of mental capacity that the individual has at any one time. Thus the operation of mental control is often successful when there is adequate mental capacity to achieve control. When mental capacity is reduced for reasons such as distraction, cognitive load, stress or time pressure for example, the intended control does not just reduce to a level where the attempt at control is unsuccessful. Rather, attempts at mental control undertaken at a time when an individual is under mental load will often produce ironic effects. The results go beyond unsuccessful control of mental states to produce mental states that become the opposite of what is desired. Desired happiness becomes sadness, desired relaxation becomes anxiety, desired interest becomes boredom, desired love becomes hate, and so on, (Wegner, 1994).

Further, this theory predicts that for normal and successful mental control to occur, two processes must work together to achieve desired mental states: an intentional operating process that searches for the mental contents that will produce the desired state and an ironic monitoring process that searches for mental contents that signal the failure to achieve the desired state. So for instance, when a person is

trying to be happy, the operating process searches for mental contents pertinent to happiness, whereas the monitoring process searches for mental contents that indicate that happiness has not been achieved. Whereas the operating process is effortful and consciously guided, the monitoring process is usually unconscious, autonomous and less demanding of mental effort.

Therefore if attempts at mental control can result in the exact opposite of the intended effect, it is useful to consider the conditions that predict such ironic effects. Predictions of ironic effects can be based on an understanding of (a) the role of intention to control, (b) the controllability of specific mental states, (c) the role of effort in the balance between the operating and monitoring processes, and (d) the range of the searches undertaken by the processes. These will be considered in turn.

(a) The individual must be attempting control. Thus, the subject must not only want to control a mental state but must, in fact be implementing the control.

(b) Controllability is a key precondition for the occurrence of ironic effects. As the ironic monitor also has its effects by guiding attention, and attention in the desired direction is useless, then attention in the opposite direction is also likely to be useless. There are many mental control tasks which are so difficult that no amount of mental capacity devoted to an operating process can produce the desired state of mind. For example trying to make oneself smart or creative or healthy may not work no matter what the mind does, or for how long (Wegner, 1990).

(c) The operating process typically requires more effort than the monitoring process, so any competition from additional sources is more likely to undermine the operating process than the monitoring process. Cognitive load in the form of concurrent tasks or time pressure will have this effect, as will a variety of affective and stress related preoccupations (Gilbert,1991). The theory then predicts that once mental

control has been found to be effective in one domain, an increase in mental load will shift the balance of the mental control processes away from the operating processes and toward the ironic monitor. This causes the activation of ironic processes, resulting in effects opposite to those intended.

(d) The operating and monitoring processes search for complementary ranges of input: anything that is not the target of the operating process indicates failure of the operating process and should be monitored. The two search processes are typically different in that one searches for positive mental processes, and the other searches for negative mental processes. This distinction is important because feature positive searches are far easier than feature negative searches, Newman, Wolff & Wearst (1980).

The theory of ironic processes in mental control will now be considered in the context of the results of the current study.

3.3 Ironic processes relating to the experience of psychosis

If this theory is considered in the context of the current study it might be predicted that sealing over or avoidance of any reminder or exploration of the psychotic experience, may be an attempt to keep control of distressing or unpleasant memories or reminders of the psychotic experience. In this way intrusions relating to the experience of psychosis are attempted to be controlled through sealing over, but ironically are maintained by just this process.

The process of trying to control intrusions in this way would involve the conscious use of the operating process in an attempt to find ways of avoiding the intrusive material. Further, it might easily be considered that an individual who has recently experienced a psychosis is likely to be under great mental stress, having had to

contend with a huge mental load in the form of the psychotic experience. Under such conditions it is likely that the unconscious monitoring system would be activated and would search for failures to control the intrusive material, and ironically induce and maintain intrusive phenomena.

In terms of the conditions that are necessary for ironic processes to take place, the aftermath of a psychosis would seem to be a very suitable context in which ironic processes would be likely to occur. In the period of recovery after psychosis it is likely that people would attempt to control intrusive material as, in many cases, people find the experience of psychosis distressing or unpleasant, as indicated by the high stress response scores in this study. Also, subjects in this study would appear to have been actively implementing control, given the high avoidance scores on the Impact of Event Scale (IES) which were correlated with the high incidence of intrusions. Further, it is likely that avoidance strategies would be a feasible method of controlling distressing mental images or memories. Avoidance is considered, under normal conditions to be a functional coping strategy that can be employed in the control of memories or images of traumatic events, (e.g. Horowitz *et al.,* 1979).

It seems that the experience of psychosis can put an individual under extreme mental stress. This may then cause an excess of pressure on mental load, which potentially shifts the balance from the operating system towards the monitoring system, thereby exacerbating and maintaining intrusive experiences.

It therefore seems that the theory of ironic processes of mental control may be helpful in understanding the experience of intrusions and their relation to avoidant or sealing over recovery styles. It seems likely that in the process of trying to control disturbing intrusive memories or images relating to the experience of psychosis, people in this study may have adopted avoidant coping strategies which have had the opposite

of the intended effect and served to reinforce and maintain the intrusive material. This may help to explain why in the current study, intrusions were predictive of a tendency to seal over in recovery after psychosis. The possible nature of the intrusions people appear to experience after psychosis has not yet been discussed. The following section attempts to consider the nature of these intrusions in the context of stress responses to the trauma of psychosis.

3.4 Recovery style and trauma after psychosis

It would appear from the results of this study that a considerable number of subjects found the experience of psychosis to be very traumatic. A large proportion of the sample scored well above normal levels on the intrusions and avoidance sub-scales of the Impact of Event Scale (IES). Also, statistical analysis indicated that there was no significant difference between the scores on the IES for a PTSD sample (Horowitz *et al.*, 1979) and the scores on the IES from the current sample. This suggests that for many people in the current study the stress experienced through psychosis was comparable to that which is predictive of Post Traumatic Stress Disorder (PTSD). There is then, little doubt that the experience of psychosis can be extremely distressing, stressful and traumatic for many people. Whether the results of this study indicate that PTSD is a comorbid problem alongside psychosis is less clear. This possibility will now be considered.

Post Traumatic Stress Disorder (PTSD) is characterised by response to a traumatic event that is expressed in two predominant phases: the intrusive state, characterised by unbidden ideas and feelings and even compulsive actions, and the denial state, characterised by emotional numbing and constriction of ideation (Horowitz, 1993).

Intrusions can be considered as the re-experiencing of the traumatic event in the form of images, thoughts, perceptions or dreams of the trauma and are considered to be the hallmark of PTSD (Calhoun & Resick, 1993). These intrusions cause significant distress and interfere with the individual's functioning. Most authors agree that the perceived unpredictability and uncontrollability of the traumatic event is the key factor in the development of PTSD (Foa, Zinbarg & Rothbaum, 1992). Evidence suggests that people who develop PTSD tend to attribute the trauma to more internal causes than traumatised individuals who do not develop PTSD. Also, individuals with PTSD generally show a tendency to attribute positive outcomes to external sources. The coping strategies employed may be an important variable in outcome after trauma. Active problem solving strategies seem to be most favourable in terms of outcome, whereas avoidance orientated strategies seem to be linked with poorer outcomes. There is however, general agreement that re-experiencing trauma is necessary for emotional processing (Rachman, 1990) and is therefore to be expected in all individuals for a period after the traumatic event. Intrusive memories persist if emotional processing is prevented or incomplete due to avoidance strategies (Horowitz, 1976, Foa, Steketee & Rothbaum, 1989). Avoidance and numbing are viewed as functional control strategies that prevent the individual from being overwhelmed by intrusive memories. There has also been evidence to show that intrusions precede avoidance.

In a 14 month prospective study of 158 people who were exposed to a multiple shooting in their office building, Creamer, Burgess & Pattison (1990) found that intrusions predicted avoidance, but not vice versa, at all points of measurement after the trauma (4, 8 and 14 months). Research has also indicated that it is intrusions and not avoidance that are linked to psychiatric impairment approximately one year after

traumatic events, (McFarlane, 1992). It has also been found that intrusions do not always correlate with avoidance over time, which has led some authors such as (McFarlane, 1992) to suggest that there may be other factors apart from intrusions that may influence avoidance behaviour. Recent work on the role of intrusions in PTSD has found that it is not the frequency of intrusions that is predictive of PTSD but rather the distress that is associated with the intrusive recollection that is significant. It is therefore proposed that the idiosyncratic meaning of intrusions leads to distress and subsequent maintenance of intrusions (Ehlers & Steil, 1995).

In terms of the current study, many subjects experienced high levels of intrusions in their recovery after psychosis, and these intrusions were predictive of a tendency towards sealing over. This would seem to fit with the PTSD model in terms of intrusions being predictive of avoidance. It would appear that the experience of intrusions was predictive of sealing over or avoidance but not vice versa which suggests that subjects were likely to experience intrusions prior to employing avoidance strategies in recovery after psychosis.

It may be that in the context of the idiosyncratic meaning that is attached to the experience of intrusions, the correlational evidence from this study is useful in assisting the identification of links between the intrusions and other variables.

From the results of this study intrusions are correlated with perceived control over illness and depression, and perceived control over illness is in turn is predictive of depression. It is suggested therefore, that in recovery after psychosis, subjects who experience high levels of intrusions regarding their psychotic experience, are likely to attach idiosyncratic meanings or appraisals to these intrusive experiences. It is postulated that these appraisals, at least in part, may relate to perceived control over illness. If an individual experiences distressing intrusions relating to their psychosis,

they may link these intrusions to their experience of psychosis, thereby evidencing beliefs relating to low control over psychotic illness. This may result in further negative appraisals such as fear of relapse into psychosis which may cause symptoms such as anxiety and hyperarousal. In an attempt to cope with the intrusions, people are likely to avoid or seal over in their recovery after psychosis. Although direction of causality cannot be assumed from the kind of data presented here, this description offers some understanding of how these variables may link. This may then provide a rationale for the creation and implementation of possible intervention paradigms. Such possibilities will be considered later in section 6.

Perhaps, then, it is important for clinicians to consider the possibility that people with psychosis may experience intrusions which relate to the trauma of psychosis. Careful assessment of the idiosyncratic meaning attached to these intrusions may be potentially very important to therapeutic interventions that are designed to reduce the traumatic effect of psychosis, and encourage control over psychotic illness. From this study, one such appraisal related to psychosis that is correlated to incidence of intrusions, is perceived control over illness. Intrusions in this study were linked to subjects' experience of psychosis, which may then be appraised as signifying a low perceived control over illness. Assuming intrusions are very distressing to most people, it is likely that they will adopt avoidance strategies, or a sealing over recovery style, as a way of coping with the experience. It might be predicted that if such avoidant strategies prevail, and are not approached therapeutically, the intrusions may well persist. McGorry (1991) considers that persistence of stress responses to the experience of psychosis may result in the development of an unrecognised PTSD which is co-morbid to the psychosis. As Stampher (1990) notes, this is particularly

significant as negative symptoms in psychosis are notoriously pervasive and tend to be very resistant to pharmacological interventions.

It is acknowledged that it is not possible to know whether the intrusions that were measured in the current study were pathological or not, as all people in this sample were studied within a year of their most recent psychosis. This does not provide enough evidence to suggest PTSD, as the intrusions and avoidance aspects of PTSD must persist for a considerable length of time (six months) after the traumatic event, in order to fulfil diagnostic criteria for PTSD. Such measures were not taken in the current study. Nor were the possible cumulative effects of multiple episodes of psychosis considered. Nonetheless it is clear from this study that for many people the experience of psychosis was extremely traumatic.

There at least appears to be enough evidence of the impact of psychosis from these results, to encourage further research into psychological adaptation to psychosis in this area. Depression was also found to be prevalent in this study and was predicted by both intrusions and avoidance. It may be that depression is the affective component of PTSD. However, this does not consider in psychological terms, how intrusions and avoidance as a result of the trauma of psychosis, may relate to depression. The next section discusses these issues.

4. <u>Depression and Psychosis</u>

Results show that 88.2 percent of the current sample could be considered to have some degree of depression as measured from the Beck Depression Inventory (BDI). If the commonly used BDI cut off point of 15 is used, 28.3 percent of the sample in this study could be considered depressed. This compares with other studies using similar samples which used the BDI as a measure of depression in psychosis -

e.g. Birchwood *et al.* (1993) found 28.6 percent of their sample were depressed and Johnson (1981) reported 26 percent of a similar sample were depressed. It would therefore seem that a significant proportion of the subjects in this study were depressed.

Further analysis indicated that two variables correlated with depression; expectations and self as illness, suggesting that the more subjects considered that their capacity for independence would be limited by their illness, or believed that their illness was part of their personality or psyche, the more likely they were to be depressed.

Subjects were then divided into two groups, using the cut off score of 15 on the BDI to indicate a depressed and non-depressed group. T - Test analysis indicated that, self as illness, and perceived control over illness from the PBIQ, as well as the intrusions component of the IES, were all significant variables indicating differences between the depressed and non-depressed groups.

Further analysis using the multiple regression procedure found that the strongest predictor of depression was perceived control over illness. However, avoidance, intrusions and age were also significantly predictive of depression.
In terms of age, the younger the subject, the more likely they were to be depressed. This might relate to the relative length of time younger subjects had been living with psychosis, compared to older subjects. It may be that younger subjects had not come to terms with the knowledge that they had a psychotic disorder, and understandably may have been highly concerned about their future in the context of living with a condition that can be extremely debilitating. Depression could quite easily be understood in these circumstances.

Intrusions and avoidance were also found to be strong predictors of depression in this study. It may be that the incidence of depression may best be understood as a

consequence of the experience of a traumatic event, in this case psychosis. However it is unlikely that the trauma of psychosis itself that causes depression. Rather it is proposed that psychotic symptoms or stress symptoms in response to psychosis, may be mediated by a process of appraising the meanings of these events. It is suggested that these appraisals are likely to dictate whether the experience of psychosis is traumatic or depressogenic. Evidence for this proposal comes from other results from this study which indicated that perceived control over illness was a powerful predictor of depression in this sample of people who were recovering after psychosis.

Perceived control over illness is a psychological appraisal of psychosis which has been demonstrated to predict depression in people with psychosis (Birchwood *et al.*, 1993). Birchwood et al (1993) concludes that depression in psychosis represents at least in part, a psychological response to an apparently uncontrollable life event - namely the illness and its disabilities - and may lie on a continuum with 'demoralisation'.

It is therefore proposed that stress responses to the experience of psychosis are likely to depend on associated appraisals in the context of the psychotic experience. Further, it is suggested that intrusions may represent a reduction or loss of control over illness.

Appraisals relating to a reduction or loss of perceived control over psychotic illness may consequently result in depression. Also, in an attempt to cope with intrusions relating to distressing psychotic events, people may actively avoid reminders, discussion or exploration of their psychosis, which may alternatively be regarded as sealing over in recovery after psychosis. This may have the opposite of the intended effect, as it is known that avoidance of intrusions tends to reinforce and maintain their existence.

The suggestion is therefore made that the intrusions experienced in recovery after psychosis are likely to relate to the psychotic experience itself. The maintenance of intrusions are postulated to depend on the idiosyncratic nature of appraisals made in response to intrusions. If the appraisals that are made impact negatively on the individual's perception of control over their illness it is likely that the intrusions will persist and the individual is more vulnerable to the development of depression.

Finally, to mention the correlation between expectations, self as illness and depression. Expectations correlating with depression suggests that the more subjects expect that their independence would be limited by their illness, the more likely they were to be depressed. It is possible that an individual who is depressed is more likely to hold such beliefs about their capacity for independence. With the additional evidence from the T-Test data, the more subjects believed that their illness was part of their personality or psyche, the more likely they were to be depressed. This information provides further evidence of the kinds of psychological appraisals which may relate to the experience of psychosis and be predictive of depression .

Before reviewing the findings of this study and attempting to consider possible clinical implications from the results, two case studies will be detailed. These will provide additional information to ascertain if individual differences in clinical cases could offer further understanding of the nature of recovery styles and their possible relationships with the other variables measured in this study.

5. Case Studies

The following case studies are from two people who took part in the current study who were found to have a tendency towards sealing over in recovery after psychosis. The first case appears to fit with the hypothesis presented in this study, whereas the second does not. Comparisons will therefore be made in an effort to understand what differentiates the two cases and what this might imply in terms of the presented hypotheses.

5.1 Case Study A (JP) - adheres to hypotheses

Research Data

Age - 29

Sex - female

Marital status - single

Recovery Style (RSQ) - 59 (mixed picture in which sealing over predominates)

Depression (BDI) - 28 (moderate depression)

Impact of events (IES) - 45

- Avoidance - 25
- Intrusions - 20 (suggests psychosis was highly traumatic)

Personal Beliefs about Illness (PBIQ) - 37

- Perceived control over illness - 11 (suggests low perceived control over illness)
- Self as illness - 10
- Stigmatisation - 10
- Containment - 4
- Expectations - 4

Recovery Style (ISOS) - 5 (tends toward sealing over)

This case demonstrates an example which appears to fit the criteria hypothesised in this study. As can be seen from the above scores, this subject tended towards sealing over in recovery after psychosis from both the subject rated score on the RSQ, and the clinician's independent rating from the ISOS. Case study A scored very highly on the IES suggesting that the experience of psychosis was very traumatic. She has a low perceived control over illness as indicated by the perceived control over illness score, and was moderately depressed as indicated by the BDI score.

Case Details

Diagnosis - schizophrenic illness

Personal History

This is a highly intelligent woman who studied medicine at University, successfully completing her degree in 1995. JP has since worked in two jobs as a medical doctor in a hospital setting. She is described as always having striven for excellence and appears to have been a very high achiever, both academically and in the sporting arena, having competed at a national level. JP is described as having a small group of friends and has close contact with her family; her mother, father and one sibling. There is no known family history of psychosis.

Psychiatric History (taken from psychiatric notes)

JP was initially referred to psychiatric services in July 1996 with depressive symptoms of six to eight week duration prior to referral. Seeming to respond to anti-depressant medication, JP was discharged. She then took up a new post working in medicine in late 1996. From 1996 to 1998, JP was admitted to hospital on three more occasions with severe depressive symptoms; suicidal ideation and self harm in the form of cutting. In May 1998, JP was admitted under section due to her suicidal ideation

and again seemed to improve and was discharged after only a few weeks. Around this time JP disclosed that she had experienced physical and sexual abuse for a number of years when growing up.

In July 1998, JP was found by police in the city centre in what was described as a 'frightened state'. Again JP was admitted to hospital under section. She subsequently tried to abscond from hospital on several occasions. During this admission it became clear that JP was experiencing auditory hallucinations of a derogatory nature which also instructed her to self harm. JP was considered to be a high suicide risk at this point. The management of JP is described as having been very difficult. This latest hospital admission lasted for approximately one year. JP is currently living in a half way house having been discharged from hospital.

Current treatment – anti-psychotic medication

- regular contact with consultant psychiatrist
- regular contact with social worker to discuss issues of abuse.

5.2 Case Study B (SA) - does not adhere to hypotheses

Research Data

Age - 24

Sex - male

Marital status - cohabiting

Recovery Style (RSQ) - 61 (mixed picture in which sealing over predominates)

Recovery Style (ISOS) - 5 (tends toward sealing over)

Personal Beliefs about Illness (PBIQ) - 32

- Perceived control over illness - 10
- Self as illness - 7

- Stigmatisation - 4

- Expectations - 6

- Containment - 0

Impact of Events (IES) - 21

- Avoidance - 13

- Intrusions - 7

Depression (BDI) - 13 (mild depression)

This case demonstrates an example which does not appear to fit the criteria hypothesised in this study. As can be seen from both the subject rated score on the RSQ and the clinician's rating from the ISOS, this subject tended toward sealing over in recovery after psychosis. The subject had a relatively low perceived control over illness but did not appear to find psychosis traumatic. He was also only mildly depressed.

Case Details

Diagnosis - schizophrenia

Drug history - cannabis, ecstasy, speed

Personal History

Described as having had problems at school, the subject left school at age of 17 and worked with his father in a labouring / driving capacity. The subject is described as having a very active social life with lots of friends and a few girlfriends, many of whom are involved in the drug scene. He has worked for most of the time throughout the course of illness. He gets on well with his family, two sisters and his mother and father. There is a family history of mental illness; his grandmother has a paranoid illness and a first cousin has a non-defined psychiatric history.

Psychiatric History (taken from psychiatric notes)

SA was first in contact with psychiatric services in 1995 at age 20 years. At this point SA believed he had special powers as a musician. He also believed that people were watching both him and his house and that his telephone had been tapped. In addition, he believed that others could read his thoughts. He was admitted briefly to hospital admission for one month with good response to chlorpromazine. Soon after being discharged SA stopped taking his prescribed medication and was re-admitted to hospital, albeit very reluctantly. SA had apparently begun to believe that aliens had taken over his body. However this admission was again very short, only three weeks, as SA showed a dramatic improvement in response to sulpiride medication. Over the next three years SA remained well and his medication was gradually reduced.

However in early 1999 medication was stopped altogether. He was then referred by his G.P. after having had a fight with his girlfriend and having crashed his car (this was considered to be a possible attempt at self harm). SA presented as thought disordered and paranoid. He was taken to general hospital for a physical examination but became so disturbed that he had to be admitted to psychiatric hospital again under section. As before this turned out to be a short admission of about one month with a good response to sulpiride medication. Psychiatric notes state that attempts to discuss issues of diagnosis with SA have proven difficult as he does not appear to want to know details of his condition. SA is currently living in the community, cohabiting with his partner and their young child

Current treatment - maintenance sulpiride medication

- also sees psychiatrist every few months.

5.3 Comparison of cases

Two cases are presented, both of whom tend toward sealing over in recovery after psychosis. From the measures taken in this study, the main differences between the scores are those of depression (BDI), and trauma (IES). It therefore appears that case A who tends toward sealing over in recovery from psychosis, has found the experience of psychosis very traumatic and was depressed. Case B also tends toward sealing over, but does not seem to have found the experience of psychosis to be traumatic and is not depressed. On closer examination of the case notes and the measures taken in this study, the following contrasts were noted between the two cases.

1. Case A had a history of depression whereas Case B does not.
2. Case A had a much higher pre-morbid functioning than case B.
3. The length of most recent admission was considerably different between both cases, with case A having spent a year in hospital and case B only a few weeks.
4. There is also the obvious trauma experienced by case A in her earlier life whereas case B has no such trauma documented.
5. Closer examination of the scores on the RSQ suggest that case B liked some of his psychotic experiences whereas this was not apparent from the case notes of case A.

3.5 Discussion of the case studies

As case A had a history of depression this could be argued to explain the differences in the depression scores. Certainly, the experience of psychosis would not be expected to ameliorate previous depressive tendencies but would be more likely to exacerbate the likelihood of becoming depressed. Indeed, the possible traumatic effects

of psychosis might be considered as relevant to the maintenance of depression in case A. Also case A's higher pre-morbid functioning could be considered a risk factor in the development of depression in psychosis, Chintalapudi (1993). The difference in length of most recent hospital stay could be considered relevant to case A's depression, as she may have begun to feel somewhat hopeless about her future in the context of her psychosis, which is known to link with depression, Birchwood *et al.* (1993).

In considering the difference between the two stress response scores on the IES, the traumatic experience of sexual abuse earlier life clearly differentiates case A from case B. This may be a factor which influenced the differences on the trauma scores after the experience of psychosis. It is possible that at least some of case A's psychotic experience relates to her earlier experience of abuse, hence her disclosure of abuse around the time of her psychosis. This may not only explain the high trauma scores for case A, but also her fear of psychosis and intense dislike of the experience. In contrast, case B did not experience earlier life trauma, and considered that he enjoyed aspects of the psychotic experience, although he also was frightened of psychosis.

In conclusion, it is postulated that case A's experience of psychosis may have reminded her of earlier trauma in her life which understandably would lead to high stress response scores in recovery after psychosis. In particular, if it is considered that the intrusions case A experienced were appraised in relation to unresolved trauma as well as to psychosis, it is likely that she would have tried to avoid reminders of these intrusions. This might explain her sealing over recovery style which may have served to maintain the intrusive phenomena. Furthermore, case A's apparent vulnerability to depression could be exacerbated in the context of psychosis, and may have been maintained by her lengthy hospital admission. In contrast, case B did not have a history of trauma and had a very short admission to hospital. It may be that for case B,

psychosis was less traumatic because the content of his psychosis was not as disturbing and therefore not appraised so negatively, as is evidenced in his stated enjoyment of aspects of his psychosis. Further, case B had no history of depression and because his hospital admissions were relatively short, he may have been protected from developing a depressive reaction to long term incarceration in a psychiatric hospital. It must therefore be acknowledged that his reasons for sealing over in recovery may have been different from case A's. Given that case B had a family history of psychosis it is possible that case B had prior experience of psychosis and did not want to accept that he had a similar condition. This was reflected in his unwillingness to discuss or acknowledge diagnostic issues.

From these case studies it can therefore be concluded that the traumatic effects of psychosis may be implicated in a sealing over recovery style, but that other factors might also influence such a response to the experience of psychosis. Prior knowledge of the potentially destructive effects of psychosis on peoples' lives is postulated to be an example of alternative factors that might influence recovery style after psychosis. These suggestions would again appear to implicate the idiosyncratic meaning or appraisals that are attached to the experience of psychosis as the most important variables which may influence response patterns and recovery styles after psychosis.

The implications from the results of this study will now be discussed in the context of possible therapeutic procedures that might be considered relevant to clinical practice.

6. Possible Treatment Paradigm

A possible treatment paradigm would have to consider effective screening for the traumatic effects of psychosis, and the related psychological appraisals of the symptoms of both the psychosis and the trauma which are likely to overlap. Further, it would be considered important to intervene at an early stage after psychosis to avoid maintenance of traumatic effects, and prevent the possibility of developing subsequent PTSD.

In considering the traumatic effects of psychosis, approaches effective in the treatment of PTSD might also prove useful in cases of psychosis complicated by PTSD. Behavioural theories of PTSD emphasise the pairing by association of the traumatic event with its subsequent physiological response. Hence, treatment aims to de-condition the arousal cues of the traumatic experience. According to this paradigm, patients with residual psychotic symptoms and post psychotic PTSD would be helped by discussing in detail, memories of past psychotic experiences (Shalev, Schreiber & Galai, 1993).

Similarly, Williams-Keeler, Milliken & Jones (1994) suggests that treatment outcome might depend on the therapist's ability to explore with the patient the traumatic impact of psychosis and the effects of living with the illness. This might involve careful probing for evidence of PTSD and, in some cases, a therapeutic approach focussed on combining knowledge of both PTSD and psychosis.

Williams-Keeler *et al.* (1994) go on to consider what the detail of a treatment paradigm might include. In this respect she considers the use of a treatment model used with sufferers of PTSD after combat experience. In terms of PTSD from combat trauma, a three stage model of rehabilitation has evolved. It involves confrontation of the trauma, acceptance of its life long impact, and integration of the experience with

realistic expectations for quality of life. Williams-Keeler *et al.* (1994) acknowledges that to apply this three stage model to psychosocial rehabilitation of those with psychosis and marked signs of PTSD requires much further research. However the authors go on to suggest that the following components require consideration:

1. Confrontation: among the relevant factors requiring consideration is the degree of trauma required to trigger PTSD; the involvement of the subjective perception of trauma over the longitudinal course (Kulka, Schlenger, Fairbank, Hough, Jordan, Marmar & Weiss, 1990); and how invasive the symptoms of psychosis are for a population that may also for instance, derive a comforting sense of familiarity from benign voices. This stage will of course be effected by the willingness of the patient to disclose details of the trauma surrounding their psychosis.

2. Acceptance: this aspect may involve not only acknowledgement of illness but also recognition of the traumatic impact of psychosis and encompass aspects of the confrontation, acceptance and integration model. Recognition of perceived helplessness in the face of overwhelming trauma (as included in DSM IV description of PTSD) may be a good place to start. It might encourage people with psychosis to feel that their lives have not simply gone bad, but rather that they have suffered a traumatic experience that is likely to have a long term impact on them. Acceptance of illness involves the rebuilding of a life that has been seriously disrupted and disorganised by the stress of experiencing psychosis.

3. Integration: the goal of the integration process is to enable the victim to become a survivor, fully aware of the potential for relapse. Integration of the illness into the overall image and lifestyle of a person with psychosis, without resignation and submersion into the illness, is the goal of integration. Integration also requires an

understanding of the complexities of the formerly ill self, including aspects of self such as family history, pre-morbid status, and past and present psychological features.

In terms of the psychological appraisals that are associated with the trauma of psychosis, it is necessary for the clinician to assess their nature carefully. This might be achieved with the use of formal questionnaires such the Personal Beliefs about Illness Questionnaire (Birchwood *et al.*, 1993), and perhaps the use of Socratic questioning techniques to assess more deeply held idiosyncratic beliefs.

This information could then be formulated into a psychological conceptualisation of the experience of psychosis which can offer the patient an understanding of their experience, thereby increasing perceived control, and reducing the traumatic effects of psychosis as well as guiding interventions. Birchwood (1993) suggests that treatment attempting to increase perceived control over psychosis may be in keeping with what Warner, Taylor, Powers & Hyman (1989) describes as 'the psychotherapeutic model'. Here, the central aim is to encourage blame-free acceptance of the illness and to develop a real sense of mastery over it through education and involvement in learning and development of self control strategies. For example the management of auditory hallucinations (Falloon & Talbot, 1981), recognition and response to early signs of relapse (Birchwood, Smith, Macmillan, Hogg, Prasad, Harvey & Bering, 1989) and highlighting and questioning the cultural stereotypes of mental illness and improving access to employment (Birchwood *et al.*, 1993).

It is suggested that such treatments should be initiated in the early stages of recovery after the first episode of psychosis so that some of the possible sequelae of untreated trauma, e.g. negative symptoms, can be avoided as much as possible. This is considered in the context of the early intervention literature (e.g. Birchwood & Iqbal, 1998) which contends that there is a critical period after first episode psychosis during

which prognosis is determined by degree of successful adaptation to psychosis. It is suggested that apart from treating the traumatic effects of psychosis, early intervention would aim to prevent the development of depression which is considered to be a consequence of appraisals people make in response to the experience of psychosis. Careful assessment of these appraisals would be required as it is considered that it is the idiosyncratic nature of these appraisals that would provide the material for targeted psychological interventions.

7. Limitations of this Study

The major problem with this study was encountered during the data collection period. The project was discussed directly with ten consultants psychiatrists, indirectly by letter or telephone with another six consultant psychiatrists and two senior house officers. The project was also discussed at four multi disciplinary team meetings, which further provided approximately 25 potential referrers. The study was explained in detail to all these contacts ,and all professional staff were asked to make pertinent referrals. Over the four month data collection period, a total of fourteen referrals were generated from the combined sources listed above, eight of whom eventually agreed to take part in the project. In order to try to access further referrals, other subjects had to be identified through the acute in-patient wards and also through patient records, before asking permission to approach these subjects. In general the lack of referrals from other sources meant that the data collection period took considerably longer than had been predicted and the sample was smaller than was hoped for. It was also likely that subjects who agreed to take part in the project, who were not first approached by a professional who knew them well, were more likely to be integrators in their recovery style, as people adopting this recovery style are more interested in exploration

and discussion of their psychosis. It is likely that subjects who tended toward sealing over in their recovery style would be more difficult to recruit for this type of study given that they tend to avoid discussion or exploration of their psychosis. Such subjects might have been more willing to partake in the project if they had initially been contacted by professionals who knew them well. The lack of referrals from professionals restricted the eventual sample size, and may also have contributed to the imbalance of the sample.

A further problem in interpreting the results of this study concerns the traumatic effects of psychosis. Because many of the subjects were interviewed relatively soon after an episode of psychosis, it is therefore unclear as to whether the stress responses that were measured were pathological. This is because there was insufficient time between the stressful event, namely the psychosis, and the administration of these measures.

A further problem with this study was in the administration of the Recovery Style Questionnaire (RSQ). Although subjects were able to complete this questionnaire, many complained that having only a 'yes / no' response option was limiting, as several people felt a 'don't know' option would have been appropriate for some of the questions.

8. Future Research

It would be of interest to replicate this study over a longer time span in order to determine whether the traumatic impact of psychosis continued for longer periods after psychosis, and thus to what degree these stress responses became pathological. This might give a better understanding of whether the stressful effects of psychosis can result in Post Traumatic Stress Disorder (PTSD), as has been suggested by for

example, McGorry (1991) and Williams-Keeler *et al.* (1994). This might also prove to be a useful way of assessing whether screening for PTSD symptoms shortly after psychosis is in any way a valuable predictor of later PTSD problems.

Another related issue, which would require consideration in future studies as described above, would be the influence of further episodes of psychosis and how they might impact on stress response patterns. It would be of interest to try to assess any links between unresolved trauma relating to psychosis and the development of problematic psychological symptoms. This might also relate to the suggestion made by Stampher (1990) who contends that the development of the so called negative symptoms of psychosis may be due to an unresolved cumulative stress disorder.

It might also be of interest to consider how the early life experiences of someone with psychosis might impact on their response and adaptation to their condition. From the case studies that were presented, and from clinical experience, it seems that earlier life experiences directly effect the content of psychotic symptoms and associated psychological appraisals. It may be useful to investigate this further to help ascertain the kinds of experience which might negatively impact on the individual's experience of psychosis and their related stress response patterns. Again this might prove useful in developing targeted early interventions as well as the identification of outcome predictors in psychosis.

Given the impact of intrusions in this study, and the hypothesised significance of the appraisals that are made in relation to intrusions, it would be of interest to try to research the content of these appraisals. Also, an attempt to ascertain the kind of appraisals which might relate to high levels of stress response patterns and different recovery styles could yield further relevant results. In this way it might be possible to gain some understanding of the kinds of appraisals that link pathological stress

responses to psychotic experience and subsequent poor outcomes. Given this kind of information, treatments could be designed focusing on the cognitive appraisals in response to psychosis.

9. Conclusions

It is clear from the findings of this study, that for the majority of subjects, the experience of psychosis was extremely traumatic. Stress response scores were comparable to those which are known to be predictive of Post Traumatic Stress Disorder (PTSD). The strongest theme throughout this study was the incidence of intrusions. Higher levels of intrusions were predictive of a tendency to seal over in recovery style after psychosis. Intrusions, avoidance, age, and perceived control over illness were found to predict depression. It is suggested that these variables may be connected if the psychological impact of the experience of psychosis is considered.

It is proposed that the variables outlined above may link in the following ways. After psychosis, it appears that many people experience intrusions relating to their psychosis. It seems that it is the idiosyncratic meanings or appraisals attached to these intrusions that will dictate their extinction or maintenance. If intrusions are appraised negatively, e.g. as indicative of a loss of control over psychosis, avoidance or sealing over strategies may be adopted in an attempt to control the intrusions. However, such avoidance strategies are likely to have a counter-intentional effect, given the mental stress of coping with psychosis, and serve to maintain the intrusions. It may be that persistent intrusions could result in pathological stress response symptoms. It is also postulated that negative appraisals made in response to intrusions are likely to increase vulnerability to other psychological problems such as depression.

It can be concluded that the traumatic effects of psychosis appear to be important to outcome in psychosis. Potentially problematic stress responses to the experience of psychosis might be recognised by levels of intrusions and avoidance. However, it appears that it is the appraisals that are made in association with the experience of psychosis, that are significant to the ability to cope with psychosis and the development of concurrent psychological problems.

Possible therapeutical interventions are considered in the context of this hypothesised model of trauma in psychosis. It is suggested that these strategies should be implemented soon after recovery from psychosis and would include screening for stress response symptoms i.e. avoidance and intrusions. Direct interventions would involve the treatment of these symptoms. It would also be important to identify idiosyncratic appraisals related to stress response symptoms with an aim to reduce negative appraisals, thereby improving perceived control over illness. The objective of such a process would be to alleviate current psychological distress and prevent related difficulties that may arise from the stress of coping with psychosis.

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APPENDIX 1

Calculations for Independent Samples T-Tests-IES norms compared with current sample

Formula

$$t = \frac{x_1 - x_2}{\sqrt{\frac{s_1^2}{n^1} + \frac{s_2^2}{n^2}}}$$

TOTAL PTSD SAMPLE V's CURRENT SAMPLE

$$t = \frac{39.5 - 36.2}{\sqrt{\frac{295.84}{66} + \frac{85.527}{34}}}$$

t = 1.245

INTRUSIONS V'S CURRENT SAMPLE

$$t = \frac{16.1 - 21.4}{\sqrt{\frac{953.00629}{66} + \frac{87521.306}{34}}}$$

t = 0.104

AVOIDANCE V'S CURRENT SAMPLE

$$t = \frac{20.1 - 18.2}{\sqrt{\frac{516.89387}{34} + \frac{13604.89}{66}}}$$

t = 0.1277

APPENDIX 2

CONSENT FORM-RECOVERY STYLE PROJECT

Name:

I have read the information on this study and have had the opportunity to talk it over with Sean Harper to ask any questions. I have been told what the project is for, and understand what will happen. I know that I do not have to take part and that I can withdraw from the project at any time. If I do want to get involved or if I decide to withdraw I have been assured that my treatment and support will not be affected.

I also understand that my name will not be known to anyone apart from the person who interviews me and that all information will be treated very confidentially.

The Grampian Research Ethics Committee of Grampian Health Board and the University of Aberdeen has approved this study and may wish to inspect the data collected at any time as part of its monitoring activities.

I hereby agree to take part in this study which has been satisfactorily explained to me.

Signature : .....

Date : .....

I confirm that I have explained to the subject the nature and purpose of this study and have answered all queries posed by the subject as honestly, fully and truthfully as I can.

Signature of investigator : .....

Date : .....

APPENDIX 3

IMPACT OF EVENT SCALE (ADAPTED

Horowitz et al

Name_____ Date Completed_____

Therapist_____

On_____ you experienced a period of being
(date) mentally unwell

Below is a list of statements which may relate to your experience after being ill. Please check each item, indicating how frequently these comments are true for you. If they do not occur, please mark the "not at all" column.

	Not at all	Rarely	Sometimes	Often
1.I think about having been ill when I don't mean to.				
2.I try to avoid letting myself get upset when I think about having been ill.				
3.I try not to remember having been ill.				
4.I have trouble falling asleep because of pictures or thoughts about having been ill come into my mind.				
5.I have waves of strong feelings about having been ill.				

6.I have bad dreams about having been ill. _____

7.I stay away from reminders of my illness. _____

8.I feel as if my illness didn't happen or wasn't real. _____

9.I try not to talk about my illness. _____

10.Pictures of me when I was ill pop into my mind. _____

11.Other things keep making me think about the time when I was ill. _____

12.I am aware that I still have a lot of feelings about when I was ill but I don't want to deal with them. _____

13.I try not to think about my illness. _____

14.Any reminder brings back feelings about my illness. _____

15.My feelings about my illness are kind of numb. _____

Below to be completed by the therapist:

Intrusion subset = 1,4,5,6,10,11,14. Total =
Avoidance subset = 2,3,7,8,9,12,13,15. Total =

Overall Total =

APPENDIX 4

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INFORMATION SHEET
RECOVERY STYLES AFTER MENTAL ILLNESS PROJECT

Introduction

It seems that people who have experienced mental illness find many different ways of coping with their illness which appears to affect how successfully they are able to manage after being ill.

The aim of this project is to look in more detail at the ways people cope with their illness and how these styles of coping influence their ability to manage after having been ill.

I would like to invite you to participate in this research project to help us learn more about how people cope after having been ill.

What will I have to do ?

This study involves filling in four short questionnaires which would take about 10 minutes each to complete. The researcher, Sean Harper, would explain each of these questionnaires to every subject and would answer any questions you have regarding the project. The researcher would be happy to visit you at home, or at any location which is convenient to you in order to carry out the study.

Patient notes

I would also like to request your permission to review your file/notes for additional information which I would keep in strict confidence.

Do I have to take part ?

No, taking part is voluntary. If you prefer not to take part you do not have to give a reason. Any treatments or support you are being given would not be affected. All the information gathered will be known only to the researcher and will be kept strictly confidential.

What to do know ?
If you would like to take part in the study could you let your nurse or key worker know or contact me directly at the address or telephone number below.

Thank you very much for considering to take part in my research. Please discuss this information with your friends, family or G.P. if you wish.

Sean F. Harper (Psychologist in Clinical Training)
Dept. of Clinical Psychology
Clerkseat Building (Block A)
Royal Cornhill Hospital
Aberdeen
Tel:01224 663131 ext 57219

APPENDIX 5

TABLE 1
Integration/Sealing Over Scale

Integration	Sealing Over
The individual is aware of the continuity between his thoughts and feelings during the psychosis and his emotional conflicts prior and subsequent to his psychotic episode.	The individual isolates the thoughts and feelings experienced during the psychosis from his view of his emotional life prior and subsequent to his psychotic episode.
The psychosis is experienced by the individual as personal, rather than as alien or visted upon him by some outside force.	The psychosis is seen as an encapsulated, circumscribed event which is alien to, and distinct from, that part of his mental life which the individual calls his own.
The individual feels responsible for his psychotic thoughts and acts.	The individual does not feel responsible for his psychotic thoughts and acts.
The individual is curious about his psychotic experiences and is emotionally invested in understanding them.	The individual is not curious about his psychotic experiences and is not emotionally invested in understanding them.
The individual treats the psychosis as a source of new information about himself which he uses to modify his opinions and behavior.	The individual does not treat the psychosis as a source of new information about himself and seeks to return to his premorbid opinions and behavior.
The individual enlists the help of others in mastering the conflicts related to his psychosis and/or life difficulties.	This individual tends not to enlist the help of others in mastering the conflicts related to his psychosis and/or life difficulties.
The individual blames his illness on his own difficulties in coping with his life problems.	The individual blames his illness on other persons or environmental events.
The individual views himself as having had an emotional or nervous breakdown.	The individual views himself as having fallen prey to a medical or medical-like illness.
The individual is able to see positive aspects to having had a psychotic episode.	The individual is unable to see any positive aspect to having had a psychotic episode.
The individual feels his psychotic experience has had a strong impact on his life.	The individual minimizes the importance or impact of his psychotic experience on his life.
The individual's attitude toward mental illness is less fearful and negative than prior to his psychosis.	The individual's attitude toward mental illness remains fearful and intolerant.
The individual likes some of the unusual feelings and ideas that he experienced during his psychosis.	The individual is repelled by the unusual feelings and ideas that he experienced during his psychosis.
The individual feels that his psychosis helped him come closer to obtaining satisfaction in real life.	The individual feels that his psychosis has made it harder for him to obtain satisfaction in real life.

Global rating: Using your clinical judgment and the above statements as a guide, circle the number on the scale below which best fits this patient's style of recovery from his most recent psychotic episode.

Integration	Tends toward integration	Mixed picture in which integration predominates	Mixed picture in which sealing over predominates	Tends toward sealing over	Sealing over
1	2	3	4	5	6

T. H. McGlashan, H. S. Wadeson, and W. T. Carpenter, Jr. Art and recovery style from psychosis. *J Nerv Ment Dis* 164(3):182–190.

APPENDIX 6

Instructions:
Written below is a list of statements about your illness.Please read them carefully and tick the box to show if you agree or disagree.

	Agree	*Disagree*
1, There was a gradual build up to me becoming ill		
2, My illness is not part of my personality.		
3, I am responsible for what I think when I am ill.		
4, I am not interested in my illness.		
5, My illness taught me new things about myself		
6, I need help to solve the problems caused by my illness		
7, My illness was caused by my difficulties in coping with life.		
8, I have had a nervous breakdown.		
9, I can see positive aspects to my illness.		
10, My illness has had a strong impact on my life.		
11, I am not frightened of mental illness.		
12, I liked some of the experiences I had when I as ill.		
13,My illness has helped me to find a more satifying life.		
14, My illness came on suddenly, and went suddenly.		
15, My illness is part of me.		
16, I am not responsible for my actions when I am ill.		
17, I am curious about my illness.		
18, I understand myself better because of my illness.		
19, I can manage the peoblems caused by my illness, alone.		
20,Others are to blame for my illness.		
21, I have had a medical illness.		
22, Nothing good came from my illness.		
23, My illness has had little effect on my life.		
24, I am frightened of mental illness.		
25, I didn't like any of the unusual experiences I had when ill.		
26, It's hard to find satisfaction with life following my illness.		
27, My illness came on very suddenly.		

	Agree	*disagree*
28, My illness is alien to me.		
29, I am responsible for my thoughts and feelings when I am ill.		
30, I don't care about my illness now that I am well.		
31, I want to be the person I was before my illness.		
32, Others can help me solve my problems.		
33, My illness was caused by stress in my life.		
34, I have suffered an emotional breakdown.		
35, Being ill had good parts too.		
36, I'm not really interested in my illness.		
37, I liked some of the unusual ideas I had when I was ill.		
38, My life is more satisfying since my illness.		
39, My attitude to mental illnes is better now, than before I was ill.		

thank you for your help

APPENDIX 7

Personal Beliefs About Illness Questionnaire (PBIQ)

Initials ..... ID code .....

Date .....

	Strongly Disagree	Disagree	Agree	Strongly Agree
I will always need to be cared for by professional medical staff				
My illness frightens me				
I am embarrassed by my illness				
I am capable of very little as a result of my illness				
Because of my illness I have to rely on psychiatric services.				
There must always have been something wrong with me to have caused my illness				
I find it difficult to cope with my current symptoms				
My illness is too delicate/brittle for me to work or keep a job				
I know when I'm relapsing but I can't do anything about it.....				
My illness is a judgement on me				
I am powerless to influence or control my illness.....				
I am fundamentally normal, my illness is like any other ...				
Society needs to keep people with my illness apart from everyone else.....				
There must be something about my personality that causes me to be what I am				
I can talk to most people about my illness				
There is something strange about me that causes my illness.				

APPENDIX 8

BDI®

Date: _____

ame: _____ Marital Status: _____ Age: _____ Sex: _____

ccupation: _____ Education: _____

his questionnaire consists of 21 groups of statements. After reading each group of statements carefully, rcle the number (0, 1, 2 or 3) next to the one statement in each group which **best** describes the way you ave been feeling the **past week, including today.** If several statements within a group seem to apply equally ell, circle each one. **Be sure to read all the statements in each group before making your choice.**

1
0 I do not feel sad.
1 I feel sad.
2 I am sad all the time and I can't snap out of it.
3 I am so sad or unhappy that I can't stand it.

2
0 I am not particularly discouraged about the future.
1 I feel discouraged about the future.
2 I feel I have nothing to look forward to.
3 I feel that the future is hopeless and that things cannot improve.

3
0 I do not feel like a failure.
1 I feel I have failed more than the average person.
2 As I look back on my life, all I can see is a lot of failures.
3 I feel I am a complete failure as a person.

4
0 I get as much satisfaction out of things as I used to.
1 I don't enjoy things the way I used to.
2 I don't get real satisfaction out of anything anymore.
3 I am dissatisfied or bored with everything.

5
0 I don't feel particularly guilty.
1 I feel guilty a good part of the time.
2 I feel quite guilty most of the time.
3 I feel guilty all of the time.

6
0 I don't feel I am being punished.
1 I feel I may be punished.
2 I expect to be punished.
3 I feel I am being punished.

7
0 I don't feel disappointed in myself.
1 I am disappointed in myself.
2 I am disgusted with myself.
3 I hate myself.

8
0 I don't feel I am any worse than anybody else.
1 I am critical of myself for my weaknesses or mistakes.
2 I blame myself all the time for my faults.
3 I blame myself for everything bad that happens.

9
0 I don't have any thoughts of killing myself.
1 I have thoughts of killing myself, but I would not carry them out.
2 I would like to kill myself.
3 I would kill myself if I had the chance.

10
0 I don't cry any more than usual.
1 I cry more now than I used to.
2 I cry all the time now.
3 I used to be able to cry, but now I can't cry even though I want to.

11
0 I am no more irritated now than I ever am.
1 I get annoyed or irritated more easily than I used to.
2 I feel irritated all the time now.
3 I don't get irritated at all by the things that used to irritate me.

12
0 I have not lost interest in other people.
1 I am less interested in other people than I used to be.
2 I have lost most of my interest in other people.
3 I have lost all of my interest in other people.

13
0 I make decisions about as well as I ever could.
1 I put off making decisions more than I used to.
2 I have greater difficulty in making decisions than before.
3 I can't make decisions at all anymore.

_____ Subtotal Page 1

CONTINUED ON BACK

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14
0 I don't feel I look any worse than I used to.
1 I am worried that I am looking old or unattractive.
2 I feel that there are permanent changes in my appearance that make me look unattractive.
3 I believe that I look ugly.

15
0 I can work about as well as before.
1 It takes an extra effort to get started at doing something.
2 I have to push myself very hard to do anything.
3 I can't do any work at all.

16
0 I can sleep as well as usual.
1 I don't sleep as well as I used to.
2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
3 I wake up several hours earlier than I used to and cannot get back to sleep.

17
0 I don't get more tired than usual.
1 I get tired more easily than I used to.
2 I get tired from doing almost anything.
3 I am too tired to do anything.

18
0 My appetite is no worse than usual.
1 My appetite is not as good as it used to be.
2 My appetite is much worse now.
3 I have no appetite at all anymore.

19
0 I haven't lost much weight, if any, lately.
1 I have lost more than 5 pounds.
2 I have lost more than 10 pounds.
3 I have lost more than 15 pounds.

I am purposely trying to lose weight by eating less. Yes _____ No _____

20
0 I am no more worried about my health than usual.
1 I am worried about physical problems such as aches and pains; or upset stomach; or constipation.
2 I am very worried about physical problems and it's hard to think of much else.
3 I am so worried about my physical problems that I cannot think about anything else.

21
0 I have not noticed any recent change in my interest in sex.
1 I am less interested in sex than I used to be.
2 I am much less interested in sex now.
3 I have lost interest in sex completely.

_____ Subtotal Page 2

_____ Subtotal Page 1

_____ Total Score