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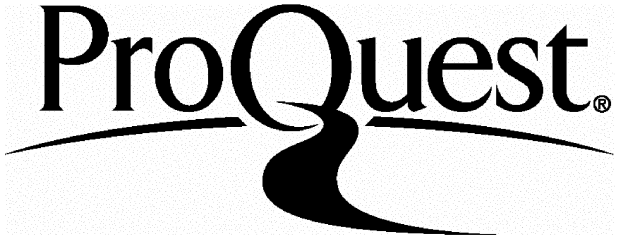
Beliefs, Self-Esteem and Mood in Older Adults with Late Paraphrenia

YVONNE MCCULLOCH

D.Clin.Psy 2000

University College London



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ABSTRACT

There is little known about the psychological processes of those with 'late paraphrenia', the onset of psychosis in later life without any apparent organic cause. This research investigated the relationship between mood, low self-esteem and the maintenance of delusions in older adults with late paraphrenia. In studies of those with early-onset schizophrenia, evidence suggests that delusions may defend against a low self-esteem, and thus depression (Kinderman & Bentall, 1996). It is thought that older people use psychological strategies to maintain self-esteem in the face of negative changes to their lives as the consequence of ageing (Atchley, 1982). The present study hypothesised that the psychosis of those with late paraphrenia may be due to strategies used to maintain self-esteem during the ageing process. Self-esteem, depression and self-representations, as well as perceptions of changes in functioning over time, were investigated in 13 people with late paraphernalia over the age of 65. Responses were compared with a depressed group (N=15) and healthy control group (N=15). The study found that those with late paraphrenia showed good levels of self-esteem and little depression. There was no evidence to suggest that their delusions were acting as a defence against underlying negative feelings about themselves. However, there was some indication that the positive views that those with late paraphrenia have were compromised by more negative views of their perceived functioning in the external world. The results are discussed in relation to theories of the function of delusions and conceptual models of adjustment to ageing. The implications for clinical practice are also considered.

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CHAPTER ONE: INTRODUCTION

1.1 Overview

This study is concerned with the emotional processes of those with late paraphrenia - in particular their beliefs about themselves and how these affect their self-esteem and mood. The validity of diagnosis and categorisation of late paraphrenia is first discussed. This is a contentious area, and although the category of late paraphrenia is not currently included in the major diagnostic manuals of Diagnostic and Statistical Manual of Mental Disorders (DSM)-IV (American Psychiatric Association (APA), 1994) and International Classification of Diseases (ICD)-10 (World Health Organisation (WHO), 1990), it continues to be used in clinical practice and debated in the literature. A description of the syndrome and its incidence and prevalence will be covered in the first subsection. Although not a very common syndrome, there are a number of risk factors associated with late paraphrenia including biological, developmental and maturational, physical, social and psychological factors. These factors will be addressed in the second subsection of the introduction. This study's area of interest is that the delusions of those with late paraphrenia, a defining factor in the syndrome's presentation, act in some way to defend a fragile self-esteem. By way of background, a summary of research investigating this hypothesis is given in the third subsection of the introduction. As the 'defence-as-delusion' theory is concerned with issues of the maintenance of the self, the self-concept

in relation to the ageing process is discussed in the fourth subsection. The final subsection presents the rationale for the study and its hypotheses.

1.2 Late Paraphrenia - Diagnostic Validity

Kraepelin (1919) suggested the term 'paraphrenia' to describe a group of individuals who shared some of the features of schizophrenia, but whose affect, will and personality were largely preserved. Roth & Morrissey (1952) adopted the term 'late paraphrenia' to describe elderly patients who presented with well organised systems of paranoid delusions and hallucinations, while preserving their personality and affective responses. The concept of late paraphrenia was further developed by Kay & Roth (1961) as a suitable descriptive term for cases with delusional and hallucinatory symptoms in those over 60 years in which signs of organic dementia or sustained confusion were absent, and where the symptoms were not due to primary affective disorder.

There is an on-going debate in the literature as to whether late paraphrenia can be adequately differentiated from early-onset schizophrenia. Important phenomenological differences have been noted between schizophrenic psychoses with onset in early adulthood and those with onset in late life (Howard, Castle, Wessely & Murray, 1993; Pearlson, Kreger, Rabins, Chase, Cohen, Wirth, Schlaepfer & Tune, 1989). Of prominence is the rarity of thought disorder and negative symptoms in the late onset cases (Castle & Howard, 1992). Andreasen, Flaum, Swayze, Tyrrel & Arnelt (1990)

found that negative symptoms such as constricted affect, withdrawal and impoverishment of thought were rarely seen in late paraphrenics, although they have been reported or present in up to 84.5% of non-elderly schizophrenics. Hassett, Keks, Jackson, & Copolov (1992) in their review of the diagnostic validity of paraphrenia say that "several aspects of the clinical presentation suggest that underlying pathogenic mechanisms in paraphrenia may differ in a qualitative way from schizophrenia developing in earlier life. These include the predominance of females, the characteristic premorbid personality features, the apparent absence of negative symptoms and the association with hearing loss and cognitive deterioration." (pp. 27). However, there are also a number of similarities between late paraphrenia and early onset schizophrenia. Apart from the positive symptoms of delusions and hallucinations, Roth & Kay (1998) have summarised other similarities between early- and late-onset schizophrenia. These include alterations in brain structure that appear unrelated to illness duration or progression; cognitive impairment which may include both general intellectual decline and specific deficits involving memory and executive functions, but again which appears unrelated to illness progression or duration; and the lack of a clear correlation between brain changes and impaired cognitive functioning.

Hassett *et al.* (1992) highlighted the need for further research using clear diagnostic criteria for both late and early onset psychosis to address issues in a standardised manner so that meaningful comparisons can be made. Differences in the diagnostic criteria have resulted in confusion in the international literature and this affects the evaluation of

research carried out with those who develop psychosis in later life. Nonetheless, the category of late paraphrenia is excluded from the DSM-III-R (APA, 1987), DSM-IV (APA, 1994) and ICD-10 (WHO, 1990), after appearing in the DSM-III (APA, 1980) and ICD-9 (WHO, 1978). Most patients are now being allocated to the diagnoses of 'schizophrenia with late onset' or 'delusional disorder'. The debate is set to continue on the nosological status of late paraphrenia (Almeida, Howard, Förstl & Levy, 1992; Hassett *et al.*, 1992; Lacro, Harris & Jeste, 1993; Roth & Kay, 1998) between those who consider late paraphrenia as qualitatively different from early onset schizophrenia and those who consider it as schizophrenia manifest in older age. More recently, a consensus statement has been issued by the International Late-Onset Schizophrenia Group which has identified the disorder as "very-late-onset schizophrenia-like psychosis" to distinguish this group from those with onset of schizophrenia after the age of 40 but before 60 (Howard, Rabins, Seeman, Jeste, and the International Late-Onset Schizophrenia Group, 2000). Roth & Kay (1998) have proposed that the use of conceptual criteria for late paraphrenia be defined as late-onset (over 60 years), non-affective, non-organic psychoses. This is to provide a more natural operational division than strictly defined classification groups which will allow for further study of this syndrome. They also propose that late paraphrenia continues to be regarded as a variant of a schizophrenic illness manifest in old age. For the purposes of this study, Roth & Kay's (1998) criteria will be used for defining late paraphrenia.

1.2.1 Psychopathology

Late paraphrenia is characterised by a relatively well organised paranoid delusional system, with or without hallucinations, in patients with no obvious deterioration of the intellect or personality. With regard to symptom manifestations, Marneros & Deister (1984) noted the "richness in psychotic productivity" in the late-onset syndrome. Roth (1987) was impressed by the absence of impoverishment of emotion, the coherence and integration of the delusional ideas, and the spirited manner in which they were usually expressed. Other studies also emphasised the prominence of positive psychotic symptomatology with delusions described as well-systematised. They tend to be persecutory or fantastic in content although erotic, hypochondriacal and grandiose delusions are also observed (Kay & Roth, 1961). Neighbours, landlords, or relatives are implicated in plots to be rid of the patient, or to annoy or interfere with them because of jealously or for simple amusement. Patients feel drugged, hypnotised, have their thoughts read, their minds or bodies worked upon by rays, machines or electricity, complain that they are spied upon, or that they can get no privacy either in thought or action. Threatening or accusatory voices coming from the neighbouring houses are frequently reported, or two or more voices discussing the patient in the third person, and running commentaries coming from old acquaintances or unknown neighbours. The intensity of this conviction often results in anxiety, anger and aggression and brings the elderly person into contact with social services or the police. Paranoid ideation is very prevalent and is present in up to 71% of those with late paraphrenia (Herbert & Jacobson, 1967).

Howard, Förstl, Almeida, Burns & Levy (1992) found 92% of their late paraphrenia group had paranoid ideation compared to 60% of early-onset schizophrenics who had grown old, 35% of a young schizophrenic group and 22% of a depressed group. Hallucinatory phenomena are usually prominent, although this is not essential for diagnosis. Auditory hallucinations are the most common and reported in approximately 75% of the patients in most studies reviewed. Visual, tactile and olfactory hallucinations were also reported (Kay & Roth, 1961). Thought disorder and affective blunting are less consistently cited across the studies reviewed, and negative symptoms generally are noted to be uncommon in elderly psychotic participants (Grahame, 1984; Häfner, Hambrecht, Löffler, Munk-Jørgensen & Riecher-Rössler, 1998; Pearlson *et al.* 1989). Andreasen *et al.* (1990) reported that negative symptoms, such as constricted affect, withdrawal and impoverishment of thought were rarely seen in those with late paraphrenia but are reported to be present in up to 84.5% of non-elderly schizophrenics.

1.2.2 Outcome

There tends to be a narrow range of treatment options available to those with late paraphrenia. Neuroleptic agents used to alleviate target symptoms are most prevalent. Psychological, occupational, and greater social support could also play an important role in outcome although these areas have yet to be investigated (Hassett *et al.*, 1992; Howard et al, 2000). Prognosis of late paraphrenia tends to be mixed. In the short term, complete remission has been found in 27-48% of patients with late paraphrenia, and 24-

42% are non-responsive to treatment (Howard, 1996; Pearlson *et al.*, 1989). Hymas, Naguib & Levy (1989) found no relapses in 65% of their sample during a follow-up period of 3.7 years, and though 26% remained deluded and hallucinated, all were living at home or in residential homes. A study in Denmark found that 27% had fully remitted after 5-15 years and 8% had become demented (Jørgensen & Munk-Jørgensen, 1985). Holden (1987) reported that 40% of patients with late paraphrenia had developed dementia over a 10-year period associated with high mortality. Variation in exclusion criteria and varying outcome measures and the extent of organic factors has probably contributed to the varying results in outcome. Currently, prognosis remains speculative and more follow-up studies are needed to clarify the longer-term outcome of those with late paraphrenia (Hassett *et al.*, 1992; Roth & Kay, 1998).

1.2.3 Epidemiology

A review of the epidemiological literature on late paraphrenia reveals marked variations in prevalence across studies. This is most likely attributable to inconsistency in both diagnostic criteria and thoroughness of case study identification (Hassett *et al.*, 1992). Kay & Roth (1961) found that late paraphrenics comprised 10% of all patients admitted over the age of 60 in both a Swedish and an English mental hospital. Blessed & Wilson (1982) reported that late paraphrenics constituted 9.8% of patients aged over 65 in a Newcastle-upon-Tyne psychiatric hospital. Lower percentages have been found for psychiatric admissions in England and Wales (5.6%) and in the United States (3.2%)

(Post, 1980). Christenson & Blazer (1984) carried out a survey of 997 elderly people living in an American community and found 4% to have clinically significant symptoms of pervasive persecutory delusions with the majority not receiving any psychiatric services. Community studies in a Welsh town showed a prevalence of 1.7% (Parsons, 1964), in a Scottish borough of 1% (Williamson, Stokoe, Gray, Fisher & Smith, 1964) and a London borough of 2.6% (Goldberg, 1970). The epidemiological studies available to date suggest that the prevalence of paranoid ideation in the elderly is approximately 2-4% (Almeida *et al.*, 1992) and that a large number of these elderly people remain undiagnosed in the community either because of their social isolation or because their symptoms are not disruptive enough to be noticed (Almeida *et al.*, 1992; Post, 1966). There is an imbalance in the female to male ratio with the proportion of females to males being from 3:1 (Roth, 1955) to 45:2 (Herbert & Jacobson, 1967). This female preponderance remains even after statistical adjustments are made to account for the higher life expectancy of women.

1.2.4 Summary

In summary, late paraphrenia is seen as a variant of a schizophrenic illness manifest in old age. Some parts of the literature consider that it is qualitatively different from early-onset schizophrenia mainly because of the well-developed delusions and the lack of formal thought disorder or negative symptoms. However, there are similarities, such as the positive symptoms, alterations in brain structure, and the presence of cognitive

impairment that appears unrelated to obvious brain disease. Although 'late paraphrenia' has been excluded from the recent diagnostic manuals of the DSM-IV and ICD-10, it is still felt in many circles that the syndrome should be continued to be studied (Hassett *et al.*, 1992; Roth & Kay, 1998). While the literature supports the validity of the syndrome, it is much less conclusive as to whether it is qualitatively different from early-onset schizophrenia. The recent consensus statement by the International Late-Onset Schizophrenia Group (Howard *et al.*, 2000) on establishing a joint view on the syndrome will assist future research endeavour. The study of a late-onset, non-affective, non-organic psychoses, is important in clarifying aspects of the syndrome, and establishing causal associations and potential ways of treating the condition. There are a number of known risk factors associated with late paraphrenia and this can begin to suggest causal associations and the possibility of developing preventative measures.

1.3 Risk Factors

1.3.1 Biological Factors

Funding (1961) in his extensive investigation of the genetic factors in paranoid psychoses of later life, found a reduced risk in first degree relatives of late-onset schizophrenic probands. Kay (1963) established that the risk of developing a form of schizophrenia in the siblings of late paraphrenic probands was greater than in the general population, but

less than the risk for siblings of younger schizophrenic probands. Castle, Wessely, Howard & Murray (1997) report that early-onset cases of schizophrenia are more likely to have a positive family history of schizophrenia (10.2%) than late-onset cases (2.9%). Most authors concluded that the mode of inheritance of the late-onset disorder, like schizophrenia, is probably polygenic with many nongenetic factors being influential (Funding, 1961; Kay & Roth, 1961; Roth, 1987).

Neuropathologically, structural abnormalities revealed by brain imaging have shown ventricular enlargement in both early onset schizophrenia and late paraphrenia. Pearlson & Rabins (1988) found evidence of only non-specific cerebral abnormalities (i.e. increased ventricle to brain ratio and cortical atrophy) in late onset schizophrenia without specific diagnosable organic pathology. Symonds, Olichney, Jernigan, Corey-Bloom, Healy & Jeste (1997) have found a lack of significant gross structural abnormalities using magnetic resonance imaging in this group. Naguib & Levy (1987) compared a group of 43 late paraphrenic patients with no clinical evidence of cognitive impairment with 40 age-matched controls. They found significant ventricular enlargement on CT scanning and subtle cognitive deficits on neuropsychological testing in their patients. In a 3.7 year follow-up of these patients, further cognitive deterioration was demonstrated but this usually fell short of clear-cut dementia (Hymas *et al.*, 1989). Miller, Lesser, Boone, Hill, Mehringer & Wong (1991) assessed cognitive performance in those with late paraphrenia. They found that 24 patients with late-life psychosis performed worse than age-matched controls on a neuropsychological assessment battery, although there was no

marked cognitive deterioration. Howard & Almeida (1992) have described deficits of memory and attention in their sample of late paraphrenics.

In the long term, the incidence of dementia was judged to be no greater in patients with late paraphrenia than in the general elderly population (Hymas *et al.*, 1989; Kay & Roth, 1961; Post, 1966). Where clear signs of dementia do emerge in people with late paraphrenia, this is only after many years of follow-up (Herbert & Jacobson, 1967; Holden, 1987; Kay & Roth, 1961; Post, 1966) suggesting that the psychosis is not initiated by the early stages of dementia. Life expectancy of patients with late paraphrenia was found to be almost the same as in the general population (Blessed & Wilson, 1982; Kay, 1962).

1.3.2 Developmental and Maturational Factors

Hafner *et al.* (1998) looked at developmental and maturational factors in schizophrenia. It is well-established that the risk for schizophrenia changes with age and that gender has a strong influence on the age of onset. Based on the first sign of the disorder, incidence rates in men are at their highest in young adults, whereas in women they increase later with a broader peak extending beyond the age of 30 and a second (lower) peak between the ages 45 and 49. Hafner *et al.* (1998) suggest that oestrogen may have a protective effect for women but that this disappears after onset of the menopause. However, Castle & Murray (1993), who rated Camberwell case-register files from 1965 to 1984, found a

considerable increase in schizophrenia in old age, particularly in women, well after the menopausal age range. On the basis of first admission with a clinical diagnosis of schizophrenia to other British and Dutch case-registers, van Os, Howard, Takei & Murray (1995) reported increases in admission rates of 90% to 150% between the seventh and the tenth decade of life. This would indicate that there are other processes at work other than the oestrogen factor.

Hafner *et al.* (1998) also noted considerable age differences regarding the extent of the elaboration and systematisation of positive symptoms, and this corroborated earlier studies with smaller samples (e.g. Kay & Roth, 1961; Pearlson *et al.*, 1989). They found a linear trend of increasingly more elaborated paranoid and systematic delusions with age. They consider it is possible that developmental changes might be responsible for these trends rather than the disease process itself. For instance the role of cognitive maturation with increasing age may produce more organised and systematic delusions. They go on to surmise that lower stages of cognitive development could presumably produce less elaborate symptoms and more signs of mental disorganisation. This may be one way of explaining the well-defined delusions of those with late paraphrenia.

1.3.3 Physical Factors

Perceptual difficulties are thought to trigger or exacerbate symptoms of late paraphrenia. Old age is often associated with reduced sensitivity and acuity of taste, smell, touch,

vision and hearing. Some of these deficits are believed to contribute to the development of, or to exacerbate, psychiatric problems (Zimbardo, Anderson & Kabat, 1981), and hearing impairment in particular has been frequently associated with late paraphrenia. Both auditory and visual impairment have been related to the development of paranoid features in old age (Cooper & Porter, 1976) often with the hearing loss predating the onset of psychosis by many years. Moore (1981) could not replicate this finding, however. Kay & Roth (1961) reported that 40% of 42 late paraphrenic British patients showed some degree of hearing impairment. Post (1966) found that deafness was present in 25% of 72 elderly paranoid patients while Herbert & Jacobson (1967) established moderate to severe auditory loss in 40% of their 45 late paraphrenics. However, only a small number of elderly deaf participants develop paranoid symptoms (Corbin & Eastwood, 1986) and there is a high prevalence rate of hearing impairment in the elderly living in the community. Data taken from questionnaires and clinicians' judgements, estimated that the range is 30-40% and using surveys which include audiometric assessment, prevalence of significant hearing loss is closer to 60% for those living at home or in homes for the aged, and up to 80-90% for those living in chronic care facilities (Alpiner, 1978; Corbin, Reed, Nobbs, Eastwood & Eastwood, 1984; Gilhome-Herbst & Humphrey, 1980).

Corbin & Eastwood (1986) found that there was little support for a causal relationship between acquired sensory deficit and the mental disorders of old age and suggest that other factors must also be involved in the production of psychotic phenomena in deaf late

paraphrenics. For instance, these deficits may reinforce a pre-existing tendency to social isolation, withdrawal and suspiciousness of the outside world (Cooper & Porter, 1976). There does not appear to be evidence that sensory deficits *per se* are risk factors in the aetiology of late paraphrenia. However, as sensory deficits are common in old age, they will co-occur at a high rate. The presence of sensory deficits will affect the assessment and management of those with late paraphrenia, particularly in exacerbating symptoms, and therefore it is a potential area for achieving therapeutic benefit. Possible therapeutic interventions have been proposed by Eastwood, Corbin & Reed (1981) who describe a dramatic improvement of psychotic symptoms after hearing aids were fitted to the ears of a partially deaf late paraphrenic patient. Similar observations have been also reported by others (Khan, Clark & Oyebode, 1988).

1.3.4 Social Factors

There are a number of social factors associated with those with late paraphrenia. It is considered that late paraphrenics of both sexes have low rates of marriage and those that do marry tend to have fewer children (Herbert & Jacobson, 1967; Kay & Roth, 1961; Post, 1966). In a controlled study by Rabins, Pauker & Thomas (1984) no significant difference was found between late paraphrenics and elderly depressive controls with regard to their marital status and fertility rates. However, Howard *et al.* (1992) addressed the same question in a population of 50 late paraphrenics and 51 elderly depressive controls. The late paraphrenic group were less likely to have married (37 out

of 50) than elderly depressives (46 out of 51) and the ones who did marry did so at a later age. Those with late paraphrenia also had a lower fertility rate. Gurian, Wexler & Baker (1992) proposed that those with a late-life delusional disorder may have been more infertile as they found that only one out of nine females had given birth even though eight had long-term marriages. There is the assumption that the absence of family or close associates and friends as people age increases the probability that their thinking may become removed from reality through isolation. However, it is not known whether isolation through remaining single and childless is a cause of psychosis or whether it is a consequence of pre-morbid characteristics of the individual (Herbert & Jacobson, 1967; Post, 1980). For instance, Roth (1987) proposed that living a withdrawn and isolated life while younger, may not allow the individual to cope so well when they are older and their coping strategies, while formerly adaptable, are no longer so effective.

Immigration and low socio-economic status are also thought to be risk factors in delusional disorder in later life. Rockwell, Krull, Dimsdale & Jeste (1994) have noted an increased frequency of immigrants or children of immigrants among patients with somatic delusions. In recent preliminary findings Gurian *et al.* (1992) describe the possible association of early life trauma (e.g. physical or sexual abuse) commonly found in those in refugee groups with late paraphrenia. These interesting findings require further exploration and validation, particularly as high rates of ethnic minorities are found in those diagnosed with early onset schizophrenia.

1.3.5 Psychological Factors

Herbert & Jacobson (1967) reported that the onset of illness in their patients occurred against a background of disturbance sufficiently strong to disrupt the personality, and that their patients' personalities often contained paranoid or schizoid traits which appeared before signs of clear psychotic symptoms. Pearlson & Rabins (1988) identified the following as adjectives utilised by family members or others in describing late onset schizophrenic patients: humourless, solitary, reserved, hostile, unsympathetic, suspicious, eccentric, quarrelsome, cold, and holding odd religious beliefs. The majority of the patients were viewed as eccentric by neighbours. However, as personality diagnoses of patients who present with psychosis in late life must necessarily be made retrospectively, some caution is warranted in associating particular traits with the later onset of illness. Abrams (1991) points out that the relationships between ageing, personality, adaptation and illness remain largely unknown, reflecting the uncertainty about how to evaluate personality in the elderly. Furthermore, it is not clear what constitutes adaptiveness in old age, and how, or even if, the ageing process changes a person's personality.

1.3.6 Summary

In summary, late paraphrenia seems to be associated with a complex interaction of factors such as age, sex, social isolation, personality characteristics, sensory impairment and organic brain lesions (Almeida *et al.*, 1992). Much of the research undertaken with those

with late paraphrenia is either biological or epidemiological in essence. The greatest emphasis has been placed on investigating changes in brain structure and it is evident that there are differences compared to healthy samples. However, it is less clear whether there is progressive change and what impact this has on presentation and outcome. Those with late paraphrenia do tend to show some type of cognitive impairment, although this is not thought to be due to a dementing process. This is similar to those with early onset schizophrenia in that structural brain changes have not been found to relate to cognitive impairment. Environmental and social causes are also seen as causative and reflect the interaction of the changing situational variables with the individual's ability to adapt to them. Apart from research looking at the premorbid personality very little is known about the psychological processes that underlie the known and unknown risk factors of late paraphrenia. Factors other than the biological tend only to be alluded to when the variance in clinical presentation and outcome cannot be explained, and Hassett (1997) considers a better understanding of the psychological determinants of the psychotic symptoms is essential. There is a movement in recent times, particularly in the psychological literature, to move away from diagnostic issues and investigate the psychological processes underlying psychotic phenomena. This is considered a better way forward to increasing understanding and establishing alternative therapies for psychotic disorders.

1.4 Late Paraphrenia - Psychological Processes

The problems in classifying late paraphrenia as a distinct syndrome are also found in defining clear diagnostic criteria for those with early-onset schizophrenia. It is not easily classed as an homogenous entity with disputes over accurate classification and a number of possible theories regarding risk factors. Hemsley (1993) commented that the current emphasis on diagnostic reliability, while in many ways commendable, has led to a relative neglect of the more subtle perceptual and cognitive abnormalities observed in and reported by schizophrenic patients. In the aged, detection of disease-related changes is even more difficult as normal changes in perceptual and cognitive processes are not clearly understood. Furthermore, factors influencing perceptual and cognitive processes may not only be biological and essentially degenerative in nature, but may also be determined by an individual's psychological response to the ageing process (Hassett, 1997).

Research into psychological processes has gained some prominence over the past decade in those with early onset schizophrenia and has consequently led to psychological research moving away from the problems of classification altogether (Bentall, Jackson & Pilgrim, 1988). Rather than study the syndrome it is felt that effort should be directed at studying particular symptoms (Bannister, 1968; Persons, 1986; Slade & Cooper, 1979). Bentall *et al.* (1988) felt that specific symptoms are an appropriate target for therapeutic research and that this can lead to a better use of psychological treatments for delusions,

hallucinations, thought disorder and other psychotic signs and symptoms. The well organised delusional systems of those with late paraphrenia are a defining feature of their condition and hence the delusions of late paraphrenic patients are a prime target for research to better understand the syndrome.

1.4.1 Delusional Ideation

There are a number of theories that have considered the psychological processes of delusions. Maher (1974; 1988) proposed that delusions are rational explanations for biologically based abnormal perceptual experiences which create understanding out of what is bizarre and strange. Alternatively, Corcoran, Mercer & Frith (1995) and Frith (1992) advocate deficits in `theory of mind' where delusions of reference, misidentification and persecution are characterised by a misinterpretation of another person's behaviour and intention. Research into poor information gathering and reasoning biases or errors such as misinterpretation, confirmation bias, and jumping to conclusions have also been associated with delusion formation and maintenance (Garety, 1991; Garety & Hemsley, 1994; Huq, Garety & Hemsley, 1988). For instance, in a rare study of psychological processes in those with late paraphrenia, a small scale research study by Phillips, Howard & David (1997) found some evidence to suggest that there are subtle abnormalities in visual perception and reasoning in patients with late paraphrenia.

Another area of interest is that the delusional systems of those with schizophrenia, particularly the paranoias, may involve fundamental problems with the self. This was acknowledged by Bleuler (1950) who observed that "in schizophrenia the alteration of the ego and its attitude towards the world is more pronounced than in any other psychosis" (pp. 143). Similarly, Schneider (1959) regarded a weakening of ego boundaries or ideas of the self as the cause of first-rank symptoms. Although the psychoanalytic view of paranoia as an attempt to deal with unacceptable homosexual yearning (Freud, 1915/1956) has been widely questioned, more recent formulations suggest that paranoia may be a reaction to the attempt to defend the self against threats which originate from within the sufferer's own psyche (Hingley, 1992). Hingley (1997) proposed that the various aspects of psychoses reflect a vulnerability of the ego or the self which is unable to adaptively protect itself from the adverse impact of intense affect and internal conflicts. Hingley adds that further difficulties include an insecure boundary between self and others, an insecure sense of identify, poor self-esteem, and difficulties in relating to others in ways which fulfil social and attachment needs. Colby, Faught & Parkinson (1979) presented a computer simulation that could explain persecutory delusions as the product of a tendency to perceive threats to self-esteem coupled with a protective mechanism which attributes the source of those threats to external causes. Roberts (1991) suggested that through organised and constructed belief systems, "patients may have subjectively fulfilled many of their apparent needs through a reconstruction of reality in which they are protected from depression, and experience an enhanced sense of meaning in life." (pp. 25). Zigler & Glick (1988) have considered that

delusions of persecution, the central symptom of paranoia, can assuage the feelings of personal inadequacy by permitting the projecting of responsibility for one's own inadequacy and failures on to the outside world thus protecting self-esteem and preventing depression. Rather than reflecting on one's own shortcomings, failure occurs because of persecution by others. In addition, persecutory delusions, including ideas of reference, provide a sense of importance and thus self-enhancement. The paranoid person can essentially reassure the self that "far from being inadequate, I must be very important and valuable if everyone is so interested in me." (pp. 287).

1.5 Evidence for the 'Delusions-as-Defence' Theory

Investigations of the theory that delusions may act as a defence against a vulnerable self have been undertaken in those people with early onset schizophrenia and have primarily been carried out by Bentall and colleagues (e.g. Bentall, Kinderman & Kaney, 1994; Kinderman & Bentall, 1996; Lyon, Kaney & Bentall, 1994). This group has looked at the possibility that delusions, particularly paranoid delusions, are maintained by serving a positive function as a defence against low self-esteem. In the `delusion-as-defence' account, Bentall and colleagues have proposed that people with persecutory delusions construct alternative realities to maintain their self-esteem This avoids discrepancies entering consciousness between how they perceive themselves to be and how they would like to be. One way of doing this is to seek explanations in the outside world, particularly in those around them, for the negative thoughts and feelings they have. The support for

this proposition is largely based on two sets of experimental findings. The first set concerns social attributional style and the second set concerns discrepancies in the self-concept.

1.5.1 Social Attributional Style

One view is that psychotic beliefs are not qualitatively distinct from normal beliefs (Kendler, Glazer & Morgenstern, 1983; Strauss, 1969) and thus normal social and cognitive processes (Bentall *et al.*, 1994; Garety, 1991) apply to them. Based on this, the observation that delusional beliefs usually concern the patient's position in the social universe, social attribution theory was considered a compatible theoretical framework within which to consider the cognitive processes of deluded patients and its relationship with depression. Attribution theory considers the way in which people explain the cause of events to themselves, and the most influential theory linking attributional style and depression is Abramson, Seligman & Teasdale's (1978) learned helplessness theory. According to this theory, certain people explain events that go wrong with an attribution style where they believe they caused it, the cause is long-lasting and that the cause will make other bad things occur. This attribution style may led to lowered self-esteem and thus depression.

In a preliminary study of attributional processes in patients with persecutory delusions, Kaney & Bentall (1989) gave deluded participants, depressed controls and normal

controls the Attributional Style Questionnaire (ASQ; Peterson, Semmel, von Baeyer, Abramson, Metalsky & Seligman, 1982). This questionnaire asks participants to generate likely causes for hypothetical events, either positive (e.g. 'getting a pay rise') or negative (e.g. 'friends are hostile'). They were then asked to self-rate these statements on scales of internality (i.e. the degree to which the events are attributed to the self, to external causes or to others), stability (i.e. the degree to which they will occur in the future); and globalness (i.e. the degree to which they will influence more than the specified event). It was found that, like the depressed participants, the deluded participants made excessively global and stable self-ratings for unpleasant events. However, it is the internality dimension (whether the event is due to the self or to others or to circumstance) which is implicated in the defence theory. Unlike the depressed participants, who made excessively internal attributions for negative events and excessively external attributions for positive events, the deluded participants made excessively external attributions for negative events and excessively internal attributions for positive events. This is seen as an extreme form of the self-serving bias, where negative events are externalised and positive events are personalised, that is found in the general population, and is considered a means of maintaining self-esteem (Ross & Nisbett, 1991). In mentally healthy individuals, the tendency to attribute the cause of negative events to external factors maintains self-esteem by enabling them not to acknowledge responsibility for the event (Taylor, 1988).

The responses from Kaney & Bentall's (1989) study and further data employing identical measures were re-analysed for internality by independent judges. The judges' ratings

were then compared with the self-ratings of internality made by the participants (Kinderman, Kaney, Morley & Bentall; 1992). Whereas the judges typically agreed with the control participants' self-ratings, they disagreed with many of the self-ratings made by the participants with delusions. Specifically, the deluded participants self-rated as external many casual statements which were rated by the independent judges as being internal. This discrepancy in the location of blame for negative events was replicated by Lyon *et al.* (1994). They presented an opaque or implicit measure of attribution style, the Pragmatic Inference Task (PIT; Winters & Neale; 1985) and a transparent or explicit measure of attribution style, the ASQ (modified to avoid repetition of items on the PIT) to deluded, depressed and control participants. Lyon et al (1994) found that the deluded group made excessively external attributions for negative events and excessively internal attributions for positive events on the transparent measure revealing a greater self-serving bias in comparison with either the depressed or control participants. In direct contrast, the attributional style made by deluded participants on the PIT, a covert measure of attributional style, substantially resembled those of depressed participants. Both groups made extremely external attributions for positive events and internal attributions for negative events, whereas the control participants did the opposite by still using the self-serving bias. The deluded participants changed from blaming external sources for negative events to blaming themselves when they were unaware that they were allocating blame. Lyon *et al.*'s (1994) explanation for this is that the necessity to make explicit attributional judgements would trigger defensive responses to protect the view of the self, whereas when non-conscious attributional judgements are made, responses appear

consistent with underlying negative self-schema. Lyon *et al.* (1994) considered that this supports the hypothesis that those with delusions have underlying feelings of low self-esteem, and that the delusions function as a psychological defence.

Studies replicating these results (Candido & Romney, 1990; Fear, Sharp & Healy, 1996; Sharp, Fear & Healy, 1997) generally support the findings that people with persecutory delusions, when compared to depressed and non-clinical control groups, show a bias to excessively external attributions for negative events. Sharp *et al.* (1997) found those with paranoid and/or grandiose delusions were more likely to externalise attributions for bad events than those with non-persecutory/non-morbid jealousy delusions or a normal control group. A further study by Kinderman & Bentall (1997) used what they considered a more reliable measure of attributions, the Internal Personal and Situational Attribution Questionnaire. The external dimension of the questionnaire is divided between a personal locus (attributing the event to identifiable others) and a situational locus (attributing the causes of events to situations or chance). They found that the participants with persecutory delusions showed a personalising bias for negative events (that is they blamed other people for them) in comparison to both depressed and non-clinical controls. However, compared to non-clinical controls, they were not more likely to show either an externalising situational bias for negative events or an internalising bias for positive events. Krstev, Jackson & Maude (1999) found only weak evidence for this effect in those with a first episode of psychosis.

A review of the literature by Garety & Freeman (1999) agrees that people with persecutory delusions do have attributional biases in externalising causes for bad events. However, there is weaker evidence for an internalising bias for positive events. Furthermore, those with persecutory delusions tend to personalise their attributions so they are particularly inclined to blame people for bad events rather than situations or chance, whereas normal people are more likely to consider situational and more benign factors. This, as Kinderman & Bentall (1996) have highlighted, could be implicated in making those with paranoid delusions more suspicious and antagonistic to others.

The evidence for attributional style and its possible role in delusions acting as a defence does not say anything about causality and Bentall and colleagues have not proposed a role for this in the formation of delusions. Lyon *et al.* (1994) felt that a defensive attributional style could be a consequence of persecutory delusions rather than the cause. Furthermore, Sharp *et al.*'s (1997) sample of those with non-persecutory delusions did not make extensive external attributions for bad events indicating that the formation of delusions in general is not dependent on this attributional style. They suggest that attributional style may shape delusional content rather than delusional form. Individuals whose attributional style is grandiose or persecutory would develop grandiose or persecutory delusions, and their attributional style will aggravate and maintain the psychiatric condition. This may go some way to defend against low self-esteem in placing the blame elsewhere rather than accepting responsibility for negative events. The evidence for social attributional style supports the theory of maintaining persecutory

delusions but it is felt that the delusions-as-defence theory requires evidence of a need to protect a vulnerable self from threat and that this leads to changes in cognitive processes which then contribute to the formation of delusions. Such evidence has been sought in studies of the self-concept.

1.5.2 Discrepancies in the Self-Concept

The second set of experimental evidence considered to support the proposal that persecutory delusions act as a defence concerns studies of discrepancies in the self-concept or self-representations. The 'self-concept' is seen as a broad term which embraces beliefs concerning relatively specific aspects of the self (such as gender identity, abilities and attributes) and self-esteem (Brewin, 1988). Although there are many different approaches to conceptualising the self (Wylie, 1979), the self-concept can be viewed as a set of related and interacting self-representations (Markus & Nurius, 1987; Markus & Wurf, 1987). Research into the self-concept in those with (early onset) schizophrenia appears to show complex disturbances of the self in psychotic patients. People with a diagnosis of schizophrenia appear to have poorly elaborated (Robey, Cohen & Gara, 1989) and contradictory (Gruba & Johnson, 1974) self-concepts with the consequences that "schizophrenic patients do not have uniformly lower self-esteem than normals but, rather specific domains of self-esteem are affected" (Garfield, Rogoff & Steinberg, 1987, pp.225). Studies using direct measures of self-esteem show only moderate levels of disturbance in psychotic patients, and they demonstrate significantly

higher self-esteem than depressed patients (Silverstone, 1991). Patients with a diagnosis of schizophrenia make no more self-rejecting statements than non-patients (Kaplan, 1975); have similar differences between their self-perceptions than other non-patients (Ibelle, 1961; Rogers, 1958); and give higher ratings of self-satisfaction (Wylie, 1979). Havner & Izard (1962) found that those patients diagnosed as paranoid showed higher self-esteem than in others with a diagnosis of schizophrenia. However, self-esteem can also be adversely affected by the impact of psychosis on the individual, and for some people self-esteem will be worse and lead to an increase in depression (e.g. Mechanic, McAlpine, Rosenfield & Davis, 1994). Freeman, Garety, Fowler, Kuipers, Dunn, Bebbington & Hadley (1998) found that negative thoughts about the self were a significant clinical problem in their study of individuals with neuroleptic-resistant persecutory delusions. Perhaps the differences between these findings is that diagnostic criteria for those with schizophrenia has become clearer, or that studies in more recent times include more treatment resistant cases. They may be due to changes in treatment or to changes in social and health care for this group, resulting in more psychological difficulties being presented or concentrated in studies.

To find support for their theory that delusions act as a defence against low self-esteem, Bentall and colleagues (Bentall *et al.*, 1994; Kinderman & Bentall, 1996) have used Higgins's (1987) theory of self-discrepancies in relating self and affect to consider deluded patients' self-evaluations or self-concepts. Higgins (1987) provides a systematic framework for considering the idea of different selves or self-images that people are

thought to possess. This idea is not new. For instance, James (1890/1948) proposed a spiritual self and a social self; Rogers (1961) distinguished between what people thought others believed of them and what a person's own ideals of what they should be like; Piers & Singer (1971) distinguished between the superego representing the moral conscience and the ideal self representing hopes and goals; Cooley (1902/1964) described a social ideal self built up by imagining a "better I"; and Colby (1968) distinguished between wish-beliefs (what I want to do) and value-beliefs (what I should do). Higgins (1987) presents a well developed and potentially predictive theory of the different representations of the self and the result of discrepancies between these representations. He identifies two different facets of the self - the first is the kind of person an individual believes s/he is actually like, and the second the kind of person an individual believes that others think s/he is actually like. Consequently, there are two standpoints on the self - the own personal view and the perceived viewpoint of others (this can be significant others or generalised others - see Erikson 1950/1963; Lecky, 1961; Mead, 1934; Wylie, 1979). These standpoints are then considered by Higgins as having three domains, that of the actual self; the ideal self and the ought self. In summary, self-representations can be held of the *actual* attributes an individual believes s/he possesses; the *ideal* attributes an individual would like to have and the attributes an individual feels s/he *ought* or should have, and the attributes the individual actually, ideally and ought to have from the perceived viewpoint of others.

According to his theory, Higgins considers that the self-state representation of actual/own and actual/other constitutes what is typically meant by a person's self-concept and that the self-state representations of ideal/own; ideal/other; ought/own and ought/other were self-directive standards or self-guides (Higgins, Strauman & Klein, 1986). He also recognised that there could be many other self-representations but felt that these were the most significant. Higgins believed that the varying discrepancies between the self-concepts and self-guides reflects a particular type of negative psychological situation. For instance, the most well-known is low self-esteem which is considered to have evolved due to differences between an individual's views of his or her own actual self and own ideal self. An individual who has discrepancies between actual/own and ideal/other may experience shame, embarrassment or fear of losing others' esteem. Discrepancies between actual/own and ought/other may give rise to feelings of fear and of being threatened, and discrepancies between actual/own and ought/own may give rise to vulnerability to guilt, self-contempt or uneasiness. These predictions have been supported by studies of clinically depressed and socially phobic psychiatric patients (Strauman, 1989), clinically anxious and depressed students (Scott & O'Hara, 1993), and dysthymic non-clinical participants (Strauman & Higgins, 1988). Brewin (1996) in his review of the theoretical basis of cognitive-behavioural theory suggested that mental representations of knowledge about the self (self-concepts) underlie disorders such as depression, social phobia and generalised anxiety disorders.

Kinderman & Bentall, 1996, Bentall *et al.* (1994) and Kinderman & Bentall (2000) have used Higgins's (1987) self-discrepancy theory as a way of formulating and investigating the possibility that delusions act as a defence against low self-esteem. Within this theory, self-esteem is seen as a function of differences between how individuals see their actual and ideal selves (Higgins, 1987). Kinderman, Bentall and colleagues hypothesise that persecutory ideation may be a result of trying to reduce this difference to a minimum. When actual-ideal discrepancies are activated by negative life events or stimuli, deluded people may actively minimise perceived differences between the actual-self and the ideal-self and thus maintain self-esteem. They go on to consider that to maintain this cognitive organisation of avoiding thinking negatively of the self, deluded people may blame others for the bad events that occur by making external, personal attributions for negative events (Kinderman & Bentall, 1997). This links with their research on attributional style as previously discussed. These attributions ("I am not responsible for the bad things that are happening to me - other people are") reduce discrepancies between the actual-self and the ideal-self, but increase discrepancies between the way individuals see themselves and the perceived views of how others see them, and leads to the belief that others will hold generally negative views of them ("other people hate me"). It was noted by Kinderman & Bentall (1996) that this type of cognitive process may generate agitation and hostility towards others and thus paranoia. Of note is that Higgins's (1987) theory does not make any predictions about discrepancies between views of the actual self and the perceived views of others about the self.

Kinderman & Bentall (1996) tested this hypothesis by predicting that paranoid delusions would be associated with positive self-ratings and low discrepancies with the ideal-self but that there would be larger discrepancies between self-ratings and the deluded patients' beliefs about how they were perceived by others. They devised a Personal Qualities Questionnaire (PPQ) which was a modified version of the Selves Questionnaire (Higgins, Bond, Klein, & Strauman, 1986) to measure self-discrepancies in paranoid, depressed and control groups. The Selves Questionnaire requires individuals verbally to generate up to 10 attributes they would use to describe the person they felt they actually are (self-actual), would ideally like to be (self-ideal), and felt they should be or ought to be (self-ought). In addition, individuals were asked to generate the attributes they believed other people would use to describe them in each of these domains. This questionnaire and its scoring system were modified in the Kinderman & Bentall study by omitting the need to make numerical ratings of the attributes. In addition, instructions to consider the believed opinions of "other people" were changed to "your parents". As predicted by Kinderman & Bentall (1996), those patients suffering from delusions of persecution and the non-patient controls showed smaller discrepancies between their perceptions of their actual self- and their ideal self-representations compared to the depressed patients. However, the deluded group had greater discrepancies between the view held of the self and that of perceived others (the believed views of their parents) when compared with controls. This difference was smaller when compared with the depressed group. In this respect they differed from non-patients but were similar to the depressed patients for self-other discrepancies.

Kinderman & Bentall (1996) concluded that these group differences are consistent with the suggestion that paranoia results from a set of externalising attributions for negative events. The externalising attributions prevent the explicit activation of discrepancies between actual-self and ideal-self representations at the expense of causing discrepancies between the view held of the self and the perceived viewpoint of others. By shifting the cause of problems to others, the self is protected from internally generated negative thoughts and feelings. Furthermore, this is likely to lead to negative perceptions of other people which would give rise to feelings of paranoia. Kinderman & Bentall (2000) have directly compared this relationship between self-representations and attributions in a group of students. They used a specifically designed measure to assess self-discrepancies following the general principles of Higgins (1987) Self-Discrepancy Theory and a modified version of the ASQ (Paterson *et al.*, 1982). In support of the model proposed by Bentall and colleagues, they found that external attributions for negative events are associated with reduced self-actual and self-ideal discrepancies suggesting that such attributions may function in a self-protective manner. They also found that if the external attributions for negative events were personalised (where the believed causes of negative events are held to be the actions or omissions of other people) self-actual and actual-other discrepancies became apparent.

Bentall and colleagues' model predicts that external attributions are more likely to be made if actual-ideal discrepancies are explicitly activated due to negative events. Conversely, deluded participants' defensive biases should be absent if there is no direct

activation of their actual-ideal discrepancy, or if those discrepancies are activated implicitly. The possible self-protective nature of the findings described above implies that abnormalities in such information processing would be most evident when automatic or non-effortful cognitive processes are assessed. Overt methods of accessing the self-concept of people with persecutory delusions, on the other hand, are more likely to be influenced by the self-serving biases. Therefore, the most important prediction of the model of delusion-as-defence in relation to self-concepts is that there will be a discrepancy between overt and covert measures of self-esteem (Garety, & Freeman, 1999). People with persecutory delusions should show overt normal or high self-esteem, or a positive explicit self-concept, but on covert measures responses should be similar to those with low self-esteem. Three studies have used the Emotional Stroop Task (Bentall & Kaney, 1989; Fear *et al.*, 1996; Kinderman, 1994) to examine covert self-esteem. The Emotional Stroop Task is thought to measure preconscious or automatic cognitive processes and has been widely used as a measure of covert attentional bias, signalling the emotional salience of words by slowing the naming of the colours in which salient, as opposed to neutral or non-salient words, are printed (Brewin, 1988). Studies have shown the Stroop effect even when participants are not consciously aware of the material presented (Williams, Mathews & MacLeod, 1996) and it is regarded as a valid measure of individuals' covert concerns (Garety & Freeman, 1999). The above studies have used as stimuli strings of Os, neutral words and, variously depression-related, threat-related, anxiety-related, and positive and negative self-descriptive words. Bentall & Kaney (1989) found that their deluded and depressed group did not differ on overt or covert

measures of depression although the deluded group showed an interference effect for words of a paranoid content. Fear *et al.* (1994) also found attentional biases to threat but not to depressive words in their delusional group. Only Kinderman (1994) has found evidence for implicit low self-esteem by using positive and negative self-descriptive words. He found that those with persecutory delusions endorsed a higher rate of positive self-descriptive words than negative words but showed interference effects for both positive and negative self-descriptive words. The response to the covert negative self-descriptive words were similar to the depressed control group's pattern. It was felt that the difference between endorsement of covert and overt negative words was consistent with the presence of a defensive process. The only other evidence for overt-covert discrepancies is that provided by Lyon *et al.* (1994) of explicit and implicit attributions, and Kinderman *et al.* (1992) of deluded participants' internality ratings as discussed above under attribution style.

Freeman *et al.* (1998) specifically looked for supporting evidence for a maintenance of self-esteem in those with drug-resistant persecutory delusions and concluded that for most people, their persecutory beliefs were not serving to maintain or distort their levels of self-esteem. They found that those with persecutory delusions had negative self-concepts similar to those with other types of delusions. In addition, there was no association between changes in delusional conviction and changes in self-esteem as would be predicted with the delusion-as-defence account. There was also no disruption between the close relationship between depression and self-esteem as would be expected. They

felt that the results were more consistent with their 'normal emotional processes' account in that the level of self-esteem is not the cause of the delusional belief but results from the individual's interpretations and efforts at coping with life experiences (including illness).

The delusional groups in these studies do tend to show fairly high levels of depression and low levels of self-esteem and these are thought to be closely related; for instance most of the participants in Freeman *et al.* (1998) study had low self-esteem and moderate to severe levels of depression. Bentall & Kaney (1989) found no difference in Beck Depression Inventory (BDI) scores between their persecutory delusional group and the depressed group, and Fear *et al.* (1996) found BDI scores higher than the healthy control group's scores although they did not reach clinical levels. Kinderman's (1994) delusional group also tended to show high levels of depression, although not as high as the depressed group. The levels of depression found in those with delusions, confounds results when investigating whether delusions are providing a defence against low self-esteem, and in comparing results with those who are diagnosed as depressed. It is not surprising that there is some overlap with the results for both psychiatric groups. However, Freeman *et al.* (1998) did found a sub-group of participants with persecutory beliefs (approximately 30%) who did show normal levels of self-esteem. When this subgroup was compared with the individuals with low self-esteem, they were found to have higher levels of conviction in their delusional beliefs, and lower levels of depression and anxiety. They considered that this group may use defensive processes.

1.5.3 Summary

A significant amount of research has been carried out with those who have early onset schizophrenia to find support for the theory that delusions act in some way to protect a weak ego or a vulnerable self-view, or to protect against depression. Attributional style studies are generally supportive in that those with persecutory delusions tend to blame others for negative events in their lives, although it is not known whether this style causes or aggravates delusions, or is a consequence of paranoid ideation. Evidence more directly considering self-esteem in relation to persecutory delusions is less clear. High levels of depression and low self-esteem are quite common in those with schizophrenia and confound results when making comparisons with depressed psychiatric controls. In addition, investigating hidden depression or low self-esteem has more often shown up anxiety or threat related preoccupation rather than depression related responses. However, some studies have found implicit, underlying indications of negative self-concepts in relation to positive, explicit normal levels of self-esteem. With self-referent material, those with persecutory delusions are more likely to present a positive self-concept when asked openly but to indicate a more negative view when the task does not openly require them to judge themselves. This cognitive strategy may well maintain a positive self-concept and provide a defence against low self-esteem. This type of defence of the self-concept could be very relevant in those growing old, and is worth considering in those with late onset delusions.

1.6 The Self-Concept in Old Age

The hypothesis that delusions provide a defence against psychological distress could equally apply to those who develop delusions in older age. Gurian *et al.* (1992) proposed that late-onset paranoia could be associated with a constriction in social networks and loss of control over the environment (real or perceived) resulting in a decreasing self-esteem. The risk factors associated with late paraphrenia such as isolation, abnormal personality traits and unresolved life goals could have the common feature of problems with the self-concept. Deafness and poor eyesight could also affect ideas about the self by increasing feelings of isolation and lack of control over the environment.

The self-concept is important in any age group but is particularly interesting in older adults. As people age, their self-esteem could become increasingly vulnerable as possible physical and mental decline occurs, social networks contract, financial worries become more prevalent and they have less control over their life situation and environment (Atchley, 1982; Lazarus & Dilongas, 1983). Therefore, ageing can be expected to place significant psychological demands on the individuals' coping mechanisms, ability to adapt to stresses and emotional resourcefulness. In addition, Erikson (1963) considered old age as a period of reflection that challenges the ageing person to seek a sense of coherence and meaning in their preceding life. Erikson (1963) felt that a negative evaluation may leave the person with a sense of meaninglessness about their life and may result in fragmentation of the self-image, repression of painful thoughts about the past,

and paranoid fears about their environment. However, despite widespread expectations to the contrary, older people generally have high levels of self-esteem (Baltes & Baltes, 1990) and there is evidence to suggest that self-esteem actually increases with age (George & Bearson, 1980). In addition, claims for the relatively high prevalence and incidence of depressive illness among older people appear to be exaggerated and severe illness is not frequent, although mild symptoms of depression are common (Henderson, 1989). However, the losses and declines of old age are fertile ground for the development of threats to the self-concept and that older people need to psychologically adapt to changing circumstances. The ageing process is highly individualised, and there is little understanding of why the majority of elderly people negotiate the ageing process very well, irrespective of the challenges this brings, while a minority develop psychological difficulties including late paraphrenia.

One aspect of the self-concept of interest is whether personality changes as people enter their latter years. Studies tend to show two themes emerging (e.g. Costa & McCrae, 1980; Neugarten, 1977). First, there appears to be a continuity of personality in that individual differences in internal personality structure tend to be maintained over time, and second, that the only internal dimension to change systematically with age in nearly all studies of personality is introversion - the turning of one's interest and attention inward upon the self rather than toward external objects and actions. Atchley (1982) considered that this increase in self-appraisal is more in the course of self-acceptance and

understanding, and a yearning for what Erikson (1963) called 'integrity', rather than for the purposes of social withdrawal.

Atchley (1982; 1994) discusses the effects on the self-concept through the ageing process, regarding the self as something that is evaluated, tested, modified and refined through life time experience (Kelley, 1955). In addition, there is less potential for conflict among the various aspects of the self, as roles, activities and environments tend to become familiar and to pose no new challenges to the self-concept. Atchley (1982) considers that views held about the self are changeable and open in young adulthood as roles and social positions vary. By middle adulthood, individuals have far more experience of a wide variety of roles and situations, and feedback from others consolidates their views about themselves and what they feel they should be like. As time goes by, more and more people reach closure or stability of ideas about their self-concept. They are in a position to re-evaluate how realistic their ideal self is and to bring this more into line with their actual views about themselves. The older an adult gets, the more realistic these views are. For instance, Birren & Renner (1980) proposed that "experience over a lifetime may modify the ideal to which the individual aspires, and their self-appraisal may change. Thus for the mature person in the later years, the ideal self and the actual self may more closely approximate each other than they did earlier." (pp. 26). Ryff (1991) confirmed this when comparing a number of dimensions of well-being which showed that individuals achieved a closer fit between their ideal and their actual self-perceptions primarily by lowering their ideals. Ryff (1991) goes on to add that the

ability to maintain positive psychological functioning in later life may be complex and uniquely different from other life periods. For instance, older people when defining positive functioning will emphasise the notion of accepting change as characteristic of a mature, well-adjusted person (Ryff, 1989).

In general, older people tend to think well of themselves due to this increase in self-acceptance as they age, and older adults maintain good self-esteem. The self-esteem scores of older people living independently in the community are nearly double those of high-school students (Cottrell & Atchley, 1969; Rosenberg, 1964). This continuity of self can serve as a solid basis on which to stand up to the negative pressures that occur as a result of ageing and older people are in fact very robust in adjusting to stressful life events (Atchley, 1994; McCrae & Costa, 1988). Ryff (1995) looked at how older people felt they had changed over time with the use of a psychological well-being scale which looked at more enduring, long-term quality of life issues. These issues are especially relevant to the older age group who are more likely to be searching for meaning in their (past) lives (Erikson, 1963). The scale was used with 90 normal older adults to assess their perceptions of improved or worsened functioning over time. In general, they tended to show that their views about themselves had either stayed the same or improved.

To maintain a good sense of functioning and self-esteem, Greenwald (1980) proposed that older adults use a number of cognitive strategies that protect their ideas about themselves. He thought they used evidence of past competencies and successes to

provide a current positive self-evaluation. This self-serving bias could go so far as the individual fabricating or revising personal histories, and only acknowledging new information that fits and supports the positive view of the self. Atchley (1982) also considers a number of psychological processes that occur to prevent the eroding of self-esteem during ageing and allow gradual decline to be slowly incorporated into views of the current self. These include: continuing to hold stereotypes about older people but ignoring them in relation to the self; seeing detriments of the self as being relatively insignificant when compared to others of the same age; discounting or ignoring negative evaluations of the self; remaining in familiar environments that allow only the use of well-practised skills and positive experience of competencies; or avoiding situations where negative responses may be generated, for instance, by staying within their own small circle to avoid ageism experiences. Neugarten (1963) talked of the "institutionalisation" of the personality as older individuals expect themselves to respond in ways consistent with their past history, and build up around themselves familiar environments and behaviours to facilitate dealing with their world in a consistent and stable way. Heckhausen & Schulz (1995) felt that older adults compensated for loss of 'primary control', that is the ability to change the world so that it fits the needs and desires of the individual, by increasing 'secondary control', that is the inner personal adaptations needed to fit in with the world and the things that cannot be changed. They have found that older people are able to maintain relatively stable perceptions of their primary control well into old age, and they suggest that the effective use of secondary control strategies is the cause of this. These strategies could include: the use of self-protective causal

attributions; adjustments to goals and aspirations; positive reappraisal; identification with powerful others; only comparing themselves to those less well-off; holding negative stereotypes of other people in relation to themselves, and using intrapersonal, emotion-focused, rather than problem-focused, forms of coping with difficulties (Heckhausen & Krueger, 1993; Heckhausen & Schulz, 1995).

Where adaptive strategies are not used or prove ineffective, however, there is a significant risk of mental health problems developing due to poor or low self-esteem. It is thought that one in five older people have significantly low levels of self-esteem that will affect their mental health (Atchley, 1982). Atchley proposed a number of reasons why this could be the case. He felt individuals may have a poor lifetime development of a solid sense of self or identity. Others' life-long low self-esteem may be caused by perfectionism where their expectations far outdistance their capacity to meet those expectations resulting in a perceived low self-acceptance. In addition, there are people who experience a loss of self-esteem in later life. This may be due to physical or mental changes becoming so pronounced that the person is forced to accept what he or she sees as a less desirable self-image. A person's self-esteem may be vulnerable because it is too dependent on particular roles or too narrow, such as defining the self by a career or profession and not being able to adjust when this is ended; or because the individual has lost control over his or her environment to such an extent that the person is essentially defenceless, for example where the person is institutionalised (Atchley, 1982). This aspect of loss of control is thought to be a significant issue in older age and mental health

(Coleman, 1992). Davies (1996) felt that people who have greatly valued their autonomy are more likely to suffer drops in self-esteem and to become agitated and hostile when forced to become dependent on others for services. Krause (1994) argued that threats to the social identities of individuals are more likely to lead to feelings of Erikson's (1963) 'despair' than threats to other areas of their lives. Heckhausen & Schulz (1995) felt that the failure of secondary control processes, the ability to psychologically adapt, in the face of the loss of primary control, the ability to change the external environment, can result in increased depression. Sudden and substantial losses in control of the external environment are likely to be particularly devastating in that they do not allow individuals time to adapt and compensate through establishing psychological adaptations before the loss occurs.

1.6.1 Summary

In summary, as older people age they tend to retain good levels of self-esteem and they do not have higher levels of depression in comparison to other age groups despite expectations to the contrary. As the effects of old age begin to change people's interactions with the world, ideas of the self also change and psychological processes are used to protect the self by continuing to evaluate the self positively. However, it could be considered that those with mental health problems in old age are unable to use these strategies, or do not use them effectively. Certainly those with depression have problems

in protecting or maintaining their self-concept and this could well be implicated in those with late paraphrenia. Limited emotional resourcefulness and poor adaptation to the stresses of ageing may interact with a biological vulnerability to precipitate psychotic illness in old age (Hassett, 1997). The delusions present in those with late paraphrenia could represent their attempts to protect their self-esteem and prevent ensuing depression along the lines of previous theorists who have considered that delusions function as a defence of the self. The trigger for the onset of delusions could be the inability to adequately adapt to the psychological stresses of the ageing process.

1.7 Current Study

The theory that persecutory delusions may function as a defence against low self-esteem can also be applied to the consideration of the delusions held by those with late paraphrenia. Those with late paraphrenia are generally defined by the presence of positive psychotic symptoms consisting of well-structured and coherent delusions (Roth, 1987), and without the thought disorder or negative symptoms often found in those with early onset schizophrenia. The delusion-as-defence model of Bentall, Kinderman and colleagues (Bentall *et al.*, 1994; Kinderman, 1994; Kinderman & Bentall, 1996) is also based primarily on disturbances in views of the self which may result in abnormal attributions. As discussed above, the self-concept in older people appears to need to change and adapt to the often negative aspects of the ageing process to maintain positive self-views. It is possible a small sub-group of these older adults use adaptive strategies

that lead to them developing delusional ideation. Those cognitive strategies to retain positive self-evaluations proposed by Greenwald, (1980), Atchley (1982) and Heckhausen & Schulz (1995) emphasise the importance of the self-serving bias in older people. Those with late paraphrenia may be using this excessively to explain negative feelings and situations, and as Bentall and colleagues propose, with the result of seeing the outside world as more threatening or alien. For instance, Heckhausen & Schulz (1995) considered that to maintain relatively stable perceptions of control over the outside world (primary control), personal adaptations (secondary control) need to be made to fit with those things that cannot be changed by the use of self-serving biases and changes in self-perception. Those with late paraphrenia may use more excessively external attributions about their negative circumstances rather than internal changes to their self-image. This has implications for developing interventions for this particular group, as current treatment strategies are limited. Evidence that maladaptive cognitive processes are causing or contributing to their mental state would be useful in developing psychological interventions, as an alternative or adjunct to medication. Psychological interventions with those with early onset schizophrenia highlight the benefits of exploring and reinterpreting individual's experiences and this is particularly relevant to this group of individuals who often live very isolated lives and seldom are in a position to talk about their internal worlds.

This study proposes to investigate the delusions-as-defence model with those with late paraphrenia who have persecutory and/or grandiose delusions. As predicted by the

model, if delusions are being used as a defensive coping strategy then there should be evidence of anomalies between overt and covert self-esteem, and self-representations. Clinically, it is considered that those with late paraphrenia show very little evidence of depression. If this is the case, there will be little confounding of overt and covert negative emotions, as has been found in studies involving those with early onset schizophrenia. Bentall *et al.* (1994) do not generally claim that the defensive function of persecutory delusions protects the individual from depression. However, it seems that this should be predicted by Higgins's model as it is the actual-self and ideal-self discrepancy that is associated with dejection-related emotions such as depression (Garety & Freeman, 1999). Freeman *et al.* (1998) also highlight the close association between self-esteem and depression. Therefore, this study will investigate overt levels of depression and self-esteem and compare these to covert attentional biases to emotionally negative words as measured through the Emotional Stroop Task. The Emotional Stroop paradigm is one of the most frequently used methods of assessing attentional bias in those with depression and is considered a good measure of psychopathology (Williams et al., 1996). The Emotional Stroop Task will also be used to assess the possibility that there is an underlying attentional bias to aspects of old age. This study will also use Higgins's (1987) self-discrepancy theory to test the possibility that those with delusions tend to seek external sources of blame rather than themselves for negative events and these paranoid attributions result in the belief that others hold negative views about them. If this argument is supported, there should be reduced differences between their ideal selves

and their actual selves, but with greater discrepancies between their actual selves and the perceived viewpoint of others.

In addition, this study aims to investigate the hypothesis that changes over time in self-perceptions may be associated with poorer mental health. If cognitive strategies are used to maintain a positive sense of self, then the perceived view of the self-concept should be reasonably stable across time, with evidence to suggest that it actually improves as views of the ideal-self and the actual-self are more in agreement. Discrepancies between past and present may indicate that psychological coping mechanisms are not effective enough to retain stable self-evaluations.

The issue of changes over time and current views of general functioning will be investigated more thoroughly using Ryff's (1989) multi-dimensional psychological well-being scale. Of the six dimensions making up this scale, of particular interest are the dimensions of positive relationships with others and environmental mastery. These two dimensions are more directly related to the individual's perception of their relationship with their external world. For instance, Positive Relations With Others is based on the importance of interpersonal relationships and Environmental Mastery requires participation in activities outside of the self requiring the ability to choose or manage the environment (Ryff, 1989). In contrast, the dimension of Self-Acceptance reflects a positive attitude to oneself; Autonomy indicates levels of self-determination or the regulation of behaviour from within; the Purpose in Life dimension reflects the sense of

directedness and intentionality of the individual; and Personal Growth to the sense that one has developed one's potential, to grow and expand as a person. If those with delusions use defences to maintain self-esteem and avoid depression by having more negative views about those around them, then this should be reflected in the dimensions of Positive Relations With Others and Environmental Mastery. They may perceive they have less control over their environment and the people in it, and thus perceive that their functioning in these areas is worse than the healthy controls. In addition, if worsening perceptions of the external world are a contributing factor to the delusional process, then the psychotic group will show a worsening of functioning on these two dimensions over time, although they should show similar responses to the healthy controls on the other dimensions.

1.7.1 Study Hypotheses

The following hypotheses will be tested in this study:

1. On explicit tasks, those participants with late paraphrenia will show normal levels of self-esteem and low levels of depression similar to the pattern found in healthy controls but different from those with depression who will show low self-esteem and high severity of depression. In contrast, those with late paraphrenia will respond in a similar way as the depressed patients to emotionally negative words in the Emotional Stroop Task indicating signs of depression and low self-esteem when measured covertly.

2. Those with late paraphrenia will show higher interference rates to the age related words on the Emotional Stroop Task than the healthy participants, and in this respect their performances will be similar to the depressed controls.

3. Those with late paraphrenia will show levels of discrepancies between their current actual-self and ideal-self representations similar to the healthy controls, but will show larger discrepancies between their current actual-self and actual-other representations than the healthy controls. Those with depression will show higher discrepancies between their actual-self and ideal-self than the other two groups.

4. Those with late paraphrenia, when comparing their past and current self-concepts, will show similar discrepancies to the healthy controls between actual-self and ideal-self discrepancies, but will show an increase in discrepancies between actual-self and actual-other viewpoints over time which will not be observed with the healthy controls. Those with depression will show a general increase in their discrepancies between actual-self and ideal-self.

5. Those with late paraphrenia will show similar levels of self-acceptance, autonomy, purpose in life and personal growth to the healthy controls and greater levels than the depressed group. However, the late paraphrenia patients will show lower ratings of environmental mastery and relationships with others compared to the healthy participants. The late paraphrenia group will show similar perceptions of changes in functioning over time as the healthy group, with the exception of environmental mastery and relationships with others, whereas the depressed group will show worsening perceptions of functioning over time.

CHAPTER TWO: METHOD

2.1 Overview

This study proposes to investigate the psychological processes of late paraphrenics' delusional ideation within the context of the theory that delusions are a form of defence against low self-esteem and depression. This study will test the hypothesis that those with delusions show differences between their overt self-evaluations and covert negative emotions. It will also explore whether there is any abnormal attentional bias towards age related factors different to that found in healthy control participants. It will look at discrepancies in 'actual', 'ideal' and 'other' self-concepts, and how these are perceived to have changed over time, to provide support for the hypothesis that those with late paraphrenia maintain normal levels of self-esteem by perceiving others in a more negative way. In addition, this study will look at perceptions of current and past functioning to explore whether differences in these perceptions are associated with delusional thinking and a defence of the self.

2.2 Design

The research design involved three experimental groups and three experimental conditions. The between subjects factor of groups consisted of an experimental group of those diagnosed with late paraphrenia, and two control groups: one with diagnoses of

depression and those considered healthy older adults. The three within-subjects factors consisted of the following i) an implicit Emotional Stroop condition with three levels (neutral words, depressed words, and age related words); ii) a self-concept condition of two within-subjects variables (past and current) each with three levels (actual, ideal and perceived by others); and iii) psychological well-being dimensions (six dimensions of autonomy, environmental mastery, personal growth, positive relations with others, purpose in life and self-acceptance) each with two levels of past and current views. The dependent variables were reaction times measured in seconds of response to the Stroop conditions, self-concept discrepancy scores both past and current, and measure of psychological well-being scores across six dimensions both past and current.

2.3 Participants

There were 13 patients in the Late Paraphrenic Group, 15 patients in the Depressed Control Group and 15 in the Healthy Control Group. Participants from the Late Paraphrenic and Depressed Groups were recruited from the Old Age Psychiatry Service at the Maudsley Hospital, South London. Two additional late paraphrenia patients were recruited through the Old Age Psychiatry Service at St Charles Hospital, North London. The patients were interviewed as either out-patients in their homes or the Maudsley's Hospital Day Care Centre, or as an in-patient. The healthy controls were recruited from local pensioners' groups, and lived predominantly in the same area as the other two groups.

2.3.1 Late Paraphrenic Group

Criteria for inclusion in the Late Paraphrenic Group were based on Roth & Kay's (1998) criteria for a diagnosis of late paraphrenia: that the psychosis was of late onset (over 60 years of age although all participants were over the age of 65); no co-morbid affective disorder; and no significant cognitive impairment or organic brain disorder. In addition, the participants had to be experiencing persecutory and/or grandiose delusions. A further criterion was that the participants needed to be fluent in English to be able to complete the Stroop task and to give informed consent.

All participants were given a diagnosis of late paraphrenia, late onset schizophrenia or delusional disorder (depending on whether DSM-III or IV criteria were used) by the psychiatrists in charge of the cases. All participants in the experimental group were current patients of the Old Age Psychiatry services, and were suffering from delusions. Formal diagnosis of late paraphrenia was obtained from the case notes. In each case, mention was made of the presence of delusional beliefs and this was also confirmed by medical staff. In addition, selected questions from the Geriatric Mental State questionnaire (Copeland, Kelleher, Kellett, Gourlay, Gurland, Fleiss & Sharpe, 1976; Gurland, Fleiss, Goldberg, Sharpe, Copeland, Kelleher & Kellett, 1976) were used by the researcher to establish that the participants were currently experiencing delusions.

During the 14 months of data collection, there was a total of 26 patients that met the criteria of late paraphrenia as provided by Roth & Kay (1998), and suitable for inclusion, and who were using the two old age psychiatry services accessed by the study. Three were considered too ill by their carers to be interviewed. A total of 23 patients were initially approached by their care workers and asked if they would like to take part in the study, and those that were in agreement were then approached by the researcher. Three (13%) did not want to meet with the researcher and seven (30.5%) were not interested in participating after meeting the researcher. A total of thirteen agreed to participate. This was a 56.5% acceptance rate which is high for this particular group of patients due to their tendency to be suspicious of others and/or their often conflictual encounters with health care professionals. Of the thirteen patients, four were men and nine were women. Eight of the patients were interviewed in their own homes, three in hospital and one in a day care centre.

A list briefly describing the delusional content of each patient is attached as Appendix A. All but one of the patients were experiencing persecutory delusions and the remaining patient had grandiose delusions. 10 of these patients were receiving neuroleptic medication, although compliance rates for this are unknown. (Compliance rates tend to be quite poor with older age cohorts, Dornan & Wynne, 1998). All but three of the patients were receiving neuroleptic medication for their psychosis. The reasons for the three patients not taking medication were due to non-compliance or the recency of the diagnosis of paraphrenia. Seven patients were taking Olanzapine (five at the standard

dose with one of these also receiving Flupentixol decanoate at a standard dose; one patient was taking this drug at a ½ and one at double the standard dose). One patient was taking Sulpiride, one was receiving Flupentixol Decanaote and one was taking Risperidone all at the standard doses.

2.3.2 Depressed Control Group

Criteria for inclusion in the Depressed Control Group were: diagnosis of an affective disorder and currently experiencing a period of depression (with a Beck Depression Inventory score of 14 or over reflecting moderate or severe depression; Beck, Rush, Shaw & Emery, 1979); over the age of 65; no significant cognitive impairment or organic brain disorder; no evidence of psychotic symptoms, and the ability to read. Participants were initially approached by their care worker and asked if they would like to take part in the study, and those that were in agreement were then approached by the researcher. A total of 29 were approached to take part in the study. In addition a further ten were approached but they did not fit the criteria. Fourteen were not interested in participating in the study and a total of fifteen patients were interviewed. This was a 52% uptake rate. Eleven women were interviewed and four men. Four patients were interviewed while in-patients, three at a mental health day care centre and eight in their homes.

All bar one of the group were on anti-depressant medication. Three were on Venlafaxine and small doses of Lithium; two were on ½ standard doses of Venlafaxine; three were on

standard doses of Sertraline; and one on Trazodine, Phenelzine and Lofepramine all at standard doses. One patient was on a double standard dose of Clomipramine and one on a small dose of Lithium only. Two patients were also receiving a course of Electric Shock Treatment.

2.3.3 Healthy Control Group

Criteria for inclusion in the Healthy Control Group were: no significant or diagnosable psychiatric condition; over the age of 65; no significant cognitive impairment or organic brain disorder; and the ability to read. The conventional cut-off point of 10 on the BDI was used to exclude those who may have more than mild depression (Rehm, 1988). Participants were approached by the researcher during their attendance at the day centres. People were approached in small groups and no details of the number of people who did not agree to be interviewed were taken. A total of fifteen patients were interviewed, four men and eleven women. Four were interviewed at the community centres and eleven in their homes.

2.3.4 Statistical Power

Statistical power was based on finding a significant Stroop effect for emotionally negative words by the psychotic group which would be similar to that found in the depressed group. Using the means of previous research findings comparing the emotional Stroop

effect by deluded, depressed and control subjects, a Contrast comparison was calculated between deluded/depressed means and control means. Using the Nquery Power programme, a sample size for .05 significance level, 2-tailed test in a 1-way analysis of variance for a power of 80% was calculated at 17 subjects per group. However, the previous research used small numbers and did not involve this current study's client group, so this power analysis needs to be treated with caution.

2.3.4 Demographic Data on Research Groups

A number of demographic details were obtained from the participants to check that the groups were approximately similar. These details included age, sex, ethnicity, marriage status, number of children, education, employment status, housing situation, and history of illness. The means, standard deviations and frequencies are presented in Table 1.

Comparison of the research groups was carried out to assess similarity in demographic information. The groups did not show any significant differences in age $F(2,40)=.7704$, $p<.47$, or gender $\chi^2(df2)=0.0812$, $p<.975$. There were no significant differences between the three groups in years of education $F(2,41)=.2335$, $p<.793$, and socio-economic status as measured through previous employment $\chi^2(df2)=0.777$, $p<.75$ and home ownership $\chi^2(df2)=5.403$, $p<.25$. There was a significant difference of marriage status between the groups χ^2 $(df3)= 9.706$, $p<.025$, although this needs to be treated with caution since the

expected frequencies were less than 5 for each cell and this is thought to provide a less robust test. (However, Howell (1996) considers that there is little risk of making type I errors when this criteria is broken even for quite small sample sizes.) The data suggest that those with late paraphrenia were less likely to be married and more likely to be single, and the normal control participants showed the opposite pattern. A Kruskal-Wallis one-way Anova showed that there was a significant difference between the groups on the number of children they had $\chi^2(df2)=6.12$, $p<.05$.

Table 1. Comparison of demographic data across the three research groups

		Late Paraphrenia Experimental Group N=13	Depressed Control Group N=15	Healthy Control Group N=15
Age	Mean	74.9	77.6	75.0
	SD	5.26	6.94	7.37
	Min	68	67	65
	Max	88	88	85
Gender				
Male	Freq	4	4	4
Female	Freq	9	11	11
Ethnicity				
UK	Freq	7	14	14
Other	Freq	6	1	1
Years of	Mean	10.4	10.2	9.93
Education	SD	1.73	2.34	1.28
Employment Status				
Manual		8	9	7
Non-Manual		5	6	8
Housing Status				
Non-ownership		12	9	8
Ownership		1	6	7
Marriage Status				
Single	Freq	4	3	0
Married	Freq	0	2	5
Divorced/Sep	Freq	2	1	2
Widow/er	Freq	7	9	8
No. of	Mean	1.3	1.8	2.73
Children	SD	1.11	1.57	1.49
Age of	Mean	71.62	58.93	
Onset	SD	6.19	22.4	N/A
of Illness	Min	60	23	
	Max	81	86	
Length of	Mean	3.6	18.7	
Illness in	SD	3.4	18.1	N/A
Years	Min	.5	1	
	Max	10	47	
No of In-Patient Admissions				
0	Freq	10	3	N/A
1-5	Freq	3	7	
>5	Freq		5	

Wilcoxon's Rank-Sum Test showed that there was a significant difference between the Late Paraphrenic Group and the Healthy Control Group (W_S=134, p<.01) with those in the control group having more children than those in the delusional group. Comparisons between the Late Paraphrenic Group and the Depressed Control Group did not reach significance (W_S=173, p>.10) and no significant difference was found between the two control groups (W_S=195, p>.05).

There was a significant difference of ethnicity between the groups χ^2 (df2)=8.702, p<.01. Ethnicity was divided between those born in the UK and those born elsewhere. As can be seen from Table 1 most of the two control group participants were born in the United Kingdom and in fact 93.3% were white English. In the experimental group 60% were born outside the UK. This difference between the groups is not ideal as it may have implications for language understanding, differing personal belief systems and the particular experience of immigration. However, the psychiatric group samples are a good reflection of the population of those diagnosed with late paraphrenia and depression within the psychiatric health service. In addition, the few people from ethnic minorities available were reluctant to participate as healthy volunteers. Those born outside the UK had lived in England for between 33-62 years with an average of 50 years. Three had English as a first language and the remaining four had spent the last 40-62 years in England using English. It is noteworthy that nine from the experimental group were born outside England and all moved to England from elsewhere. It has been considered by Gurian *et al.* (1992) that immigration status is a risk factor for late paraphrenia and the

high number of non-English participants will be discussed further in the Discussion Section.

The psychiatric groups did differ in their history of illness. There was a significant difference of age of onset of the mental health problem $t(16.42)=2.1$, $p<.025$, and significant differences for length of time with the illness $t(15.15)=3.16$, $p<.006$ and number of inpatient stays χ^2 $(df2)=11.98$, $p<.005$. The reason for this is that some participants in the depressed group had longer histories of depression (and onset before the age of 60 years) with an average age of onset at 34.3 years (SD 7.4). This compares to those in the late paraphrenia group who, by definition, have a much later onset of illness. Although, there is a difference in the histories of illness between the two groups, it was felt that valid comparisons can still be made between them as the study was investigating current perceptions about self beliefs and it was felt that these would be similar in the depressed group regardless of history. In addition, the history of illness does not predict severity. Burvill, Hall, Stampfer & Emmerson (1989) compared social, demographic and clinical measures between those with early-onset and late-onset depression. They found that there were no significant differences between the groups, especially on degree of neuroticism.

In summary, there were no differences between the groups on age, gender, years of education and socio-economic status. However, those in the Late Paraphrenic Group were more likely to be single and to have less children than those in the Healthy Control

Group. There were significant differences between the Late Paraphrenic Group and the two control groups in ethnicity and immigrant status. There was also a significant difference in history of illness between the two psychiatric groups when comparing age of onset, years of illness and number of inpatient stays. Apart from these differences, the Groups were reasonably matched on demographic factors. The differences of marriage status, number of children, ethnicity and immigrant status have already been considered as factors more commonly associated with those with late paraphrenia and the sample in this study appears to reflect this. The influence of these differences between the Late Paraphrenic Group and the control groups will be further addressed in the Discussion section.

2.4 Measures

A number of measures were used to test the study's hypotheses. The Beck Depression Inventory (BDI) (Beck, 1967; Beck & Beck, 1972; Beck *et al.*, 1979) and Rosenberg Self-Esteem Scale (Rosenberg, 1965) were used to assess the presence of overt depression and levels of self-esteem respectively; and a Stroop task was devised to assess covert feelings of depression and the presence of anxiety connected with aspects of ageing. A series of Self-Concept Checklists were devised to measure discrepancies in the self-concept from differing viewpoints and over time. A Psychological Well-Being Scale (Ryff, 1989) was used to assess the perception of individual functioning and the degree to which this had changed over time. Other measures used in the study included relevant

sections of the Geriatric Mental State (Copeland *et al.*, 1976; Gurland *et al.*, 1976) to assess presence or absence of psychotic symptoms; and the Mini-Mental State Examination (Folstein, Folstein & McHugh, 1975) to provide a measure to ensure that those with a significant level of cognitive impairment are not included. The Network Assessment Instrument (Wenger, 1989; 1991) was used to assess social support which is considered a risk factor for those with late paraphrenia.

These measures are described in more detail below. The first two, the Emotional Stroop Task and the Self-Concept Checklist, have been devised specifically for this study, and the remaining measures are standardised instruments and scales.

2.4.1 Emotional Stroop Task

The Emotional Stroop Task consisted of three lists of words: neutral, depressed, and old age related words. The sets of words were generated following the method described by Dalgleish (1995) and is as follows. The depressed words were taken from the collection of emotionally related words of John (1988) and Johnson-Laird & Oatley (1989). The neutral words were selected from Francis & Kucera (1982) frequency norms, and the old age related words were obtained from the Chambers Thesaurus (1991). The three groups of words were matched for frequency and length according to Thorndike & Lorge (1944). A total of 57 words were given to ten independent judges to classify into the categories of neutral, depressive or old age related categories. Those that did not achieve

a majority agreement were discarded and a final ten words of equal length and frequency (neutral/depression $t_{(.017)}(19)=2.34$, $p>.03$; neutral/old age $t_{(.017)}(19)=2.06$, $p>.05$; depression/old age $t_{(.017)}(19)=.203$, $p>.50$) were selected per group with a 97% agreement rate among the ten judges.

The method of administering the Stroop test broadly resembled that of Williams & Broadbent (1986), Bentall & Kaney (1989) and Bentall & Thompson (1990), and was as follows. Six A4 sized stimulus cards were used to present the words, two cards for each condition. Ten rows of five words (50 in total) to be colour-named were presented against a white background on each card. The words were coloured red, blue, green, yellow and brown and were randomly spread so that each colour appeared 10 times, once on each row. The neutral cards consisted of 10 emotionally neutral words (act, near, globe, casual, sonnet, comment, subject, function, welcomes, universal); the depressive cards consisted of 10 emotionally negative words (sad, doom, bleak, misery, gloomy, failure, despair, hopeless, wretched, depressed); the old age cards consisted of 10 words relating to aspects of old age (old, aged, frail, infirm, senile, ancient, retired, elderly, wrinkled, pensioner). The font size was 24pt and the order of words was randomised for each list. Examples of the cards are attached as Appendix B. Participants were instructed to name the colours as quickly as possible making as few mistakes as possible. A practice card was prepared of 20 (different) neutral words to help explain what was required and to provide an initial practice of the task. The time taken to name the colours of all 50 stimuli on each card was recorded by stop-watch. No error rates were recorded

since all participants corrected their own errors (which were very few in number). The order of administration of the six cards was systematically randomised across the sample.

2.4.2 Self-Concept Checklist

A Self-Concept Checklist was devised for this study following the same format as that used by Kinderman & Bentall (2000). Their checklist was used to assess self-discrepancies in the views individuals held of their personal achievements following the general principles of Higgins (1987) Self-Discrepancy Theory. It consisted of three sections. The first assessed participants' opinions of their actual level of achievement, the second, their ideal level of achievement and the third, the level of achievement they believed their peer group ascribed to them. The checklists consisted of 30 positive and 30 negative achievement-related words presented three times on separate sheets of paper headed by the instructions, "Please read the following lists of words and select those which best describe you as you think YOU ACTUALLY ARE" for the first section, "...as you think YOU WOULD IDEALLY LIKE TO BE" for the second section and "...as you think THE OTHER PEOPLE IN YOUR YEAR THINK YOU ACTUALLY ARE" for the third section. Participants were asked to place a tick beside those words they felt described them in each perspective and a cross beside those words that they felt definitely did not describe them. This resulted in three overall measures of self-concept in the specific field of achievement, two from the standpoint of self: *self-actual* and *self-*

ideal and one from the standpoint of other: *other-actual.* Scores were calculated in each case by the addition of positive words endorsed positively and negative words endorsed negatively, and the subtracting of both positive words endorsed negatively and negative words endorsed positively. Self-discrepancy scores actual-ideal and actual-other were calculated by subtraction of the scores in one domain from the scores in the other.

A revised version of Kinderman & Bentall's (2000) checklist was employed for this study. Instead of the words focusing on the area of personal achievement, it was felt that the words should reflect more general self-descriptive adjectives. Also, participants were instructed to consider the believed opinions of 'other people' (either specific or general others) rather than the 'people in your year' as used in Kinderman & Bentall's study which was not appropriate for this study. In the revised version of the self-concept checklist the positive and negative self-descriptive words were drawn from Anderson's (1968) 'Likableness norms'. Anderson (1968) instructed college students to rate 555 personality trait words on a seven point scale, ranging from "least favourable or desirable" to "most favourable or desirable". Words were also rated for meaningfulness on scale of 0 ("I have almost no idea of the meaning of this word") to 4 ("I have a very clear and definite understanding of the meaning of this word"). Anderson (1968) also compiled 200 words from the original 555 as a smaller list of higher quality words that were considered more appropriate for many experiments. They were selected as having high values of meaningfulness and high frequency of ratings of likableness. The 58 out of the 60 words for this study were chosen from this list of 200 words and the remaining 2

words were included to provide opposites to two negative words. These 2 words were still highly rated for likableness (rated 104 and 129 in order of likableness). The mean rating for meaningfulness is no less than 3.54. (An independent t-test showed that there was no significant difference between the positive and negative words on meaningfulness $t(29)=0.548$, $p>.05$).

Two versions of the self-concept checklists were constructed using the above words (example in Appendix C). One set was to assess self-actual, self-ideal and other-actual views as held currently, and the second set was to assess these same views but how they were held in the past. The only difference between the two versions was that the order of the words were changed in the second version. Six overall measures of the self-concept were obtained: *actual:* past and current; *ideal:* past and current; and *other:* past and current. Discrepancy scores were generated by subtracting the *actual* self score from the *ideal* self score to obtain a Actual-Ideal discrepancy score, and the *actual* self was subtracted from the *other* score to obtain an Actual-Other discrepancy score.

When reliability checks were conducted on the three scales within the self-concept checklist separately, using data from all 43 participants when first completing the questionnaire, Cronbach's alpha was found to be .66 and . 68 for the current and past self-actual representation, .75 and .75 for the current and past self-ideal representation, and .64 and .69 for the current and past actual-other representation.

2.4.3 Psychological Well-Being Scale

Perceptions of different domains of psychological well-being were assessed using the Psychological Well-Being Scale devised by Ryff (1989). The scale consists of six dimensions of psychological well-being: *self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life* and *personal growth* and are presented in a structured self-report format. The definitions of these dimensions as provided by Ryff (1989) are in Table 2.

The scale has been specifically developed to assess individuals' viewpoints about themselves over time unlike many measures which tend to assess state self-reports. It was felt that research in psychological well-being has been guided by narrow conceptions of positive function with central emphasis been given to short-term affective well-being (i.e. happiness), at the expense of more enduring life challenges such as having a sense of purpose and direction, having satisfying relationships with others, and gaining a sense of self-realisation (Ryff, 1989). To assess individuals' perception of current psychological well-being and perceived changes over time, a method similar to that used by Ryff (1991) was adopted.

Table 2: Definitions of psychological well-being dimensions (Ryff, 1989)

Self-Acceptance

High scorer: Possesses a positive attitude toward the self; acknowledge and accepts multiple aspects of self including good and bad qualities; feels positive about past life.

Low scorer: Feels dissatisfied with self; is disappointed with what has occurred in past life; is troubled about certain personal qualities; wishes to be different than what he or she is.

Positive Relations With Others

High scorer: Has warm, satisfying, trusting relationships with others; is concerned about the welfare of others; capable of strong empathy, affection, and intimacy; understand give and take of human relationships.

Low scorer: Has few close, trusting relationships with others; finds it difficult to be warm, open, and concerned about others; is isolated and frustrated in interpersonal relationships; not willing to make compromises to sustain important ties with others.

Autonomy

High scorer: Is self-determining and independent; able to resist social pressures to think and act in certain ways; regulates behaviour from within; evaluations self by personal standards;

Low scorer: Is concerned about the expectations and evaluations of others; relies on judgements of others to make important decisions; conforms to social pressures to think and act in certain ways.

Environmental Mastery

High scorer: Has a sense of mastery and competence in managing the environment; controls complex array of external activities; makes effective use of surrounding opportunities; able to choose or create contexts suitable to personal needs and values.

Low scorer: Has difficulty managing everyday affairs; feels unable to change or improve surrounding context; is unaware of surrounding opportunities; lacks sense of control over external world.

Purpose in Life

High scorer: Has goals in life and a sense of directedness; feels there is meaning to present and past life; holds beliefs that give life purpose; has aims and objectives for living.

Low scorer: Lacks a sense of meaning in life; has few goals or aims ; lacks sense of direction; does not see purpose of past life; has no outlook or beliefs that give life meaning.

Personal Growth

High scorer: Has a feeling of continued development; sees self as growing and expanding; is open to new experiences; has sense of realising his or her potential; sees improvement in self and behaviour over time; is changing in ways that reflect more self-knowledge and effectiveness.

Low scorer: Has a sense of personal stagnation; lacks sense of improvement or expansion over time; feels bored and uninterested with life; feels unable to develop new attitudes or behaviours.

Ryff (1989) operationalised six theoretically-derived dimensions of well-being based on the construct-oriented approach to personality assessment (Wiggins, 1973). The six dimensions were considered as theoretical constructs that point to different aspects of positive functioning. The psychological well-being scale consisted of 20 items per dimension divided approximately between positive and negative items. The internal consistency coefficients for the scales were as follows: self-acceptance: .93; positive relations with others: .91; autonomy: .86; environmental mastery: .90; purpose in life: .90; and personal growth: .87. The test-retest coefficients for the 20-item scales over a 6-week period on a subsample of responders were as follows: self-acceptance: .85; positive relations with others: .83; autonomy: .88; environmental mastery: .81; purpose in life: .82; and personal growth: .81. The six measures of psychological functioning were compared with other prominent instruments measuring psychological well-being and adjustment in middle and later life. Self-acceptance and environmental mastery were strongly associated with measures of life satisfaction, affect, self-esteem and morale. However, the other dimensions of positive relations with others, autonomy, purpose in life and personal growth were not represented in other current assessment instruments (Ryff, 1989). This measure has not been standardised on those with mental health problems but shows good correlation with measures often used with those with psychological problems e.g. the Self-Esteem Scale (Rosenberg, 1965) and the Self-Rating Depression Scale (Zung, 1965). Ryff's (1991) study investigating perceived changes over time in the psychological well-being dimensions for older adults in a sample of 90. This indicated perceived stability in some domains (autonomy, positive relations with

others, and environmental mastery for men; autonomy, purpose in life and personal growth for women), progress in other domains (self-acceptance for both sexes; environmental mastery and positive relations with others for women), and decrement in yet other realms (purpose in life and personal growth but only for men).

In this study, a shorter form of the 20-item per dimension parent scale was used. This consisted of nine items in each scale with a total of 54 items. Although there are currently no correlation data between this and the 20-item parent scale, there are correlation data between a 14-item scale and the parent scale. This is very high: self-acceptance: .99; positive relations with others: .98; autonomy: .97; environmental mastery: .98; purpose in life: .98; and personal growth: .97 and it is assumed that the 9-item scale will have similar high correlational ratings with the 20-item scale. The 9-item per dimension scale was preferred to the longer versions due to the necessity to keep the questionnaire as short as possible for the participants in this study. It was felt that those with mental health disorders would find it more arduous to complete the longer versions twice. The items for each dimension are listed in Appendix D. Items from the six 9-item scales were randomly mixed to produce a single self-report inventory that respondents answered according to a 1 (strongly disagree) to 6 (strongly agree) response format. A second inventory was generated by randomly mixing the items. One inventory was administered with instructions to answer in respect of how participants felt about themselves currently and the second inventory with instructions to answer in terms of what they were like in the past. Like the Self-Concept Checklists this related to the ages

of 40 to 50 and the 'past' questionnaire was completed along with the 'past' checklist, while the participants were considering this period of their lives.

2.4.4 Beck Depression Inventory

The Beck Depression Inventory (BDI) (Beck, 1967; Beck & Beck, 1972; Beck *et al.*, 1979) is a self-report questionnaire consisting of 21 items describing various affective, cognitive, behavioural and physiological symptoms associated with depression. Each item consists of four statements graded in severity from 0 to 3 from which respondents are instructed to choose the statement which best describes the way they have been feeling over the last week. This instrument is not intended for diagnostic purposes, but measures severity. The BDI is based on a Guttman scale with a maximum score of 63. The Centre for Cognitive Therapy in Philadelphia provided guidelines for cut-off scores for the BDI: none or minimal depression <10; mild to moderate depression 10-18; moderate to severe depression 19-29 and severe depression 30-63 (Beck & Beamesderfer, 1974). A meta-analysis of the BDI's internal consistency yielded a high mean alpha analysis coefficient of .86 for psychiatric patients and 0.81 for non-psychiatric patients (Beck *et al.*, 1974). High test-retest reliability values have been reported for normal and clinically depressed participants across time intervals lasting from five days to three months (Strober, Green & Carlson, 1981). Gallagher, Nies & Thompson (1982) considered the reliability of the BDI for those over 60 years of age. Test-retest scores were .86 for the normal elderly, and .79 for those who were depressed. Internal

consistency was lower with a coefficient alpha of .74 for the normal elderly and .73 for the depressed elderly. Gallagher *et al.* (1982) conclude that the BDI has respectable internal consistency and stability for use with older adults in research and that it is adequate as a clinical screening instrument for use with the elderly. Schnurr, Hoaken & Jarnett (1976) have shown that older psychiatric patients report higher BDI scores than younger ones. The cut-off scores were 14 and over representing mild to moderate depression and severe depression from 25. This excluded those who may have milder cases of depression.

2.4.5 Self-Esteem Scale

The Rosenberg Self-Esteem scale was included in the study to provide an overt measure of self-esteem. The scale (Rosenberg, 1965) was originally developed for high school students, but it has been used extensively with older groups of adults (Breytspraak & George, 1982). This self-report instrument consists of 10 items reported along a 4-point continuum from *strongly agree* to *strongly disagree*; half of the items are expressions of positive self-esteem and half are negative. Rosenberg (1965) reported a reproducibility coefficient of .92 and a scaleability coefficient of .72. With regard to validity, he reported significant correlations between self-esteem and clinical ratings of depression. Low scores indicate high self-esteem. The standardisation scores of a normal population sample of 2,294 men and women aged between 18 and 65 were a mean of 34.7 and a

standard deviation of 4.86. Scores are negatively skewed, that is they tend toward low self-esteem with 20.1% of their adult respondents having the maximum score of 40.

2.4.6 Mini-Mental State Examination

Mini-Mental State Examination (MMSE; Folstein *et al.*, 1975) provides a brief evaluation of orientation, registration, attention, recall, language, and constructional praxis. It is widely used in neuropsychiatry as a screening measure in clinical practice and research (Tombaugh & McIntyre, 1992). Standardisation of the test by administration to 63 normal older adults and 137 patients indicated that the score of 20 or less was found essentially only in patients with dementia, delirium, schizophrenia or affective disorder and not in normal elderly people or in patients with a primary diagnosis of neurosis and personality disorder (Folstein, *et al.*, 1975). The MMSE is well-recognised and well used and it is customary to interpret MMSE performance on the basis of a single cut-off score. The widely reported cut-off score for the MMSE is 24 (Folstrein *et al.*, 1975). However, the MMSE has limitations as a screening measure. The most obvious and widely reported problem is low sensitivity, that is, a high rate of false negatives (Dick, Guiloff, Stewart, Blackstock, Bielawska & Paul, 1984; Iverson, 1998). It has been demonstrated that the cut-off score is affected by the age and education of the individual (Iverson, 1998). For instance, a higher education level would require a higher cut-off score to reach 'abnormality' and increasing age would require a reduced cut-off score. The

MMSE is considered an effective screening instrument but lacks sensitivity and it should not be used for diagnostic purposes (Spreen & Strauss, 1988).

2.4.7 Geriatric Mental State

The relevant sections of the Geriatric Mental State (GMS) developed by the US-UK Diagnostic Project (Copeland *et al.*, 1976; Gurland *et al.*, 1976) were used to assess the presence or absence of positive psychotic symptoms (Appendix E). The format is similar to other instruments designed to assess the presence of psychiatric conditions including the Psychiatric State Examination (Wing, Cooper & Sartorius, 1974) and Scale for the Assessment of Positive Symptoms (Andreasen, 1984). The questions cover delusions of persecution, control, reference, grandiose ability or identity, and religious delusions, as well as hallucinations and insight. Responses are rated either normal; abnormal and mild to moderate intensity, infrequent or fleeting; abnormal and severe, frequent or persistent; rating uncertain; or not asked. This measure was made necessarily brief and not coded as it was used only to confirm the presence of psychotic symptoms, the main diagnosis of late paraphrenia being made by the appropriate medical team.

2.4.8 Network Assessment Instrument

The Network Assessment Instrument (Wenger, 1989; 1991) is used to assess the type of social network an individual has (Appendix F). Five networks are identified on the basis of the availability of local close kin, the level of involvement of family, friends and neighbours, and the level of interaction with the community and voluntary groups. The instrument has a high level of agreement with 75% agreement across assessors, with disagreements relating to borderline cases. 70% of networks were unequivocally identified as one network type or another. In 6% of cases, networks could not be classified because of incomplete or contradictory data. In 24% of cases, borderline network types were identified. The answers are coded to establish a support network type of *family dependent, locally integrated, local self-contained, wider community focused* or *private.* 'Family dependent' has its primary focus on close family ties with a few peripheral friends and neighbours; 'locally integrated' is associated with long-term relationships with local family, friends and neighbours; 'local self-contained' involves more arm's length relationships or infrequent contact with relatives or neighbours; 'wider community focus' is associated with active relationships with relatives, although absence of local kin, and a high salience of friends and neighbours; and 'private' is typically associated with the absence of local kin and minimal contact with neighbours and low community contact or involvement.

2.5 Procedures

Ethics approval was obtained from the Maudsley and Bethlem Trust and Institute of Psychiatry Ethical Committee (Research) and the St Mary's Local Research Committee. The approval letters are attached as Appendix G.

On agreement of the participant to undertake the study after reading the Information Sheet (Appendix H), s/he was asked to complete the Consent Form (Appendix I).

The participants were initially administered the following instruments in a randomised order: Mini-Mental State Examination, Geriatric Mental State questionnaire, Beck Depression Inventory, Rosenberg Self-Esteem Scale, and the Network Assessment Instrument. After this was completed participants would complete the current and past versions of the Psychological Well-Being Scale and the Self-Concept Checklists together, and these were counterbalanced. The Scale and Checklists were also counterbalanced within the current and past viewpoints. The 'past' was defined as middle adulthood between the ages of 40 to 50 years old. The middle adulthood range was used as views about the self and identity are thought to be more established and to have reached 'closure' (Atchley, 1982). Fitzgerald (1996) reported that people tend to remember more autobiographical information from young adulthood, concluding that this was because they were still addressing issues of self-definition and identity formation, and at later ages, their 'self-narrative' has been largely constructed. To facilitate thinking retrospectively,

following the method used by Ryff (1991), participants were given four open-ended questions dealing with where they lived during this period; who were the important people in their lives at that time; what goals they were aspiring to and what difficulties they were experiencing. Completion of the Stroop task was always done after the current version of the Psychological Well-Being Scale and the Self-Concept Checklists were completed. This ensured that participants were orientated in their thoughts and feelings about themselves to the current time, and that this was consistent across the participants as testing times varied. In the majority of cases, due to the nature of those taking part, it was decided to verbally present all the instruments to the participants including the self-report questionnaires. This allowed the participants to clarify any concerns they had about the questions, and the participants were relaxed about this method of presentation. The whole testing session varied considerably from about 1½ hours to about 3½ hours. For those participants taking over 2 hours, two visits were usually carried out to complete the testing. After the completion of the tasks the researcher generally took time to explain the purposes of the experiment to the participants and answer any queries they had about the study.

2.6 Summary

This study is using an Emotional Stroop task, a measure to assess discrepancies between self-concepts, and a psychological well-being scale to investigate whether those with late paraphrenia have any defensive psychological processes occurring which might be

associated with their psychosis. As the negative emotions looked for are low self-esteem and depression, a depressed control group will be used to compare responses, and a healthy control group will be used to provide non-psychiatric response comparisons. There are a number of other measures also used, to ensure that the criteria for the groups are being met on presence of delusions and absence of cognitive impairment, to provide an overt measure of self-esteem and depression, and a support network questionnaire to provide information on a known risk factor in those with late paraphrenia.

CHAPTER THREE RESULTS

3.1 Overview

The results chapter will consider the descriptive and statistical analyses of the data collected using the methods outlined in the previous chapter. The results will be presented under three main headings which reflect the measures used and the research questions.

The first section will consider the question of whether those with late paraphrenia overtly present as free of signs of depression or low self-esteem but, when assessed by a measure that accesses underlying emotional responses, show evidence of depressed emotionality. If this were the case, those with late paraphrenia should show similar responses to the healthy controls on overt measures but show results similar to the depressed patients on covert measures as derived from the Emotional Stroop Task. In addition, to assess whether those with late paraphrenia show anxiety about growing older beyond what would be found in healthy controls, the interference effect of old age related words in the Emotional Stroop Task will also be considered in this section.

The second section will consider the data collected on discrepancies in the three views of the self-concept for the past and current time points. If those with late paraphrenia externalise their feelings about negative events and blame others as being responsible,

then it would be expected that they would show normal levels of discrepancy between their views of their actual selves and ideal selves but at the expense of having greater discrepancies between their views of their actual selves and the perceived views that others have about them. Furthermore, this discrepancy between 'actual' and 'other' should increase over time as the patient becomes deluded, while the self-esteem is maintained with little change in discrepancies between 'actual' and 'ideal'.

The third section will deal with the participants' perceived changes in functioning over time. It would be expected that those with late paraphrenia should have similar perceptions to the healthy controls if they are defending against negative emotions. However, if those with late paraphrenia externalise blame for negative events, then their perceptions about their external world, as reflected in the dimensions of Environmental Mastery and Positive Relations with Others, will be more negative.

3.2 Levels of Depression and Self-Esteem

To assess the overt presentation of depression and self-esteem, the BDI and Rosenberg Self-Esteem Scale were used. To measure underlying evidence of negative emotions about the self, the Emotional Stroop task was used with time taken in seconds to respond to Neutral, Depressed and Old Age related words in colour. The means, standard deviations and ranges for the self-esteem, BDI and Stroop scores are shown in Table 3.

Table 3: Comparison of the means, standard deviations and ranges for BDI, self-esteem and Stroop scores across the three research groups

		Late Paraphrenic Experimental Group N=13 Mean (SD)	Depressed Control Group N=15 Mean (SD)	Healthy Control Group N=15 Mean (SD)
BDI	Mean	8.46	24.87	4.6
	SD	4.14	11.19	3.31
	Min	2	15	0
	Max	18	49	10
Rosenberg Self-Esteem	Mean	17.85	26.33	17.80
	SD	4.95	5.92	4.43
	Min	10	12	11
	Max	25	37	26
Stroop	**(secs)**			
Neutral	Mean	81.10	64.27	47.35
	SD	42.88	23.89	12.81
	Min	33.05	32.49	26.34
	Max	180.93	130.46	75.2
Depressed	Mean	83.96	68.40	50.32
	SD	42.05	28.05	13.74
	Min	34.0	37.58	29.16
	Max	180.67	154.70	79.71
Old Age	Mean	86.78	67.23	49.21
	SD	46.98	25.16	11.41
	Min	35.1	35.72	28.87
	Max	203.03	140.24	79.71

The means of the BDI measure reflect the selection criteria as all of the Healthy Control Group's score were below the cut-off point for mild depression. The Depressed Control Group had scores ranging from moderately depressed at 15 to severely depressed at 49 and showed a higher variability across the scores. The Late Paraphrenic Group had BDI scores ranging from 2 to 18 with only one reaching a level of mild depression and one having a score of 18 reflecting moderate depression. The Rosenberg Self-Esteem measure revealed a pattern similar to that of the BDI with the Late Paraphrenic Group and the Healthy Control Group having lower scores (representing better self-esteem) than the Depressed Control Group who had a more negative level of self-esteem. Of note, is that these self-esteem scores, even those from the Depressed Control Group, are below the standardised norm of 34.7 found in those aged between 18 and 65 (Rosenberg, 1965). In the Stroop task, the Late Paraphrenic Group on average took longer to complete all of the Stroop tasks with a wider range of scores than the Depressed Control Group. Both of these groups took longer to complete tasks than the Healthy Control Group.

The raw data was examined to check that it met the assumptions for the use of parametric statistics. The BDI data was positively skewed in the Depressed Control Group scores. This data was transformed for analysis using a square root transformation. The Stroop scores also showed positive skewness in some of the sample scores. This affected all of the Stroop scores for the Depressed Control Group and scores in the Old Age words condition for the Late Paraphrenic Group. These scores were also transformed for analysis using a square root transformation. The Depressed Control Group scores for the

depressed words condition still remained skewed due to one unusually slow response time. As it was felt that the score was a reflection of the sample group, albeit an extreme one, the influence of this score was reduced by assigning the outlying case a raw score one unit larger than the next most extreme score in the distribution, as provided in guidelines by Tabachnick & Fidell (1996).

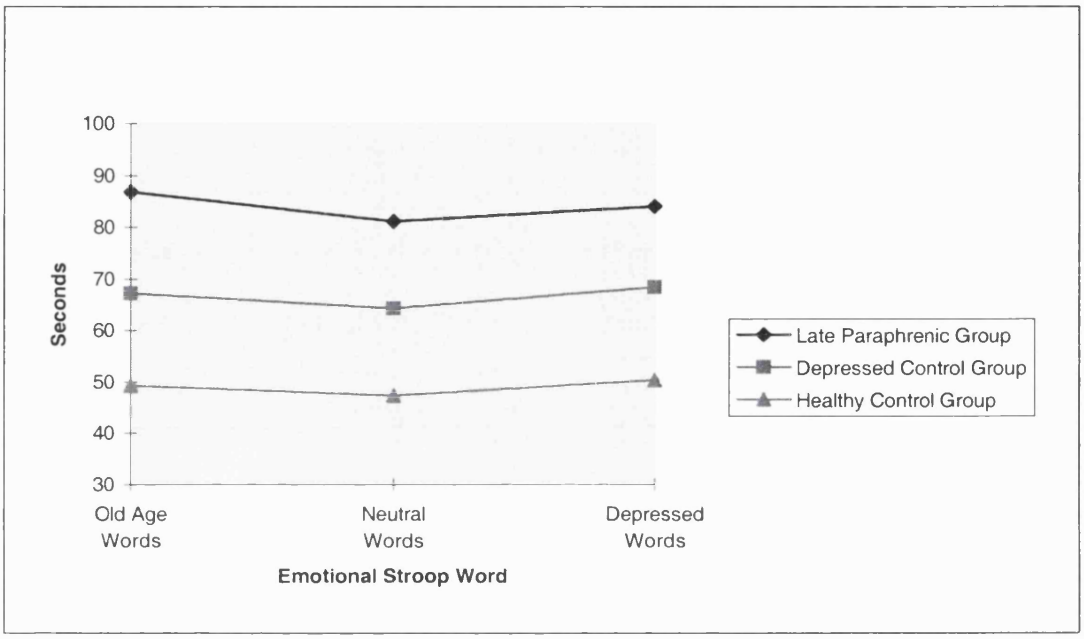
One-way Anovas were carried out on the BDI and self-esteem scores to compare the group means. There was a significant difference between the groups for the BDI scores $F(2,40) = 40.675$, $p<.0001$ and the self-esteem scores $F(2,40) = 13.36$, $p< .0001$. Multiple comparisons corrected for Type 1 errors using the Bonferroni test showed that for both measures there were no significant difference between the Late Paraphrenic and Healthy Control Groups, but that these both differed from the Depressed Group at the significance level of .05.

A mixed between- and within-subjects Anova was carried out to compare the Stroop task scores between the groups. The within-subject variable was the time in seconds taken to complete the Neutral, Depressed and Old Age related word conditions of the Stroop task.

There was no interaction of Group by Stroop word condition $F(4,80)=.5957$, $p=.667$. There was a significant main effect of Group $F(2,40)=5.61$, $p<.007$, and a main effect of Stroop task $F(2,39)=8.09$, $p<.001$. The diagrammatic comparison of the means of the groups for each word condition is shown in Figure 1. The difference between the groups

is due to the slower response times by the Late Paraphrenic Group which differed significantly to the Depressed Control Group $t(26)=2.795, p=.008$ and the Healthy Control Group $t(26)=9.66$, $p=.005$. The Depressed Control Group and the Healthy Control Group did not differ significantly from each other $t(28)=.129$, $p=.898$. The within group difference in the Stroop task is due to the significant difference of the Old Age related words compared to the Neutral words $F(1,40)=15.47$, $p<.0001$ with reaction times on Old Age words being slower. There was no significant difference between the Depressed words and the Neutral words $F(1,40)=.603$, $p=.442$. Further analysis of the Old Age related words were carried out as there was an a priori prediction that the Late Paraphrenic Group would show more of an interference effect to these words than the Healthy Control Group. An interference score was calculated by subtracting the Old Age related word condition from the Neutral word condition, and a comparison of the means showed that there was no difference between the Late Paraphrenic and Healthy Control Groups on this measure $t(26)=1.40$, $p=.10$. Therefore, the prediction that the Late Paraphrenic Group would be substantially more affected by anxiety over age related words than neutral words than the Healthy Control Group was also not supported.

Figure 1: Reaction times for the Emotional Stroop Task across participants



The findings in relation to depression and self-esteem indicate that those in the Late Paraphrenic Group show similar levels of depression and self-esteem to the Healthy Control Group, and that the Depressed Control Group showed higher levels of severity of depression and lower self-esteem as expected. It was also predicted that the Late Paraphrenic Group would have a slower performance on the Depressed words of the Stroop task than the Neutral words, similar to the Depressed Control Group. However, the lack of a within subjects effect indicates that this applies to both Old Age and Depressed words. The interference effect for the emotionally negative words was not found in any of the groups, and therefore, no further analyses were carried out.

3.3 Self-Concept Discrepancies

Three measures of self-concept were obtained, that of actual-self, ideal-self and actual-other. These self-concepts were taken from the viewpoint of how the person saw him/herself currently, and also in the past when aged between 40 and 50 years. The discrepancy scores were calculated by subtracting the actual-self view from the ideal-self view to obtain an Actual-Ideal discrepancy, and by subtracting the actual-self view from the self as viewed by others to obtain the Actual-Other discrepancy score. If the hypothesis that those with delusions form more negative views of how others see them to maintain their own self-esteem is supported, then those with late paraphrenia should show similar Actual-Ideal discrepancies but larger Actual-Other discrepancies than the healthy controls. Furthermore, over time, those with late paraphrenia should maintain their level

of self-esteem and show little change in their Actual-Ideal discrepancies but show an increase in their Actual-Other discrepancies.

The raw data contained some missing values. One participant from the Late Paraphrenic Group would not complete the self-concept measure for the current perceived views of others as it was felt that it was too difficult to answer, and one participant from the Depressed Control Group did not complete the three self-concept checklists for past views due to lack of time and subsequently not being available for the measures to be completed. Following the guidance of Tabachnick & Fidell (1996) the missing values were replaced by the means for all the cases.

There were three outliers in the Late Paraphrenic Group's scores. One participant thought that others would consider all attributes in a negative way which resulted in extreme discrepancies in Actual-Other scores for both past and current viewpoints. In addition, one participant had a very high Actual-Ideal discrepancy due to a very negative actual-self view in the past. As it was felt that these scores were from the intended sample population but with very extreme values, and following guidelines provided by Tabachnick & Fidell (1996), the influence of these outliers were reduced by assigning the outlying cases raw scores that were one unit more than the next most extreme scores in the distributions.

The data were also examined for conformity to assumptions required for parametric analysis. There was some evidence of skewness in some of the research samples. This includes positive skewness in the Past Actual-Ideal discrepancy scores in the Depressed and Healthy Control Groups and negative skewness in the Current Actual-Other discrepancy scores in the Healthy Control Groups. As both positive and negative skewness were present, it was not possible to transform the data, and it was considered that the robustness of parametric tests would allow for the slight skewness.

Mean scores based on the modified data are presented in Table 4. The positive values represent views of the self that are better than the actual-self viewpoint, so all Actual-Ideal scores show that the ideal self was considered more positive than the actual self and this was also true of the Actual-Other discrepancy scores. The Depressed Control Group showed the highest discrepancies for both Actual-Ideal and Actual-Other for both past and current ratings, and they tended to show greater variability in the scores particularly for the current viewpoint. Of note is that, overall, the Late Paraphrenic Group did not show a negative discrepancy value for the Current Actual-Other viewpoint as would be predicted if they considered that others thought more negatively of them than they did of themselves.

Table 4: Comparison of means of the self-discrepancy scores of the participants

	Late Paraphrenic Experimental Group N=13 Mean (SD)		**Depressed Control Group N=15 Mean (SD)**		**Healthy Control Group N=15 Mean (SD)**	
Self-Concept Discrepancies	Current	Past	Current	Past	Current	Past
Actual-Ideal Mean	10.15	8.53	24.80	15.60	8.67	9.20
SD	8.74	11.55	15.58	14.25	7.66	9.53
Actual-Other Mean	1.08	1.46	4.67	4.67	0.67	0.27
SD	7.29	7.26	8.37	8.40	7.81	5.90

A mixed between and within groups design analysis of variance was performed with the between-subjects factor being the comparisons across the three participant groups, and two within-subjects factors of type of discrepancy: Actual-Ideal and Actual-Other; and change over time: Past and Current.

The analysis showed that there was a significant three-way interaction of group, time, and type of discrepancy, $F(2, 40)=3.82$, $p=.030$. As can be seen from Figures 2, 3 and 4, this three-way interaction appears to be due to the Depressed Control Group showing an increase over time in Actual-Ideal discrepancies. Indeed, related t-tests confirmed that the Depressed Control Group showed a near significant change (allowing for multiple comparisons) between past and current viewpoints on Actual-Ideal discrepancies $t_{(.017)}(14)=2.22$, $p=.0215$ indicating an increasing trend in their discrepancies. This effect was not found in the other two groups ($t_{(.017)}(12)=.36$, $p=.363$; $t_{(.017)}(14)=.16$, $p=.436$). None of the groups showed a significant change in Actual-Other viewpoints ($t_{(.017)}(14)=.00$, $p=.50$; $t_{(.017)}(12)=.31$, $p=.38$; $t_{(.017)}(14)=.16$, $p=.437$).

There were also two significant two-way interactions. One was of type of discrepancy by time, $F(1, 40)=4.20$, $p=.047$, which reflects that the Actual-Ideal discrepancy had a changing trend over time for all groups combined (related $t_{(.025)}(42)=1.8$, $p=.0395$) but that the Actual-Other did not (related $t(42)=.04$, $p=.486$) as shown in Figure 5. This

significant interaction is likely to be due to the Depressed Control Groups showing a highly significant change, as indicated by the three-way interaction.

The other two-way interaction was of group by type of discrepancy $F(2, 40)=3.14$, $p<.054$. This is represented in Figure 6 indicating that the Actual-Ideal discrepancies were higher in the Depressed Control Group than the other two groups, while the Actual-Other discrepancies were similar across the three groups. Indeed, the Depressed Control Group has significantly higher Actual-Ideal discrepancies than both the Healthy Control (unrelated $t_{(.017)}(28)=2.93$, $p=.0035$) and the Late Paraphrenic Groups (unrelated $t_{(.017)}(26)=2.74$, $p=.007$), while the latter two did not differ from each other ($t_{(.017)}(26)=.26$, $p=.398$. There were no significant differences between any of the three groups on Actual-Other discrepancies although a trend between the two control groups (unrelated t-tests: $t_{(.017)}(26)=1.34$, $p=.0965$; $t_{(.017)}(26)=.26$, $p=.40$; $t_{(.017)}(28)=1.89$, $p=.035$). Again, this two-way interaction is likely to be due to high current Actual-Ideal discrepancies in the Depressed Control Group as demonstrated by the three-way interaction.

Figure 2: Comparison of mean Actual-Ideal and Actual-Other self-discrepancy scores for the Late Paraphrenic Group

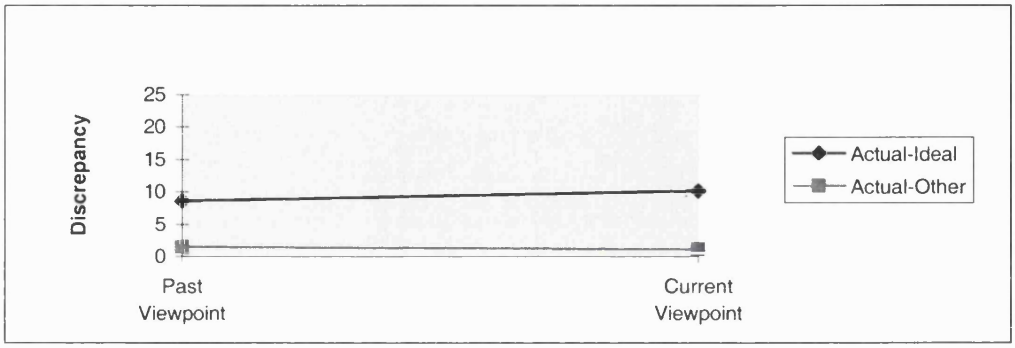


Figure 3: Comparison of mean Actual-Ideal and Actual-Other self-discrepancy scores for the Depressed Control Group

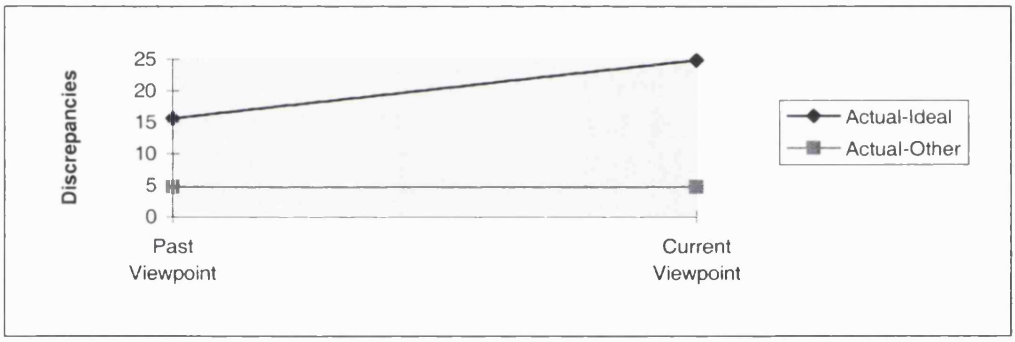


Figure 4: Comparison of mean Actual-Ideal and Actual-Other self-discrepancy scores for the Healthy Control Group

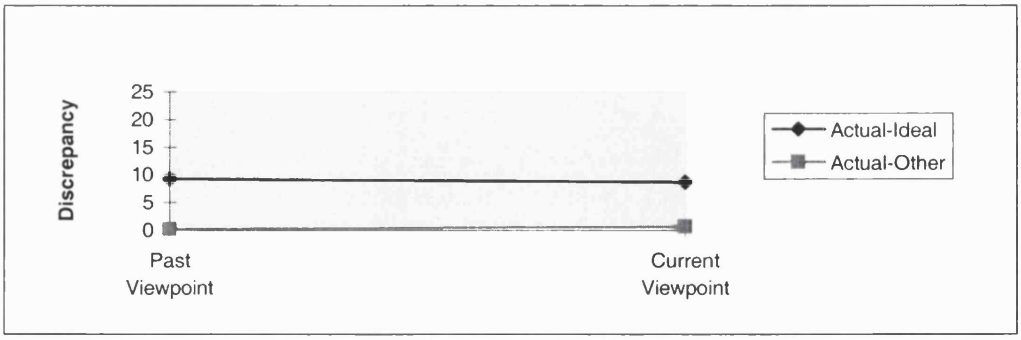


Figure 5: Mean comparison of type of discrepancy score with past and current viewpoints

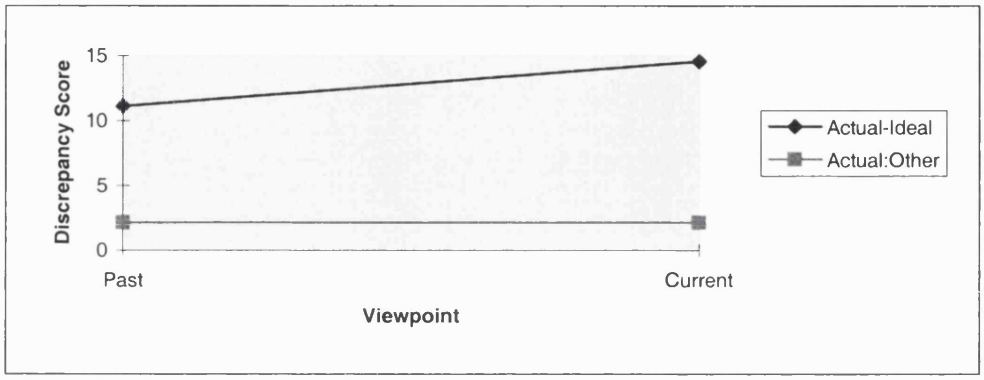
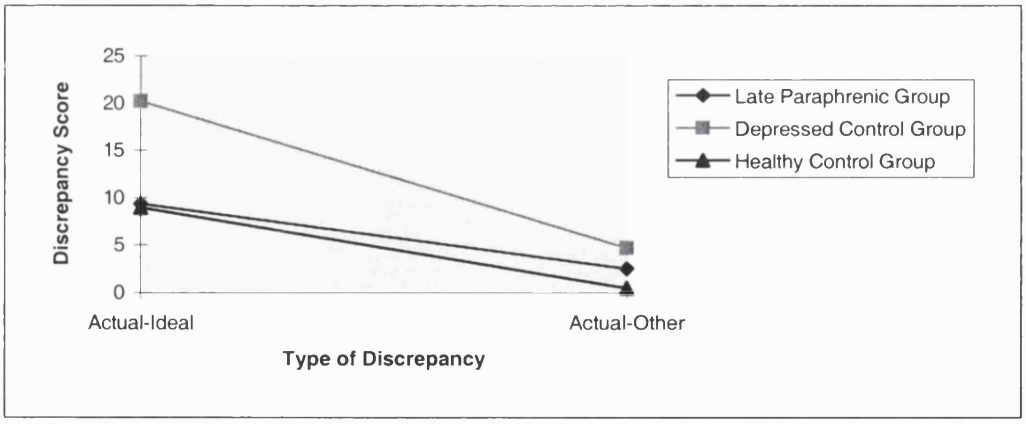


Figure 6: Comparison of means of Actual-Ideal and Actual-Other discrepancies across the three research groups



There was a main effect of group, $F(2, 40)=5.57$, $p<.007$ which was due to a significant difference between the Depressed Group and the Healthy Control Group $t(28)=3.313$, $p<.002$ with the depressed group showing higher discrepancies overall. There were no significant differences between the Late Paraphrenic Group and either the Depressed Control Group $t(26)=1.376$, $p=.177$ or the Healthy Control Group $t(26)=.316$, $p=.754$. There was also a main effect of type of discrepancy, $F(1, 40)=66.38$, $p<.0001$, with Actual-Ideal discrepancies being overall greater than the Actual-Other discrepancies. There was no main effect of time $F(1, 40)=1.36$, $p=.251$.

In terms of the a priori research questions, namely that the Late Paraphrenic Group would show similar current Actual-Ideal discrepancies to the Healthy Control Group, but larger Actual-Other discrepancies, the results supported the former, but not the latter. A one-way Anova comparing the current Actual-Ideal discrepancies across the groups was significant at $F(2,40)=9.13$, $p<.0005$ which showed that the Late Paraphrenic Group did not differ from the Healthy Control Group but both differed from the Depressed Control Group at significance level $p<.05$ using Bonferroni multiple comparisons. However, there were no group differences between their current Actual-Other discrepancy scores $F(2,40)=1.186$, $p=.316$. Similarly, there was support for the hypothesis that the Late Paraphrenic Group's Actual-Ideal discrepancies would show similar changes to that of the Healthy Control Group over time, but there was no support for the hypothesis that

the Actual-Other discrepancies would increase over time as shown on page 100 ($t_{(.017)}(12)=.31$, p=.38).

To summarise, as predicted, the Late Paraphrenic Group showed no significant differences in discrepancies in the current Actual-Ideal condition to the Healthy Control Group. However, against predictions, there was also no significant difference between discrepancies in their current Actual-Other representations to that of the Healthy Control Group. It was predicted that the Late Paraphrenic Group would show similar changes in Actual-Ideal discrepancies over time to that of the Healthy Control Group and this was found. It was also predicted that this group would show an increase in Actual-Other discrepancies over time, but this finding was not supported in this study. As expected, those in the Depressed Control Group showed higher Actual-Ideal discrepancies and there was a trend for this to increase over time.

3.4 Dimensions of Psychological Well-Being

It was hypothesised that if defensive processes are being used, then those with late paraphrenia are more likely to look to external causes for negative events to protect their self-esteem. It is predicted that the Late Paraphrenic Group will show similar ratings of functioning to the Healthy Control Group on those psychological well-being dimensions that are related to more internal self-evaluations such as Autonomy, Self-Acceptance,

Purpose in Life, and Personal Growth. But in contrast, those psychological well-being dimensions relating to their external world and people i.e. Positive Relations with Others and Environmental Mastery, will show a perception of worsening functioning to the healthy controls. Furthermore, if those with late paraphrenia are particularly anxious about growing older, and if there are defensive processes in place, then their perceived views of change in functioning over time will be similar to normal healthy controls who generally maintain if not improve their view of functioning over time, but the Late Paraphrenic Group will show decreasing changes in perception of functioning on the Positive Relations with Others and Environmental Mastery dimensions.

The raw data contained some missing values. One participant from the Late Paraphrenic Group did not complete the current version of the Psychological Well-Being scale, stating that it was too difficult to answer the questions because of her current living situation. As provided by guidance in Tabachnick & Fidell (1996), the means were calculated from the available data given (33.3% of the questions answered) to give scores for the six dimensions. The past version of the psychological well-being scale was not completed by one participant from the Depressed Control Group who also did not complete the past self-concept checklist. Again these missing values were replaced by the mean for all the cases. Checks for the assumptions of parametric statistics showed the data sets for the Past Self-Acceptance score from the Depressed Control Group and the Past Positive Relations With Others from the Healthy Control Group were negatively skewed. Consequently, the Psychological Well-Being scale scores for these two dimensions were

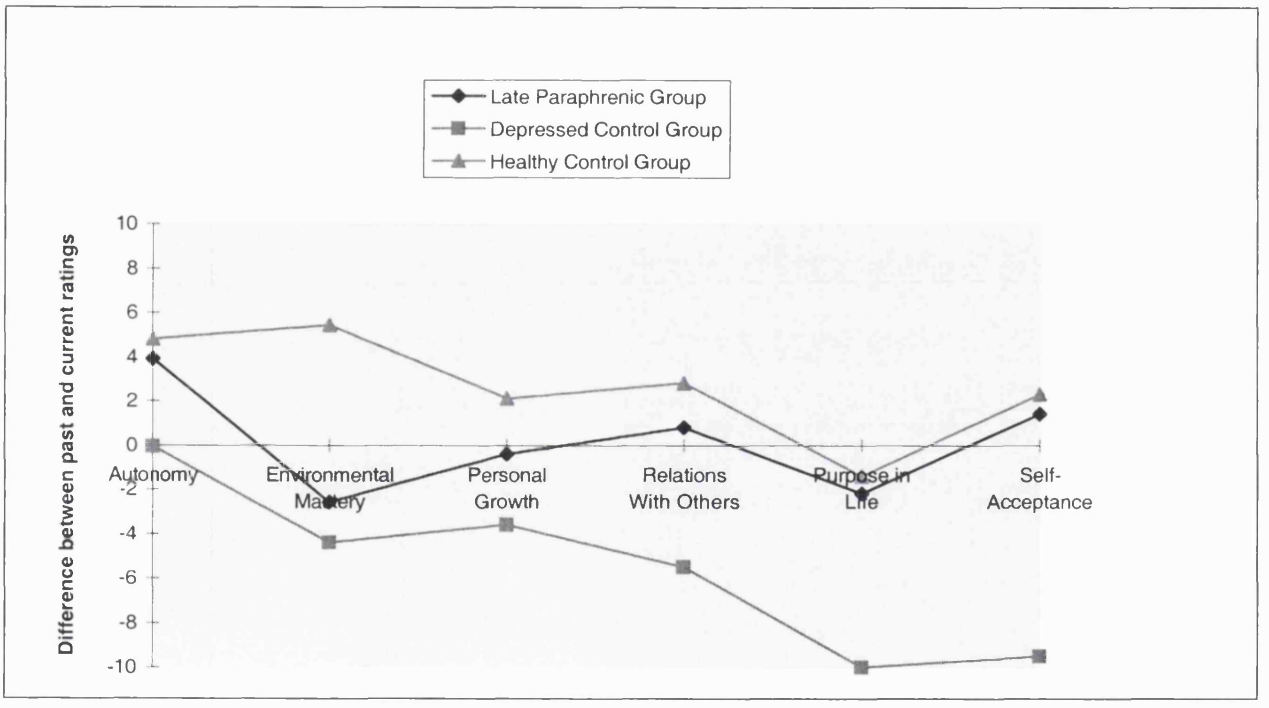
transformed by the inversion and square root method. However, this did not eliminate skewness in the Self-Acceptance data set so the analysis was carried out with slightly skewed data ($z = 2.05$).

The mean scores and standard deviations for the six dimensions of the Psychological Well-Being scale for the three research groups are shown in Table 5. Overall, the Healthy Control Group shows the highest rating of psychological well-being, the Depressed Control Group the lowest and the Late Paraphrenic Group somewhere in between. The differences between the past and current viewpoints for each of the dimensions were calculated to give an indication of perceived change over time. Positive scores represent a perceived increase in functioning and negative scores represent a decrease in perceived functioning. The profile of the changes in functioning in the six dimensions for each of the groups is shown in Figure 7.

Table 5: Comparison means and standard deviations of the six dimensions of the Psychological Well-Being scale for the participants

		Late Paraphrenic Experimental Group N=13 Mean (SD)		Depressed Control Group N=15 Mean (SD)		Healthy Control Group N=15 Mean (SD)	
Psychological Well-Being		**Current**	**Past**	**Current**	**Past**	**Current**	**Past**
Autonomy	Mean	43.00	39.07	39.6	40.33	43.20	38.40
	SD	6.18	8.78	6.93	6.59	6.12	7.79
Environment Mastery	Mean	36.00	38.62	32.67	37.07	44.67	39.27
	SD	5.63	9.03	11.46	7.68	6.88	10.04
Personal Growth	Mean	34.54	34.85	29.33	32.93	39.73	37.60
	SD	8.18	9.17	5.68	5.69	9.18	9.39
Positive Relations	Mean	36.31	35.54	33.60	38.93	45.93	43.13
	SD	11.87	12.85	9.88	7.82	6.01	10.14
Purpose in Life	Mean	32.85	35.08	25.33	35.33	38.00	39.40
	SD	10.13	8.79	7.16	8.49	7.24	7.93
Self-Acceptance	Mean	38.08	36.69	28.47	38.00	41.80	39.47
	SD	10.42	11.64	11.48	10.52	7.76	10.67

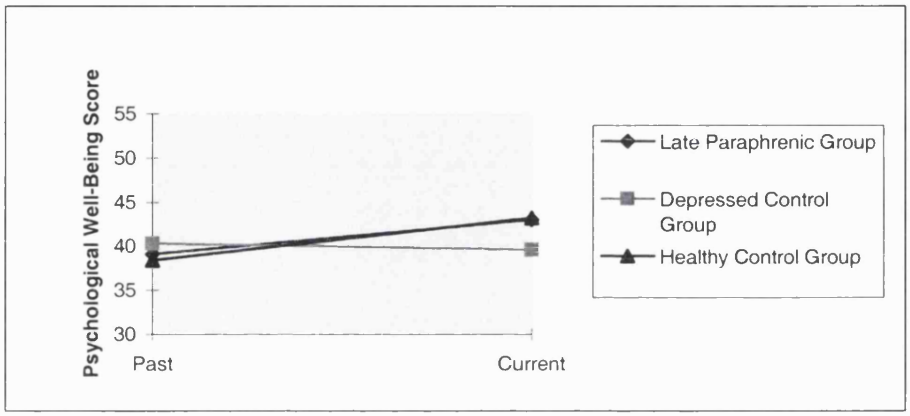
Figure 7: Differences between past and current views on the six dimensions of the Psychological Well-Being scale



A mixed between and within factors design analysis of variance was carried out for each of the six dimensions of the Psychological Well-Being measure. The between subjects factor is the research group and the within subjects factor is the change over time between past and current views in individual dimensions.

The analysis of the Autonomy dimension did not show any significant interaction of group and time $F(2,40)=2.19$, $p=.125$. However, there was a main effect of time $F(2,40)= 5.08$, $p<.030$, which indicates that overall, the groups generally showed an increase in feelings of Autonomy. The means of the Autonomy dimension are plotted in Figure 8.

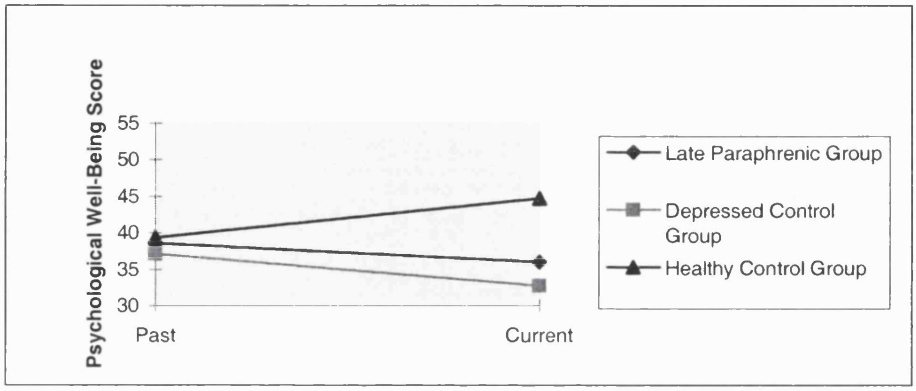
Figure 8: Comparison of past and current means for the Autonomy dimension across the research groups



The Environmental Mastery dimension showed a significant interaction of group by time $F(2,40)=3.52$, $p<.039$. There was a significant main effect of group, $F(2,40)= 4.10$, $p<.024$, but not for time $F(1,40)=6.21$, $p=.744$. This interaction is shown in figure 9. The main group effect was due to the Late Paraphrenic Group and Depressed Control Group not significantly differing in feelings of Environmental Mastery $t(26)=.485$, $p=.631$, but they both scored significantly lower than the Healthy Control Group ($t(26)=3.22$,$p=.084$ and $t(28)=2.162$, $p=.0367$). A priori tests showed that the Late Paraphrenic Group and the Depressed Control Group did not show any statistically significant changes over time $t_{(.017)}(12)=1.04$, $p=.161$ and $t_{(.017)}(14)=1.25$, $p=.117$. However the Healthy Control Group showed a significant increase in perception of Environmental Mastery over time $t_{(.017)}(14)=2.49$, $p=.013$.

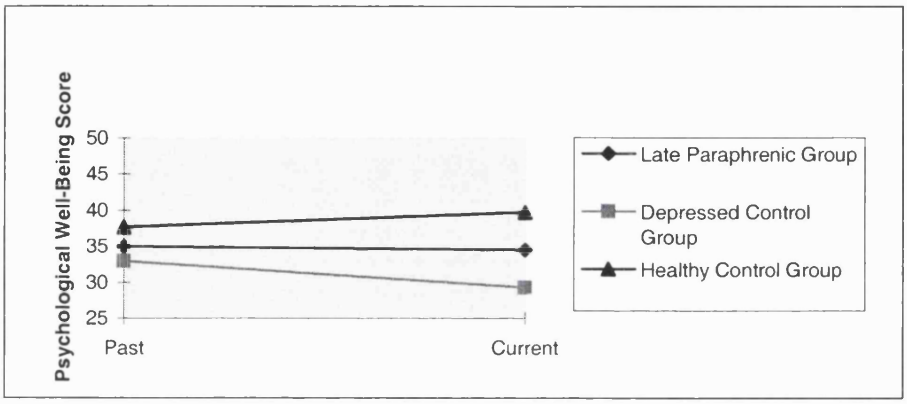
One-way Anovas showed that there was a significant difference between the groups for current feelings of Environmental Mastery $F(2,40)=7.94$, $p=.0012$, but not for past $F(2,40)=.2372$, $p=.79$. The former test reached significance in the Leverne Test of Homogeneity of Variances $F(2,40)=6.3$, $p=.004$ but using a more conservative test by altering the degrees of freedom (Box, 1954; Howell, 1992) it was still significant at the $p<.01$ level. Bonferroni multiple comparisons showed that both the Late Paraphrenic Group and Depressed Control Group did not significantly differ in feelings of current Environmental Mastery, but they both differed significantly from the Healthy Control Group at the significance level of .05.

Figure 9: Comparison of past and current means for the Environmental Mastery dimension across the research groups



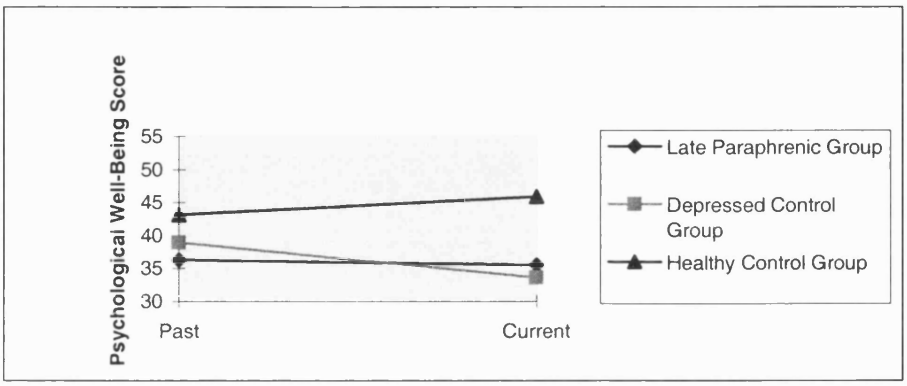
The analysis of the Personal Growth dimension did not show a significant interaction of time and group $F(2,40)=1.66$, $p=.203$. There was a main effect of group $F(2,40)=4.69$, $p<.015$ but not of time $F(1,40)=.2$, $p=.657$. The main effect of group was due to the Healthy Control Group showing higher Personal Growth scores than the Depressed Control Group $t(28)=2.57$, $p=.014$, but neither group showed significant differences to the Late Paraphrenic Group $t(26)=1.36$, $p=.186$ and $t(26)=.093$, $p=.926$. The comparison of the means are shown in Figure 10.

Figure 10: Comparison of past and current means of the Personal Growth dimension across the research groups



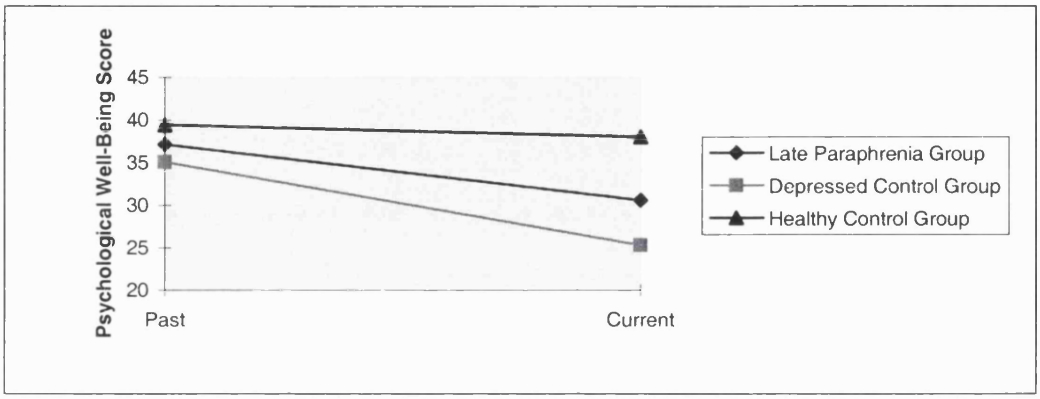
The Positive Relations dimension showed a significant interaction of time and group $F(2,40)=4.57$, $p=.016$ and a main effect of group $F(2,40)= 4.07$, $p=.025$, but not time $F(1,40)= .06$, $p=.810$. This interaction can be seen in Figure 11. The main effect is due to the Late Paraphrenic Group and Depressed Control Group showing no significant differences in feelings about their relations with others $t(26)=.597$, $p=.554$, but they both differed significantly from the Healthy Control Group $t(26)=2.4$, $p=.023$ and $t(28)=2.844$, $p<.007$. One-way Anovas showed a significant difference between the groups for current feelings of Positive Relations $F(2,40)=7.016$, $p=.0024$, but not for past $F(2,40)=1.74$, $p=.1885$. Bonferroni multiple comparisons showed that both the Late Paraphrenic Group and Depressed Control Group did not significantly differ in feelings of current Positive Relations, but they both differed significantly from the Healthy Control Group at the significance level of .05. Only the Depressed Control Group showed a significant decrease in feelings of Positive Relations with Others over time $t_{(.017)}(14)=2.95$, $p=.005$. The Late Paraphrenic Group and the Healthy Control Group, did not reach significance on this, although the latter group showed an increased trend $t_{(.017)}(12)=-.40$, $p=.349$ and $t_{(.017)}(14)=1.38$, $p=.0945$.

Figure 11: Comparison of past and current means of the Positive Relations with Others dimension across the research groups



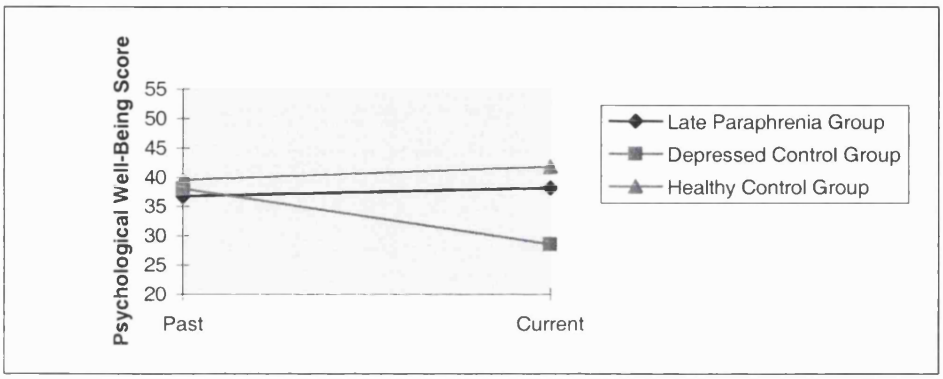
The Purpose in Life dimension did not show a significant interaction of time and group although it was close to significance $F(2,40)= 2.94$, $p=.064$. There was a main effect of group, $F(2,40)= 6.52$, $p=.004$ and of time, $F(1,40)= 7.82$, $p=.008$. The comparisons are plotted in Figure 12. The main effect of the group was due to the two control groups differing from each other $t(28)=2.94$, $p=.054$ with the Healthy Control Group showing higher scores than the depressed group. The Late Paraphrenic Group did not differ from the Depressed Control Group $t(26)=.263$, $p=.794$, but showed a trend in having lower scores than the Healthy Control Group $t(26)=1.93$, $p=.065$. Related t-tests showed that only the Depressed Control Group showed a significant decrease over time $t_{(.017)}(14)=3.93$, $p=.001$, and the Late Paraphrenic and Healthy Control Groups did not reach significance $t_{(.017)}(12)=.57$, $p=.29$ and $t_{(.017)}(14)=.73$, $p=.239$. The potential interaction was due to the depressed group showing a decrease in perceptions of Purpose in Life. One-way Anovas of the Purpose in Life viewpoints showed that there was a significant difference between the groups on current views $F(2,40)= 9.064$, $p=.0006$, but not past views $F(2,40)=1.219$, $p=.3064$. Bonferonni multiple comparisons on the current views showed that the Depressed Control Group significantly differed to the Healthy Control Group with the Late Paraphrenic Group differing from neither (significance level $p<.05$).

Figure 12: Comparison of past and current means of the Purpose in Life dimension across the research groups



The Self-Acceptance dimension showed an interaction of time and group $F(2,40)= 4.60$, $p<.016$. This interaction can be seen in Figure 13. There was a trend for the main effects of group $F(2,40)=2.76$, $p=.075$, but no effect of time $F(2,40)=1.16$, $p=.289$. The trend in the main effect of group was due to a significant difference between the two control groups $t(28)=2.087$, $p=.043$, but the control groups did not differ to the Late Paraphrenic Group (Depressed Control Group $t(26)=.157$, $p=.876$ and Healthy Control Group $t(26)=1.025$, $p=.315$). The Late Paraphrenic Group did not show a significant change across time $t_{(.017)}(12)=.37$, $p=.36$, and nor did the Healthy Control Group $t_{(.017)}(14)=.96$, $p=.178$. However, the Depressed Control Group showed a decrease in feelings of Self-Acceptance over time $t_{(.017)}(14)=3.00$, $p=.0045$. The interaction is due to the two control groups differing with the Depressed Control Group showing a decrease in feelings of Self-Acceptance over time. A one-way Anova on the current Self-Acceptance showed a significant difference between the groups $F(2,40)=7.075$, $p=.0023$, with the Late Paraphrenic Group and the Healthy Control Group not differing in current perceptions about their feelings of self-acceptance, but both differing significantly from the Depressed Control Group with higher scores at the significance level of $p<.05$ using the Bonferroni test for multiple comparisons. A one-way Anova for the past views of Self-Acceptance showed no significant differences $F(2,40)=.226$, $p=.799$.

Figure 13: Comparison of past and current means of the Self-Acceptance dimension across the research groups



In summary, the findings of the analysis of the six dimensions show that, as predicted, the Late Paraphrenic Group showed no differences in their perception of functioning on the Autonomy, Personal Growth, Purpose in Life and Self-Acceptance dimensions to that of the Healthy Control Group. Furthermore, the Late Paraphrenic Group showed significant differences on the current perceptions of Environmental Mastery and Positive Relations with Others dimensions to the Healthy Control Group, and which were not significantly different to the perceptions of the Depressed Control Group.

It was also predicted that the Late Paraphrenic Group would show similar perceptions of changes in functioning over time as that of the normal control group, except for the dimensions of Environmental Mastery and Positive Relations with Others. However the Group did not show any significant changes over time, while the Healthy Control Group showed significant positive changes in perceptions of functioning in Autonomy and Environmental Mastery, and the Depressed Control Group showed significant decreases in feelings of Purpose in Life, Self-Acceptance and Positive Relations With Others. The groups did not show any changes in Personal Growth.

3.5 Risk Factors

The information obtained from the Network Assessment Instrument was not analysed due to the small cell sizes for each of the social network types, and the results are shown in Table 6. Where there was an overlap of social network type i.e. when ratings were the

same, the frequency has been divided between the network type. A descriptive analysis of the results shows that of most interest is that those in the Late Paraphrenic Group are more likely to have a 'private' social network type than the Healthy Control Group. However, the Depressed Control Group shows a similar pattern. The private social network type is associated with the absence of local kin and minimal contact with neighbours. Furthermore, the Healthy Control Group is much more likely to have a 'wider community focus' than either of the psychiatric groups.

Other risk factors have been discussed under the demographic data section, and as indicated that those with late paraphrenia were more likely to be single and to have less children than those in the Healthy Control Group. There were significant differences between the Late Paraphrenic Group and the two control groups in ethnicity and immigrant status. So this would suggest that this sample did show some of the risk factors commonly found in those with late paraphrenia, namely a tendency to be more isolated, lower rates of marriage and number of children and a much greater frequency of immigrant status. However, apart from immigrant status, this pattern is similar to those that are depressed.

Table 6: Comparison of frequency of social network type for the three research groups

	Late Paraphrenic Experimental Group N=13		Depressed Control Group N=15		Healthy Control Group N=15	
Social Network Type	**Frequency**	**%**	**Frequency**	**%**	**Frequency**	**%**
Family Dependent	3	23	2.5	16.7	.5	3.3
Locally Integrated	4.5	34.6	3.3	22	8.5	56.7
Local Self Contained	0	0	2.3	15.3	1	6.7
Wider Community Focused	.5	3.9	.5	3.3	4.5	30
Private	5	38.5	6.3	42	.5	3.3

CHAPTER FOUR DISCUSSION

4.1 Overview

This study investigated the psychological processes of late paraphrenics' delusional ideation within the context of the theory that delusions are a form of defence against low self-esteem and depression. This study considered whether those with late paraphrenia with persecutory and/or grandiose delusions show differences between their overt self-evaluations and covert negative emotions about themselves. It also considered whether there was any abnormal attentional bias towards age related factors different to that found in healthy control participants. The study also investigated whether those with late paraphrenia maintain normal levels of self-esteem by perceiving others in a more negative way. In addition, this study looked at perceptions of current and past functioning to explore whether changes in these perceptions are associated with delusional thinking and a defence of the self.

The following chapter provides a summary of the findings of the study and how these can be interpreted in the context of the research questions and what is already known about the delusions-as-defence argument. The findings will also be considered in terms of providing further information on those with late paraphrenia within the framework of ageing. The limitations of the study will be reviewed and their ramifications on the

findings will be discussed. Finally, the implications of the findings for understanding and providing services for those with late paraphrenia will be discussed, and suggestions for future research will be made.

4.2 Summary of Findings

Analysis first considered whether the experimental group showed overt levels of low depression and good self-esteem but underlying levels of depressive emotionality as assessed by the Emotional Stroop Task. It was found that the Late Paraphrenic Group showed no significant differences to the Healthy Control Group on the BDI and self-esteem measures with no evidence of overt depression or low self-esteem. Both groups showed significant differences to the Depressed Control Group. The results from the measure to assess covert levels of negative emotionality showed that there were no significant interactions between the groups and the conditions of the Emotional Stroop task. There were main effects of differences between the groups and the Stroop word conditions. The group difference was due to the Late Paraphrenic Group having slower overall response times than either of the two control groups. The Stroop word main effect was due to all participants responding slower to the Old Age related words compared to the Neutral words. This difference was found for each of the groups. There were no interference effects found when comparing the Neutral words and the Depressed words in any of the groups. As predicted, the Late Paraphrenic Group did not show overt evidence of depression or low self-esteem. However, the prediction that the Late

Paraphrenic Group would show underlying attentional biases to emotionally negative words was not supported. The Stroop interference effect was, however, found with the Old Age related words. This was significant but this attentional bias was found in all three groups. There were no significant differences of this effect between the Late Paraphrenic Group and the two control groups.

This analysis also looked at whether those with late paraphrenia showed evidence of disparities between their actual views of themselves and their ideal and perceived views of how others see them, and how these may change over time. The results showed that there was an interaction between the groups, the type of discrepancy and time. There were also two two-way interactions between group and type of discrepancy, and time and type of discrepancy. There were main effects of group and type of discrepancy, but not of time. The main effect of group was due to the Depressed Control Group showing larger discrepancies overall than the Late Paraphrenic Group and Healthy Control Group who did not differ from each other. The main effect of type of discrepancy was due to the Actual-Ideal discrepancies being greater than the Actual-Other discrepancies. The interaction between group and type of discrepancy was due to the Depressed Control Group showing larger Actual-Ideal discrepancies to those of the other two groups who again did not differ from each other. The interaction between type of discrepancy and time was due to the Actual-Ideal discrepancies showing an increase over time while the Actual-Other discrepancies did not change. The three-way interaction was due to the

Depressed Control Group's increase in their Actual-Ideal discrepancies over time which was not found in the other two groups.

With regards to the research questions, as predicted, the Late Paraphrenic Group did not show any differences from the Healthy Control Group in current Actual-Ideal discrepancies. However, the prediction that there would be differences between their Actual-Other discrepancies in that the delusional group would show greater discrepancies than the healthy volunteers was not supported. As expected over time, the late paraphrenia patients showed a similar Actual-Ideal discrepancy level to that of the healthy control participants, and again dissimilar to the depressed patients who showed increased discrepancies over time. However, against predictions, the Late Paraphrenic Group did not show any significant changes in their Actual-Other discrepancies over time.

Finally, the analysis looked at current perceptions of functioning on a number of psychological well-being dimensions and perceived changes in these dimensions over time. It was proposed that those with late paraphrenia would show similar views to healthy participants in perceived current views and changes over time. However, if there are some defensive strategies being employed, then they would show more negative views for those dimensions relating to the external world of Environmental Mastery and Positive Relations with Others. The results showed an interaction for the Environmental Mastery dimension with a main effect of group but not of time. The main effect of group was due to the Late Paraphrenic Group and Depressed Control Group both differing to

the Healthy Control Group but they did not differ from each other. The interaction was due to the Healthy Control Group only showing an increase in perception of functioning over time. The dimension of Positive Relations With Others also showed a significant interaction with a main effect of group. Like the Environmental Mastery dimension, the Late Paraphrenic Group and the Depressed Control Group differed significantly from the Healthy Control Group, but the interaction was due to the Depressed Control Group showing a decrease in perception of functioning on this dimension. The remaining significant interaction was with the Self-Acceptance dimension which also showed a trend towards a group effect. This trend was due to a near significant difference between the two control groups although neither differed from the Late Paraphrenic Group. The interaction is due to the two control groups differing with the Depressed Control Group showing a decrease in feelings of Self-Acceptance over time, while the two other groups did not show change over time. The Purpose of Life dimension showed a near significant interaction with main effects of group and time. The group effect was due to the control groups being significantly different with the Healthy Control Group showing higher ratings on this well-being dimension and the Late Paraphrenic Group showing a trend toward a significant difference with the healthy group but not the depressed group. The main effect of time was due to the Depressed Control Group showing a reduction in feelings of Purpose in Life while the two other groups showed no changes over time. The near interaction was due to the Depressed Control Group showing lower ratings than the other two groups and that they decreased over time. The Autonomy and Personal Growth dimensions did not show any interaction although the Autonomy condition

showed a main effect of time due to all groups generally showing an increase in this dimension, and the Personal Growth dimension showing a main effect of group which was due to the control groups differing from each other.

As predicted the Late Paraphrenic Group showed similar responses to the Depressed Control Group on current perceptions of Environmental Mastery and Positive Relations With Others, which were significantly different to the higher ratings of the Healthy Control Group. Furthermore, as predicted, the Late Paraphrenic Group showed similar perceptions of functioning to the Healthy Control Group on the other four dimensions of Autonomy, Personal Growth, Purpose in Life and Self-Acceptance. In respect of the predictions about changes in perception of functioning over time, the Late Paraphrenic Group did not show any significant changes in the six dimensions over time. More specifically, there was no significant perception of a reduced perception of Environmental Mastery or Positive Relations With Others. Whereas, the Healthy Control Group showed a significant increase in the Autonomy dimension, although the Late Paraphrenic Group showed a trend in this direction, and in Environmental Mastery. The Depressed Control Group showed a significant reduced perception of functioning for the Purpose in Life, Positive Relations and Self-Acceptance dimensions.

It would appear from these results that those with late paraphrenia do not experience depression and they retain good levels of self-esteem. Furthermore, there was no evidence to suggest that they were defending against a preconscious level of low self-

esteem or negative self-evaluations. This group also did not consider that generalised others thought negatively of them and this was not different to an earlier time in their lives. Those with late paraphrenia did, however, report higher levels of current perceived difficulties in functioning in those psychological well-being dimensions relating to more involvement in interactions with the external environment. These results were more similar to those with depression, even though they also held very positive self views on the psychological well-being scale similar to those held by the healthy controls. However, they did not show any significant changes over time in the dimensions. Overall, those with late paraphrenia reported consistent positive self-evaluations. However, when they are questioned on those aspects of functioning that require more interaction with others and the external environment, they report more negative views, and the responses are similar to that held by the depressed patients.

4.3 Interpretation of Findings

The research looked at three broad areas of the delusions-as-defence theory in relation to those with late paraphrenia. The first two areas are those that Bentall, Kinderman and colleagues have investigated (e.g. Bentall *et al.*, 1994; Kinderman & Bentall, 1996; Lyon *et al.*, 1994), namely differences between overt and covert emotionality, and discrepancies in self-representations. The third area is looking at perceptions of growing older and the association this may have with the delusional beliefs of those with late paraphrenia.

4.3.1 Depression and Self-Esteem

The differences between overt and covert emotionality is perhaps a direct test of the delusions-as-defence theory. If a defence is being used, then asking directly for self-evaluations will activate the defence and they will report a positive presentation of themselves, but if the defence is by-passed, then some evidence of depression should be found. The study was able to confirm that those with late paraphrenia overwhelmingly do not report significant symptoms of depression and that they do maintain good levels of self-esteem. They showed no differences to the healthy controls in this respect, and were significantly different to the depressed patients who showed moderate to severe levels of depression and low self-esteem. With regards to covert negative self-evaluation, the use of an Emotional Stroop task that is thought to measure attentional biases (Williams, *et al.*, 1996), and therefore should by-pass the defence, showed that there was no evidence to suggest that the Late Paraphrenic Group were being affected by emotionally negative words. However, as there was no depression interference effect found overall, this is inconclusive. Therefore, the study was unable to find any covert evidence of depression in those with late paraphrenia. However, the study did find attentional biases to age related words which were present in all three research groups. The groups did not differ significantly from each other in the interference effect. This result indicates that, perhaps not surprisingly, issues of age are relevant to all older people, not necessarily those who have a psychopathology. The mechanisms behind this attentional bias are not known. For instance, the saliency of the words for those that are well may be related to fears for

the future, whereas those that are unwell, the saliency may be related to its influence on their current state of mental health. For those with late paraphrenia, who feel positive about themselves, but may have problems with coping, then age related issues may exacerbate these feelings.

The Stroop task employed in this study was not able to elicit attentional biases to depression in any of the three groups. This is contrary to well established research suggesting that emotionally negative salient words interfere with the ability to name the colour of the ink they are printed in (Dalgleish, 1995; Williams & Broadbent, 1986; Williams *et al.*, 1996). The numbers in this study may have resulted in low power, but the Stroop interference effect is robust and prevalent (Williams *et al.*, 1996) and a number of studies have shown the effect even with small numbers, particularly for clinical groups (e.g. Bentall & Kaney, 1989; Gotlib & McCann, 1984; Richards & French, 1990). Furthermore, the Stroop effect has been found to be robust in older adults when tested using Stroop's (1935) original format of colour-incongruent words (Kwong See & Ryan, 1995), and the interference effect tends to be greater than that found in younger adults. This is thought to be due to a general slowing of cognitive processes in older age (Verhaeghen & Lieve De Meersman, 1998). Effects sizes are very high, and a review carried out by Verhaeghen & Lieve De Meersman (1998) into the Stroop effect in ageing showed a range of 1.05 to 3.16. The failure to find this basic difference between depressed and neutral words may lead to queries about the reliability and validity of the Stroop task used in the present research. However, there was an emotional Stroop effect

for the Old Age related words which indicates that the Stroop task was able to elicit attentional biases for this emotionally salient area.

There are a number of possible explanations for the lack of a Stroop effect for depressed words in this study. Although the Stroop effect is a robust finding in older adult groups, there is no research showing what sort of effects would be expected from emotionally salient words with healthy older adult groups or for older adults with clinical symptoms. The lack of a Stroop effect for depressed words may be particular to the age cohort under study. Older people may use different cognitive strategies to deal with emotionally salient words and they are not affected by the negative words as younger adults are. For instance, Williams *et al.* (1996) consider circumstances where the Stroop interference effect is not found in younger clinical populations. Their review of such instances has led them to propose that under certain circumstances, if an increased effort is required to perform the task, then attentional biases can be overridden, interference is reduced and the participants become generally faster at performing the entire task across all word conditions (Williams, *et al.*, 1996). However, the presence of the Stroop effect for the age related words indicates that attentional processes were 'caught' by the saliency of these words. One interesting aspect of this argument, is that if faster speeds of response reduce interference in the Stroop task, then the response times of the Late Paraphrenic Group would increase the likelihood of an interference effect being generated compared to the control groups as they were significantly slower at performing the Stroop tasks. According to Verhaeghen & De Meersman (1998) a slowing in process speed has a linear

relation to the interference effect. Perhaps the lack of a significant difference between the neutral and depressed words for those in the Late Paraphrenia Group who had a significantly reduced processing speed over all the word conditions, provides some indication that the depressed words are not emotionally salient to them, and they do not suffer underlying negativity about themselves.

Another reason for the lack of the interference effect for depressed words, may be due to 'cognitive avoidance' where the saliency of the words causes the individual to essentially shut out the words and not be affected by the meaning (de Ruiter & Brosschot, 1994). An examination of those with BDI scores 19 and above reflecting a moderate to severe level of depression indicated that these participants also did not show the interference effect. There was a correlation between all the BDI scores and the interference effect $r=-.5537$, $p<.032$ but this was in the opposite direction to that expected with increasing interference scores reflecting decreasing BDI ratings. This may indicate that those with depression were actively avoiding the depressed words.

4.3.2 Discrepancies in the Self-Concept and Changes Over Time

Discrepancies in self-representations were used as a means of investigating the theory that part of the defensive process contributing to the maintenance of delusions is that those with persecutory delusions may blame others for the negative events in their lives rather than accepting responsibility themselves for things that go wrong. Therefore, it is argued

by Bentall *et al.* (1994) that those with persecutory delusions maintain their self-esteem at the expense of regarding others more negatively, and that the perceived views of others will be negative about them. Evidence for this was investigated in this study by considering discrepancies between the actual view and the ideal view of the self and the perceived views of others of the self. The results showed those with late paraphrenia had similar current Actual-Ideal discrepancies to the healthy controls. This was in contrast to the depressed group who had significantly greater discrepancies which reflected their lower levels of self-esteem. However, there was no evidence to suggest that they consider that others think negatively of them. Although the Late Paraphrenic Group showed significant differences between the Actual-Ideal discrepancy and the Actual-Other discrepancy, this was not significantly different to that held by the two control groups. In fact, the three groups all showed positive discrepancies in the perceived views of others indicating that they considered others would see them in a more positive light than they did themselves. Overall, the Late Paraphrenic Group and the Healthy Control Group did not differ significantly in their current Actual-Ideal and Actual-Other discrepancies, nor in changes over time. However, they both differed to the Depressed Control Group whose current Actual-Ideal discrepancy increased over time. All groups showed no differences between their past Actual-Other discrepancies and their current Actual-Other discrepancies. Therefore, although the Late Paraphrenia Group report maintaining good levels of Actual-Ideal discrepancies similar to the Healthy Control Group, they did not show, as predicted, that they considered generalised others thought of them negatively. In addition, there were no perceived changes over time for the Late

Paraphrenic Group, although as this is a retrospective view of change, then this may be affected by their current delusional state. For instance, any biases in their thinking about their current self-evaluations will possibly also affect the views about how they viewed themselves in the past.

The self-discrepancy paradigm used by Kinderman & Bentall (1996) found that their sample of those with persecutory delusions believed that others had more negative views of them than did other participants. However, they used a format where the participants generated their own attributes to describe themselves and this was along more similar lines to Higgins's (1987) original method. They also instructed the participants to consider the perceptions their parents held about them rather than the opinions of 'other people'. This study chose to follow the format of self-concept checklists used by Kinderman & Bentall (2000) where lists are formulated with positive and negative attributes which participants were to agree or disagree with. It was felt that this was a more appropriate measure for this study as it would place fewer demands on the older adult participants who might be reluctant or find it difficult to generate their own attributes about themselves. Kinderman & Bentall (2000) found that the self-concept checklists used with their student samples were sufficiently robust to detect self-discrepancies by this method and that the students were able to specify their perceived selves using the attributes provided with a high degree of reliability. The measure used in this study was able to elicit discrepancies in the Actual-Ideal viewpoints from the depressed group but it may not have been sufficient enough to detect a more subtle

effect. There was no grading of the attributes as Higgins (1987) proposed and a forced-choice scenario does not allow individuals to express more subtle feelings about themselves. However, making people express either a positive or negative viewpoint is more likely to access significant discrepancies rather than self-generated words which might be more neutral or modest, or grading of responses given which may generate less pronounced self-discrepancies.

One reason for not finding the expected discrepancies for the Actual-Other view is that those with late paraphrenia had persecutory delusions about specific others, and they did not often seem suspicious about generalised others. When considering the 'others' viewpoint, they may have been considering the views of family, friends, or acquaintances, past or present, and who are much more likely to have been seen as positive, and to have more positive views about the participants. Unlike those with early onset schizophrenia where their paranoia may be more generalised and who may consider everyone worthy of suspicion, those with late paraphrenia may only consider particular others in a negative way. This may, however, have been different for those who did not see the researcher or agree to take part in the research, and it was reported in at least some of the cases that the person would not agree to the research due to being suspicious of strangers. In contrast, those people interviewed for the Late Paraphrenic Group were often very happy to talk to the researcher and only became angry or suspicious, when talking about their 'persecutor/s'. Consequently, the Late Paraphrenic Group would not consider all others in a negative way, only those who played a role in their delusional ideation.

Another reason for the lack of a significant Actual-Other discrepancy for those with late paraphrenia and the control groups may be that older adults do not consider the viewpoints of others to be that different from the ones they hold about themselves. According to Atchley (1982), older adults reach closure on their self-perceptions around middle-age or later, and they may not contemplate that others see them much differently from how they see themselves. This is in contrast to younger people who are still in the process of forming one coherent self. Bentall & Kinderman's (1996) study instructed their participants to consider their parents' views of them, and as they noted, this relationship has specific and special connotations, and is much more salient. These perceived views may well be very different to that of generalised others, particularly in those with schizophrenia who may have difficult histories with their families. Kinderman & Bentall (2000) used the self-concept checklists with students who may have been more able to consider different views about themselves as they themselves may hold different views and feel less resolved about their own identities. Alternatively, older adults may be less concerned about how others see them. Atchley (1994) thought that older people tend to conclude that they know themselves better than anyone else and so assign more weight to their own opinions and discount others' views about them.

4.3.3 Psychological Well-Being and Changes Over Time

The Psychological Well-Being scale was used to assess perceptions that involved evaluating the self over the longer term rather than a state measure such as the BDI or

self-esteem scale. This scale was devised to consider various dimensions of perceived well-being and has been standardised on older adults. This instrument was used to consider whether there were any differences or similarities between the three research groups in their current views of psychological well-being and perceived changes in functioning over time. It was considered that if those with late paraphrenia were using delusions as a defence, they would show similar levels of current well-being and perceived changes to those from healthy controls. However, if they were maintaining their self-esteem by thinking others were responsible for their difficulties, then they may perceive that their level of functioning had worsened in those areas involving the external world or others. The results appear to confirm this prediction. The Late Paraphrenic Group showed similar perceptions in their level of functioning to the healthy controls on those dimensions relating more closely to their opinion of themselves i.e. Autonomy and Self-Acceptance, but showed similar responses to the depressed patients for Positive Relations With Others and Environmental Mastery, the dimensions relating more to the individuals' interaction with the world around them. The Groups did not differ significantly on the dimensions of Purpose in Life and Personal Growth with regards to changes over time. The Late Paraphrenic Group did not show any significant changes over time in the six dimensions. The Healthy Control Group showed a significant improvement in Autonomy and Environmental Mastery and the Depressed Control Group showed a significant decline in perception of Purpose in Life, Positive Relations and Self-Acceptance.

The results of the Psychological Well-Being measure showed evidence that there are cognitive processes occurring with those with late paraphrenia who consistently report positive self-evaluations similar to that found by the healthy controls but report results similar to the depressed group on those aspects involved in perceptions of functioning in areas relating to the external world. This would tend to support Bentall et al's theory that those with persecutory delusions maintain their self-esteem by attributing negative consequences to others. It may also show evidence for Zigler & Glick's (1988) argument and Colby et al (1979) model that personal inadequacies are projected onto the outside world to maintain self-esteem. In the case of those with late paraphrenia, this projection manifests itself onto specific others in the external world, probably as a result of the more limited life style they experience.

4.3.4 Significance of Findings

This research was unable to find discrepancies between overt levels of self-esteem and depression and covert levels of negative emotionality in those with late paraphrenia. Furthermore, there was no evidence to suggest that due to the influence of persecutory delusions those with late paraphrenia considered that generalised others would see them in a negative way. However, this study did find some support for Bentall et al's argument that those with persecutory delusions maintain their positive sense of self by regarding others more negatively. As predicted those with late paraphrenia did show more negative views about their environment and their relationships with others when

measured through the psychological well-being scale. The Late Paraphrenic Group showed differences between their scores on the Environmental Mastery and Positive Relations With Others dimensions and the dimensions that relate to more internal views about the self. Bentall *et al.* (1994) argue that externalising causal attributions for negative events will decrease the generation of negative self-representations. This is considered to reflect an extreme self-serving bias particularly when considering responsibility for negative events. Kinderman & Bentall (1997) found that those with paranoid ideation were more likely to make personalised attributional biases for negative events rather than situational or circumstantial biases which were more commonly found in nonpatient participants. They consider that those with delusions would blame others for the adverse situations they are in.

The responses by the Late Paraphrenic Group for the Positive Relations With Others dimensions which showed no significant differences to that of the depressed group would reflect that they feel that they have poor personal relationships with others, although they did not report that they felt that others thought badly of them. However, this recognition that they have poor relationships with others, may reflect an underlying negative view of others, rather than a viewpoint that others do not want to associate with them, as this group show positive views about themselves. The Environmental Mastery dimension is related to the sense of competence in managing the environment and would appear that the low perception of functioning in this area is related more to a 'situational' attributional style. However, managing external activities and surroundings, particularly

as one ages, is much more reliant on interactions with others. For instance, Wenger (1992) found that contact with relatives increased as people aged; and the Office of Population Censuses and Surveys (1996) found high levels of contact between older people and their relatives and friends, and that this was often to provide extensive care and support. Those who lack close family and friends, and this is a risk factor in those with late paraphrenia, are more likely to receive help in managing their environment through unfamiliar others.

The poorer perception in functioning by those with late paraphrenia in those psychological well-being dimensions that relate to the external world, that of Positive Relations With Others and Environmental Mastery, can also be related to issues of control. Feelings of control of one's environment is very important for good mental health in older age (Coleman, 1992). It may be that a worsening sense of control of one's environment is the catalyst to start attributing blame to others for difficulties. Heckhausen & Schulz (1995) considered that it was necessary for the individual to make personal adaptations (secondary control) in order to cope with changes in their environment that they could increasingly do little about (primary control). These strategies of secondary control are necessary to protect the self-esteem. It is evident from the theories about the self-concept and ageing that there are many cognitive strategies employed by people in normal ageing that maintain self-esteem. These strategies could be considered 'defensive' in that they allow the individual to deny an unacceptable reality. For instance, these strategies include using, or fabricating, evidence

of past successes to maintain a current positive self-evaluation, holding stereotypes of other older adults but not of themselves, discounting or ignoring negative aspects of the self, and remaining in well-known and mastered environments (Greenwald, 1980; Atchley, 1982; 1994). It could be that the dynamic between primary and secondary types of control is shifted in those with delusions in older age. Perhaps threats to primary control make an individual's feelings of self-worth more important and salient, and thus the individual becomes more focused and rigid about these ideas. Consequently, the view of the self then becomes more susceptible to threats from outside others. They may feel very positive about themselves, and indeed sometimes superior to others, but live in a situation where they can not exert this high sense of self-worth and superiority in a changing and increasingly unfamiliar community. They, therefore, search for a reason for this and begin to blame specific others for their lack of ability to control their environment. Consequently, they would not show evidence for any depression or low self-esteem even on a task such as the Stroop as their feelings of self-esteem are positive, and they would not consider that generalised others would see them in a negative way. They may however, have more negative evaluations regarding those aspects that involve the external world that they have difficulty controlling.

The delusions-as-defence theory continues to have face validity but support for the theory continues to be difficult to find. In Garety & Freeman's (1999) review of cognitive approaches to delusions, they concluded that the studies looking at differences between covert and overt levels of self-esteem were not conclusive, and that some studies were of

questionable validity. For instance, using an Emotional Stroop task, Bentall & Kaney (1989) and Fear *et al.* (1996) found attentional bias to threat but not to depressive words in their persecutory deluded group. Kinderman (1994) found evidence to suggest that those with persecutory delusions covertly endorsed negative attribute words similar to that found by the depressed group. However, in the overt part of the study, although the paranoid group endorsed positive words similar to that of the healthy controls, they also endorsed a similar number of negative words as the depressed group. Therefore, there did not appear to be an overt-covert discrepancy between their negative self-descriptive views, which could be accounted for by the level of depression in the group. Freeman *et al.* (1998) were not able to find normal levels of self-esteem in their treatment resistant patients with persecutory delusions indicating that the defence, if it existed, was not very effective. They also found that self-esteem correlated with mood but not delusional conviction in that as conviction decreased, self-esteem did not become worse. This would be expected if there was a defence working, even if it was a poor defence. Chadwick & Lowe (1994) also considered that an argument against the delusions-as-defence idea is that depression does not increase as delusional conviction decreases as would be expected, and in fact the opposite is found.

In contrast, those with late paraphrenia consistently report positive views about themselves and do not present with evidence of depression. This is in spite of the difficulties they are often experiencing or perceive to experience in their home environments. Unlike their stated views about themselves, they report a poorer ability to

control their environment and to form good relationships with others. Their sense of managing the external world depends increasingly more on others, or that others are able to more adversely affect their sense of being in control. For instance, new neighbours remove the sense of the familiar, or noisy neighbours emphasise feelings of being threatened. This study has shown some evidence of a cognitive strategy they employ to maintain a positive sense of self. Those with late paraphrenia who have persecutory and or grandiose delusions may not question their own role in the difficulties they experience, but see their surroundings as more unfriendly or hostile. They then use this to explain any negative thoughts or feelings they may have, thus preserving their own positive sense of self.

4.4 Methodological Issues and Limitations of the Study

There are a number of reasons to be cautious in interpreting the findings of this study due to methodological issues and limitations in the research process. These fall into three main areas for comment: that of the research sample; the measures used; and the procedure and design.

4.4.1 Research Sample

One of the major limitations of this study is the low sample size which affects statistical power and the generalisability of the results. The number of 43 participants over three

groups allows limited statistical power so that significant results are much more difficult to achieve. Hence, significant results that may be found with a larger sample are not elicited with smaller experimental numbers. Statistical power is further compromised by the number of statistical tests carried out which increases the risk of wrongly rejecting the null hypotheses and care has been taken to adjust the significance level where necessary.

Obtaining representative samples from the population under study is not always easy. It is not always possible to get a truly random sample of research patients due to the necessity for patients to give their consent and constraints on their ability to participate in the research being conducted. For instance, in this study 41% of those fulfilling the criteria for the late paraphrenia group when approached refused to participate. There may have been significant differences between those who agreed to be interviewed and the refusers. For instance, the refusers may have been more suspicious and uncooperative, or differed in the extent to which their delusions caused them distress, or in their negative beliefs about others. The latter is particularly relevant as part of the study was attempting to elicit those views about others. Furthermore, there were a number of patients whom care staff considered would not participate, and cases where care staff were reluctant to upset a sensitive relationship between the patient and themselves. An important issue with the research sample is that of the diagnosis of those included in the Late Paraphrenic Group. People were included in the study if they were diagnosed with delusional disorder, late-onset schizophrenia or late paraphrenia after the age of 60 years by their medical team. Due to the isolated nature of many of the participants' lives or the

delay in coming to the notice of social or health services, it is not known whether the onset of symptoms may have occurred before this age. Furthermore, out of the cases available for this study, there was a high proportion of cases with recent onset of the illness, for instance over the last six months, and fewer cases with a longer history. This raises the question about the stability of the diagnosis and prognosis. This may indicate that the illness is more transitory or for many the delusions resolve by themselves or due to past treatment. In addition, there was no measure of conviction or extent of delusional beliefs, only that they were present. Including a measure of delusional conviction might have provided an additional measure of the level of severity of the illness.

Obtaining a representative sample for the Depressed Control Group also revealed possible vagaries in those who agreed to be interviewed and those who refused. Fifty percent of those identified with depression and approached for the study refused to be interviewed. Feelings of depression can make an individual reluctant to be involved in new activities, so it may be that those who did agree were less depressed than those who refused. This is evident in the range of BDI scores which showed a skewness of scores in the lower end of the group. However, all those included in the study still obtained a BDI score above the cut-off point of 15. The participants for the Healthy Control Group were recruited through day care centres for pensioners and it may be that they are not truly representative of older aged people. For instance, most of them used the centre as a way of meeting people and for social activities, and there may be something about this

group of individuals that may differ from older adults in general who do not use such centres.

Although the groups were matched for demographic factors such as age, gender, years of education and socio-economic status, there were differences between the groups. The most important perhaps is the high level of non-English people in the late paraphrenia sample compared to the two control groups. Immigrant status has been considered a risk factor for late paraphrenia (Gurian *et al.*, 1992) and this did seem to be very prevalent in those fulfilling the criteria for inclusion in the Late Paraphrenia Group. It is not known what differences there may be in the belief systems that people hold about themselves across different cultures. For instance, Scherer & Wallbott (1994) found significant differences in responses to emotional stimuli across a number of different cultures e.g. shame, guilt or fear, which must impact on self-representations. The immigrant and language issues also have implications for the results as there may have been difficulties in this group understanding the words in the Stroop task and the self-concept checklists. A specific measure for reading ability could have been administered to give a more accurate indication of the participants' ability to read and understand the words presented. However, the four participants with English as a second language had lived in England for at least 40 years, and consequently had a lot of experience in using the language.

The other main difference between the two psychiatric groups is their history of illness. The difference is due to one-third of the Depressed Control Group having the onset of their illness at an early age and consequently being treated for longer. The other two-thirds had more recent onset with a more similar pattern of treatment to that experienced by the Late Paraphrenic Group. Those in the Late Paraphrenic Group were also less likely to be taking medication. It is not known what effect this would have had on the results, but whether the depressed sample had early or late onset depression, it would be anticipated that they would still view the self, the world, and the past in a cognitively and emotionally negative framework. For instance, there was no association between BDI scores and length of illness. Those with recent onset of depression were just as likely to report high symptoms of depression on the BDI than those with early onset. However, the length of illness may have had implications for comparing levels of self-esteem and depression. Those with early onset of depression are more likely to have well established negative self-views than those with a late onset of a psychiatric illness, making it much easier for them to acknowledge negative opinions of themselves. In retrospect, it would have been better to match the Late Paraphrenic Group, as by definition these patients had a late onset condition, with a group consisting entirely of those with a more recent onset of depression.

There were differences in the psychiatric groups in the extent to which they were prescribed medication, with the Late Paraphrenic Group less likely to be taking medication at the time of interview. This would have implications for the responses given

as any medical intervention will confound the patients' responses about their views about themselves and their world. In addition, it is not known what the compliance rate was for prescribed medication for the psychiatric groups.

4.4.2 Validity of Measures

This study involved two measures designed specifically to test the proposed hypotheses, an Emotional Stroop task and self-concept checklists. This means that these have not been used before and there is no reliability data for them. The Psychological Well-Being scale has been standardised on older adults although it has not been used with those with psychiatric problems. This has implications for the findings of the study and may contribute to its limitations.

The Stroop effect for the depressed words was not found in this study even in those diagnosed with depression and with high BDI scores. This would appear to go against the generally consistent and robust findings of the Stroop paradigm, particularly with clinical groups (Gotlib & McCann, 1984; Williams, *et al.*, 1996). The non-replication of these findings in this study may have been due to the low numbers, the procedure or the sample groups used. The number of participants used would have reduced statistical power but as Williams *et al.* (1996) point out many studies have found the interference effect with small numbers, often with smaller numbers than found in this study. The procedure itself may have created a 'blurring' of the interference effect. For instance, the

use of card presentation format and timing by a stopwatch does not make for such an accurate measurement of the Stroop response as a computer presentation. However, Dalgleish (1995) confirmed that differences between the two methods are only relevant when measuring response times to emotionally positive words. That is, both methods will elicit the interference effect for emotionally negative words. However, other aspects of the presentation may have resulted in the inability to find the Stroop effect. For instance, some participants had difficulty in discriminating the colours of the words, although they were told to name the colour as it appeared to them. Another difficulty was the higher number of people in the Late Paraphrenic Group who had English as a second language.

However, these factors which may have reduced the Stroop interference effect would also have affected the Age Related word condition, and in this case, an interference effect was found suggesting that the Stroop tasks were sufficiently robust to elicit the Stroop effect. However, the words used in the depressed condition of the Stroop task may not have been salient to the older adult participants. These words were similar to other studies using emotionally negative words in the Stroop task but used with younger aged groups, and the words in the current study were not piloted on older adults. Perhaps a piloting of both the depression related and Old Age related words with older aged groups would have been judicious.

The self-concept checklists were based on measures designed by Kinderman & Bentall (2000) but modified for the aims and age group for this study. The self-concept checklists required people to rate whether they thought an attribute applied to themselves or not. However, there are noted difficulties in attempting to assess people's views about themselves by asking them (Wylie, 1979). For instance, they may show social desirability effects or they may not think of themselves in a negative way. However, Wylie (1979) considered the latter as a good reflection of someone's self-evaluation, and he thought people were less likely to deceive the interviewer than to deceive themselves. Wylie (1979) also questioned the instructions used when assessing people's insight into how others may see them, and felt that the instructions needed to be very explicit. In this study, instructions were given for 'generalised others'. Mead (1934) considered that in later development a person's self-concept becomes based on this viewpoint rather than on specific others. The results of this study did not find very large discrepancies between the views of the 'actual' self and the 'other' self and there were no significant differences shown between the Actual-Other viewpoint in any of the groups. In the light of these results, it is questionable whether older adults distinguish, in a consistent way, between their own views about themselves and that thought to be held by others. In addition, the use of the instructions as 'generalised others' probably resulted in participants considering the viewpoint of people who played positive roles in their lives. In particular, people in the Late Paraphrenic Group are unlikely to consider the viewpoint of the person/people who are part of their delusional beliefs but of those that they see in a more positive light.

A further issue regarding the self-concept checklists are that they were devised not as the idiolectic Selves Questionnaire of Higgins (1987) where attributes are self-generated but, following Kinderman & Bentall (2000), the words were generated for the participants. This method was employed as it was felt that it would place fewer demands on the participants, particularly for this age group and those with mental health problems. In addition, the checklists used were simple to construct, administer and score. Using the Selves Questionnaire as proposed by Higgins (1987) may well have produced different discrepancies between actual, ideal and other viewpoints. However, it could be argued that the forced-choice response allowed clearer lines to be drawn between positive and negative feelings about the self.

The shorter 9-item per dimension form of the Psychological Well-Being scale was employed for this study due to the length and time needed to complete the 20-item per dimension questionnaire. The 9-item per dimension does not have reliability and validity data as yet but is being employed by Ryff and colleagues in their Wisconsin Longitudinal Study. Correlation between the 20-item scale and the 14-item scale are very high at .97 to .99 across the six dimensions, and it is assumed that the correlation with the shorter 9-item scale will also be high. This was supported by the responses found with the Healthy Control Group which was similar to that found in Ryff's (1991) study of changes in perception of functioning over time i.e. either improvement or general stability (for women). The Psychological Well-Being scale has not been standardised on psychiatric populations and, therefore, it is not possible to comment on the reliability of this for the

Late Paraphrenic and Depressed Control Groups. However, the depressed patients showed a profile that would be expected with this group in that they perceived that their functioning (on most of the dimensions) had decreased over time and that their current perception of functioning was worse than that found in the healthy control participants.

4.4.3 Procedure and Design

One aspect of the procedure that may have affected the data collection is that presentation of the questionnaires and checklists were in a verbal format. This lead to the researcher sometimes being asked to elaborate on the meaning or leading to a discussion by the participant on possible answers. This format would also have increased social desirability effects as participants may be more reluctant to present themselves negatively. However, it was felt that, on balance, it was better for the researcher to participate more directly in this process due to the nature of the variations in the required responses e.g. actual, ideal, other, both past and present responses. It was felt that this would help the participants feel more at ease and, in addition, it gave the participant an opportunity to answer the questions in full, rather than providing yes/no or graded responses, and allowing them to elaborate or qualify their response. This often made the process a more enjoyable and rewarding one for the participants.

A procedural factor that may have affected the Stroop task was the decision to carry out this part of the interview after the 'current' psychological well-being and self-concept

checklists. This was designed to have participants focus on how they felt currently. However, as the time frames were counterbalanced, this meant that the Stroop task was often completed as the final aspect of the interview. Consequently, the participants may have been tired and losing interest by this time. Furthermore, for those whose interviews were split over two sessions, the participants may have a much shorter session before completing the Stroop task. This difference as to when the Stroop task was performed may have increased the variation in the responses of the participants. It may have been better to have ordered this near the start of the interview process, thus ensuring everyone was completing it at about the same time in the interview process.

A further factor about the procedure in relation to the self-concept checklists, was the monotony of completing six checklists and the need to switch between three viewpoints and two time frames. Many participants found this a boring task, particularly those who completed the interview in one sitting. The monotony of the task also led to quick responses, which assesses more automatic responses to the words, but may not have allowed sufficient consideration of each attribute especially when it needed to be considered as the viewpoint of others. The need to switch views a number of times may have resulted in it being difficult for the participants to consistently differentiate between their own views about themselves and how they thought others perceived them, and their current views compared to past views. With the words being presented verbally by the researcher, it was possible to remind the participant which domain they should be considering. However, it is questionable whether a clear delineation between the

different domains of the self particularly that of the 'other' viewpoint was achieved. In addition, the measure only accessed retrospective reports about the self-concept and this will always be affected by the individual's current views about the self.

4.4.4 Summary

There may be a number of reasons to treat the results of this study with caution. For instance, the number of participants may not have provided sufficient power or they may not have been representative enough of the populations under interest to be able to reliably draw conclusions from the results. Furthermore, the research instruments and their presentation may not have been measuring accurately the areas of interest, such as the attentional biases for depressed words in the Stroop task or the different viewpoints of the self-concept checklists. However, the findings would indicate that the method was robust in many ways. For instance, the different groups did show the predicted levels of depression and self-esteem. The Late Paraphrenia Group and the Healthy Control Group did not differ from each other showing little evidence of depression and good levels of self-esteem in contrast to the Depressed Control Group. The Stroop task was sufficiently robust to elicit the interference effect for the Age Related words, across all three groups. The self-concept checklists also measured the predicted pattern of results for the Actual-Ideal discrepancies in that the Late Paraphrenia Group and the Healthy Control Group did not differ to each other and had much smaller discrepancies than the Depressed Control Group, and the Depressed Control Group worsened over time. However, the

checklists may have been less valid in measuring Actual-Other discrepancies. The Psychological Well-Being scale also was able to support some of the predictions in that the Late Paraphrenic Group showed similar response to the Healthy Control Group on the dimensions of Autonomy, Personal Growth, Purpose in Life, and Self-Acceptance, but showed worse perceptions of functioning, similar to that of the Depressed Control Group in those dimensions of Environmental Mastery and Positive Relations With Others. Hence, the methodology was sufficient to enable consideration of the hypotheses of the study.

4.5 Implications for Services for People with Late Paraphrenia

The findings of this study have implications for the sorts of interventions and the way they are applied to those with late paraphrenia. The findings of the study showed that those with late paraphrenia consistently report positive views about themselves and that there was no evidence to suggest that they suffered from depression. Their positive self-evaluations did not appear to be maintained at the expense of viewing generalised others as thinking negatively of them and thus blamed for adverse events. However, this may not be the case for specific others especially those involved in their delusional belief systems. Those with late paraphrenia also reported similar perceptions of general well-being to that of healthy controls on dimensions relating to a more internal sense of self which was similar to findings on the self-esteem measure and discrepancies between actual and ideal self. However, their perceptions of their level of functioning when they

considered how they interacted with the environment and people around them resulted in responses that were more similar to those with depression. That is, when they considered their ability to manage their environment and their relationships with others, they indicated a reduced level of well-being.

Therefore, any psychological intervention should be directed at their feelings of inadequacy with relationships with others and managing the environment. Perhaps using Heckhausen & Schulz (1995) framework of primary and secondary control, it is evident that those with late paraphrenia have little difficulties with secondary control in using cognitive strategies to make personal adaptations to maintaining self-esteem. However, this may not be used to make allowances for their reduced primary control or ability to control their surroundings. In other words, their expectations about themselves are high but this may be at odds with the way they experience their surroundings and circumstances. Psychological interventions could focus on this aspect of their thinking and strategies could be used to help them reality test their perceptions about themselves in relation to their ability to control their environment. This could be by helping them with the use of behavioural tasks to increase their ability to cope with their environment and the people in it, and/or the use of cognitive strategies to help adjust their perceptions of their ability to cope.

An example of this is comes from Fava, Rafanelli, Conti & Grandi (1998) who report on a novel psychotherapeutic approach that uses Ryff's (1989) psychological well-being

model as a way of providing interventions for those with residual symptoms of affective disorders. This therapeutic approach asks patients to report only episodes of well-being, encourages them to identify and set into a situational context such episodes no matter how short-lived; to identify automatic thoughts and beliefs leading to premature interruption of well-being; and to focus attention on any specific impairments shown on Ryff's dimensions of psychological well-being. The goal of the therapist is to guide the patient from low scores of the dimensions to achieving high scores. For example, low scorers on the Personal Growth dimension have a sense of personal stagnation, lack of improvement or expansion over time and they feel bored and uninterested with life. High scores have a feeling of continued development, see themselves as growing and expanding and are open to new experiences. Initial comparisons of this therapeutic approach on a small sample showed significant improvements in psychological well-being and a reduction in psychological distress, and it compared favourable with cognitive-behavioural therapy (Fava et al, 1998). Such an approach with those with late paraphrenia could be envisage by concentrating on those dimensions that they scored lower on, namely Environmental Mastery and Positive Relations With Others.

The difficulty with this group would be in engaging them in any sort of psychological therapy. Due to lack of insight, they do not consider that they have any problems they need addressing but that it is the neighbours, professionals or others that should be dealt with. Consequently, they tend to consider interventions from the health service with suspicion or irrelevance. However, they do present with distress and anxiety as a result

of their beliefs about their circumstances, and they often come into contact with outside agencies and cause concern due to their behaviour or complaints. From clinical experience, current medical interventions are accepted by those with late paraphrenia as a way of helping them to feel less anxious or stressed about their circumstances, even though they consider this medication does not solve their actual problems. Any psychological intervention would also need to engage with this group by providing them with support with their anxiety and distress in the context of their perceived difficulties. This is similar to that proposed by those using cognitive-behavioural therapy for psychosis (Chadwick & Lowe, 1994; Fowler, Garety & Kuipers, 1995) in that it may take many weeks and even months before sufficient trust is established. Many of those with late paraphrenia show little suspiciousness and, from clinical observation, would welcome the opportunity to discuss their beliefs. However, it would be also envisaged that there would be difficulties in engaging with some of those with late paraphrenia and that they may never fully accept interventions from the health service.

Those with late paraphrenia do experience significant levels of anxiety and distress due to their belief systems. Psychological interventions could be employed in helping to manage this anxiety and distress. In addition, the current work on cognitive-behavioural therapy for delusions and other symptoms of psychosis (Chadwick & Lowe, 1994; Fowler *et al.*, 1995) could be modified to be used with this group of people to help reduce distress. The therapy involves challenging delusions by encouraging the person to construe his or her delusions as a reaction to, or as an attempt to make sense of, particular events, and

that an alternative perspective from which to understand these events can be supplied and evaluated in a collaborative framework. There does not appear to be any recorded instances where this type of intervention has been used with those with late paraphrenia but it is possible that it could be used successfully with the older aged cohort. It is of interest that work in modifying delusions has generally resulted in a fall of levels of depression (Chadwick & Lowe, 1994; Milton, Patwa & Hafner, 1978), but with a group whose level of depression is already reported as low, care would need to be taken to monitor this carefully. In respect to this type of intervention, again there may be difficulties in engaging with some of those with late paraphrenia, particularly as they hold such positive views about themselves.

4.5.1 Summary

Those with late paraphrenia show little depression and maintain good levels of self-esteem, thus they do not feel the need to seek help from the health services. They do, however, show evidence to suggest that they find it more difficult to cope with their environment than they would openly report to others and perhaps to themselves. This may be implicated in the development of paranoid and/or grandiose delusions about those in their environment. Consequently, psychological interventions aimed at helping them develop more adaptable and flexible perceptions about their level of functioning with the world around them may help ameliorate their delusional belief systems. In addition, work around encouraging this group to consider alternative explanations for their experiences

and beliefs, such as that carried out in younger aged cohorts, may also help in reducing their distressing belief systems.

4.6 Implications for Future Research

This study was unable to find support for the delusions-as-defence theory with patients who have late paraphrenia. There were a number of limitations that may have contributed to this and future research using the current methodology would need to take these into account. The number of participants was less than ideal to provide strong statistical power and an increase in numbers would have given more confidence in the results found. There were a number of issues about the samples used. The degree of illness may have been relevant for the Late Paraphrenia Group, and a measure of delusional conviction should ideally be used in future research. In addition, there were quite significant differences between the psychiatric groups in their histories of illness and the Late Paraphrenic Group contained a high number of non-English participants. Due to the rarity of the group and the difficulty in recruitment, they should be more closely matched with those with late-onset depression and on demographic factors of ethnicity, age and gender. This may also contribute to consideration of using a matched samples design.

Due to the difficulty in recruiting significant numbers of those with late paraphrenia it is important to employ as valid and reliable measures as possible. The Stroop test is one

such measure, but care needs to be taken in its presentation. For instance, in this study, it would have been better to have piloted the depressed and age related words on older adults rather than younger adults, to assess whether they were as salient to older adults. In addition, the actual presentation cards could have been clearer with bigger lettering and sharper colours or the use of colours that are less likely to be confused. The use of computerised Stroop may also be a consideration but this may provide difficulties with an age group that may vary greatly in their experience and reaction to computers.

The self-concept checklists were able to elicit some expected results but they may not have been subtle enough to show more specific effects, particularly with the Actual-Other discrepancy score. The use of the Selves Questionnaire (Higgins, 1987) may have the benefits of being much shorter to administer and less monotonous as the participants would need to generate their own attributes, but at the expense of requiring more effort from them. This questionnaire is also graded with a Likert scale and this may have shown more subtle effects. Alternatively, shorter lists of words generated by the researcher and with a grading scale may have also provided more subtle effects. Wylie (1979) reported that using pairs of quite neutral words resulted in more thought needed by the participant and also had the added benefit of reducing the social desirability effect. The other difficulty with the Actual-Other discrepancy score is the instructions given to the participants. The instructions of 'generalised others' may be too vague and allowed individuals to select whom they chose which probably is invariably someone they perceive who will think of them positively. The use of 'parents' as Kinderman & Bentall (1996)

did had its own difficulties and is not really appropriate for older adults. Using the person/s who is/are involved in the delusion would probably elicit the required differences between the actual and other viewpoints. However, this then provides problems with the instructions to the control groups. The use of a group of 'generalised others' that is reputed to hold negative stereotypes about older people, such as a younger age cohort, may encourage differences between the actual viewpoint and perceived viewpoint of others.

The Psychological Well-Being scale has been standardised on normal older adults but not those with psychiatric problems. However, in some dimensions, it did produce the expected results from those with depression and with a larger number of participants, these effects could well have been more significant. The 9-item per dimension scale was used which did not have reliability data, instead of the 14- or 20-item scale. The shorter form was used to reduce the length of the questionnaire. However, the longer versions could be used if only those items from the scales that are most relevant to the study are used i.e. Autonomy, Self-Acceptance, Positive Relations With Others and Environmental Mastery.

One aspect that was not followed up in this study, and would have provided an extra dimension to the information about the patients' emotional lives was the aspect of anxiety. A number of researchers have considered the influence of anxiety in the formation and maintenance of delusions e.g. Freeman *et al.* (1998) and Freeman &

Garety (1999) and that delusions may be defending against anxiety. There was some indication, at least with some of those with late paraphrenia, that there were significant levels of anxiety and this is an important area to follow up in any future research.

On a broader perspective, the rarity of the syndrome of late paraphrenia poses the problems in recruiting sufficient numbers to carry out controlled comparative studies. The use of multiple case studies or more qualitative research methods may provide more psychological insight, although with less generalisability, of this fascinating group of older adults.

4.7 Concluding Remarks

This study has provided evidence that those with late paraphrenia retain good self-esteem and positive self-evaluation with little or no depression. This group shows quite remarkable fortitude in light of the sometimes adverse situations in which they live, and further, the circumstances in which they believe they live. This study was unable to find evidence to indicate that they were showing any hidden depression, or that they maintained their level of self-esteem by feeling that generalised others saw them negatively. Therefore, the study was unable to find support for the delusions-as-defence theory using these measures. However, there were indications through the well-being dimensions that those with late paraphrenia did not feel that they were coping as well as they would generally report. They reported results similar to that found for the Healthy

Control Group for those dimensions more related to self-evaluation, but those dimensions of Relations with Others and Environmental Mastery which measured concepts relating to interactions under the control of others, they reported perceptions similar to that of the Depressed Control Group. This dichotomy in their thinking about their perceived abilities and their actual experiences with their external world may be implicated in the formation and/or maintenance of their delusional ideation. This would provide modest support for Bentall *et al.*'s (1994) hypothesis that those with persecutory delusions maintain their positive self-esteem by attributing responsibility for negative events onto others, or Zigler & Glick's (1988) argument that they project their own feelings of negativity into the external world. The need to blame others may stem from feelings of poor control over their environment. However, such findings raise more questions than they answer. Further research still needs to be undertaken to understand the cognitive, emotional and behaviour processes that allow those with late paraphrenia to remain positive about themselves while experiencing, for them, adverse circumstances.

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6. APPENDICES

Appendix A: Late Paraphrenic Group - Delusional Ideation

Appendix B: Emotional Stroop sheets (3)

Appendix C: Checklist-Style Self-Concept Scale

Appendix D: Scales of Psychological Well-Being

Appendix E: Geriatric Mental State (Extracts)

Appendix F: Network Assessment Instrument

Appendix G: Ethics Committee Approval Letters

Appendix H: Patient/Healthy Volunteer Information Sheet

Appendix I: Patient/Healthy Volunteer Consent Form

LATE PARAPHRENIC GROUP

DELUSIONAL IDEATION

LP01 Patient believes that an unknown man is entering her flat and taking objects, and moving her clothes and shoes around.

LP02 Patient feels that God speaks to her through secret messages from magazines, theatre plays and her daily biblical readings. These are related to attempting to absolve her of feelings of guilt over her brother's death. She also feels that God is bestowing miracles on her.

LP03 Neighbours, who are harrassing patient with music and noise, police and council are in a conspiracy to make her move to Scotland so that a Scottish man can marry her and have sex with her.

LP04 A next door neighbour and her cleaner are carrying out black magic on the patient to harm her. This makes her feel weak, ill and forgetful, and she feels invaded by black demons. Patient also has hallucinations of voices of God, Jesus and her ex-husband, whom she feels help her overcome the demons.

LP05 Patient feels that nursing staff are wishing to harm her, and are stealing money from her. She believes that black male nurses bring in blocks of ether at night which they pump into the ward to make everyone sleep. She thinks that they will harm her, lock her away or possibly kill her during the night.

LP06 Patient believes she was being tortured by the IRA and she feels that they want to kill her daughter. She attempted suicide to save her daughter from the IRA.

LP07 Patient believes that neighbours make excessive noises and allow a dog to bark continuously to annoy him. He feels that one neighbour is emitting rays into his flat to disturb his sleep.

LP08 Patient believes that her landlady enters her flat at night to attempt to fix and maintain the flat, which is in a terrible state. The landlady has been dead for a number of years. She also expresses concerns about her young female neighbours, whom she thinks are lesbians, do not eat and drink.

LP09 Patient believes that neighbours above her listen to everything she does, and disrupt her when she is doing anything around the flat. She believes they pump chemicals through her kitchen cupboard into her flat and this makes her feel dizzy, to cough and sneeze.

LP10 People come into her flat when patient is not there, and strange "sinister" tappings follow her around the room. Patient feels that a local taxi driver parks across the road from her and is making her ill.

LP11 Patient believes that there is a conspiracy among his doctors to not tell him about the cancer he has and not to treat him for it. He feels that he has a large tumour which is growing and absorbing his body's nutrients. He also feels that this tumour is giving off a foul smell.

LP12 Patient thinks neighbour is entering his flat and stealing money and other things. Also feels that this neighbour was intimidating him by looking at him and wanted to harm him. He also has grandiose delusions that he is highly intelligent and that he is being prepared for a special mission.

LP13 Patient believes neighbour is annoying him and possibly trying to harm him through voodoo magic of some kind. He thinks this neighbour is entering his flat through magical means, to look at his personal belongings and to move things around. He also feels that everyone is against him and talk about him behind his back and lying about him.

sad failure hopeless bleak gloomy

wretched doom depressed despair misery

doom despair sad wretched failure

gloomy hopeless misery depressed sad

misery gloomy doom failure bleak

depressed bleak failure misery doom

bleak depressed gloomy hopeless wretched

hopeless misery despair sad despair

failure sad wretched gloomy depressed

despair wretched bleak doom hopeless

elderly frail senile infirm retired

wrinkled senile old ancient aged

frail ancient elderly retired infirm

pensioner aged infirm frail old

senile retired wrinkled elderly ancient

aged pensioner frail senile elderly

old wrinkled retired aged pensioner

infirm old ancient pensioner wrinkled

retired infirm aged old senile

ancient elderly pensioner wrinkled frail

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CHECKLIST-STYLE SELF-CONCEPT SCALE

This questionnaire is designed to measure what you think you are like as a person. Please read the following list of words and choose those which best describe you as you think YOU ACTUALLY ARE (*WOULD IDEALLY LIKE TO BE; OTHER PEOPLE THINK YOU ACTUALLY ARE*).

Thus, if you think that any of the words listed below describe you very well as you actually are, (*would ideally like to be; other people think you actually are*) please put a tick in the box next to that word. If, on the other had, you think that any of the words listed below definitely does not describe you as you actually are, please put a cross in the box. If a word does not apply to you, and neither does its opposite, leave it blank.

I.e.: 1. Male ☐ 2. Female ☐

Would you say you were:

Moody ☐	Good-natured ☐	Disagreeable ☐	Bold ☐
Friendly ☐	Broad-minded ☐	Agreeable ☐	Boring ☐
Likeable ☐	Unimaginative ☐	Compassionate ☐	Serious ☐
Warm ☐	Generous ☐	Unambitious ☐	Humorous ☐
Reserved ☐	Uncaring ☐	Narrow-minded ☐	Pleasant ☐
Cruel ☐	Irresponsible ☐	Unsympathetic ☐	Polite ☐
Honest ☐	Untrustworthy ☐	Considerate ☐	Outgoing ☐
Unfriendly ☐	Kind ☐	Trustworthy ☐	Interesting ☐
Mean ☐	Inconsiderate ☐	Sympathetic ☐	Cold ☐
Sociable ☐	Unco-operative ☐	Unpleasant ☐	Sensible ☐
Selfish ☐	Bad-tempered ☐	Anti-social ☐	Untruthful ☐
Rude ☐	Helpful ☐	Imaginative ☐	Dislikeable ☐
Unselfish ☐	Truthful ☐	Reliable ☐	Dishonest ☐
Intelligent ☐	Cheerful ☐	Shy ☐	Unhelpful ☐
Ambitious ☐	Unintelligent ☐	Co-operative ☐	Unreliable ☐

SCALES OF PSYCHOLOGICAL WELL-BEING
(Ryff, 1989)

Short Form: 9-Item Scale

AUTONOMY DIMENSION

1. I am not afraid to voice my opinions, even when they are in opposition to the opinions of most people.
2. My decisions are not usually influenced by what everyone else is doing.
3. I tend to worry about what other people think of me.
4. Being happy with myself is more important to me than having others approve of me.
5. I tend to be influenced by people with strong opinions.
6. I have confidence in my opinions, even if they are contrary to the general consensus.
7. It is difficult for me to voice my own opinions on controversial matters.
8. I often change my mind about decisions if my friends or family disagree.
9. I judge myself by what I think is important, not by the values of what others think are important.

ENVIRONMENTAL MASTERY DIMENSION

1. In general, I feel I am in charge of the situation I which I live.
2. The demands of everyday life often get me down.
3. I do not fit in very well with the people and the community around me.
4. I am quite good at managing the many responsibilities of my daily life.
5. I often feel overwhelmed by my responsibilities.
6. I generally do a good job of taking care of my personal finances and affairs.
7. I am good at juggling my time so that I can fit everything in that needs to get done.
8. I have difficulty arranging my life in a way that is satisfying to me.
9. I have been able to build a home and a lifestyle for myself that is much to my liking.

PERSONAL GROWTH DIMENSION

1. I am not interested in activities that will expand my horizons.
2. I do not want to try new ways of doing things - my life is fine the way it is.
3. I think it is important to have new experiences that challenge how you think about yourself and the world.
4. When I think about it, I have not really improved much as a person over the years.
5. I have the sense that I have developed a lot as a person over time.
6. I do not enjoy being in new situations that require me to change my old familiar ways of doing things.
7. For me, life has been a continuous process of learning, changing, and growth.
8. I gave up trying to make big improvements or changes in my life a long time ago.
9. There is truth to the saying you can not teach an old dog new tricks.

Appendix D

POSITIVE RELATIONS WITH OTHERS DIMENSION

1. Most people see me as loving and affectionate.
2. Maintaining close relationships has been difficult and frustrating for me.
3. I often feel lonely because I have few close friends with whom to share my concerns.
4. I enjoy personal and mutual conversations with family members or friends.
5. I do not have many people who want to listen when I need to talk.
6. It seems to me that most other people have more friends than I do.
7. People would describe me as a giving person, willing to share my time with others.
8. I have not experienced many warm and trusting relationships with others.
9. I know that I can trust my friends, and they know they can trust me.

PURPOSE IN LIFE DIMENSION

1. I live life one day at a time and do not really think about the future.
2. I tend to focus on the present, because the future nearly always brings me problems.
3. My daily activities often seem trivial and unimportant to me.
4. I do not have a good sense of what it is I am trying to accomplish in life.
5. I used to set goals for myself, but that now seems like a waste of time.
6. I enjoy making plans for the future and working to make them a reality.
7. I am an active person in carrying out the plans I set for myself.
8. Some people wander aimlessly through life, but I am not one of them.
9. I sometimes feel as if I have done all there is to do in life.

SELF-ACCEPTANCE DIMENSION

1. When I look at the story of my life, I am pleased with how things have turned out.
2. In general, I feel confident and positive about myself.
3. I feel like many of the people I know have got more out of life than I have.
4. I like most aspects of my personality.
5. I made some mistakes in the past, but I feel that all in all everything has worked out for the best.
6. In many ways, I feel disappointed about my achievements in life.
7. My attitude about myself is probably not as positive as most people feel about themselves.
8. The past had its ups and downs, but in general, I would not want to change it.
9. When I compare myself to friends and acquaintances, it makes me feel good about who I am.

GERIATRIC MENTAL STATE AGECAT PACKAGE
Copeland et al, 1976; Gurland et al, 1976)

EXTRACTS RELEVANT TO DELUSIONAL BELIEFS AND HALLUCINATIONS

0 = No ('normal')
1 = Yes ('abnormal') mild to moderate intensity, infrequent or fleeting
2 = Yes ('abnormal') sever, frequent or persistent
8 = No reply elicited, question not understood, reply not understood or rating uncertain
9 = Question not asked or inapplicable

"Don't be concerned if some questions appear a little odd or strange, some of them will not apply to you, but we have to ask everyone the same sort of questions."

PERSECUTION

1. How do you get on with people generally? Do they make you feel ill at ease. *Feels ill at ease.* 0 1 2 8 9
2. Do you sometimes get the feeling people are laughing at you, or talking about you? *Does have that feeling.* 0 1 2 8 9

If previous question negative skip to question 4.

3. Do you think it really is true, or is it perhaps just the way you feel about it? (Are you sure?) *Probably not true.* 0 1 2 8 9
   Considers it is true. 0 1 2 8 9
   Convinced it is true. 0 1 2 8 9
4. We can't be expected to get on with everybody. Is there anyone - you don't need to tell me who - that you have particular difficulty with?
   There is such a person/persons. 0 1 2 8 9

If there is person or persons skip to question 6

5. Is anyone trying deliberately to annoy you or harm you?
   Unrealistic belief that someone is trying to annoy or harm him/her. 0 1 2 8 9

If no unrealistic belief ... skip to observation item Question 13

6. Well I expect you are generally a reasonable person Mrs/Miss/Ms/Mr _____, so is it probably their fault? (Do not probe further at this point)
   Says it is their fault but interviewee has doubts. 0 1 2 8 9
   Says it is their fault and interviewee has no doubts. 0 1 2 8 9

7. Of course, some people can be really unpleasant; and that can be upsetting --- do you suppose they are doing it on purpose to annoy you?
   Interviewee believes they are. 0 1 2 8 9
8. What do they do?
   Interviewee unrealistically believes people are deliberately trying to annoy or harm him/her. 0 1 2 8 9
9. Why do they do that do you suppose? Do you believe you've done anything to deserve it? Do you really feel strongly about it?
   Indicates he/she feels strongly about it. 0 1 2 8 9
   Indicates he/she deserves to be persecuted. 0 1 2 8 9
10. Do you think you could be mistaken?
   Interviewee does not believe he/she is mistaken. 0 1 2 8 9

If interviewee believes he or she is mistaken skip to Question 13

11. Could they be trying to do you real harm? (In what way?)
   Interviewee believes person/persons are trying to upset, distress or use him/her. 0 1 2 8 9
   Interviewee believes person/persons are trying to do him/her serious physical harm or kill him/her. 0 1 2 8 9
   Do they resort to any tricks?
   (0 = No, 1 = Yes) 0 1 2 8 9
   Record Attempts

   _____

12. You don't need to tell me who it is, of course, but I would be interested to know?
   Interviewee claims it is an official body/person or organisation,(police, MI5, KGB etc.) 0 1 2 8 9
   Interviewee claims it is a private person, known/unknown 0 1 2 8 9
13. ***The rater believes that, given the context, the interviewee's beliefs are:***
   Unlikely to be true, but possible **0 1 2 8 9**
   Absurd, or almost certainly not true **0 1 2 8 9**
   Subject looks or sounds unduly suspicious **0 1 2 8 9**

PERCEPTUAL DISTORTION

In this section, rate only clearly abnormal or puzzling experiences, e.g. electric rays, hypnotism, etc.

14. Does your imagination ever play tricks on you?
   Describes abnormal perceptual experiences. 0 1 2 8 9
15. Is something odd (strange) going on which you cannot explain?
   Puzzled by something odd going on. 0 1 2 8 9

16. Do you get strange sensations in your body?
    Somatic hallucinations. 0 1 2 8 9
    Delusions involving sexual sensations e.g. induced by telepathy, fantasy lover has intercourse with interviewee at night etc.
    (If positive, rate 1 or 2 for previous item as well.) 0 1 2 8 9
17. Do you smell strange odours (smells) that others do not notice?
    Olfactory hallucinations. 0 1 2 8 9
    Delusions involving smell e.g. interviewee or other person gives off a smell, gas pumped into rooms etc.
    (If positive, rate 1 or 2 for previous item as well.) 0 1 2 8 9
    Interviewee claims that s/he gives off a bad smell.
    (If positive, rate 1 or 2 for previous item as well.) 0 1 2 8 9
18. Do you notice an unusual taste in your food or drink?
    (What is it like?) (What is it due to?)
    Unpleasant tastes not necessarily hallucinations 0 1 2 8 9
    Gustatory hallucinations 0 1 2 8 9

PROBE: ***"occasionally people have strange experiences, for example":***

19. Do you hear things other people cannot hear? **If yes:** (What do you hear?) (What about voices?) (When there is no one about?)
    If yes: (What do they say?)
    Indicates s/he hears voices in the absence of identifiable external stimulation 0 1 2 8 9

If no auditory hallucinations skip to question 21

20. Do you ever hear several people talking about you between themselves, without talking to you directly.
    Interviewee is discussed in the third person i.e. indirectly 0 1 2 8 9
21. Do you have visions or see things that are invisible to other people?
    Indicates s/he experiences visual perceptions in the absence of identifiable external stimulation 0 1 2 8 9

If no visual hallucinations go to question 25

22. Was it when you were wide awake?
    Visions while wide awake 0 1 2 8 9
23. Did you think it was real?
    Thought it was real 0 1 2 8 9

AFFECTIVE RESPONSE TO DELUSIONS OR HALLUCINATIONS

24. What do you feel about these experiences? (Do you get angry, or sad, or frightened?) (Do you deserve it?) (Is it your fault?) (How do you show it?) (Do you even enjoy it?) **Rate reaction as follows:-**

Marked affective response	0 1 2 8 9
Indignantly feels the experiences are not deserved.	0 1 2 8 9
Feels the experiences are deserved punishment.	0 1 2 8 9
Interviewee seems indifferent and apathetic or does not report much emotional reaction	0 1 2 8 9

THINKING DIFFICULTIES

25. Does anyone make you do things that you do not intend? (Do not want to do?) or feel, or say, things you do not intend?

Someone or something controls him/her in a supernatural manner, e.g. by hypnosis, electricity, witchcraft etc., but do not rate if belief is likely to be shared by others from the same cultural background. Exclude complaints of simply being ordered about.	0 1 2 8 9

26. Is anyone interfering with your thoughts?

Someone or something interferes with his/her thoughts in a supernatural manner (see above)	0 1 2 8 9

27. Can anyone read what you are thinking?

Someone can read his/her thoughts in a supernatural manner (see above)	0 1 2 8 9

If 25, 26, & 27 are negative skip to question 30 otherwise ask:-

28. What do people around you (your friends) (your relatives) say (think) about that?

No opinion expressed or does not know.	0 1 2 8 9
Others from the same background reject the idea.	0 1 2 8 9

29. Could you be mistaken?

Is certain it is happening.	0 1 2 8 9

GRANDIOSITY

30. Do you have special talents, powers or mission to your life?

Unrealistically claims special talent, powers or mission	0 1 2 8 9

31. Could you be a special person? (In what way? Who could that be?)
Is there anything unusual about you?

Claims to be famous person, real, historical or religious, (the Pope, God, etc.)	0	1	2	8	9
Claims there is something about him/her or his/her circumstances which indicate that he/she is really superior to his/her apparent position.	0	1	2	8	9
The interviewee is convinced about his/her beliefs, but given the context the rater judges them as absurd.	0	1	2	8	9

INSIGHT

32. Do you think there is anything the matter with you? (Any emotional, mental or physical illness?) (Any problem you need help for?)
(What do you think (a symptom) is due to?)

Interviewee has not adequately admitted to or explained his/her emotional or physical problems.	0	1	2	8	9

If interviewee has .... Finish

In ratings below: 1 = minimising
2 = complete denial

Denies he/she is either physically or psychiatrically sick in spite of the evidence	0	1	2	8	9
Denies or doubts his/her symptoms have had psychiatric significance in spite of the evidence.	0	1	2	8	9
Denies or doubts important symptoms, disabilities or problems observed by rater.	0	1	2	8	9
Interviewee has obvious psychological problems which he/she denies or unreasonably regards as medical or social in nature.	0	1	2	8	9

Network assessment instrument*

*THIS FORM SHOULD ONLY BE USED IN CONJUNCTION WITH THE APPROPRIATE TRAINING PACKAGE DEVISED BY DR.G. CLARE WENGER, CENTRE FOR SOCIAL POLICY RESEARCH AND DEVELOPMENT, UNIVERSITY OF WALES, BANGOR

INSTRUCTIONS
1. ASK ALL QUESTIONS AND CIRCLE CODE
2. CIRCLE SAME CODE ACROSS ALL BOXES ON SAME LINE
3. COUNT (DO NOT ADD) CIRCLED CODES FOR EACH NETWORK COLUMN AND ENTER NUMBER AT BOTTOM OF COLUMN
4. HIGHEST NUMBER ON BOTTOM LINE WILL BE IN COLUMN OF RESPONDENT'S NETWORK TYPE

QUESTION	RESPONSE CATEGORIES	CODE	FAMILY DEPENDENT	LOCALLY INTEGRATED	LOCAL SELF-CONTAINED	WIDER COMMUNITY FOCUSED	PRIVATE
1. HOW FAR AWAY, IN DISTANCE, DOES YOUR NEAREST CHILD OR OTHER RELATIVE LIVE? *DO NOT INCLUDE SPOUSE*	NO RELATIVES	A					
	SAME HOUSE/WITHIN 1 MILE	B	B				
	1-5 MILES	C		C			
	6-15 MILES	D		D	D		
	16-50 MILES	E			E	E	E
	50+ MILES	F				F	F
2. IF YOU HAVE ANY CHILDREN, WHERE DOES YOUR NEAREST CHILD LIVE?	NO RELATIVES	A			A		A
	SAME HOUSE/WITHIN 1 MILE	B	B	B			
	1-5 MILES	C	C	C			
	6-15 MILES	D		D	D		
	16-50 MILES	E			E		
	50+ MILES	F				F	F
3. IF YOU HAVE ANY LIVING SISTERS OR BROTHERS, WHERE DOES YOUR NEAREST SISTER OR BROTHER LIVE?	NO SISTERS OR BROTHERS	A				A	A
	SAME HOUSE/WITHIN 1 MILE	B	B	B			
	1-5 MILES	C	C	C	C		
	6-15 MILES	D		D	D		
	16-50 MILES	E			E		
	50+ MILES	F				F	F
4. HOW OFTEN DO YOU SEE ANY OF YOUR CHILDREN OR OTHER RELATIVES TO SPEAK TO?	NEVER/NO RELATIVE	A					A
	DAILY	B	B	B			
	2-3 TIMES A WEEK	C	C	C			
	AT LEAST WEEKLY	D			D		
	AT LEAST MONTHLY	E			E	E	
	LESS OFTEN	F				F	F
5. IF YOU HAVE FRIENDS IN THIS COMMUNITY/ NEIGHBOURHOOD, HOW OFTEN DO YOU HAVE A CHAT OR DO SOMETHING WITH ONE OF YOUR FRIENDS?	NEVER/NO FRIENDS	A					A
	DAILY	B		B		B	
	2-3 TIMES A WEEK	C		C		C	
	AT LEAST WEEKLY	D		D		D	
	AT LEAST MONTHLY	E	E		E		
	LESS OFTEN	F	F		F		F

QUESTION	RESPONSE CATEGORIES	CODE	FAMILY DEPENDENT	LOCALLY INTEGRATED	LOCAL SELF-CONTAINED	WIDER COMMUNIT. FOCUSED	PRIVATE
6. HOW OFTEN DO YOU SEE ANY OF YOUR NEIGHBOURS TO HAVE A CHAT WITH OR DO SOMETHING WITH?	NO CONTACT WITH NEIGHBOURS	A	A				A
	DAILY	B		B			
	2-3 TIMES A WEEK	C		C			
	AT LEAST WEEKLY	D		D	D	D	
	AT LEAST MONTHLY	E	E		E	E	
	LESS OFTEN	F	F				F
7. DO YOU ATTEND ANY RELIGIOUS MEETINGS?	YES, REGULARLY	A		A		A	
	YES, OCCASIONALLY	B	B		B	B	
	NO	C			C		C
8. DO YOU ATTEND MEETINGS OF ANY COMMUNITY/ NEIGHBOURHOOD OR SOCIAL GROUPS, SUCH AS OLD PEOPLE'S CLUBS, LECTURES OR ANYTHING LIKE THAT?	YES, REGULARLY	A		A		A	
	YES, OCCASIONALLY	B	B		B		
	NO	C	C		C		C
NETWORK TYPE (HIGHEST NUMBER)							

INFORMATION RECEIVED FROM: (CODE AS APPROPRIATE)	ALL FROM CLIENT/PATIENT	1
	SOME OR ALL FROM PROXY	2

NETWORK TYPE:

Appendix G

THE MAUDSLEY

INSTITUTE OF PSYCHIATRY

De Crespigny Park
Denmark Hill
London SE5 8AF

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

ETHICAL COMMITTEE (RESEARCH)

Tel: (0171 919) 2892

30 March, 1999

Dr R Howard
Old Age Psychiatry
Maudsley

31 MAR 1999

Dear Dr Howard

Re: Beliefs, self-esteem and mood in older adults (013/99)

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

Please note that this approval is subject to confirmation by the full Committee when it meets on 16 April 1999. Initial approval is given for one year. This will be extended automatically only on completion of annual progress reports on the study when requested by the EC(R). Please note that as Principal Investigator you are responsible for ensuring these reports are sent to us.

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

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

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

Please quote Study No. 013/99 in all future correspondence.

Yours sincerely,

Margaret M. Chambers

Margaret M Chambers
Research Ethics Coordinator

ECR MC96

St Mary's

Appendix G

RESEARCH AND DEVELOPMENT OFFICE

(Mailbox 121) 2nd Floor, Mint Wing, St Mary's Hospital, Praed Street, London W2 1NY

Direct Line R&D: 0171-886 1330/2014 Ethics: 0171-886 6514 Fax: 0171-886 1529

July 7, 1999

Yvonne McCulloch
Sub Department of Clinical Health Psychology
University College London
Gower Street, London
WC1E 6BT

Dear Ms McCulloch

99/BJ/362 Beliefs, Self Esteem and Mood in Older Adults
R&D NUMBERS MUST BE USED IN ALL COMMUNICATIONS

On behalf of the members I am pleased to say that the above project has now been approved by the St Mary's Local Research Ethics Committee. This approval is given on the understanding that the research team will observe strict confidentiality over the medical and personal records of the participants. It is suggested that this be achieved by avoidance of the subject's name or initials in the communication data. In the case of hospital patients, which can be done by using the hospital record number and in general practice, the National Insurance number or a code agreed with the relevant GP.

It should be noted:

- The Ethics Committee's decision does not cover any resource implications which may be involved in your project.

- The Ethics Committee should be informed of any untoward development, amendments or changes in protocol that may occur during the course of your investigations. Please quote the above EC number in any correspondence.

Research documents approved	Date of circulation	Date of approval
LREC application form	23.6.99	6.7.99

Chairman's initials

Appendix G

. 99/BJ/362 Beliefs, Self Esteem and Mood in Older Adults

- Where research involves computer data, this may be subject to the Data Protection Act.

- The GPs of any volunteers taking part in research projects should be aware of their patients' participation.

- Every care should be taken to obtain the volunteers' informed consent to participate in the research project with the necessary help being provided for volunteers with language difficulties.

The Research & Development Office will be monitoring your project frequently. If you have need to contact us further regarding your project, please quote the R&D number as specified in the heading.

Yours sincerely

Dr Rodney Rivers
Chairman

INFORMATION SHEET (Patients/Healthy Volunteers)

Title of Study:
BELIEFS, SELF-ESTEEM AND MOOD IN OLDER ADULTS

My name is Yvonne McCulloch and I am a Clinical Psychologist in Training. I am being supervised by Dr Rob Howard, Consultant Psychiatrist, from the Maudsley Hospital.

I am carrying out some research and I would like to invite you to take part. The research is looking at the way people see themselves and how this may affect their mood and behaviour. It involves older adults and asks for their views about themselves, how they feel they cope and their relationships with others. It will also ask these same questions for an earlier period of their lives.

If you agree to take part in this research, I would come and visit you and ask you a series of questions. These questions should take about 1½-2 hours to complete but this can be done over two visits if you wish.

The study will be divided into four parts. The first part involves asking basic questions about yourself and your situation, your mood, and how you generally see yourself. The second part will involve completing three checklists which contain a number of adjectives. For each checklist, you will be asked to tick the words which best describe either as you actually are; how you would like to be or how you think others see you. You will then be asked more questions on how you see yourself, your surroundings and your relationship with others.

The third part will involve completing the same three checklists and questions for a previous period in your life, for instance when aged about 40-50 years.

The fourth part will involve a simple task where you will be presented with lists of words in different coloured inks. You will be asked to name the colour of the ink in which the words are written.

The information gained from this study will help increase understanding of any link between what people think of themselves and their mood and behaviour. This study may not be of direct benefit to you but may help people in the future.

The information that you provide may be seen by other people besides myself but will not be directly linked to your name. The information will be kept wholly confidential and secure.

Participation in this study is entirely voluntary and if you do not wish to take part in the study, it will not affect your future care in any way.

If you agree to participate, but then change your mind, you are free to withdraw from the study at any point without giving a reason and without affecting your future care.

All proposals for research using people are reviewed by an ethics committee before they can start. This study has been reviewed by the Institute of Psychiatry and Bethlem & Maudsley NHS Trust Ethical Committee (Research).

Finally, please ask if you do not understand anything or would like more information about this study.

Researcher: ***Yvonne McCulloch, Clinical Psychologist in Training***
Address: ***Sub-Department of Clinical Health Psychology, University College London, 1-19 Torrington Place, London WC1E Tel: 0171 380 7897***

CONSENT FORM (Patients/Healthy Volunteers)

Title of Study:
BELIEFS, SELF-ESTEEM AND MOOD IN OLDER ADULTS

Researcher: Yvonne McCulloch, Clinical Psychologist in Training

To be completed by patient

Delete as necessary

1. I have read the information sheet about this study YES/NO

2. I have been able to ask questions about this study YES/NO

3. I have received clear answers to my questions YES/NO

4. I have received enough information about this study YES/NO

5. I have had enough time to think about this study YES/NO

6. I understand that I am free to withdraw from
   this study: at any time YES/NO
   without giving a reason for withdrawing YES/NO
   without affecting my future medical care YES/NO

7. I have agreed to take part in this study YES/NO

Signed: ..... Dated: ..... Name: .....

Witness: ..... Dated: .....

THANK YOU FOR YOUR CO-OPERATION