# CHRONIC DEPRESSION:
# CLINICAL FEATURES, CLASSIFICATION AND NATURAL HISTORY

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Abstract

This thesis reports a study in which several aspects of chronic depression were explored. Firstly, a detailed description of the clinical features of a cohort of chronically depressed patients is presented. This is followed by the results of an attempt to validate Akiskal's typology of chronic depression using numerical taxonomy. Finally, the findings of a prospective naturalistic study of chronic depression are presented. In this component of the study, depression severity, neuroticism and extroversion, depressive cognitions and levels of anhedonia were reassessed 12 months after initial assessment.

In the first component of the study, the author devised a structured clinical interview to improve the quality of retrospective information obtained from patients. Information derived from this interview, in conjunction with that from a range of questionnaires formed the basis of the clinical description. While findings of the descriptive component of the study confirmed the considerable morbidity which has previously been reported in chronically depressed patients, other studies have tended to report on samples of smaller size and not always to give as broad a description as is presented in the present study.

In the second component of the investigation, a numerical taxonomy programme which overcomes several problems associated with cluster analysis was used in an attempt to validate Akiskal's proposed classification of chronic depression. While two of the four groups produced by this technique appeared similar either to Akiskal's "character spectrum disorder" or "chronic secondary depression", one group appeared to subsume both Akiskal's "chronic primary depression" and "sub-affective dysthymia". Within this group, early onset patients resembled "sub affective dysthymia" and late onset patients resembled the chronic unipolar group. Family history of depression and family history of alcohol dependence were potent discriminators between the groups. The typology produced by the numerical taxonomy procedure was generally meaningful in terms of variables which had not been used in the analysis. There were points of similarity between the typology and other classifications

of episodic depression, namely the neurotic/psychotic distinction, Winokur's classification of unipolar depression and other typologies derived from multivariate statistical analysis.

The final component of the study explored the issue of change over time in depression severity, measures of personality, depressive cognitions and anhedonia in chronic depression. While depression severity scores were significantly lower at 12 month follow up, there were negligible changes in measures of personality, anhedonia and dysfunctional attitudes. The author argues that this finding supports the hypothesis that personality features and affective symptoms are relatively independent in chronic depression and that resolution of affective symptoms will not invariably change personality function. None of a group of factors which had been associated in the literature with the development of chronicity were associated with the persistence of depression over time.

Several of the findings of these investigations are of theoretical interest and may have clinical applicability. The study substantiates the considerable morbidity associated with chronic depression and, in particular, it highlights the risk of suicide and the relatively low utilization of antidepressants. From a nosological viewpoint, the study provides statistical validation for certain aspects of Akiskal's classification. Conceivably, the groups produced by the numerical taxonomy procedure in the present study could provide a better focusing of currently available treatments. The follow up component of the study is of theoretical interest as it provides empirical evidence which is consistent with the view that personality and affective components in chronic depression are to some extent independent.

This thesis contains no material which has been accepted for the award of any other degree or diploma at any university. To the best of my knowledge it contains no material previously published or written by any other person except where due reference is made in the text. If accepted for the award of the degree I consent to the thesis being made available for photocopying and loan.

Signed:

Geoffrey Schrader

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# CHAPTER 1

# LITERATURE REVIEW

## 1.1 Introduction

The affective disorders remain a focus for much research in psychiatry. Their high prevalence, their considerable associated mortality and morbidity, and the fact that their nosology and aetiology are as yet only partially understood all stimulate further inquiry.

My interest in chronic depression developed initially from my clinical practice. I found there was a substantial number of patients in my general hospital psychiatric outpatient clinic for whom the expected recovery from depression did not eventuate. Such "difficult" patients often figure predominantly in the doctor's mind, to the extent that a false impression, an over inflated estimation of the prevalence of such patients problems can be gained. This tends to occur particularly in large university associated clinics where often the most complicated and treatment resistant cases are referred. However, a reading of the recent literature indicated that my observations were not unique and that there was generally an increased awareness of the importance of the chronicity of some forms of depression. The view that depression was an episodic disorder had originated from Krapelin's (1921) contention that schizophrenia and manic depression could be differentiated in part on the basis of outcome, with schizophrenia being characterised by chronicity. More recent reviews however, highlighted that for substantiated numbers of patients a chronic outcome in depression was not unusual (Robins and Guze 1972; Weissman et al 1976; Rounsaville et al 1980; Keller et al 1983; Lancet editorial 1986; Lee and Murray 1988; Kiloh et al 1988; Scott 1988). This increasing awareness of chronic depression occurred in spite of the efficacy of modern antidepressant treatment. Indeed, it could be argued that the very efficacy of antidepressant treatment may have brought into clearer relief the problems of the chronically depressed.

The introduction of specific chronic depressive syndromes occurred with DSM-III (APA, 1980) and DSM-III-R (APA, 1987) and with ICD -10 (WHO, 1987), however there were surprisingly few detailed accounts of the clinical characteristics of the chronically depressed, and fewer still reports of the natural history of depression once chronicity had been

established. The most prominent theme to emerge from these accounts was the heterogeneity of patients with chronic depression. In turn this heterogeneity led to proposals for sub classifications of various forms of chronic depression (Akiskal 1983). However, the validity and utility of such classifications was not established.

Whether chronic depression was more usefully viewed as a persisting "state" or as a "trait" was another theme predominate in the literature. The relationship between depression and temperament or personality had been explored since antiquity, with the notion that some temperamental disturbances could be viewed as variants of affective disorder repeatedly occurring.

Thus my clinical impressions resonated with my initial reading and as a result I was further stimulated to review the literature more completely.

## 1.2 Chronic Depression, Melancholia And The Depressive Temperament: An Historical Perspective On Contemporary Views

### 1.2.1 Early conceptualisations of melancholia and the depressive temperament

Descriptions of less incapacitating forms of affective disorder have as venerable a tradition in the classical medical literature as those of more severe forms of depression. Since Hippocrates, there have been well documented descriptions of severe affective disorder, often accompanied by aetiological theories and descriptions of possible treatments. Often in such descriptions, distinctions were drawn between severe forms of mental illness, which were conceptualised as medical diseases and less severe emotional states, which were construed as more disturbances of morality, character or temperament. In ancient Greece (Jackson 1986, p 29), predominantly biological theories were put forward to explain mental illness. Mental illnesses were thought to reflect disturbances in the physical functioning of the body. The predominant theory of disease was predicated on a disturbance in the balance or function of the four humours, blood, yellow bile, phlegm and black bile. Furthermore, a predominance of one humour could have effects on temperament, for example an excess of black bile led to a gloomy and despondent character. In the Aristotelian view, (Jackson 1986, p 31) this melancholic temperament was also associated with certain artistic and creative or even prophetic tendencies.

While having physiological concomitants and causes, mental disorder was also viewed as a disorder of the soul. It is worth commenting on the classical understanding of the "passions" and the "emotions" as these views have influenced Western thinking over subsequent millennia. According to Plato (Jackson 1986, p 15 ), the passions were "irrational" aspects of the soul, they were located in the abdomen, and they threatened the function of the rational soul which was located in the brain. Essentially, the "passions" had the capacity to diminish the soul's rationality and they were viewed as ancillary to rational thought. In a recent review, Berios (1985) suggested this conceptualisation may have contributed to the relative lack of descriptive terms for disturbed affective states in

comparison to the abundance of terms for disordered thinking (or rationality), which exists even today in psychiatric phenomenology.

While disturbances of the soul were often discussed in terms of medical analogy, and were thought to have clear bodily associations, they were viewed as much the province of the philosopher and the priest as the physician in the classical period and the middle ages. One example of how Christian religious connotations of sin were used to describe an emotional or temperamental state was the medieval concept of Acedia (Jackson 1986, p156). Acedia was a constellation of feelings and behaviours a "weariness of heart" or dejection which was thought worthy of remedial attention. It was viewed as a sin similar in some respects to "tristitia " and was often discussed in relation to melancholia. It also had at times connotations of laziness and sloth. Treatment of this chronic condition was usually seen in religious terms of penitence but occasionally more medical frameworks for treatment were employed. The question as to whether Acedia was a sin, or a treatable medical condition, in a sense reflects current concerns as to whether chronic depression is better considered a personality disorder or an affective disorder. Towards the Renaissance the two elements of acedia: sadness and sloth, became more separate, the former merging into a mild "temperamental" form of of the disease melancholia, and later into the sin of sloth.

During the Renaissance, the melancholy temperament was once more perceived as having several positive aspects. Ficino (Jackson, 1986, p 100) the 15C Florentine humanist, echoing the Aristotelian view, saw associations between genius and the scholarly life and the melancholy temperament. Those with such temperament were capable of great intellectual accomplishments,but were at risk of melancholia the disease. It is probably in the setting of such ideas that the Elizabethan concept of melancholy (Babb 1951, p 60) which became so popular in literature arose. Babb sees the great prevalence of the "melancholy disposition" in the late English Renaissance as having origins in the intellectual climate of the time which was characterised by uncertainty and social upheaval.

In the 18C, great literary descriptions of melancholia and the melancholic temperament were made by Samuel Johnson and his biographer, James Boswell. Johnson

had two lengthy depressive episodes, the first in his 20s and later in his 50s. In between these episodes he continued to suffer a melancholic disposition. He told Joshua Reynolds:

> *"The great business of life...was to escape from himself; this disposition he considered as a disease of his mind, which nothing cured but company".*

and later

> *"I inherited a vile melancholy from my father which has made me mad all my life, at least not sober"* (Bate 1977, p 115).

Boswell wrote a monthly column in The London Magazine entitled The Hypochondriac. He was similarly afflicted with a melancholy disposition. He writes

> *"I was born with a melancholy temperament. It is the temperament of our family. Several of my relations have suffered from it. Yet I do not regret that I am melancholy. It is the temperament of tender hearts, of noble souls . But such temperaments require a careful education. There is danger that they will fall into a debility which will completely destroy them or that they will form a habit of viewing everything in such colours as to make their lives miserable"* (Ober 1985, p. 666)

### 1.2.2 Twentieth century concepts of chronic depression

#### 1.2.2.1 Kraepelin, Kretschmer and Schneider

During the nineteenth century, Esquirol and others such as Griesinger redefined the characteristics of melancholia, the disease. Esquirol distinguished between the popular view of melancholia as a disposition and melancholia the disease. According to Esquirol (1976, p 78)

> *"The word melancholia, consecrated in vulgar language as the*

*name for ordinary sadness or (tristesse) should be left to moralists and poets*".

At the same time, perhaps due to the increasing populations within asylums more attention was paid to the course of psychiatric disorder. This increasing attention to natural history culminated in Kraepelin's classification which distinguished manic depressive insanity from dementia praecox. However, it is noteworthy that as Berios (1985) explained, Kraepelin did not include a primary disturbance of affect in the defining characteristics of manic depressive insanity. Instead he described (1) good prognosis, (2) differential heredity and (3) the presence of excitement and inhibition, symptoms which were not necessarily symptoms of elation and depression. According to Berios, the clinical descriptions of affect continued to lack the detail and complexity of descriptions of disorders of thinking. He pointed out that the inadequacy of clinical descriptions of affective disturbances, even in the"golden age of phenomenology" of the 19C, was due to the continuing primacy of thinking over emotion in Western civilisation. According to Berios, three other factors mitigated against the development of a comprehensive phenomenology of affective disorders in the 19C. Darwinism encouraged the view that emotions were primitive responses representing stereotyped behavioural programmes. Also the peripheralist understanding of the emotions (James 1891, p 442)which viewed emotions as epiphenomena of physiological mechanisms, led to emotional responses being analysed in term of incoming sensations. Finally, Freudian psychodynamic approaches to affect tended to neglect the development of clear clinical description. This was because for Freud, affect had two connotations, firstly, a descriptive one, and secondly, a mechanism and a source of energy. Without an appropriate lexicon, clinical descriptions of affect relied on descriptions of pathological thinking such as depressive delusions or descriptions of altered states of psychomotor activity or physiological function. Clearly this problem was not entirely insurmountable as Kraepelin's distinction between dementia praecox and manic depressive insanity demonstrated. But the lack of an adequate "semiology of affect" (Berios 1985) may have hindered the early scientific exploration of mild "temperamental" forms of affective disturbance.

However, in the 8th edition of his textbook of psychiatry Kraepelin (1921) described the temperamental characteristics of patients with manic depressive illness. In a series of 1000 patients he reported 37% had what he termed "permanent peculiarities". These "faint indications correspond to the morbid phenomena of manic depressive insanity" (p 117). He went on to assert however, that such temperamental characteristics could exist in people who never manifested an episode of depression or mania, and further, that such people were "observed with special frequency as simple personality peculiarities in the families of manic depressive patients" (p 118). He concluded that there were certain temperaments which could be regarded as rudimentary forms of manic depressive insanity. He described four types of temperamental disturbance related to manic depressive insanity: depressive, manic, irritable and cyclothymic. His description of the depressive personality stressed depressed and despondent mood - "every moment of pleasure is embittered to them by the recollection of gloomy hours" (p 119). He also stressed the presence of feelings of guilt, anxiety, lack of self confidence and somatic symptoms. The condition usually began in youth and either persisted unchanged throughout life or slowly merged into more classical episodes of depression or of mania. Kraepelin's basis for viewing this depressive temperament as related to manic depressive insanity was its high prevalence in the families of patients with manic depressive illness and the fact that the temperament could exist prior to and after a patient had experienced an episode of manic depression.

Kretschmer (1952) similarly developed a theory of personality types. He asserted that certain personality types, namely cyclothymic and schizoid temperaments occurred more frequently in patients with either manic depressive illness or schizophrenia. He also claimed that these types existed amongst people without psychiatric disorder, but increasingly extreme forms of those temperaments merged into either manic depressive illness and schizophrenia. He also attempted to link temperament to bodily shape, but this aspect of his work did not withstand critical evaluation (Von Zerssen 1977, p 27).

In his classification of "psychopathic" personalities Schneider (1958) included the depressive temperament. "Depressive psychopaths" were characterised by constant pessimism and an incapacity for enjoyment.

> *"The basic common characteristic of depressives is the constant pessimism or at any rate their very sceptical view of life, which they seem to reject yet at the same time seem to love in a rather dismal way. They tend to take everything seriously and have no capacity for frank enjoyment. They are prone to 'see through' things and usually find something imperfect. They are apt to deplore the past and fear the future. They have little heart for their own purposes and are deeply distrustful. They are distracted by daily worries, hypochondriacal fears, self analysis, doubt over life itself". Schneider (1958, p 79).*

Akiskal later formalised Schneider's depressive personality (1983) describing the following features:

1. quiet, passive unassertive
2. gloomy, pessimistic and incapable of fun
3. self critical, self reproaching, and self derogatory
4. sceptical, hyper-critical and complaining
5. conscientious and self disciplinary
6. brooding and given to worry
7. pre-occupied with inadequacy, failure and negative events to the point of morbid enjoyment of one's failures.

Schneider, unlike Kraepelin and Kretschmer, did not link the depressive personality to manic depressive psychosis. For Schneider "No common somatic basis, so far as we know, links depressive personality and endogenous depression" (1958, p 83).

1.2.2.2 Psychodynamic views

While the early twentieth century saw the statement of clear hypotheses regarding a biological basis for some major mental disorders and also for some personality traits in the work of Kraepelin, the ideas of Freud, particularly as they were taken up by Meyer in North America, had dominant effects in the way chronic depressive conditions were viewed this century. In the psychodynamic model, a depressive "reaction" was seen to be the result of disturbances in psychological development, particularly at critical phases of life. Abraham (1949, p 137) provided an extensive psychodynamic explanation of depression. Depression could occur in a range of psychotic and neurotic disorders. Neurotic depression stood in relation to grief as anxiety corresponded to normal fear. He saw links between depression and obsessionality and repressed hostility. Freud developed psychological theories of depression in "Mourning and Melancholia". However, he warned (1953, p 166) that his material was "limited to a small number of cases whose psychogenic nature was indisputable; and that some forms of melancholia suggest somatic rather than psychogenic affections". Rado (1956, p 46) found it necessary to distinguish between "depressive neurosis" and melancholia. The greater the effect of the depressive process on the ego at the cost of reality testing, the more the condition approached melancholia. Particular personality traits, for example, oral and anal, were said to predispose to depression. Bibring (1953, p 13) criticised earlier psychodynamic views and concentrated on ego functions in depression. For Bibring, depression was "the emotional expression (indication) of a stage of helplessness and powerlessness of the ego, irrespective of what may have caused the breakdown of the mechanisms which established his self esteem".

1.2.2.3. The unitary-binary debate

The debate as to whether there were categorical or dimensional distinctions between various forms of depression similarity affected the development of modern concepts of milder chronic forms of depression. Briefly this debate was between those who saw depressions as differing only in intensity, for example Mapother (1926), and those, for example Gillespie (1929) who saw certain depressions being categorically distinct, viz endogenous versus

reactive depression. Aubrey Lewis (1938) was a "unitarian" arguing that depressions differed in terms of severity and also, interestingly, of chronicity. The opposing view put forward by Gillespie was a development of Kraepelin's concept of "psychogenic depression".

While some protagonists such as Lewis saw chronicity as an important dimension of depression, the issue of how more chronic forms of depression should be conceptualised was not widely discussed. One of Kraepelin's distinguishing characteristics for manic depression was its relatively good prognosis, at least when compared with schizophrenia. Although non resolving forms of depression were reported (Rennie 1940) the prevailing view was that affective disorders had a generally good prognosis. The introduction of effective treatment for depressive illness certainly strengthened this view. However, occasional chronic forms of severe depression were recognised, and were generally thought to be related to the melancholic or severe endogenous depressions. The concept of endogenous or autonomous or melancholic depression generally incorporated the notion of severity. The idea of a mild endogenous depressive state did not have wide currency. Depressions of less severity were generally viewed as either categorically or dimensionally distinct from endogenous depression or severe depression. Kraupl-Taylor (1966) commented that while the term hypomania was commonly used, there was no corresponding concept of "hypomelancholia". Less severe chronic forms of depression were commonly seen as distinct from severe melancholic depression and were usually associated with some form of personality disturbance. In fact some measures of the endogenous concept, for example, the Newcastle Depression Scale included a "stable premorbid personality" as a variable associated with endogenous depression.

Given the lack of popularity, particularly in the United States, of Kraepelin's and Kretschmer's views on the aetiology of the depressive temperament, milder chronic depressions were seen in aetiological terms as neurotic, or occurring as the result of developmental problems and subsequent personality pathology. For example, in 1952 in DSMI, non psychotic depression was classified as either a depressive reaction under the psychoneuroses or as a personality disorder within the subgroup of cyclothymic personality.

In 1968 in DSMII, neurasthenic neurosis was introduced as a condition which was characterised by moderate depression and a chronic course, along with asthenic personality which was characterised by easy fatiguability, and incapacity for enjoyment. Neither diagnoses however, were commonly made (Phillips et al 1990). Chronic mild depressive disorders were similarly classified in ICD-9 as either neurotic depression, a prolonged depressive reaction or cyclothymic personality. Certainly the notion that neurotic depression was associated with life long patterns of interpersonal difficulties, high levels of dependency, and high scores on measures such as neuroticism and introversion was pervasive in the literature.

Schildkraut's "characterological depression" (1969, p 52) is an example of such a formulation of neurotic depression in terms of life long personality difficulties. Such concepts did not however, necessarily imply a non pharmacological approach to treatment. For example Klein's concept of hysteroid dysphoria (1974) which includes as a diagnostic criterion a life long pattern of fluctuating mood, shares some points of similarity with characterological depression, but Klein and others found such patients to respond to antidepressants, particularly MAOIs.

In summary, while the debate as to whether depressions differed in terms of severity only or were categorically different led to the development of a clearer understanding of endogenous depression (at least in its severe forms), it did little to clarify the understanding of non-endogenous depression. Non-endogenous depression remained a heterogenous grouping of conditions, one of which connoted a chronic condition of moderate severity associated with personality and interpersonal maladjustments.

1.2.2.4 Unipolar depression: Winokur's classification

Apart from attempts to distinguish between endogenous and neurotic forms of depression on a phenomenological basis, the other substantial advance in the classification of the affective disorders came with a classification based on natural history when Leonhard (1957) introduced the concept of bipolar and unipolar forms of affective disorder. While

there was general agreement as to the validity of the concept of bipolar forms of affective disorder there was less agreement as to where the boundaries of unipolar depression lay in terms of neurotic depression. Of note, Leonhard's original distinction between bipolar and unipolar disorder originally was only suggested for endogenous forms of affective disorder.

Following the introduction of the unipolar-bipolar distinction, Winokur (1971) proposed a classification of primary unipolar depression based on family history of depression and alcoholism, rather than on presenting symptoms. Winokur initially divided patients with unipolar depression into primary and secondary groups. Patients with primary unipolar depression had no previous psychiatric disorder. Of patients with primary unipolar depressive disorder, he first noted that there were more women with an early age of onset (<40) and more men with a later age of onset (>40). He then noted that women with an early age of onset depression had more relatives with alcoholism or antisocial personality disorder or depression while men with a later age of onset had more relatives with depression and few relatives with alcoholism or antisocial personality disorder. Winokur proposed a spectrum of related disorders: depression, alcoholism, and antisocial personality, presenting at different rates in men and women.

In later formulations (Winokur 1979), age of onset and gender were stressed less, but three forms of primary unipolar disorder were distinguished on the basis of family history. In this system, patients were classified as having non familial depression if there was no family history of depression or alcoholism, pure depressive disorder if there was a family history of depression alone and depression spectrum disease if there was a family history of either alcoholism and drug abuse, antisocial personality or hysteria alone or in combination with depression. There is some empirical evidence (Zimmerman et al 1986) that depression spectrum disease may be analogous to neurotic depression, while familial depressive disease is similar to endogenous depression. However, clinical distinctions based on presenting symptoms between these 3 proposed disorders are not pronounced (Behar et al 1980) nor would this be expected, given that all patients required similar characteristics for a diagnosis of primary unipolar depression. Those differences which have been demonstrated are

primarily in terms of distinctive pre-morbid personality characteristics (Van Valkenburg et al 1977). Patients with sporadic depressive disorder have the least personality disturbance while those with depressive spectrum disorder have the most disturbed personalities, with pure depressive disease being intermediate. In terms of natural history, the findings (Winokur 1979) are complex, with depressive spectrum disorder patients more likely to describe lifelong nervousness prior to hospitalisation, but pure depressive disease patients more likely to have a recurrent illness requiring further hospitalisations.

The distinction between Winokur's proposed subtypes of primary unipolar depression has not always been confirmed empirically (Andreasen et al 1979). There is also evidence that the primary-secondary distinction may not have validity in terms of distinctive family history for affective disorder. Grove et al (1987) using family study (direct interview) and family history methods found there was no increased risk of affective disorder between relatives of patients with primary depression or secondary depression. Three other studies reported similar findings (Guze et al 1971; Stancer et al 1984; Revely and Revely 1981).

Whether there are any genetic links between alcoholism and affective disorder remains controversial. Merikangas et al (1985) reported data which indicated that alcoholism and depression were distinct diseases and not manifestations of a single underlying disorder. Schuckit (1986) reviewed the area and came to similar conclusions, although he acknowledged that it was still possible that an association existed between the two disorders within some subtypes of affective disorders. In particular, he argued that there may be some form of association between depressive spectrum disease and alcoholism.

Notwithstanding its limitations, Winokur's classification of unipolar depression has been successful in providing heuristically useful alternatives to the debate between the proponents of categorical and dimensional views of depression. It is noteworthy that this advance occurred with a classification based not on phenomenology but rather on family history. This could be seen as further evidence of our lack of terms to describe different depressive experiences or perhaps the lack of relevance of depressive phenomenology to the classification of depressive disorder.

1.2.2.5. Akiskal's classification of chronic depression

Several reviews of the natural history of acute depression which appeared in the 70's (Robins Guze 1972, Weissman and Klerman 1977) suggested that an unfavourable chronic outcome occurred in from 12-15% of cases. These reports were counter to the conventional wisdom that affective disorders in general had good or episodic outcomes modified to some extent by personality variables. Weissman and Klerman (1977) found 12% of a sample of 120 women with "neurotic depression", who had initially responded to a tricyclic antidepressant with a reduction of symptoms when followed over 20 months, remained chronically symptomatic. Chronicity was associated with pre-existing neurotic personality, less tricyclic antidepressant treatment and more minor tranquilliser usage during follow up. The report was interesting for several reasons. Firstly, it highlighted the responsiveness of some patients with neurotic depression to tricyclic antidepressants. Secondly, it confirmed the association of "neurotic "personality traits with chronicity. Thirdly, it appeared to suggest that chronicity could be overcome by more assiduous pharmacological and psychotherapeutic effort.

While neurotic depression remained a diffuse concept with multiple definitions (Klerman et al 1979), it continued to be (perhaps because of this lack of definition) a frequently applied diagnosis, particularly in outpatient settings. For example, Akiskal et al reported (1978) 40% of a sample of outpatients were given a diagnosis of neurotic depression. They went on to demonstrate that if followed over time, patients with the diagnosis of neurotic depression often developed symptoms more characteristic of other psychiatric disorders. They reported that in a cohort of 100 patients diagnosed as having neurotic depression and followed prospectively, only 40% were confirmed to have a "pure affective illness", and of these, 22% had primary unipolar depression while 18% had developed manic or hypomanic episodes. In the remainder (60%), other non affective psychiatric disorders were eventually diagnosed or the course of the depression was paralleled by the course of a chronic medical illness. In their follow up study, Akiskal et al (1978, p. 761) found that "severe character disorder was equally distributed in the primary and secondary subgroups

and did not distinguish between them" and that irrespective of the primary/secondary distinction, presence of characterological features was associated with poor social outcome. They concluded that a minor depressive state solely defined on phenomenological grounds lacks diagnostic specificity for the primary/secondary and the unipolar/bipolar diagnostic schemes. Akiskal et al (1979) proposed the non symptomatic variables of "pharmacologically induced hypomania", "family history of bipolar disorder" and "family history of affective disorder in three consecutive generations" as a means of distinguishing between primary and secondary depression. They argued for the notion (later to be incorporated in DSMIII) that character pathology should be coded on a "separate axis" distinct from any affective disorder.

As mentioned, Akiskal et al, found that chronicity in their follow up study was associated with "personality pathology". According to Akiskal et al (1978 p. 765)

> *"this 'characterological' dimension in the concept of neurotic depression appears to be the only clinically meaningful component of the neurotic depressive syndrome and seems to predict unfavourable social outcome as well as suicide. However, so called characterological depression is not a nosological entity, but refers to a personality dimension that augurs poor prognosis. In other words, the conventional wisdom of subsuming mild chronic depression under the label of "characterological depression" obscures important distinctions. Thus, chronic ("characterological") depressions may represent sub-affective manifestations of unipolar depressions or the residual phase of unipolar depressions that have not remitted fully, or they may accompany life long personality disorders and incapaciting non psychiatric medical disorders".*

Thus the diagnosis "dysthymic disorder", a chronic affective disorder was introduced in DSMIII (APA 1980) in the context of the failure of neurotic depression as a diagnosis which could be validated and the increasing awareness of a less favourable outcome in a

portion of patients with acute depression. The multi-axial approach of the DSMIII allowed for both the diagnosis of an affective disorder and the diagnosis of a personality disorder and thus, to some extent, side stepped the debate as to whether patients had chronic affective disorders or personality disorder. It was noteworthy however, that in terms of treatment options, dysthymic disorder was placed on the psychiatric disorder axis with the affective disturbance rather than with the more treatment resistant personality disorders.

Akiskal (1983) described a new classification of chronic depression in the early 80s, in which there were 4 groups:

(1) Primary depressions with residual chronicity. These were usually of late onset and usually there was no history of prior chronic depressive symptoms. These depressions followed lack of resolution of a primary depressive episode.

(2) Chronic secondary dysphorias. These could occur at any age in the setting of another pre-existing non-affective psychiatric or medical condition.

(3) Sub-affective dysthymia. This was described as one of the characterological depressions. Onset was usually before 25. Symptoms persisted almost continuously with occasional exacerbations occurring. Melancholic symptoms such as psycho-motor changes, hypersomnia, diurnal variation and anhedonia occurred. Patients were introverted and had Schneiderian depressive personality traits. 'Sub affective disorder' was viewed as a variant of primary affective disorder. It had theoretical antecedents in the previously mentioned concepts of Kraepelin and Kretschmer of 'constitutionally' determined depressive temperaments and in Kraupl-Taylor's concept of hypomelancholia. Akiskal suggested the following operational criteria for 'sub affective dysthymia':

a. Indeterminate onset, cardinal manifestations usually obvious before 25 years.

b. Fluctuating course over many years, but typically not free of affective manifestations for more than a few weeks at a time.

c. Habitually subsyndromal in syndrome profile, although the full range of depressive symptoms (which may even crystallise into superimposed syndromal episodes) occurs at various times.

d. At least two of the following melancholic manifestations: a) psychomotor inertia, b) hypersomnia, c) anhedonia and d) diurnal variation (worse in the morning).

e. Habitual introversion, with brief periods of extroversion sometimes seen during relatively "well" periods.

f. Presence of at least 5 of the 7 Schneiderian depressive personality traits.

g. Absence of a diagnosable non affective disorder from the Washington University list of validated psychiatric disorders (apart from alcohol and drug abuse).

(4) Character spectrum disorder. This was one of the characterological depressions. Onset was early. Personality often demonstrated features of histrionic and antisocial traits. The depression usually lacked melancholic symptoms and was not responsive to somatic antidepressant treatment. There was often associated substance abuse. "Character spectrum disorder" was viewed as less an affective disorder and more as a condition reflecting personality pathology or occuring as a variant of another psychiatric disorder, for example somatisation disorder.

Akiskal's classification was based on naturalistic longitudinal observation of chronically depressed patients; a method he termed "clinical cluster analysis". Age of onset and response to treatment were factors used in determining the classification. Late onset chronicity following an unresolved primary depressive episode and sub-affective disorder were predominantly responsive to adequate antidepressant treatment, while secondary chronic depression and character spectrum disorder were not responsive to antidepressants. He used

other measures such as family history, personality, developmental object-loss and life events as independent variables to validate the classification (Akiskal et al 1981).

He found the lowest rates of depression in the families of patients with character spectrum disorder. Highest rates of family history of affective disorder were found in the 'sub-affective disorder' group. Patients in this group had unexpectedly high rates of bipolar disorder in family members. Patients with character spectrum disorder had the highest rates of familial alcoholism and developmental object loss. Akiskal found the highest rates of "unstable personality traits" among the early onset character spectrum group.

Factors associated with chronicity in the primary unipolar group (Akiskal 1982) included multiple deaths in the family, superimposed chronic medical illness, use of antihypertensive drugs and having a disabled family member. Akiskal also demonstrated differences in REM sleep between chronically depressed patients in different categories of his classification (Akiskal et al 1980). He showed patients with sub-affective dysthymia and patients with late onset depressions with residual chronicity had shortened REM latency, similar to patients with acute primary depression. These findings have been replicated by Hauri and Sateia (1984), although in more recent reports replication has not always occurred (Arriaga et al 1990).

In summary, Akiskal stressed that some of the symptoms of chronically depressed patients were more helpfully viewed as chronic affective symptoms rather than being viewed as "characterological" in origin. There were similarities between some of his categories and those of Winokur. There appeared to be clinical similarities between Winokur's "depression spectrum disorder" and Akiskal's "character spectrum disorder". In both there were strong family histories of alcoholism. Akiskal did not however, posit a genetic link between alcoholism and depression. Winokur's patients with depression spectrum disorder had a primary affective disorder while Akiskal saw his "character spectrum disorder" patients as not having an affective disorder.

Akiskal's classification can be criticised on several grounds. Firstly it was "tested out" on the population from which it was derived. Secondly, some proposed external validators for affective disorders, such as REM latency have not been proven to be entirely specific. (Berger,1982). Notwithstanding these criticisms, the revised DSMIII-R criteria for dysthymic disorder took into account several of Akiskal's proposals for a classification of chronic depressive disorder. For example, DSMIII-R made use of Akiskal's primary-secondary and late and early onset distinctions between various forms of chronic depression.

### 1.2.3 Summary

Since antiquity comparisons between severe melancholic illnesses and less severe chronic depressive temperamental disturbances have been drawn. However, the lack of terms available to describe fine gradations in affective state limited precise descriptions of these milder conditions, and often the most compelling descriptions of these conditions were literary rather than medical. In the 20C, Kraepelin and Kretschmer once again made links in terms of phenomenology between severe depression and milder temperamental forms of affective disorder, both positing some form of common "constitutional" aetiology. However, a psychodynamic explanation for chronic depressive temperamental disturbances prevailed particularly in the U.S., for the first part of this century. The binary position within the unitary-binary debate tended to view endogenous depression as a discrete and severe condition, while some forms of neurotic depression were chronic. The use of non-phenomenological criterion such as natural history subsequently led to the development of the concept of unipolar depression, which was in turn further divided into various forms on the basis of other non phenomenological variables such as family history and age of onset. These forms of unipolar depression differed in terms of premorbid personality characteristics. In a setting of concern over the heterogeneity of the diagnosis of neurotic depression, and an increasing awareness of the chronicity of some forms of depression, Akiskal suggested a classification of chronic depression based both on phenomenological and non phenomenological criteria. Aspects of the classification have been incorporated into DSM-III-R, but as yet there has been no multivariate statistical test of the validity of the classification.

## 1.3 Chronic depression : state or trait

### 1.3.1 Chronic depression and personality pathology

The possible association between chronic depression and disturbances of personality was a constant theme in the literature reviewed thus far. In the following section the literature regarding the relationship between chronic depression and personality will be reviewed in more detail.

The relationship between personality and chronic depression has been addressed from several vantage points, none of which provides an entirely satisfactory conceptual understanding. For example, there is the hypothesis that certain personality traits predispose individuals to depressive episodes. Some of these same traits if present in extreme forms may predispose to chronicity of depression. There is a modification of this hypothesis, in which the experience of a depressive episode has lasting effects on personality, the "post-depressive personality". There is also the hypothesis that premorbid personality and post-morbid personality may be subsyndromal variants of depressive illness itself. In the following sections the literature regarding each of these perspectives will be reviewed.

#### 1.3.1.1 Psychodynamic views

Chodoff (1972) reviewed the psychoanalytic and psychiatric literature regarding the depressive personality and concluded that although there were major methodological inadequacies, there was enough evidence to warrant further investigation of some of the personality traits said to be associated with or causative of depression. Psychoanalytic authors, while more often describing predisposing traits to depression such as the anal and oral traits, have occasionally described an enduring depressive character. Kahn (1975), Berliner (1966) and Arieti and Bemporad (1980) each described a depressive character, which had features of enduring low self esteem, guilt, hopelessness and emptiness. These concepts arose out of careful observation of small numbers of cases. More recently, Kernberg (1987) described a "depressive-maschochistic personality disorder." These patients tended to be

conscientious, and over-serious, reflecting severe super-ego functioning. They also were over dependent on the love and support of others. Furthermore they had difficulty expressing anger, which could, through the mechanism of introjection lead to depression. Simons (1986) believed that the masochistic and depressive personality were distinct and that the clinical features of depressive personality disorder were those described by Schneider (1958). In turn, Akiskal had used Schneider's description of the depressive personality as an operational criterion for 'sub affective' disorder. In terms of phenomenology, there is common ground between some psycho-analytic concepts of the depressive personality and Akiskal's "sub affective dysthymia". Differences between the two are more in aetiological terms.

1.3.1.2 Premorbid personality and affective disorder

Von Zerssen (1977) reviewed the literature regarding associations between personality disturbance and affective psychosis. He concentrated on the European literature, particularly the work of Kraepelin and Kretschmer, which as previously described, posited biological links between manic depressive illness and some depressive personality traits seen both inter-morbidly, and in the relatives of patients with manic depressive illness. He reviewed the concept of the "melancholic" personality which he described as comprising traits of orderliness, conscientiousness, meticulousness, conventional thinking and dependency on close relationships. He drew parallels between this concept, extensively developed by Tellenbach (1961) and psychoanalytic concepts regarding the personality structure of depressed patients.

He also surveyed the literature on the psychometric evaluation of the personality of depressed patients both during and after recovery. He referred at some length to the Marke-Nyman Temperament Scale (MNTS), (Nyman 1956) and to differences in subscales such as "sub validity" and "solidity" observed between depressed, recovered and normal populations. Such abstracted scales are difficult to interpret, but analyses of individual items can prove interesting. For example "depressives" (outside episodes) did not rehash and dramatise small

incidents that occurred to make a more amusing story ('solidity'), and they were deeply moved by other people's misfortunes ('stability') (Metcalfe et al 1975).

Von Zerssen concluded that there were no obvious similarities between the traits described as characteristic of the melancholic personality and the symptoms of endogenous depression, and that the melancholic personality was therefore not a form of endogenous depression. In fact, he lent to a more analytic view, seeing the melancholic personality as a form of psychological compensation for an inclination towards depression.

Von Zerssen's review touched only briefly on the methodological problems which place many limitations on the interpretation of much research in the area of personality and depression. Firstly, it has been repeatedly substantiated that the depressive state has an effect on personality. This finding clearly limits the interpretation of retrospective studies of premorbid personality in depressed patients. There is some evidence (Kendell and DiScipio 1968) that if depressed respondents are asked to respond as they are when well, that this effect is reduced. However, Hirschfeld et al (1983) have shown that such instructions do not uniformly take account of the effect of depressive state on trait. Using the method of Kendell and DiScipio, they found that assessments of emotional strength and interpersonal dependency made by instruments such as the Maudsley Personality Inventory were affected by the clinical state of depression. Assessments made when the patient was depressed reflected depression rather than enduring personality traits.

There have been very few prospective studies in which evaluations of patients' personality traits have been made prior to the onset of a depression. In a Scandinavian study, Nystrom and Lindegard (1975) measured personality traits using the MNTS in a group of 3000 men applying for driver's licenses and traced those who subsequently developed a depressive disorder. These individuals were found to have demonstrated initially more "psychasthenic traits" ('sub validity') than those who remained well, and a tendency to ruminate and to shyness in company. However, the findings were somewhat difficult to interpret, in part due to the lack of clear cut diagnostic criteria used in the study. Lewinsohn et al (1981) reported that depression prone cognitions measured in a community sample of

998 subjects did not predict those 9 subjects who became depressed during a 1 year follow up. Angst and Clayton (1986) followed a sample of 6, 315 Swiss Army conscripts initially administering the Freiburg Personality Inventory (FPI). They compared subjects who subsequently developed a depressive disorder with those who did not. They found those who were to develop a unipolar depression (using Feighner Criteria) initially scored higher in aggression and autonomic lability. Aggression scores were also high in those who committed suicide or died by accidents. Independent of diagnosis, those who made suicide attempts scored higher on aggression whereas subjects with suicidal ideation scored low on aggression. The findings were difficult to interpret, particularly those associating higher "aggression" scores with subsequent onset of depression.

Hirschfeld et al (1989) reported a prospective study of personality and affective disorder utilising a high risk group, viz the first degree relatives of patients with affective disorder. They found that "lower emotional strength" and "resiliency", significantly differentiated those who developed depression from those who did not. They also found that among younger subjects, personality variables did not distinguish between those who did and did not develop depression, while in the older age group, decreased emotional strength, increased emotional dependency and increased thoughtfulness were associated with subsequent onset of depression.

In summary, there is some consistency in the findings of these prospective studies if one examines individual items of the scales describing traits such as "sub validity", "autonomic instability" and "decreased emotional strength" which have been shown to be predictive of future depressive episodes. These factors seem to share elements of the concept of neuroticism. However, whether these personality traits are specifically associated with the likelihood of the onset of a depressive disorder is unclear. Similar personality traits have been found in patients suffering from other illnesses, for example panic disorder (Reich 1987).

1.3.1.3. Post-depressive personality and chronic depression

There is some evidence, particularly from prospective studies that certain premorbid traits are associated with developing depression. There is also evidence that some of those same traits, viz those reflecting neuroticism, if present to a great extent when measured at time of illness, predict chronicity. The "post-depressive personality" can be seen as the result of the effect of a depressive episode on a patient who presumably had pre-existing elevated neuroticism scores. There is a consistent body of findings which suggests that high neuroticism scores measured at the time of illness tend to predict a more chronic outcome. For example, Kerr et al (1970) found that neuroticism as measured by the Maudsley Personality Inventory (MPI) scores predicted a more chronic outcome. Weissman et al (1978) reported that neuroticism (measured by MPI) alone, rather than a number of demographic and developmental variables, predicted poor outcome in depression. Hirschfeld et al (1986) similarly found neuroticism scores predicted chronicity. Duggan et al (1990) found in an 18 year follow up study that high neuroticism scores measured by the EPI were associated with poor outcome and chronicity. In each of these studies, personality assessments were made at a time when patients were depressed, however, in the Hirschfeld study recovered vs non recovered patients were matched for initial symptom severity. Just what is measured as neuroticism when patients are depressed remains unclear, Hirschfeld et al (1986) suggests that the personality differences measured during illness may reflect exaggerations of premorbid differences.

Metcalfe (1968, p 97), using the EPI, studied women who had recovered from a depressive episode and compared their neuroticism scores with those of women who had never suffered from depression. Although overall scores were similar, he found that the recovered groups were characterised by "worry and tenseness" and "rigid, unimaginative and 'habit-bound' attitudes". Thus Metcalfe viewed a person with a depressive personality as one who has the incapacity to recover from a depressive episode rather than having any particular predisposition to depression. Kraepelin (1913) in fact described cases where he saw deterioration of premorbid personality in terms of the effect of a prolonged depressive illness.

Kraines (1957), similarly described the gradual evolution of neurotic personality traits in patients with depressive illness who he followed over many years. Scott (1988) summarised the European literature and described similar changes in personality occurring as the result of depressive illness leading to the development of a "depressive defect state". Cassano et al (1983) reviewed the chronic sequelae of depression, describing continuing patterns of both symptomatology and social maladjustment.

Mayer (1975) argued that certain symptoms and characteristics of patients who had depressive episodes treated with antidepressants, were the in fact the deleterious side effects of antidepressants themselves. This view has not gained wide support in the literature. For example, Weissman and Klerman (1977) posited under-utilisation of antidepressant drugs as a factor associated with chronicity, along with reliance on minor tranquillisers.

In their prospective study of personality as a predictor of depression in first degree relatives of patients with unipolar depression, Hirschfeld et al (1989) reported that the personality scores of the patients who went on to develop a depression, while abnormal, were more healthy than those of patients who had recovered from a depressive episode. They used a battery of self report personality inventories including the MPI. This prospective finding supports the concept that a depressive episode per se may have an enduring effect on premorbid personality.

1.3.1.4. Depressive personality as affective disorder

Akiskal is a recent exponent of the view that premorbid and "post morbid" personality characteristics in some patients with chronic depression represent attenuated forms of affective disorder. As already discussed, this position has a long history in the medical and psychiatric literature. Akiskal (1983) suggested that for some patients with chronic depression, "premorbid" personality features reflect an attenuated form of biological affective disorder which he termed "sub-affective dysthymia". Furthermore, he suggested that in some patients with chronic depression , particularly those who fail to recover completely from a primary depressive disorder, their ongoing personality disturbance, the"post depressive"

personality, similarly reflects an ongoing biological abnormality associated with affective disorder. Akiskal based his contention that these forms of chronic depression are variants of major affective disorder on previously discussed findings regarding response to antidepressant treatment, family history and REM latency (Akiskal et al 1981).

Whether such "formes frustes" should be considered personality disorders or affective disorders is an interesting issue. It is noteworthy that Akiskal included in his diagnostic criteria for sub-affective disorder a modified form of Schneider's criteria for his "depressive personality" (Schneider 1958). In his most recent formulations, Akiskal (1989) argued that sub-affective dysthymia should be viewed as a "treatment responsive personality disorder". He based this contention on its early onset and the fact that it is defined to some extent by trait rather than state variables. The debate as to whether these conditions are personality disorders or affective disorders becomes largely semantic if the view is held that biological, psychological and social factors all have aetiological roles in the genesis of personality characteristics evident in patients before and after they develop prolonged depressive illness. It is only when differing aetiologies (for example biological for affective disorder and psychological for personality disorder) are proposed that controversy arises. Indeed, the designation of dysthymic disorder as an affective disorder in DSMIII generated such controversy (Frances and Cooper 1981) from some psychoanalytically orientated authors even though the classification was claimed to be "atheoretical" with respect to aetiology.

In summary, most of our understanding of the nature of the relationship between personality and depression comes from studies of acute depressive disorder. Considerable methodological difficulties, particularly those relating to the effect of the depressive state on personality make interpretation of findings difficult. There have been no prospective studies of premorbid personality measured prior to the onset of chronic depression. There have been no prospective studies determining the natural history of personality variables in chronically depressed patients. At present there is no definitive evidence regarding the aetiology of any of the traits associated with the premorbid and post morbid personalities of either acutely or chronically depressed patients.

### 1.3.2 Chronic depression and cognitive theories of depression

While most of the extensive literature regarding cognitive theories of depression relates to acute depressive episodes, several aspects of the cognitive theories, particularly Beck's concept of enduring negative cognitive schemata and Teasdale's recent modification of earlier theories may have relevance to chronic forms of depression.

#### 1.3.2.1 Beck's theory of depression

Theories regarding the role of cognition in depression have gained considerable ascendency in the last two decades. In particular, the demonstrated efficacy of cognitive psychotherapeutic approaches in major depression has encouraged a careful evaluation of theories such as Beck's Cognitive Theory of Depression. According to Beck (Beck 1967), predisposition to depression lies in negative cognitive schemata. These dysfunctional cognitive structures are determined in childhood by negative experience. The schemata can be reactivated in adult life by events which are in some sense reminiscent of previous negative experience. As a result of this reactivation, a negative depressive cognitive style ensues and a depression results as a consequence of these dysfunctional patterns of thinking. Conceivably, the existence of such enduring negative cognitive schemata could have considerable effect in determining the chronicity of depressive illness as well as its onset, although there is little reported in the literature on the role of such schemata in chronic depression.

At the level of cognitive schemata, there should be detectable differences between those prone to depression and those who are not vulnerable. A questionnaire, the Dysfunctional Attitudes Scale (DAS) has been developed (Weissman and Beck 1978) which purports to measure underlying negative cognitive schemata. Prospective studies to ascertain differences in cognitions prior to the onset of depression between those who subsequently develop depression and those who do not, have generally failed to demonstrated any pre-existing differences in cognitive schemata (as measured) between these groups (Lewinsohn et al 1981). Several studies have used the DAS in groups of depressed patients. A general

finding is that scores are elevated during episodes of depression. Most studies report that on recovery however, scores return to levels not significantly different from controls (Hamilton and Abrahamson 1983; Silverman et al 1984; Simons et al 1984; Schrader et al 1986a). Where studies have reported persistently high DAS scores at follow up, the question of partial remission of depressive symptoms has been raised (Eaves et al 1984).

However, not all patients who are depressed exhibit such a cognitive style (Hamilton and Abrahamson 1983). There is also some evidence of lower DAS scores occurring in patients with endogenous depression as opposed to non-endogenous depression (Peselow et al 1990), but not all studies have reported this distinction (Eaves et al 1984; Zimmerman and Coryell 1986; Giles 1982). Patients with high DAS scores measured during depressive episodes have been reported (Norman et al 1988) as having an earlier age of onset, and a trend towards more episodes of depression. High DAS scorers have been reported as having a higher rate of relapse (Rush et al 1986) and a poorer response to treatment (Peselow et al 1990).

In summary, there is evidence that in some forms of depression, there are patients who have elevated scores on instruments such as the DAS. There is some evidence emerging regarding the nature of patients who are high scorers. There is little evidence that scores on the DAS prior to a depressive episode can predict vulnerability to depression.

1.3.2.2 Teasdale's modification of Beck's theory

Teasdale (1988) has proposed a modification to Beck's theory regarding vulnerability to depression. In Teasdale's view, a distinction should be drawn between vulnerability to the onset and to the persistence of depression. He considers that in predisposed people, the persistence of depressed mood comes about if in a mildly depressed state, negative patterns of thinking are activated. The original source of the depression, whether biological social or psychological is not important, "the crucial factor which determines whether the initial depression will intensify and persist is the pattern of thinking that exists once depressed" (Teasdale 1988 p. 251). Teasdale reviewed empirical findings consistent with this model

(Lewinsohn et al 1981; Dent and Teasdale 1988) and concluded that there was preliminary evidence suggesting that for a given level of depressed mood, those patients who have a particular style of negative cognitive processing are more likely to remain depressed. Williams et al (1990) have reported further evidence supporting this view. While Teasdale has not specifically related his theory to chronic depression, his ideas would appear pertinent both to the notion of the post depressive personality and to chronic depression.

There would appear to be similarities between concepts of negative cognitive processing and neuroticism. The concept of neuroticism was recently reviewed from a cognitive perspective. Martin (1985) viewed the idiosyncratic cognitive processing seen in individuals with high neuroticism scores as being similar to those idiosyncrasies of thinking which have been observed in depression. She saw the cognitive effects of neuroticism and depression as being inter-related but distinct, and acting to reinforce one another.

There have been few reports on the cognitive style of patients with chronic forms of depression, either using cross-sectional or longitudinal experimental designs. Although, given Teasdale's hypothesis, clearly the finding of high scores on measures such as the DAS would be expected in chronic depression. As discussed earlier the association between measures of neuroticism and chronicity of depression would suggest that an enduring negative cognitive style should be evident amongst the chronically depressed. While Miller et al (1986) found no significant differences in DAS scores between patients with "double depression" and episodic depression, Klein et al (1988a) reported that patients with episodic major depression scored significantly lower on the DAS than patients with double depression.

### 1.3.3 Summary

Just how personality interacts with depressive disorder has been the subject of much enquiry. Unfortunately, problems reconciling the different theoretical positions adopted by investigators and methodological problems relating to the assessment of personality variables, make interpretation of the findings difficult. A relatively consistent theme however, is the association between elements of personality functioning subsumed under the term

"neuroticism" being associated with a chronic outcome. Following this review of how personality factors may play a role in the development of chronic depression, the next section will review information regarding our understanding of the clinical features of chronic depression viewed as an affective disorder.

## 1.4 Clinical characteristics of chronic depression

### 1.4.1 Definition and classification

The period of time which is required to elapse before a depression is considered chronic is to some extent arbitrary. The average length of depressive episodes prior to the introduction of specific antidepressant therapy may give some indication of the natural history of depressive episodes. For example, Rennie (1940) reported the average length of a first depressive episode was 6.5 months. The most widely accepted criterion for chronicity at present would appear to be the persistence of affective symptoms for 2 years (Cassano et al 1983). Generally the persistence of affective symptoms is required to diagnose chronic depression rather than more general measures of functioning such as persistent social impairment. Problems with using social impairment as a measure of chronicity are reviewed by Scott (1988). For example, social impairment may reflect personality variables and may actually precede the onset of depression. Paykel and Weissman (1973) demonstrated that social impairments largely, but not entirely, disappear with symptom resolution in acute depressive disorders.

Various forms of chronic depression are described in DSMIII-R (APA 1987) and ICD-10 (WHO 1988). In DSMIII-R it is possible to classify major depression as chronic if it extends beyond a 2 year period. Chronic depression which does not occur in the setting of an unresolved major depression is termed dysthymic disorder. Dysthymic disorder is further subdivided into primary and secondary and late and early onset forms. The DSMIII classification of chronic depression had been criticised on account of the heterogeneous group of patients it described and on the similarity of the criteria used to describe it and major depression (Kocsis and Frances 1987). The DSMIII-R diagnosis criteria for dysthymic disorder have been generally seen as a positive step towards reducing heterogeneity, but the criticism of the similarity of the criteria to major depression still pertains. The DSMIII-R dysthymia criteria have also been criticised for stressing somatic and vegetative changes which are seen by some (Kocsis and Frances 1987) as not common symptoms in dysthymia.

A major but not often discussed difficulty with the early/late onset and primary/secondary distinctions in the classification of a chronic illness such as dysthymia, is the validity of retrospective reports from patients regarding time of onset and sequencing of other illnesses. The ICD-10 (WHO 1987) classification of chronic depression is similar in many respects to DSMIII-R. Dysthymia is included as a persistent affective disorder and the diagnostic guidelines are similar to DSM-III-R. The DSMIII-R classification of chronic depression reflects to a great extent the classification proposed by Akiskal (1983). (see page 17)

The term "double depression" was introduced by Keller et al (1982) to describe patients with a history of chronic depression or dysthymia who presented with the full major depressive syndrome. These patients were found to "recover" quickly back to their normal dysthymic state, but were much more likely than patients without pre-existing chronic depression to have further relapses into major depression. Keller and Lavori (1984) did not see "double depression" as a distinct disease entity, but rather a "cross sectional" state that could occur in most patients with dysthymic disorder and in a proportion of patients with major depression. They saw its importance in the effect it had in altering rates of relapse in major depression. Clearly, the "ease" with which patients could change classification from dysthymic disorder to major depression (particularly in DSMIII) may be of considerable importance in evaluating the "double depression" concept. Other proposed classifications of chronic depression, for example Scott (1988), follow broadly the proposals set out by Akiskal.

### 1.4.2. Epidemiology

There have been two studies which have attempted to estimate the prevalence of chronic depression in randomly selected community samples, both conducted in the U.S.A. Weissman and Myers (1978) found a 4.5% prevalence of intermittent depression as defined by the Research Diagnostic Centre criteria (RDC). The Epidemiologic Catchment Area (ECA) (Robins et al 1984) study found prevalence rates for DSMIII dysthymic disorder of between 2.1% - 3.8% .

The literature regarding the percentage of depressed patients who will go on to become chronic was recently reviewed by Scott (1988). In studies reported between 1921 and 1974 an average of 12-15% of cases became chronic. She noted that these studies spanned a time when new treatments for affective disorders were introduced, and in spite of this, the rates of chronicity appeared unchanged. Bebbington (1982) commented that the intensity of follow up was in general directly proportional to the number of chronic cases discovered. This may explain Winokur and Morrison's (1973) suggestion that chronicity was self limiting if a cohort was followed long enough, as only 17% of Winokur and Morrison's cohort was traced at 10 years. Weissman et al (1976) reported that 12% of depressed outpatients who were initially amitriptyline responders remained chronically symptomatic over a one year period. Rounsaville et al, (1980) reported that over 30% of patients presenting to an outpatient clinic with acute major depression also described symptoms consistent with RDC chronic, minor or intermittent depression. Markowitz et al (1992) reported a prevalence of dysthymic disorder of 36% in a series of 75 consecutive outpatients. Kovacs et al (1984) reported 43% of children referred to a mood disorders clinic had a diagnosis of dysthymic disorder. This finding is consistent with retrospective accounts of early onset given by some patients with dysthymic disorder.

The work of Keller et al (1983, 1986), suggested even higher risks of chronicity (up to 21%) occurring in patients with major depression. In a prospective study of patients who had recovered from a major depressive disorder, Keller et al (1986) found a 22% probability that subsequent depressive episodes would last one year. The culmulative risk that patients would develop a chronic course was estimated at 30%. It is noteworthy that 25% of Keller's original sample of patients had a history of chronic minor depression. However, (Coryell et al 1990) reported that up to three quarters of patients with chronic affective disorder recovered when followed over a 5 year period. Factors associated with recovery were, less severe illness initially, lack of psychotic features and a high level of functioning prior to the onset of the illness.

Concern about the long term outlook for patients with affective disorder was further increased by several long term follow up studies reported in the late 1980's. Studies from London (Lee and Murray 1988) and Sydney (Kiloh et al 1988) both showed poor outcomes, with less than one fifth of patients remaining continuously well. Of interest, and in contradistinction to shorter follow up studies where a more neurotic picture when initially depressed predicted a poorer outcome. (Kerr et al 1970; Paykel et al 1974) in these studies both neurotic and psychotic patients had very poor outcomes.

There have been very few reports of prevalence data for suggested sub groupings of chronic depression. In Akiskal's original group of chronically depressed patients Akiskal et al (1981) 28% had chronic residual primary depression, 36% had chronic secondary depression, 22% had character spectrum disorder and 14% had sub-affective dysthymia. Akiskal's patients had been referred to a mood clinic from either psychiatric, community or primary medical outpatient sources. Klein et al (1988b) reported a prevalence rate of 5.3% for late onset dysthymia and 10.3% for early onset dysthymia in a cohort of 512 outpatients from a community mental health centre at a university based clinic.

1.4.3. Sociodemographic data

(i) Age

The mean age of onset of chronic depression (Akiskal et al 1981; Berti Ceroni et al 1984; Scott et al 1988) is between 40 and 50, which is not significantly different from non acute affective disorders. Some studies however, found older patients at greater risk for developing chronicity (Bratfos and Haig 1968; Post 1972; Keller et al 1986). Regarding the proposed sub groupings of chronic depression, Akiskal et al (1981) reported an older age at index evaluation for patients with primary depression with residual chronicity and the youngest age of onset in patients with characterological depression and intermediate age of onset for patients with secondary depression. Garvey et al (1986) reported no difference in the age at evaluation between chronic primary major depression and non chronic primary depression. Klein et al (1988b) reported a younger age at evaluation for early onset as

opposed to late onset dysthymic patients, but no differences between age at evaluation between early onset dysthymic patients and patients with acute major depression, (Klein et al 1988c).

(ii) Sex

Most studies report that chronic depression is more frequent in females (Berti Ceroni et al 1984; Akiskal et al 1981). The ECA study (Robins et al 1984) reported that dysthymia was significantly more prevalent in females than in males in 2 of the 3 sites studied. However, Keller and Shapiro (1981) reported no differences in rates of recovery from major depression between the sexes. Klein et al, (1988b) reported no differences regarding sex in a group of early onset dysthymic patients compared with a group of acutely depressed patients. Akiskal et al (1981) reported more females in each of his sub groups in a ratio of 2-3 to 1 apart from sub affective dysthymia where there was a more even sex distribution.

(iii) Marital status

Akiskal et al (1981), described "impaired marital communication" as a frequent finding in patients with chronic depression. Keller and Shapiro (1981) reported that marital status was associated with chronicity of depression in an unexpected manner with unmarried patients having higher rates of recovery than married patients. Other studies, Scott et al (1988) reported no differences regarding marital status between patients with acute and chronic primary major depression, and between patients with early onset dysthymia (Klein et al 1988b) and non chronic depression.

(iv) Social class

Brown and Harris (1978) found an association between chronicity of depression and lower social class in a community sample of working class women. Keller et al (1986) found that low family income was a predictor of chronicity. Other studies, (Hirschfeld et al 1986; Scott et al 1988) have not found differences in socio-economic status between recovered and chronic primary major depressed patients. Klein et al (1988b) found no distinctions between

early onset dysthymia and acute major depression with respect to socio-economic status. Akiskal (1990) reported that disproportionately more patients with subaffective disorder may be seen in private rather than public settings.

1.4.4. Clinical features

Long duration of illness has been a predictor of chronicity in most studies of chronic depression. (Toone and Ron 1977; Keller et al 1984; Keller and Shapiro 1982; Scott et al 1988). Both length of time before seeking treatment and length of previous episodes appear related to chronicity. Of course it is uncertain as to what extent duration of illness is an independent or dependent variable.

No set of symptoms appear to be typical for chronic depression. Both neurotic and endogenous symptom patterns occur in chronic depression and both have been associated with equally poor outcome in long term follow up studies of depression (Lee and Murray 1988; Kiloh et al 1988). Indeed it is this very heterogeneity in clinical presentation which has led to the development of sub classification of chronic depression. Some of the proposed classifications use clinical features such as the presence of "melancholic manifestations" (Akiskal 1983) as criteria for sub groups for example, sub affective dysthymia. These melancholic symptoms include psychomotor inertia, hypersomnia, diurnal variation of mood and anhedonia.

The term anhedonia was introduced by Ribot (1897). It refers to an "insensibility relating to pleasure" as opposed to analgesia, or the absence of pain. Anhedonia has been described in schizophrenia (Kraepelin 1919) as well as in affective disorder. Klein (1974) suggested that anhedonia was a marker for tricyclic responsive "endogenomorphic" depressions. A biological basis for anhedonia has been discussed in terms of a disturbance of reward pathways viz the median forebrain bundle and the lateral hypothalamus (Olds and Milner 1954; Fawcett et al 1983). However, Klein viewed patients with chronic neurotic depression as being more demoralised than anhedonic. Although he did discuss the responsiveness of some patients with chronic neurotic depression to mono-amine oxidase

inhibitors as evidence for an anhedonic component to some forms of chronic neurotic depression. Of note Clark et al (1984) reported that patients who were extremely anhedonic when depressed usually responded well to antidepressants but remained high scorers when recovered in terms of a scale devised to measure anhedonia. This finding, although from a non chronic population may support Akiskal's contentions that anhedonia may have enduring aspects in sub affective dysthymia. Anhedonia has not been measured systematically in any published reports of chronic depression.

Koscis and Frances (1987) reported that (as well as depressed mood), decreased energy, decreased self esteem, psychic anxiety and inappropriate guilt were most common symptoms in chronically depressed patients. They argued against the symptom list for dysthymia in DSMIII-R on account of it being too overly weighted towards somatic symptoms and not placing enough emphasis on cognitive and functional symptoms.

There is some evidence that with time, symptoms in chronic depression may vary, with endogenous symptoms reported less often (Cassano and Maggini 1985). Anxiety symptoms have been reported as occurring more frequently in chronically depressed patients (Paykel 1971; Kupfer and Spiker 1981). Garvey et al (1986) found no significant differences in clinical symptomatology between patients with either acute and chronic primary major depression. Hirschfeld et al (1986) found similar severity of symptoms among chronic and non chronic depressed patients. Similar findings concerning severity of depressive symptoms were found by Miller et al (1986) comparing double depression to episodic depression. Klein et al (1988c) found that patients with early onset dysthymia had similar depression severity as patients with non chronic major depression as measured by the Beck Depression Inventory (BDI), or at interview. However, more chronic patients had DSMIII melancholic depressions. Klein et al (1988b) found no distinction in depression severity between late and early onset dysthymic patients. Scott et al (1988) reported higher depression severity scores (BDI) in female chronic depressed patients compared with acute patients, however, no distinction was evident in observer rated measures of severity. Keller et al (1984) reported an

association between admission to hospital (an indirect measure of illness severity) and chronicity.

1.4.5. Psychiatric history

Toone and Ron (1977) reported that chronically depressed patients were more likely to have a history of frequent hospital admissions than those who had remained well. Garvey et al (1986) found that patients with chronic major depression had more previous episodes of depression. Scott et al (1988) similarly found more previous episodes of depression in chronically as opposed to non chronically depressed elderly women. Hirschfeld et al (1986) found more previous hospital admissions among the chronically depressed. Keller and Shapiro (1981) however, found that the number of prior episodes of depression did not predict chronicity but it did predict relapse. It did not influence the course of the illness in those patients who did relapse.

1.4.6. Co-morbidity

(i) Psychiatric co-morbidity

Akiskal et al (1981) distinguished between secondary chronic depression which they viewed as related to another chronic psychiatric or medical problem and the secondary consequences of some chronic depressions. These consequences may include agoraphobia and substance abuse. Such reports are difficult to evaluate given the problems associated with retrospectively determining the temporal relationships between two illnesses. Keller et al (1984) reported that a history of a non-affective psychiatric disorder, particularly alcoholism predicted a chronic course. However, in their prospective study Keller et al (1986) found that the primary-secondary distinction did not predict the duration of depressive episode. In a one year follow up study of an ECA community sample of subjects diagnosed with a major depressive disorder, Sargent et al (1990) found that an additional one or two diagnoses made no difference to the persistence of depression, while in subjects with three extra diagnoses

depression was significantly more persistent. Klein et al (1988c) found more alcohol and substance abuse, but no more anxiety disorders or eating disorders among early onset dysthymic patients compared with non chronic patients with major depression. Scott et al (1988) found some evidence for the development of secondary psychiatric complications in chronic depression.

(ii) Medical co-morbidity

Akiskal et al (1981) viewed some forms of chronic depression as occurring secondarily to a chronic incapacitating medical disease. Furthermore Akiskal et al (1981) reported that the onset of a debilitating physical illness such as chronic obstructive airways disease and congestive cardiac failure after the onset of depression were also associated with chronicity. Scott et al (1988) reported significantly more patients with chronic depression had a history of thyroid disease, compared to those with episodic depression.

1.4.7. Family history

Akiskal et al (1981) reported that there was a positive family history of affective disorder in some of his categories of chronic depression more often than in episodic major depression. Specifically, sub affective dysthymia disorder and chronic primary depression had stronger family histories of affective disorder. Character spectrum disorder had less family history of affective disorder and a more frequent family history of alcoholism compared with episodic affective disorder. Scott et al (1988) found a significantly increased family history for affective disorder only in female chronically depressed patients. Both authors reported that family history was often multiple, with several first degree relatives affected.

Akiskal et al (1981) also reported an increased loading for bipolar disorder among relatives of patients with sub-affective dysthymia. Klein et al (1988c) reported higher rates of non bipolar and bipolar II affective disorders in relatives of patients with double depression

compared with episodic major depression. Klein et al (1988c) also reported more affective disorder in the families of early onset dysthymic patients compared with episodic major depression. They also found (Klein et al 1988b) more family histories of affective disorder in early rather than late onset dysthymic disorder. Klein et al (1988d) in a well designed study found the offspring of unipolar patients exhibited signifciantly higher rates of dysthymia than the offspring of medical and normal controls.

However, Toone and Ron (1977) found that family history of affective disorder did not predict chronicity in their sample of good and poor prognosis patients. Garvey et al (1986) found that family history of affective disorder did not distinguish chronic from non chronic major depression. Both these studies can be criticised in terms of the inclusion criteria they used to determine chronicity. However, Miller et al (1986), in a well designed study found no difference in family history between patients with double depression compared with patients with recurrent major depression without dysthymia. Torgersen (1986) in a well designed twin study found little evidence for the heritability of dysthymic disorder. His study however, can be criticised on the basis that the Present State Examination (PSE) was used to make DSMIII diagnoses. Not unexpectedly, given the heterogeneity of the syndrome, the role of genetic factors in chronic depression remains unclear. Evidence from Klein et al (1988b) that there is a stronger familial loading for early onset as opposed to late onset dysthymia is interesting however, as it reflects an increasingly reported finding (Blehar et al 1988) of increased family loading for depression in early versus late onset episodic major depression.

1.4.8. Developmental history

Akiskal et al (1981) found that of his 4 subgroups of chronic depression, only patients with character spectrum disorder reported significantly more developmental object loss than patients with episodic depression. They defined developmental object loss in terms of criteria modified from Amark (1951):

(1) proband born out of wedlock, and parents did not marry or live together subsequently.

(2) one or both parents died before age 15.

(3) parents separated or divorced before age 15.

(4) proband adopted or lived in foster homes or orphanages.

Other authors have found developmental object loss not to be associated with chronicity (Weissman and Klerman 1977; Hirschfeld et al 1986; Scott et al 1988). Alnaes and Torgensen (1989) found that patients with acute major depression remembered their childhoods as less traumatic in terms of losses and relationships with parents than patients with a major depression plus dysthymic disorder. The patients with double depression remembered more traumatic childhoods than those patients with dysthymic disorder alone.

1.4.9. Personality

The literature on personality disturbance and its association with chronic depression has been reviewed in the section "Chronic Depression: State or Trait" (p 22 ). In that section, the role of personality factors in the development of chronic depression, the effect of depressive illness on personality, and the concept of chronic depression as a personality disorder were discussed. The variety of personality measures used, the fact that measures were often derived from different conceptual frameworks, and problems with issues of reliability and validity all make interpretation of this literature difficult.

In this section, several recent studies coming from a clinical perspective will be reviewed. These papers have generally used the DSM-III diagnostic criteria for personality disorder and have employed a number of different strategies for assessing personality. For example, Tyrer et al (1988) interviewed patients with either dysthymic disorder, panic disorder or generalised anxiety disorder using the Personality Assessment Schedule (PAS) (Tyrer and Alexander 1979) when unwell, and also interviewed informants. They found that there was a similar pattern of reseponses on the PAS for both subjects and informants. They found more neurotic symptomatology in the personality disordered group, and in particular found personality disturbance significantly more common in dysthymic disorder as opposed to generalised anxiety disorder and panic disorder. However, in terms of methodology, Zimmerman et al (1988) found that patients with major depression and informants differed

markedly in their descriptions of the patients normal personality, with informants reporting more psychopathology. In this study the Structured Interview for DSM-III Personality Disorders (SIDP) (Pfohl et al 1982) was used. The authors discuss this discrepancy in terms of factors such as rater variance, the effect of the patients depressed state being greater on the informant than on the patient, patient's lack of insight of the effect of their behaviour on others, and a tendency for patients to deny negative attributes, but the authors found no explanation entirely satisfactory.

Pilkonis et al (1988) reported a study of personality pathology in patients with recurrent depression who were assessed when in the recovered phase. Assessments were made by patients and clinicians. The pesonality assessment included the Hirschfeld-Klerman Personality Battery (Hirschfeld et al 1986) and a Personality Assessment Form which consisted of dimensional ratings for the 11 personality disorder categories included in DSM-III. Using this method they found substantial prevalence of personality disorder, with the most common disorders being avoidant (30.4%), compulsive (18.6%) and dependent (15.7%). Markowitz et al (1992) reported that dysthymic disorder outpatients had a very high prevalence of personality disorder diagnoses made using the SCID II (Spitzer et al 1986), with dependent, avoidant and borderline personalities predominating.

Shea et al (1990) reported on the relationship between treatment outcome and personality disorder in patients with major depression in the National Institute of Mental Health Treatment of Depression Collaborative Research Programme. Somewhat surprisingly, they found that patients with personality disorder did not have a poorer outcome in terms of depression severity or work functioning. Overall however, they were less likely to reach a criterion of recovery and they showed less improvement in social functioning than patients without personality disorder. A major problem with this study was the use of a low cut off point for personality disorder which resulted in a high prevalence (74%) of personality disorder.

Clinical research in the area of personality comorbity in chronic depression remains in an exploratory stage, with methodological problems relating to the lack of clarity as to the

definition of personality disorder and the criteria by which each sub type should be operationalised, when personality should be assessed and who (clinician, patient or informant) provides the most valid assessment.

1.4.10. Life events

A number of studies have reported few differences in life events experienced prior to the onset of chronic as opposed to non chronic depression (Weissman and Klerman 1977; Hirschfeld et al 1986; Miller et al 1986; Klein et al 1988c; Billings and Moos 1984). Klein et al (1988a) found that patients with double depression reported higher levels of "chronic strain" than patients with episodic major depression. Chronic strain was measured on a 17 item scale the authors devised and for which they provided a provisional psychometric evaluation. Billings and Moos (1984) found that unlike non chronically depressed patients, relative levels of stress were not related to functioning in chronically depressed patients. They hypothesised that depression in chronically depressed patients develops into a stable trait like characteristic which is less responsive to environmental factors. Alnaes and Torgensen (1989) found loss events more common as precipitating events in acute major depression than in dysthymic disorder.

Akiskal (1982) found that certain concurrent environmental factors were more prevalent in chronic as opposed to episodically depressed patients. In particular he noted deaths within the family, disabling medical illness and chronic marital discord. Scott et al (1988) found an excess of independent undesirable life events occurring in chronic as opposed to non chronic patients in the 6 months prior to illness and the 2 years following. Most frequently reported life events were deaths of family members, ill health or redundancy. While the role of life events in precipitating chronic depression remains uncertain, there is some evidence that subsequent life events may have a role in maintaining the depressed state.

1.4.11. Biological markers

Given the early stage of development of the nosology of chronic depression it is not surprising there have been few consistently replicated findings regarding presumed biological

markers for chronic depression. Usually studies have attempted to demonstrate similar disturbances in chronically depressed patients compared with those described in episodic major depression. Problems arise with this approach not only because of nosological difficulties with chronic depression but also because most laboratory markers remain controversial even for episodic major depression. Akiskal (1982) demonstrated shortened REM latencies for patients with chronic primary major depression and for patients with sub-affective dysthymia (Akiskal et al, 1980). REM latencies for patients with secondary chronic depression and character spectrum disorder were not shortened. These findings were replicated by Hauri and Sateia (1984). Miller et al (1988) found similar rates of dexamethasone suppression in patients with double depression and patients with recurrent depression without dysthymia. However, Roy et al (1985) found no differences between patients with early onset dysthymic disorder and normal controls on either the dexamethasone suppression test . In a recent review of the area, Howland and Thase (1991) found evidence for some similarities between dysthymic disorder and major depression in terms of studies of REM latency, electrodermal activity and the thyroid axis. Investigations of dexamethasone suppression, catecholamines and other EEG sleep variables tended to demonstrate more consistent differences between dysthymic disorder patients and patients with major depression. They tentatively conclude that dysthymic disorder patients may manifest more biological trait qualities of depression (reduced REM latency has been suggested as a trait marker of depression (Kupfer and Ehlers 1989)) than the biological state characteristics of major depression, viz dexamethasone suppression.

### 1.4.12. Treatment

As the majority of depressive illnesses will remit without specific treatment (Akiskal 1983), inadequate treatment cannot be presumed to be the primary cause of chronicity. However, a series of reports regarding the generally low level of somatic antidepressant treatment often prescribed (Keller et al 1982; Keller et al 1986) and the finding that many so-called "refractory" depressive illnesses may respond to more vigorous antidepressant

treatment (Quitkin 1985) raises the possibility that there may be a group of patients whose depressions have become chronic because of inadequate or inappropriate treatment. Weissman and Klerman (1977) commented that the counter transference problems physicians and psychiatrists often experience with chronically depressed patients may affect treatment decisions. For example, they found such patients were often treated with sedative hypnotics rather than antidepressants. Akiskal (1982) similarly found more sedatives used in chronic compared with non chronically depressed patients. Schrader et al (1986) found in an outpatient setting, low doses of antidepressants prescribed, often in combination with benzodiazepines for patients with affective disorders. They demonstrated an association between increasing chronicity of depression and a greater tendency to use antidepressants in combination with other psychotropic drugs. Berti Ceroni et al (1984) found that lack of adequate antidepressant treatment at the onset of the illness was associated with chronicity, particularly for women. In an intervention study Kupfer et al (1989) found that early intervention in a second episode of recurrent depression significantly shortened the overall length of the depressive episode.

Reviewing the literature of the treatment of minor depression and dysthymic disorder, Conte and Korasu (1992) pointed out the considerable problems in evaluating much research in the area. These problems relate to ambiguity in diagnosis, small sample size and inconsistent outcome measures. However, they concluded there was substantial evidence for the efficacy of antidepressant drugs in minor depression. Similar conclusions were drawn by Stewart et al (1992) and Howland (1991) who also reviewed the area. Several studies have specifically addressed the issue of antidepressant responsiveness in chronic depression. Kocsis et al (1988) in a double blind placebo controlled trial found imipramine to have a significant therapeutic effect in patients with dysthymic disorder and major depression. Of note, Kocsis et al (1991) demonstrated a more favourable long term outcome in chronic depression patients who had initially responded to imipramine compared with non responders. Patients in this study were assessed on average 40 months after entry into the study. Other

studies, some open and less well controlled have also found antidepressants to be effective in chronic depression (Ward et al 1979; Rounsaville et al 1980; Akiskal et al 1980; Harrison et al 1986; Vallejo et al 1987). However, Paykel et al (1982) found no differences in responsiveness to amitriptyline or placebo in a group of patients with "neurotic dysphoria". Both groups improved, while patients treated with phenelzine had a worse outcome. There is considerable evidence, recently reviewed by Schou (1990) that lithium carbonate when used in addition to tricyclic antidepressants can be effective in some cases of depression resistant to tricyclic antidepressants alone. The serotoninergic system has been implicated in treatment resistant depression (de Montiguy et al 1981, Schrader and Levien 1985; Leonard 1988). Bersani et al (1991) reported that ritanserin, a potent long acting 5HT antagonist, was significantly superior to placebo in a double blind trial with 30 dysthymic outpatients. Ritanserin has been suggested as being particularly helpful for patients with symptoms of poor motivation, apathy and fatigue.

While some depressions may remain chronic because of a lack of appropriate treatment, there is also evidence that some depressions remain chronic in spite of intensive treatment. Keller et al (1986) found that approximately half the patients who did not recover were treated with high levels of antidepressant therapy for extended periods of time. This finding they suggest indicates that, at least some patients, will not respond to current available treatments. Hirschfeld et al (1986) found in a comparison of treatment received by chronic and non chronic patients with major depression, that the chronic group had in fact received more intensive somatic treatment.

While psychotherapeutic approaches have classically been suggested for chronic depression, there have been few studies examining the efficacy of psychotherapy in chronic depression. Weissman and Akiskal (1984) reviewed the area. Arieti and Bemporad (1978) described psychotherapeutic strategies based on broadly psychoanalytic principles for use in chronic mild depression. Akiskal (1982) described a "practical psychotherapy" using behavioural, supportive and crisis oriented techniques which was found helpful, particularly in patients with early onset dysthymia and late onset unresolved primary depression. Corney

(1981) reported a controlled clinical study where a social work intervention had a significant effect on outcome in patients with acute depression superimposed on dysthymia but not in acute depression alone. McCullough (1991) reported a study of ten patients with dysthymic disorder diagnosed by DSM-III criteria who were treated by a form of cognitive behavioural psychotherapy. The response rate was high. While the study was naturalistic and the sample was very small the method of treatment was well described as were outcome criteria.

1.4.13 Summary

General conclusions gained from reviewing the recent literature on the clinical characteristics of chronic depression are that firstly the number of reports is relatively modest. Furthermore, cohorts of patients studied are often of small size, and apart from very recent reports, only a limited range of clinical variables are commented upon. Recent reports have began to compare various sub groups of patients with chronic depression classified according to typologies suggested by DSM-III-R and Akiskal. There have been very few prospective studies of the natural history of chronic depression. Proposed typologies have yet to be tested using multivariate statistical methods. In the following section the literature regarding recent developments in the classification of affective disorders using statistical means will be reviewed.

## 1.5 Procedures for classifying depression

### 1.5.1 Philosophical advances

Hempel (1961, p 3) writing at a time when psychodynamic theory was in ascendency at least in the U.S., saw as a main objection to psychodynamic theories

> "*that their central concepts lack clear and uniform criteria of application and that, as a consequence, there are no definite and unequivocal ways of putting the theories to a test by applying them to concrete cases*".

Hempel suggested a way to improve theoretical discussion in psychiatry was to improve the nature of classification of psychiatric syndromes. He introduced Bridgeman's (1927) idea of "operational definitions" from physics. According to Hempel (1961 p 11)

> "*if a classificatory scheme is to be used with a high degree of uniformity by different investigators, the concepts determining the various subclasses will have to possess clear criteria of application that can be stated in terms of publicly ascertainable characteristics*".

Hempel also noted the progression from classifications based on descriptive to more theoretical bases which occurred in biology and medicine. However, for successful prediction and scientific understanding, the theoretical assertions still needed to be capable of an objective test. According to Hempel (1961 p 17)

> "*in a classificatory system with a theoretical basis, two individuals with similar symptoms may then come to be assigned to quite different classes*".

Eventually with a successful theoretical underpining morphologically similar animals such as the Tasmanian Wolf (Thylacinus) and the Wolf (Canis) can be assigned to different species. The preceding distinction seems obvious to anyone familiar with modern biology. Following Hempel's argument, with an adequate and testable theoretical understanding, it may eventually be possible to categorize phenomenologically very similar presentations of depressive illness into meaningful sub groups with a similar degree of certainty.

Hempel's views on classification, particularly the use of operational diagnostic criteria have had a quite profound impact on psychiatric nosology. A good example of this impact was the incorporation of diagnostic criteria in the DSMIII in 1980. While psychiatric nosology remains predominantly at the descriptive phase of development, many diagnoses now include criteria relating to aspects of the patient other than simple mental state findings. For example DSMIII-R diagnostic criteria for schizophrenia, major depression with melancholia, and dysthymic disorder include variables such as level of function, past history and longitudinal course.

### 1.5.2. The use of numerical taxonomy

The greater understanding of the philosophy of classification of psychiatric disorder which has recently emerged occurred at a time when various multivariate statistical procedures were being applied to problems in psychiatric nosology. Numerical taxonomy is the process by which classifications are made using multivariate statistical methods such as cluster analysis, principle component analysis and multidimensional scaling (Romesburg 1984). The method was first used in the development of biological classifications (Sneath and Sokal 1973), and later extended to almost any area of enquiry where the classification of objects is desired. Cluster analysis is one method of numerical taxonomy. The mathematics of cluster analysis have been described extensively (Anderberg 1973). This review will be confined primarily to the role of cluster analysis in the classification of affective disorder. Cluster analysis has a direct appeal to psychiatric nosologists because unlike other multivariate techniques, for example factor analysis, it results in groups of patients who resemble each other in terms of specified variables. In simple terms, cluster analysis involves

calculating measures of similarity between individuals and then grouping individuals according to their similarity coefficients. Many different processes of determining similarity coefficients have been devised as have differing clustering algorithms (Romesburg 1984).

There are several substantial problems with the technique of cluster analysis (Everitt 1972; Strauss et al 1973). Firstly different methods of cluster analysis do not all produce the same groupings when applied to the same data set. Therefore any cluster found must be in some sense validated by alternative methods. Secondly, most cluster analysis programmes do not decide on the optimum number of groups within a population and generally "user evaluation" is the criterion employed. Finally, most cluster programmes will find groups in data sets even where no groups exist (Patrick and Wallace 1990).

A method of clustering objects which overcomes some of these difficulties was devised by Wallace and Boulton (1968) and later improved upon (Wallace 1986). The method is based on a general theory of inductive inference which is consistent with conventional statistical inference (Wallace and Freemen 1987) and is influenced by information theory. The approach is an operationalised form of Occam's Razor: that is to prefer the theory which yields the shortest *explanation* of the available data. The method considers the values of variables associated with objects to be classified to form a "message". Using a code, the length of the "message" can be determined. Dividing the sample into classes however, provides a more concise description of the data. A "message" can be devised which describes the sample divided into classes. Such a message contains a "segment" describing each class and a segment describing each object. In terms of information theory, this form of "message" is an instance of a general form of "message" called an explanation. An explanation encodes a body of data or observations by first stating a theory about the data, then encoding the data in a code which would be optimal were the theory true. (Patrick and Wallace 1990). The "theory" in this case is the proposed class structure of the population. The length of the message is called the "Wallace Information Measure". The formal derivations of the Wallace Information Measure have been published (Wallace and Boulton 1968 1975; Boulton and Wallace 1969, 1970, 1973a, 1973b, 1975;

Wallace 1986). According to SNOB the "best" classification is the one which is described by the shortest message length.

This numerical taxonomy programme (SNOB) can be seen as an automated method of inductive inference (Patrick and Wallace 1990). An early version of the SNOB programme was used by Pilowsky et al (1969) to classify depressed patients. Another version has been used to classify child psychosis (Prior et al 1975). The SNOB classification programme has been utilised in a wide variety of non psychiatric classification problems from geographical regions (Logan et al 1975) to astronomical alignments (Patrick and Freeman 1988).

In summary, the main advantages of the SNOB programme for cluster analysis are that the programme, rather than the user, determines the optimum number of classes for a given data set. Furthermore, SNOB will not find classes where they do not exist. Thus the programme appears to overcome major difficulties found with most cluster analysis programmes

### 1.5.3 Cluster analysis and the classification of depression

Reports of classifications of depressed patients generated by older methods of cluster analysis have appeared in the literature for over 20 years. Blashfield and Morey (1979) reviewed 11 studies employing some form of numerical taxonomy. Each study reviewed, found a cluster variously described as "retarded/endogenous""psychotic". However, there was a wide variation in how other depressed patients were classified; ranging from a "non-endogenous" group (Pilowsky et al 1969) to a number of studies finding 2 or 3 other groupings of patients described as "hostile", "anxious", and "young patients with personality disorder" (Paykel 1971) or "hostile" and "anxious" (Overall et al 1966). Blashfield and Morey (1979) concluded that the cluster analysis studies clearly demonstrated that non-psychotic depression is too heterogenous to be placed under a single "neurotic depression" category. They identified methodological problems with several of the early studies, in particular the use of inverse factor analysis as a clustering technique. They also commented on the fact that variables related to the longitudinal course of the illness were seldom included

in the studies. In spite of these short- comings there was a surprising degree of uniformity in the results of the studies reviewed.

The Pilowsky et al (1969) study is of interest as it used an early form of the SNOB programme previously discussed and as such was the only report to have used a "non-user" evaluation of the number of classes produced. Paykel's study (1971) is of note because some of the classes produced seem to share characteristics with more recently described groupings of chronic depression. Variables included in his analysis included age, number of previous depressions, assessment of alcohol intake, MPI neuroticism score and a stress score. In particular his "anxious depressions" and depression in young people with personality disorder are of interest in terms of current proposed classifications of chronic depression. Paykel (1972a) attempted to validate his typologies by demonstrating differences between the groups on variables not used in the original analysis. For example, differences between the groups were demonstrated in terms of treatment with medication, and site of treatment. Paykel (1972) also demonstrated the validity of the classification by demonstrating differential responsiveness to amitriptyline amongst the 4 groups, with psychotic depressions showing greater improvement and anxious depressions showing the least improvement.

Andreason et al (1980) reported a study where cluster analysis was used to create a three group typology. In this classification one group appeared to correspond to "endogenous depression", one group to "neurotic depression" and one group to a "chronic minor depression or depressive personality". Andreason et al (1980) used family history as an external validator; they found significantly higher familial prevalence of affective disorder in the first two clusters compared with the third cluster. Studies by Copeland (1985) and Matussek et al (1982) using a broader range of variables including non mental state items, have resulted in broadly similar findings to those previously discussed. There have been no studies reported in the literature where cluster analysis has been applied to the problem of the classification of chronic depression.

There have been several attempts to validate existing classifications with cluster analysis techniques. Strauss et al (1973) demonstrated the importance of the selection of

clustering technique in his study where clusters produced from a cluster analysis of a series of psychiatric patients were compared with traditional diagnostic groups. Williams et al (1976) similarly performed a cluster analysis on a set of symptoms of psychiatric patients. While the resulting groups had been treated in significantly different ways and showed significantly different response to treatment, no such differences were observed between the groups in terms of clinical diagnostic groupings.

### 1.5.4 Summary

Psychiatric nosology remains at the descriptive phase of development although non mental state findings are increasingly included in operationalised definitions of disorders. While multivariate statistical procedures have been extensively applied to the problem of the classification of depression, there have been no studies reporting a statistically validated typology of chronic depression. Numerical taxonomy programmes now exist for example the SNOB programme, which overcome difficulties associated with more traditional forms of cluster analysis.

## 1.6 Concluding comment

Three broad aspects of the literature review led to the formulation of the present study. Firstly, while there has been an increasing interest in and awareness of the problem of chronic depression there remains a paucity of comprehensive studies of the clinical features of the condition. Secondly, while there has been considerable interest into the relationship between personality variables and chronic depression, the nature of that relationship remains unclear. Thirdly, while the heterogeneity of chronic depression is widely recognised, and various typologies have been put forward on clinical grounds, there have been no attempts to validate classifications using multivariate statistics.

# CHAPTER 2

# THE PRESENT STUDY

## 2.1 Aims and hypotheses

### 2.1.1 Introduction

The first component of the study was designed to provide a comprehensive description of a group of chronically depressed patients. The second component was an attempt to use numerical taxonomy to provide statistical confirmation of Akiskal's classification of chronic depression. The third component addressed the issue of how depressive symptoms, measures of personality and cognitive style and anhedonia may change over time in patients with chronic depression.

### 2.1.2 A comprehensive description of a sample of chronically depressed patients

In the first component of the study a group of chronically depressed patients was described in terms of a broad range of clinical and other variables. Information collected about patients reflected that obtained in the traditional psychiatric diagnostic interview. However, this information was obtained from structured interviews. A range of information regarding aspects of psychological functioning which the literature review had indicated might be of interest in chronic depression was also sought by the use of structured interview and questionnaires. This information included assessments of depression severity, personality, cognitive style and anhedonia. The aim of this component of the study was to provide a comprehensive description which would enable comparisons with other reports of chronically depressed patients. Furthermore, the detailed descriptions of the patient group would assist in validation of the typology of chronic depression developed in the second component of the study.

### 2.1.3 The validation of a classification of chronic depression using numerical taxonomy

Akiskal proposed that patients with chronic depression form a heterogenous group consisting of various sub groups which could be characterized by clinically observable differences not only in symptoms, but also in terms of personality, longitudinal history, family history and psychiatric and medical comorbidity. The present study aimed to test this hypothesis by the statistical method of numerical taxonomy. This aspect of the study further aimed to test the validity of any groupings produced by the numerical taxonomy procedure

(whether or not they reflected Akiskal's proposed groups) by examining their clinical meaningfulness in terms of variables not used in the cluster analysis.

In order to test the hypothesis that Akiskal's classification could be confirmed by numerical taxonomy, a set of variables capable of distinguishing between each of his sub groups was required. Fortunately, at least one of his sub groups had been operationally defined and the other proposed groups had been described in detail (Akiskal 1983). The variables the author derived from Akiskal's classification for use in this study are listed in the Table 2.1. The individual variables and their methods of determination are fully described in this section (p 73)

TABLE 2.1

Variables used in numerical taxonomy procedure (derived from Akiskal (1983))

age of onset

"endogenous" quality of first depression

continuous or intermittent depression

presence of previous non affective psychiatric illness

premorbid personality

presence of continuing "sub affective" symptoms

family history of depression

family history of alcoholism

presence of previous significant medical comorbidity

presence of Schneiderian depressive personality features

presence of "unstable" personality characteristics

presence of co-existing substance or alcohol dependence

### 2.1.4 Possible changes over time in depression severity, measures of personality, cognitive style and anhedonia in patients with chronic depression

Given the paucity of information regarding the natural history of chronic depression, this component of the study was to some extent exploratory. Broadly the aims were as follows:

The first aim was to determine whether questionnaire scores reflecting depression severity, personality, cognitive style and anhedonia changed over time in a naturalistic study of chronic depression. Clearly, were substantial numbers of patients' depression scores to normalise during the follow up period, doubts would be raised regarding the chronicity of the sample. It was expected that while there would be some changes in depression severity over time, very few patients would become entirely free of depressive symptoms or personality or cognitive disturbance. The follow up therefore afforded an opportunity to demonstrate prospectively the chronicity of patients' depression.

The second aim was to determine whether any changes in depressive severity were accompanied by changes in personality, cognitive style and anhedonia. Did scores on questionnaires designed to measure these attributes change in a parallel fashion or did some measures change while others did not? This question was related to one of the major themes of the literature review, namely, is chronic depression better conceptualized as an affective disorder or a personality disorder? Specifically, if depression scores and personality scores both normalized to some extent, or if both became more pathological then this would be evidence for the chronic depression as "affective disorder" hypothesis. A finding of persistently pathological personality scores occurring in association with a reduction in depression scores would favour the chronic depression as "personality disorder" hypothesis. This aspect of the investigation rested on the assumption that personality measures were affected by current mental state (Hirschfeld et al 1986). With respect to cognitive style, a finding of persistently evident dysfunctional thinking in chronically depressed patients whose depression severity had decreased, would be evidence for patients with chronic depression having ongoing ready access to negative cognitive schemata irrespective of the severity of their depression. Finally, a

finding of persistent abnormalities in the capacity of chronically depressed patients to experience pleasure while a diminution of depression severity occurred would be evidence for anhedonia having "trait like" qualities in chronically depressed patients.

The third aim was to determine which factors might predict any change in depressive severity. It was thought that those factors already described in the literature review as being associated with the onset of chronicity could be tested as possible predictors of continuing chronicity in this population. In particular it was proposed to determine whether age at onset, marital status, neuroticism, extroversion, depression severity, number of depressive episodes, length of initial depressive episode, and whether the patient was treated with antidepressants at follow up were associated with change in depression severity scores over time.

The last aim of this component of the study was to determine whether there were different patterns of change occurring in terms of depression severity, personality, depressive cognitions and anhedonia in the sub groups which emerged from the numerical taxonomy procedure. More specifically, were some groups of patients characterized by similar changes in all measures, reflecting a more "affective" condition, while were other groups characterized by changes in depression severity occurring without changes in personality cognitive style or anhedonia, reflecting more a personality disorder, or trait like disturbance?

## 2.2 Selection of subjects

### 2.2.1 Selection criteria

These criteria were designed to select a population which reflected characteristics of chronically depressed adult patients already described in the literature. Broadly, the population sought was to have complaints of depressed mood for greater than 2 years duration.

Inclusion criteria

1. Complaints of depressed mood for greater than 2 years.
2. Either sex.
3. Age greater than 18.
4. Literate in English.

Exclusion criteria

1. The presence of an organic psychiatric disorder.
2. The presence of a well documented non-affective psychotic disorder.
3. The presence of a personality disorder was not a criterion for exclusion.

The requirement for literacy in English was a practical one to facilitate the administration of questionnaires, it did however, lead to the exclusion of some otherwise eligible patients.

The criteria excluding patients with organic psychiatric disorder, and well documented non affective psychiatric disorders obviously had an effect on the nature of the population eventually studied. While patients with chronic affective psychotic disorders, for example schizophrenia, may suffer from chronic depressive symptoms, it was considered that their exclusion was warranted. Clinically, such patients are almost invariably considered as not suffering from chronic depression but rather from their underlying disorder. Also, difficulties distinguishing negative schizophrenic symptoms such as lack of motivation from affective symptoms were considered in deciding to exclude this group. Patients with organic psychiatric disorder were excluded as it was assumed that an unimpaired cognitive state would be required

to participate successfully in the assessment procedure. Much of the assessment procedure was related to the gathering of historical and longitudinal data. The reliability of such information gained from patients who were cognitively impaired was assumed to be low.

### 2.2.2 Sources of referral

In a nosological study it is of the utmost importance that patients selected are a representative group of the condition to be studied. According to Grove and Andreasen (1986), p. 349,

> *"an unrepresentative choice of clinical populations can mislead the investigator, making a vagary of sampling appear to be of taxonomic importance".*

The writer initially planned to conduct the study in the outpatient department of The Queen Elizabeth Hospital (T.Q.E.H.). The Q.E.H. is an university affiliated general hospital of approximately 600 beds. The writer had previously carried out research at T.Q.E.H. psychiatry outpatient department into drug prescription habits (Schrader et al 1986). Experience gained during this project had indicated that there was probably an adequate number of patients who would be suitable for the present study. However, a number of factors led to the writer to increase the number of referral sources. They were primarily related to a concern that a population recruited from a psychiatric outpatient clinic in a general hospital would not be entirely representative of the greater "universe" of patients with chronic depression. Firstly, there were concerns related to the nature of the population The Queen Elizabeth Hospital serves. The hospital is situated in the north western suburbs of Adelaide. The South Australian Health Commission (Social Health Atlas Project, 1990) has characterized this area of metropolitan Adelaide as having a population which is older, having a greater proportion of low income, and semi skilled workers and people receiving unemployment benefits and having a higher proportion of non English speaking residents. A population recruited from a general hospital in such an area would presumably reflect these findings and have a greater proportion of people of lower socio-economic class. This was of some concern as Akiskal (1990) had raised the

possibility that some forms of chronic depression were more likely to be treated in private settings. Also, the writer predicted from his experience working in psychiatric clinics in general hospital settings that a large proportion of patients would have co-existing medical illnesses. This medical comorbidity might not be present in chronically depressed patients treated in other settings.

Two solutions were considered to increase the representative nature of the population to be studied in terms of its age, socio-economic status and medical co-morbidity.

Firstly, patients were recruited from a community psychiatric outpatient clinic situated nearby The Queen Elizabeth Hospital, in an attempt to include patients without medical co-morbidity.

Secondly, a group of volunteer patients was recruited in an attempt to obtain a population more evenly balanced with respect to socio-economic status. There is considerable evidence that symptomatic volunteers are of a higher socio-economic status than psychiatric populations often studied (Brauzer and Goldstein 1973). While the use of "populations of convenience" such as university students in studies of psychopathology has been criticized on the basis that depressive symptomatology in such a group is unlikely to correspond to clinical depression (Rosenthal and Rosnow 1975), there is evidence to suggest that symptomatic volunteers recruited from community samples may approximate psychiatric "cases". Brauzer and Goldstein (1973) reported on the use of symptomatic volunteers in drug trials of tricyclic antidepressants and benzodiazepines. They found a significant difference between placebo and active drugs in symptomatic volunteers with symptoms of anxiety and depression. Overall, Goldstein et al (1971) reported that symptomatic volunteers when assessed by experienced observers using the Brief Psychiatric Rating Scale (BPRS) had symptom profiles which differed little from general psychiatric cases of simple anxious depressions. Barrett (1981) reported that by using a selection procedure to obtain a more severely disturbed group it was possible to obtain a group of symptomatic volunteers for whom RDC diagnoses could be made.

Parker and Blignault (1983) in a comparative study of neurotic depressions in symptomatic volunteers and psychiatric patients concluded that neurotic depressives could readily be obtained by seeking and screening a symptomatic volunteer group. Of note they reported that depression was more chronic in the symptomatic volunteer group.

The issue of the "caseness" of symptomatic volunteers in the present study was addressed in the following manner. It was decided to include only those volunteers currently in treatment for chronic depression in the study. As such these subjects are referred to as volunteer patients rather than symptomatic volunteers. As some of these volunteers may have been treated by general practitioners rather than psychiatrists it was thought appropriate to add two further "tests" of psychiatric caseness. Volunteers included in the study as well as being in treatment also had to score either above a cut off point for caseness on the General Health Questionnaire (GHQ) (Appendix 1) (Goldberg and Hillier 1979) or be taking antidepressant drugs to qualify as subjects.

### 2.2.3 Selection procedure

#### The Queen Elizabeth Hospital sample

The casenotes of all patients attending the psychiatric outpatient clinic at the hospital were reviewed to determine potential subjects who appeared to satisfy criteria for the study. Some 340 casenotes were reviewed. Subsequently, the patient's treating doctor in the clinic (either a psychiatrist or trainee psychiatrist) was contacted and asked to assess whether the patient did indeed satisfy inclusion criteria. The treating doctor was then asked to raise the issue of participation with the patient in the research project at the next scheduled visit.

Subsequently a letter was sent to the patient inviting him/her to participate in the project. If no response was forthcoming the patient was contacted by telephone and the nature of the project further explained. As a result of this procedure, 42 patients from the outpatient clinic were found to fulfill the selection criteria and completed the assessment.

The Beaufort Clinic sample

The two psychiatrists at this community psychiatric outpatient clinic were contacted and asked to review their caseloads and identify patients who appeared to satisfy the selection criteria for the study. They identified 14 patients. A similar process of contacting potential patients was followed as outlined above. A number of patients were eventually excluded on the basis of their lack of fluency in English and not fulfilling selection criteria at the assessment interview. 7 patients from the Beaufort Clinic completed the assessment.

The Volunteer Patient sample

An article briefly describing the research project and calling for volunteers (fig. 2.1) (see over) was inserted into local community newspapers in each part of metropolitan Adelaide. The local community newspaper in Adelaide is distributed free of charge to each household in metropolitan Adelaide. The estimated circulation for the newspapers is 450,000. I spoke with each person who responded to the article, explaining the nature of the research; that a treatment was not being offered and there was no monetary reward for participation. A number of respondents were clearly seeking treatment and in these instances I suggested they should see their local general practitioner for further help.

Those respondents who were in treatment for their depression and who appeared to satisfy selection criteria at this initial telephone contact were then sent a letter (Appendix 2) and a series of questionnaires which they completed at home and brought with them to the assessment interview. The doctors treating the patients were contacted (Appendix 2). 73% of these respondents were in treatment with private psychiatrists and the remainder were seeing their local doctor for their chronic depression. As previously mentioned two further tests of psychiatric "caseness" were applied. They were either that the patient had a score above a cut off point on the General Health Questionnaire or that the patient was taking antidepressant drugs. These further tests of caseness were required as approximately a quarter of the patients were in treatment with general practitioners, not psychiatrists, for their chronic depression.

FIGURE 2.1

Article appearing in 'Messenger Press' 1989

# Depressed needed for hospital trial

PEOPLE who suffer from chronic depression are being encouraged to take part in a trial at the Queen Elizabeth Hospital into the nature of this debilitating condition.

Dr Geoff Schrader of the Department of Psychiatry said this week the research project was designed to discover more about the factors which seem to make recovery for some people who experience depression so difficult.

"Hopefully results of the study will help more effective treatments for chronic depression to be developed," he said.

"The study involves people being interviewed and completing questionnaires in an attempt to understand the symptoms and experiences of the person," he said.

Dr Schrader on 45 0222 ext. 7552 would like to hear from people willing to participate in the study.

It was initially planned to screen symptomatic volunteers with the 28 item version of the GHQ (Goldberg and Hillier 1979). However, concern has been raised in the literature about the original scoring system of the GHQ when used to screen for chronic illness (Finlay-Jones and Murphy 1979). Goodchild and Duncan-Jones (1985) suggested a modification of the GHQ scoring system whereby "no more than usual" answers for negative items would score "1" rather than "0". They suggested a cut off point for caseness of a score greater than 12 using the revised scoring system. They called this scoring system the C GHQ for chronic GHQ. They demonstrated this scoring system was less likely to produce "false negatives" than the original scoring system. Koeter et al (1989) applied this revised scoring system to the 28 item GHQ in a sample of outpatients. They found that GHQ scores of patients with chronic disorders were significantly lower than patients without chronic disorders. The mean C GHQ scores between chronic and non chronic patients however, did not differ. They found that the largest reduction in "false negatives" occurred when a combination of the original and revised procedures was used. This entails caseness being defined as a GHQ score $\geq$ 5 or a C GHQ score $\geq$ 13. I decided to use this combined system in selecting volunteer patients for the study. Of the 55 respondents to the newspaper article, 38 satisfied all inclusion criteria.

## 2.3 Method

### 2.3.1 A comment on the reliability and validity of retrospective patient accounts

Before describing in detail the method of the study, the central issue of the reliability and validity of retrospective patient accounts will be briefly discussed.

In order to fulfil the aims of the investigation a broad range of information was required from each patient. As well as current phenomenology, information regarding the longitudinal history of each patient's chronic depression was required. In many instances corroborating information from casenotes was not available. Thus the writer was confronted with the issue of the reliability and validity of patients' retrospective accounts of the longitudinal history of depressive symptoms.

Most of the current description of chronic depression are based on retrospective patient reports of symptoms. Whether depressed patients' descriptions of the chronicity of their illness are affected by some form of negative retrospective bias is an interesting question, discussed by Koscis and Frances (1987) but not widely addressed in the literature. There is some evidence however, supporting the reliability and validity of self-reports of the longitudinal history of chronic depression. Kandel and Davies (1986) followed up adolescents who had reported depressive symptoms after nine years. They found that those who reported symptoms as adolescents were most likely to report symptoms as adults. Several studies have addressed the issue of the reliability of life time recall of psychiatric disorder (Mazure and Gershon 1979; Andreasen et al 1981; Robins et al 1984) and have generally concluded that it is possible to make reliable life time diagnoses if a structured interview approach is employed. For example, Andreasen et al (1981) found quite good re-test reliability over a 6 month period for depressive symptoms and for substance abuse but not for anxiety symptoms. Robins et al (1984) comment that recall of previous psychiatric symptoms is affected by the age of the patient, and the nature of the symptoms about which enquiry is being made. For example, milder symptoms may be more easily forgotten while more florid and possibly stigmatising symptoms may be suppressed.

Leckman et al (1982) reported a study which attempted to measure the validity of life time psychiatric diagnosis made by a structured interview, the SADS-L by comparing data obtained by the interview from a "best estimate of life time psychiatric diagnosis". The "best evidence of life time psychiatric diagnosis" was based on data from direct interview, medical records and family history data from relatives. They found that life time diagnoses based solely on information obtained from the SADS-L was nearly as good as "best estimate" diagnostic information for the diagnosis of major depression, drug and alcohol abuse, but not for minor depression.

Keller et al (1981) reported a study where the reliability of rating past psychiatric symptoms and life time diagnoses in patients who were currently ill was found to be high for most diagnoses. Instruments used were the SADS and the RDC. Different raters from different centres assessed 25 patients. Kappa coefficients for background information were high, e.g. outpatient treatment 0.94, age first hospitalised 0.94, number of psychiatric hospitalisations, 0.91. The Kappa coefficients for past episodes of major depression were .82 and for alcohol dependence 0.67. For individual symptoms of depression similarly high Kappa values were found, for example: age at first episode 0.74, suicidal thoughts 0.68, sleep disturbance 0.79, loss of energy 0.77, depressed mood 0.77. For suicidal behaviour, Kappa was 0.97 for the number of attempts. There was more difficulty in reliably assessing the RDC diagnosis of recurrent unipolar depression. The problem appeared to arise in determining whether the present episode of depression was part of a chronic or episodic picture.

However, Parker (1987) cautioned against ready acceptance of other recently published life-time prevalence data. In particular he took issue with the ECA study. These data were generated from the lay interviewer administered DIS in community samples. He argued that there is little in the literature to support the validity of interviews determining life time prevalence of affective disorder in community samples, and that the ECA life time prevalence data under-estimate to a great extent the prevalence of affective disorder. Bromet et al (1986) similarly reported poor reliability of life time diagnosis of major depression in a community

sample where subjects were interviewed using the SADS-L and then re-interviewed 18 months later. Of note, they reported that even those women who reliably reported life time episodes of depression were unreliable in their reporting of details such as the age at first episode and the length of the first episode. Interestingly, they found that women who were depressed at the second interview or who had more psychiatric problems in between the interviews gave more reliable accounts. This finding mirrors that found in other studies into the reliability of retrospective accounts of health events such as hospitalisation or chronic illness (Madow 1973) where patients who were ill at the time of assessment gave more reliable historical information.

There have been few prospective studies in the psychiatric literature of the recollection of the fine detail of affective experience. Schrader et al (1990) found that inpatients tended to over estimate the intensity of their recent previous affective experience. In this study inpatients were administered the Zung Self Rating Depression Scale on two occasions separated by one week. On the second occasion they were also asked to complete the scale "as they had been feeling one week previously". Interestingly, it was found that patients who were more depressed initially had more accurate recall of their symptoms.

The literature therefore raises important caveats about the validity and reliability of retrospective accounts of illness, psychiatric or otherwise. There is evidence, particularly in community studies, of an under estimation of life time diagnosis of affective disorder (Parker 1987). Inevitably, problems with recall, particularly in older patients and problems with suppression of socially stigmatising symptoms will tend to reduce reporting of previous illness episodes. The reliability of retrospective accounts appears to be better amongst patients (Keller et al 1981), particularly among those who continue to have symptoms at the time of interview. However, the problem of the effect of the current mental state of a depressed patient having a "negative distorting effect" in the recollection of information regarding previous illness episodes has not been widely studied.

In view of these difficulties, the author considered that the best available approach to gather valid and reliable information about patient's psychiatric histories would be to combine information from interviews of the patient and family members and case records. Several factors mitigated against this approach being taken in this investigation. Firstly, approximately half the patients studied were not in treatment at The Queen Elizabeth Hospital where I had ready access to casenotes. These patients were in the main in treatment by psychiatrists in private. Many had seen numerous doctors over time periods of up to 40 years. As such, case records were not easily available. Practical, logistic and time constraints made it not possible to interview family members of each patient. For those patients for whom casenotes were available, that is the group of patients attending the psychiatric outpatient clinic at T.Q.E.H., casenotes were used to verify information from interviews. The decision to proceed with the investigation using the direct interview as the primary source of information regarding the patient's psychiatric history was taken with the understanding that the findings of the study would require interpretation in light of the previously mentioned data.

### 2.3.2 Clinician rated instruments

#### 2.3.2.1 The development of a structured interview for chronic depression

In order to test the validity of Akiskal's classification, information regarding the criteria said to distinguish between his proposed sub groups of chronic depression was required. Furthermore, information regarding other facets of the patients illness and history was required to help validate any classification which emerged from the multivariate analysis. Finally, in order to address hypotheses regarding changes over time in chronic depression, information regarding personality, cognitive style and anhedonia was required. As the proposed distinguishing criteria were derived from Akiskal's classification, it initially seemed that his Mood Clinic Data Questionnaire (MCDQ) (Akiskal 1984) would be a good means of collecting data. This instrument collates in a semi-structured manner, information regarding the variables which Akiskal used to develop his classification. Diagnostic criteria used in the instrument are a mixture of "St Louis" criteria (Feighner 1972) and Research Diagnostic Criteria (RDC) (Spitzer et al 1978) as incorporated into DSM-III. The family history diagnostic criteria used in the

instrument are derived from Winokur's approach as it is incorporated into the RDC family history version (Andreasen et al 1977). The areas covered by the instrument are basically those covered in a clinical psychiatric assessment. The interviewer or collator of information is guided however, by the use of headings for example "chronological overview of past psychiatric history" and lists of diagnostic criteria.

The writer decided to use the MCDQ as a foundation for a more completely structured interview. It was hoped that by devising specific individual questions there would be a more reliable and uniform approach to data gathering in the study. The routine clinical psychiatric interview was the template for this structured interview. The interview schedule is appended (Appendix 3). The following areas were covered in the interview:

1. Demographic information
2. Longitudinal history of illness
3. Pre-morbid personality
4. "Sub affective" symptoms
5. Family history
6. Medical co-morbidity
7. Treatment
8. Developmental history
9. Marital history
10. Personality assessment, Schneider, DSMIII
11. Current DSMIII diagnosis (SCID)
12. Depression Severity (Hamilton Rating Scale)

1. Demographic information:

Information was sought regarding age, sex, marital and employment status. Each subject's living arrangements were determined. Questions were also asked regarding whether the subject was receiving welfare benefits and whether they were born in Australia.

2. Longitudinal history of illness:

This section contained an overview of current symptoms. There were questions relating to how long the person had been depressed, had been in treatment, and whether their depressed mood was intermittent or constant. There were also questions attempting to determine the nature of symptoms when first depressed and the nature of treatment at that time. The length of the first episode and the number of subsequent episodes was sought. Enquiry was also made into the patient's history of suicidal behaviour. An attempt to ascertain the presence of any psychiatric disorder pre-dating an affective disorder was made. Akiskal's MCDQ criteria for diagnosing any other previous psychiatric disorder were followed.

Specific variables extracted from this section for the cluster analysis included:

Variable 1. "Age of onset" (QST022)

Variable 2. "Nature of the first depressive episode" this variable was designed to reflect the extent to which the first depressive episode was recollected as having "endogenous" features. This variable was a summation of QSTs 025, 026, 027, 028 which deal with vegetative symptoms and the nature of treatment during the first depressive episode. A higher score indicated the presence of more endogenous symptoms and treatment with ECT or antidepressant drugs when first depressed.

Variable 3. Whether the depression was continuous or intermittent, (QST 016).

Variable 4. Whether depression was preceded by another non-affective psychiatric disorder, (QSTs 044-051).

3. Premorbid personality:

This section consisted of a direct attempt to have the patient describe their personality prior to the onset of their first depressive illness. Patients were asked to offer adjectives which described their personality before their first depression (QST054). These were assessed as

being either predominantly positive or negative in terms of self esteem, confidence and pessimism and as a result variable 5, "premorbid personality" was derived.

4. Sub-affective symptoms:

This section included an attempt to have patients assessed in terms of a persisting "mild melancholic" temperament. This notion is central to Akiskal's concept of sub-affective dysthymia. Patients were asked questions regarding persisting psychomotor inertia, hypersomnia, anhedonia and diurnal mood variation, QST 056-059. In order to be a stringent test of persistent symptoms, patients were asked if these symptoms were present when "at their best". Variable 6, relating to persisting sub-affective symptoms was the summation of these items.

5. Family history:

This section followed the MCDQ, using the family history method of eliciting information about patients' relatives. This method is less reliable than the family study method where relatives are directly interviewed. It tends to under estimate the number of affected family members. However, for the reasons of practicality previously mentioned, it was not possible to interview family members. The criteria used to diagnose psychiatric disorder in family members were those used in Akiskal's MCDQ which in turn were derived from the RDC family history version (Andreasen et al 1977). Morbid risk was calculated using the abridged Weinberg method (Slater and Cowie 1971) to calculate bezugziffers for the age corrected rates of psychiatric disorders in relatives. The risk periods employed were 18-59 for affective disorders and 18-39 for alcoholism. Following Klein et al (1988b), age corrected prevalence rates were calculated separately within the family of each patient and the family was used as the unit of analysis. Morbid risk data for depression, variable 7, and alcohol dependence, variable 8, were entered into the cluster analysis.

6. Medical co-morbidity:

This section consisted of an enquiry into the patient's medical history, looking firstly at his subjective appreciation of any illness. The interviewer also made an objective judgement of the seriousness of the medical condition on the basis of the casenotes (where they were available and where they contained information regarding the illness) and the disability attributable to the particular illness. He also assessed whether the medical condition pre-dated the onset of the depression. The variable included in the cluster analysis was QST 073 which reflected the interviewer's assessment.

7. Treatment:

An enquiry was made into the longitudinal treatment history, for example QST 013, 024, 028-32, and also into current treatment, specifically the nature of any pharmacological treatment (QST 075) at the time of the initial interview. Information relating to treatments used when first depressed was used in the cluster analysis in the derivation of the variable 2, "nature of first depressive illness". Information regarding current treatment was also collected, to provide validation for any groups produced in the classification process.

8. Developmental history:

(QST 075-102) Information sought in this section was predominantly that gathered in a general psychiatric clinical assessment. Areas covered included childhood relationships with parents, developmental object loss, and exploration of childhood nervousness, school friendships and romantic disappointments. Developmental loss was assessed according to Akiskal's modification of Amark's (1951) criteria: (1) proband born out of wedlock and parents did not subsequently marry or live together (2) one or both parents lost by death before proband 15, (3) parents divorced or separated before proband 15, (4) proband lived in foster homes or orphanages. This information was not used in the cluster analysis, but rather reserved for possible validation of any sub groups.

9. Marital history:

(QST 102-146) This section included enquiry into the patient's perception of their marital relationship, their spouse's health, alcohol intake, and sexual relationship. Also the patient's perception of the effect of their depression on the relationship was sought. Enquiry was also made into the number of children the patient had and how often the patient had contact with their children. This information was not included in the cluster analysis, but reserved for possible validation of any groups.

10. Personality assessment:

The interviewer made an assessment of the patient's personality using information gained at interview and where possible from casenotes. Two forms of personality assessment were made. The first consisted of the interviewer's judgement as to whether the 7 characteristics of Schneider's "Depressive Personality" were present. (Akiskal suggested that Schneider's depressive personality is particularly associated with "sub affective" dysthymia.) The reliability of Schneider's typology for personality disorders varies between types of disorder; but it has been reported as high (with a Kappa value of .75) for the depressive type (Standage 1979). Klein (1990) furthermore reported moderate to good inter rater reliability, internal consistency and test retest stability for Akiskal's operationalized form of the Schneiderian Depressive Personality. A summation of QST 147-153 was included in the cluster analysis to derive variable 10, "presence of Schneiderian Depressive Personality features".

In order to assess the presence of other personality traits which were required as distinguishing criteria in Akiskal's classification, a DSMIII personality diagnosis was made. The interviewer reviewed criteria for each personality diagnosis before judging its presence in the patient. Variable 11, consisting of a summation of scores for histrionic personality, borderline personality and anti-social personality was included in the cluster analysis as in reflection of the "unstable" personality associated with Akiskal's "character-spectrum disorder".

11. Current DSMIII diagnosis:

It was felt important to gauge how patients in the study would be diagnosed according to a contemporary general psychiatric classification system. It was of particular interest to discover whether patients would have non-affective diagnoses in addition to or in place of affective disorder diagnoses. In order to make DSMIII diagnoses in a reliable manner, portions of the Structured Clinical Interview for DSMIII (SCID) (Spitzer et al 1985) were used in the study. The SCID is a structured interview designed for use by interviewers experienced in eliciting psychopathology. The major advantage of the SCID over other structured interview schedules, for example the Diagnostic Interview Schedule (DIS) (Robins et al 1981), is that the interviewer is clinically experienced and is required to exercise his clinical judgement regarding the presence or absence of symptoms. The interviewer makes specific diagnoses as he progresses through the schedule. There is evidence in the literature (Riskind et al 1987) of acceptable inter rater reliability for the SCID.

The SCID has a "modular" structure which enables portion of the entire interview to be omitted depending on the nature of the investigation. In the present study modules for the following diagnoses were incorporated into the interview. Current major depressive episode; adjustment disorder with depressed mood; dysthymic disorder; current manic episode; past manic episode; panic disorder; agoraphobia without panic attacks; social phobia; simple phobia; obsessive compulsive disorder; generalised anxiety disorder; somatisation disorder; hypochondriasis; undifferential somatoform disorder; alcohol dependence (life time); substance abuse (life time). A further module was used to screen for the presence of psychotic symptoms at some time. It was hoped that use of the SCID would provide a reliable estimation of psychiatric co-morbidity amongst the sample, particularly with respect to anxiety, somatoform and substance dependence disorders. For this study exclusion criteria relating to the presence of affective disorder when making other diagnoses were suspended.

The 1985 version of the SCID used in the study, while titled the Structured Clinical interview for DSMIII-R, the instrument still used predominantly DSMIII criteria, particularly

for affective disorders. Therefore diagnoses generated are DSMIII rather than DSMIII-R. While diagnostic information from the SCID portion of the interview was used in the cluster analysis to derive variable 12, "presence of alcohol or other substance dependence", in the main this information was gathered for the purpose of assigning conventional diagnoses to patients in the groups which emerged from the cluster analysis.

12. Depression severity:

While a measure of depression severity was not a variable to be included in the cluster analysis, it was felt that an interviewer rated measure of depression severity would be helpful in terms of a general description of patients and would allow comparison with other published studies into chronic depression. Depression severity was also seen as a possible "symptomatic external validator" of any groups which emerged from the cluster analysis. The 17 item Hamilton Depression Scale (Hamilton 1960) was used in the study. (QST 165-182). The concentration of items relating to "physiological" changes associated with depression viz psychomotor changes, sleep disturbance and weight loss was of some concern, given suggestions in the literature that more "psychological" depressive symptoms may be more prevalent in chronic depression (Koscis and Francis 1987). However, given the widespread use of the Hamilton Scale it was included for comparative purposes.

2.3.2.2 The interviewer

The writer undertook each of the interviews with subjects in the study. In an ideal experimental situation the interviewer would be blind to the hypotheses to be tested by the data gathered in the study. Clearly, I had formulated the hypotheses to be tested in this study, and therefore it is conceivable, that at some level, a bias towards grouping a subject's responses in some expected manner was possible. For practical reasons, it was not possible to have another experienced psychiatrist perform the interviews. I therefore tried to reduce possible biases by a number of means.

Firstly, I devised the previously described structured interview to encourage a uniform approach to data gathering from each patient in the study. Secondly, a large amount of data was collected from each person. It could be argued that it might be more difficult to unconsciously bias a patient's responses to produce desired patterns with such a large set of variables. On the other hand, the process of psychiatric diagnosis in a clinical setting is one of the recognition of patterns of response amongst a large number of patient responses, and it is therefore conceivable that a systematic bias towards particular sets of patients' responses could

have occurred even with a large number of variables. Thirdly, I undertook a course of instruction in the use of the SCID as suggested by the authors of that instrument. Fourthly, I conducted a study to determine inter rater reliability with an experienced psychiatrist on the Hamilton Rating Scale. This proved to be adequate. Finally, I hoped that my 10 years experience in eliciting psychiatric phenomenology would assist rather than bias my eliciting of information.

### 2.3.3 Self report instruments

Each subject completed a number of self report questionnaires. The questionnaires were chosen to provide extra and complimentary information to that obtained by the direct interviewing of the subject. The questionnaires also provided quantitative information which could be used to address hypotheses relating to possible changes in personality, depression severity, depressive cognition and anhedonia over time. Furthermore, the literature review indicated that measures of the neuroticism and of depressive cognitions could vary among different sub groups of chronic depression. Similarly "anhedonia" might be expected to vary between chronic depressive sub groups. While depression severity would not necessarily vary between groups, the author was concerned that the Hamilton Rating Scale, included in the direct interview might not adequately capture degrees of mild to moderate depressive symptomatology. For that reason, a purportedly more sensitive measure of milder alterations in mood was included. None of these measures was used as a variable in the cluster analysis. Rather, it was proposed to use the scores from the questionnaires as possible validators of any group structure which emerged. Scores on the questionnaires were to be used in the longitudinal section of the investigation, where changes in scores over a one year follow up period would be monitored.

#### 2.3.3.1 Personality - The Maudsley Personality Inventory

The literature review suggested that the concept of neuroticism as measured by the Maudsley Personality Inventory (MPI) (Eysenck 1959) was associated with chronicity of depression. According to Eysenck (1959) neuroticism "refers to the general emotional lability

of a person, his emotional over responsiveness and his liability to neurotic breakdown under stress", while extroversion "as opposed to introversion refers to the outgoing, uninhibited, social proclivities of a person". The author decided to use the MPI in this investigation rather than the Eysenck Personality Inventory (Eysenck and Eysenck 1964) (which was developed later) primarily because the bulk of research in the psychiatric literature regarding neuroticism and chronicity of depression had used the earlier instrument.

The MPI (Appendix 4) consists of 48 items, 24 measuring neuroticism and 24 measuring introversion. The two dimensions are seen as independent, (although it was the low correlation between neuroticism and introversion as measured by the MPI which led Eysenck to develop the EPI). The items of the MPI were selected after lengthy item analyses and factor analyses. Eysenck has described the psychometric properties of the MPI (Eysenck 1959).

2.3.3.2 Cognition

- The Dysfunctional Attitudes Scale
- The Hopelessness Scale

Two aspects of depressive cognitive style were measured: dysfunctional attitudes and hopelessness. Dysfunctional attitudes are those underlying common assumptions which according to Beck (1967) act as schemas by which people construe the world. Hopelessness, according to Beck et al (1974) can be defined as "a system of cognitive schemas whose common denominator is negative expectation about the future".

Weissman's Dysfunctional Attitude Scale (DAS) (1978) was chosen as a measure of dysfunctional attitudes. The initial item pool was chosen by Weissman to reflect the stable idiosyncratic beliefs that are said to predispose towards depression. Response to the items is on a modified Likert scale, scaled to ensure dysfunctional responses score highest. The items were chosen to represent seven value systems: approval, love, achievement, perfectionism, entitlement, omnipotence, and autonomy. The 100 item scale was later refined by factor analysis to produce two 40 item scales the DASA and DASB. Weissman tested the

psychometric properties of the DAS using data from undergraduate university students, and found high correlations between scores for the two forms. Validity for the DAS was seen in terms of its positive correlation with scores on the Story Completion Test (Hammen and Krantz 1976) a purported measure of depressive cognitive distortions, the Beck Depression Inventory (BDI) (Beck et al 1961) and the depression scale of the Profile of Mood States (POMS) (McNair et al 1971).

Properties of the DAS have been examined in an Australian context (Parker et al 1984) and normative scores were found to be similar as to those in North America. They suggested that the A form of the DAS might be more useful for clinical and research use as factor analyses of the A form led to more readily comprehensible constructs. They found DAS scores were not correlated with neuroticism as measured by the EPI, although Schrader et al (1986a) found a significant correlation between introversion measured by the MPI and DAS scores in patients who had recovered from a depressive disorder. In the present study the A form of the DAS was used (Appendix 5).

Hopelessness was measured in the present study using the Hopelessness Scale (HS) (Beck et al 1974) (Appendix 6). Following Stotland (1969), who argued that "a person's hopelessness can be objectified by defining it in terms of a system of negative expectancies concerning himself and his future", Beck constructed an instrument to reflect these negative expectancies. It consists of 20 true or false items. The items were selected from a "semantic differential" test of attitudes about the future (Heimberg 1961) and from pessimistic statements made by psychiatric patients who had been judged as appearing hopeless by clinicians. A higher score indicates a more hopeless attitude. Beck et al (1974) presented evidence for the reliability of the HS in terms of coefficient alpha which gave a reliability coefficient of .93. The HS was found to have concurrent validity in terms of correlation with clinical ratings of hopelessness, the pessimism item of the BDI and with the Stuart Future Test, a semantic differential test (Stuart 1961).

2.3.3.3 Anhedonia - The Pleasure Scale

The literature review had suggested that anhedonia might be characteristic of some forms of chronic depression, for example, Akiskal's sub affective dysthymia. There was also some evidence of enduring decreased capacity to experience pleasure in some patients who had recovered from depression (Clark et al 1984), although there were no studies reporting systematically on the presence of anhedonia in the chronically depressed. The concept of anhedonia is an important one because of its presence implies (Klein 1974) a favourable response to antidepressant treatment. In practice difficulties regarding the assessment of the presence of anhedonia often relate to problems distinguishing it from demoralization.

The investigator chose to use the Pleasure Scale (PS) (Fawcett et al 1983), as the authors had recognized and attempted to overcome this difficulty (Appendix 7). The PS was developed by a group of clinicians experienced in the treatment of mood disorders. They developed a pool of sentences meant to reflect gratifying situations for people regardless of age, sex or life circumstances. Subjects are asked to rate on a 5 point scale how much pleasure they would experience in such a situation, regardless of its real life applicability. Responses are averaged to yield a mean pleasure score, high scores suggest a great capacity for experiencing pleasure and low scores a diminished capacity. In terms of distinguishing between anhedonia and demoralization, Fawcett et al (1983) suggested that while demoralized patients often will not admit to any form of enjoyment on direct enquiry, they become able to "experience pleasure passively when they are not called upon to initiate or pursue pleasurable activities themselves". They argued that by asking subjects to respond passively to pleasurable situations "remote in time and presented under fictional or ideal circumstances" demoralized patients would admit to experiencing pleasure while anhedonic patients would not.

Fawcett et al (1983) reported the split-half reliability of the PS as good, with a Spearman-Brown correlation coefficient of .94. Cronbach's $\alpha$ for the items yielded a coefficient of .96 suggesting the items belong to a single underlying dimension. In terms of its validity, scores on the PS correlated significantly with the Chapman Anhedonia Scale

(Chapman et al 1976), depression scores and hopelessness scores. There was no correlation with neuroticism (MPI). The Chapman Anhedonia Scale has some disadvantages compared with the PS as it is longer and shows a significant correlation with age.

2.3.3.4 Depression severity - The Inventory for Depressive Symptomatology

In order to capture variations between milder degrees of depressive symptomatology, the author administered the Inventory for Depressive Symptomatology (IDS) (Rush et al 1986) (Appendix 8). The self rated form of the IDS was devised to measure signs and symptoms of depression in both inpatients and outpatients. Items were developed by examination of existing questionnaires, diagnostic criteria and by expert clinical judgement. Items were selected to include criteria to diagnose DSMIII major depression, RDC endogenous depression, and also items used to differentiate atypical, endogenous and anxious depressives. Of note, the IDS has more points available between the upper range of a normal score and the mean depressive level compared with the Hamilton Rating Scale. Therefore, the IDS could be expected to be more sensitive to milder depressive symptomatology. The IDS has been reported (Rush et al 1986) to have good internal reliability with coefficient $\alpha = 0.85$, and to be valid in terms of significant correlations with the Hamilton Rating Scale and the Beck Depression Inventory.

2.3.4 Laboratory measures

The dexamethasone suppression test (DST) was performed. The literature review had suggested that some patients with chronic depression might have abnormal dexamethasone suppression although published reports had been equivocal. The outpatient version of the DST was used. This version of the DST requires only one venepuncture and is claimed to have only marginally less sensitivity for endogenous depression than the inpatient version (Carroll et al 1981). Cortisol levels were assayed using a radio-immuno assay technique (Amerlex Amersham Kit). A plasma cortisol greater than 160nmol/l at 1600,17 hours after the administration of 1mg of dexamethasone was taken as a non-suppressing result. This cut off point differs from that suggested by Carroll who suggested 138nmol/l (5ug/dl). It is the cut off

point used at the Institute of Medical and Veterinary Science in Adelaide. It was derived from probit analysis of local patient data and validated by data obtained locally from normals.

Carroll's exclusion criteria for medical conditions and drug treatment where the DST was likely to be misleading were applied. For practical reasons, the DST was performed only for Q.E.H. outpatient subjects and the community clinic subjects. These subjects were given instructions to take the 1mg dexamethasone tablet at 11.00 p.m. and were asked to return the following day at 1600 for the venepuncture. This visit also enabled them to complete the self rated questionnaires component of the assessment over night.

## 2.4 The procedure

### 2.4.1 Ethics approval

Ethical approval to conduct the study was sought and obtained from the relevant Ethics Committees of the University of Adelaide and The Queen Elizabeth Hospital (Appendix 9).

### 2.4.2 The initial interview

The procedure followed in the initial interview was the same for all patients, apart from the volunteer patients (VP) completing the questionnaires prior to the interviews and the OP and community psychiatric clinic patients completing them after the interview. This difference in ordering of the assessment occurred for the following reasons. As previously mentioned, whether the hospital outpatients and community clinic patients satisfied inclusion and exclusion criteria could be determined by reviewing their casenotes before the patient was interviewed. For the volunteer patients, extra criteria regarding "caseness" needed to be determined by direct interview and by their response to the C GHQ. While the initial telephone contact with these patients afforded an opportunity to assess whether they met entry requirements for the study, it was felt that direct interview was a more certain way of determining their suitability. To achieve this, as previously mentioned, these patients were sent a packet of the self rated questionnaires and asked to complete them at home and bring them to the initial assessment interview. For the volunteer patients, the package included the 28 item Chronic General Health Questionnaire (C GHQ). On arrival the C GHQ was scored. If on initial direct clinical assessment, they appeared to satisfy inclusion criteria and caseness criteria, the interview proceeded. The assessment of whether they satisfied exclusion criteria for inclusion, for example the absence of an organic psychiatric disorder, was made on the basis of clinical judgement at that stage. Mailing questionnaires to the VP group also eliminated the inconvenience of making two trips to the hospital. Many of the VPs lived at some distance from the hospital while the other patients generally lived close by.

The hospital OP patients and the community psychiatric clinic patients were interviewed and subsequently given the questionnaires to complete. These patients were (unlike the VP group) completing the DST, and therefore of necessity, needed to return to the hospital the

following day. These patients were instructed to complete the questionnaires at home and return them when they returned for venepuncture the next day. It was felt this difference in the ordering of the direct interview and self report questionnaire portions of the initial interview would probably not be of importance.

All initial interviews were conducted in the Department of Psychiatry at The Queen Elizabeth Hospital. Interviews took on average two hours to complete. Although some interviews took considerably longer, particularly if the subject had a long and complicated psychiatric history. After ensuring caseness and inclusion criteria were satisfied (for the VPs) and that consent had been obtained, the interview took the form outlined in the appendix. In general I attempted to keep to the form of the interview as written, however, if the patient appeared to require clarification of a question I would reframe questions. If inconsistencies in responses to questions arose, I would gently point these out and allow the subject to rethink his reply. I used clinical judgement to facilitate recall of specific symptoms when patients had previously in the interview given clues to the existence of symptoms in the past. In general, I applied the advice given in the SCID-R instruction manual regarding the administration of the entire interview. Put simply, this advice is to follow carefully the format of the interview but also to allow clinical judgement to prompt and assess responses.

### 2.4.2 Problems associated with the administration of the initial interview

The researcher felt that some patients found the interview was too long. There was some concern that fatigue could affect the reliability of the latter portions of the interview. However, this effect was not experienced by all patients. The interview had to some extent been designed with this problem in mind. For example, questions requiring detailed recall of details of early depressive episodes were placed early in the interview, when it was hoped the patients would be most alert. Questions regarding the phenomenonology of previous depression and current depressive state were clearly separated in the interview, in an attempt to reduce confusion in the patient regarding which episode was being considered. Notwithstanding these features of the interview schedule, the investigator found some patients

appeared to have considerable difficulty in relating specific symptoms to particular points in time in their psychiatric history, while others appeared to experience difficulties relating to fatigue.

### 2.4.3 The initial administration of questionnaires

As previously mentioned the order in which the questionnaires and interview were administered differed between the outpatient and the VP group. The questionnaires were administered in their published form (apart from the word "fun" being substituted for "gay" in item 38 in the MPI). Published instructions for these questionnaires vary as to whether they refer to the patients usual state or to how they feel at present. For example, the MPI and the DAS indicate the recipient should respond as they usually feel, while the IDS, PS and HS state or imply that the subject should respond as they are feeling recently or at present.

### 2.4.4 Problems with the administration of questionnaires

The author did not become aware of the existence of the IDS until the first 10 patients had been interviewed. Therefore IDS data on these patients is not available. Other problems with missing data arose with the OP group because of an oversight in checking whether respondents had completed all items of questionnaires when they returned them. Overall, the number of cases with missing data was felt to be sufficiently low as to not greatly affect the results.

### 2.4.5 The follow-up assessment

The follow-up assessment consisted of the set of questionnaires administered during the initial assessment namely the MPI, DAS, PS, and HS and the IDS. The VP patients also completed the 28 item C GHQ at follow-up. The patients were followed up on average 12 months after the initial assessment. Patients were contacted by mail initially (see Appendix 10) and invited to participate in the follow-up. If no contact was made, patients were then contacted by telephone. Those patients who could be contacted and who agreed to participate were then mailed the questionnaires and asked to complete them. This method achieved follow

up in about three quarters of cases initially seen. It was decided to base the follow-up portion of the investigation on data obtained from the self report questionnaires, as it was these measures which reflected in a quantifiable manner the personality, cognitive style, and hedonic tone of the patients. It was decided to use the self rated IDS as a measure of depressive severity on account of its purported greater sensitivity to milder degrees of depressive symptomatology than the direct interview HRS. Patients were also asked a series of questions related to the nature of their current treatment, namely whether and how often they saw their psychiatrist or general practitioner for depression and what medication they were taking (see Appendix 10).

## 2.5 Statistical analysis

### 2.5.1 Sample description

In order to achieve the aim of the first component of the study, viz a comprehensive description of a group of chronically depressed patients, a large amount of information regarding the entire sample is presented in tabular form. To enable comparison between patients recruited by different techniques, information regarding the volunteer patient group and the outpatient group is also presented separately.

Categorical data describing the OP and VP samples are presented in the form of contingency tables. Statistical analysis using the Chi square was performed after categories were pooled to give 2x2 tables. Fisher's exact test was applied when there were small expected frequencies. Differences between the VP and OP sub groups with respect to continuous data is generally presented in terms of means and standard deviations and t-tests are used to compare means, other than in those situations where the assumption of normality was violated. In those instances the appropriate non parametric univariate test was used, for example the Mann Whitney - U test. Alpha was set at 0.05 for this section, although clearly multiple decisions were being taken. Drawing multiple inferences by means of multiple univariate tests carries with it the risk of inflating the chance of erroneously rejecting one or more null hypotheses (Hall and Bird 1985). However, Bonferroni adjustment was not performed in this section, rather actual probability values have been given where possible, and a cautious approach has been taken in interpreting findings. In this, the investigator follows Siegel and Castellan (1988 p. 9) "in reporting his finding, the researcher should indicate the actual probability level associated with his findings, so that the reader may use his own judgement in deciding whether or not the null hypothesis should be rejected".

### 2.5.2 Numerical taxonomy

The investigator chose to use the SNOB numerical taxonomy programme (Patrick and Wallace 1990) as a means of attempting to confirm Akiskal's classification. The SNOB programme is described in the literature review (p 52 ). SNOB offers several advantages over

other cluster analysis programmes. Firstly the programme, not the user determines the optimum number of classes or groups present. Secondly, SNOB will not retrieve classes where none exist. These features in particular make SNOB an appropriate form of numerical taxonomy to confirm a predicted class structure. Thirdly, while other classifications use some arbitrary measure of similarity to compare subjects, SNOB assigns subjects to classes on the basis of the Wallace Information Measure (WIM). WIM is based on inductive inference and information theory (see p 52). Fourthly, output from the SNOB programme includes an estimation of the extent to which variables used in determining the class structure differ "significantly" in terms of their distribution within classes and within the whole population. Obviously the classes derived by numerical taxonomy differ *a priori* on the variables used in the analysis, and the "significance" values are illustrative only. SNOB indicates the level of "significance" at which a log-likelihood ratio test rejects the hypotheses that the within class and the whole population distributions are the same.

It is of note that in Akiskal's classification, while some differences between sub categories occur with respect to symptoms, the main differences occur in terms of longitudinal history, personality, family history and psychiatric and medical comorbidity. There has been some controversy in the psychiatric literature regarding the use of non symptomatic variables in cluster analytic studies. Ni Bhrolchain has argued (1979) that hypotheses regarding classification should be tested using only clinical symptoms and signs as variables. She holds that to include in the analysis variables such as the longitudinal history of illness and personality, variables she takes to be aetiological with respect to depression, leads to ambiguous results because the analysis incorporates the assumption that aetiological and symptom patterns are related in a one to one manner. However, Roth et al (1979, p. 94) dispute this claim. They argue that

> *"The investigator is justified in drawing upon all the features that characterise individuals who suffer from different forms of psychiatric disorder if by this means more clear delineation*

*of discrimination between clinical groups can be achieved*".

They dismiss Ni Brolchain's claims regarding any ambiguity created by including both aetiological and symptomatic variables in cluster analyses by asserting that as the aetiology of depression is unknown this is not an issue (p 94):

> "*If the causes of depressive illness were already known we would be in a position to investigate their relationship to variations in clinical profile. The true state of affairs is quite different. It is through the definition of clinically uniform groups of disorders, also differentiated from others by their course and outcome, that advances in knowledge of aetiology and the discovery of new treatments have been achieved in the past. So it is likely in the future. And in the quest for the most clear, simple and valid classification, all features that sharpen description and discrimination must be allowed to qualify for inclusion*".

While aware of Ni Brolchain's argument, the author viewed Roth et al's position as a persuasive justification for the inclusion of non symptomatic variables in the analysis in the present study.

The typology produced by SNOB was tested by repeating the analysis on the outpatient and volunteer patient samples separately.

The validity of the SNOB classification was further assessed by examining the typology in terms of variables which had not been used in the analysis. The SNOB programme has the capacity to estimate whether the distribution of a variable not used in the analysis differs significantly within classes and within the whole population. SNOB indicates the level of significance at which a log likelihood ratio test rejects the hypothesis that within classes and whole population distributions are the same.

2.5.3 Follow up data

In order to address the first and second aims of the follow up study, viz to assess changes over time in depression severity, measures of personality, cognitive style and anhedonia, questionnaire scores (6 measures) at 12 month follow up were compared with scores at the initial interview using a series of univariate tests. The Bonferroni adjustment was made, and alpha was set at 0.05/6 (Hall and Bird 1985). T-tests were used to compare means, other in those situations were the assumption of normality was violated. In those instances the appropriate non parametric univariate test was used, for example the Wilcoxon matched pairs test.

In order to address the third aim of the follow up study, viz the determination of factors associated with the persistence of chronicity, a stepwise multiple regression analysis was performed. The multiple regression analysis determined any associations between a set of independent variables and the dependent variable, change in depression severity score.

In order to address the fourth aim of the follow up study, viz to determine whether there were different patterns of change occurring in questionnaire responses over time in the groups derived from the numerical taxonomy analysis, a repeated measures MANOVA was performed to determine any effect of SNOB group membership on changes in questionnaire responses occurring over time.

All analyses apart from the numerical taxonomy procedure were performed using SPSSX. The SNOB programme is written in FORTRAN. It was obtained from its author, Professor C.S. Wallace of the Department of Computer Science, Monash University.

# CHAPTER 3

# RESULTS

## 3.1 Introduction

The results section is divided into three parts. In the first part, data are presented which address the first aim of the study, that is to provide a comprehensive description of a group of chronically depressed patients. In the second part, results of a numerical taxonomy analysis conducted to provide validation for Akiskal's classification are presented. Data describing the groups derived from the analysis in terms of other variables not used in the analysis are also presented in this section in order to provide further validation for the typology. In the final part of this section, data from the follow up component of the study are presented. These data address hypotheses outlined in the methodology section regarding changes over time in symptomatology in chronically depressed patients.

## 3.2 Sample characteristics

### 3.2.1 Introduction

In this section, data is presented which describes the sample of patients (n = 87) interviewed by the investigator. The section is divided into sub sections which reflect the format of the structured interview and the set of questionnaires which the patients completed.

While all patients satisfied inclusion criteria (see p 61), the sample (n = 87) was divided into 2 groups on the basis of the different methods of recruiting patients described in the methodology section (p 64).

The first group consisted of patients who were either recruited from The Queen Elizabeth Hospital Psychiatry Outpatient Clinic (n = 42) or the Beaufort Clinic Community Psychiatry Clinic (n = 7). These patients generally lived near T.Q.E.H. or the Beaufort Clinic in suburbs which had older populations of low socioeconomic status. This group was called the OP group (n = 49).

The second group consisted of patients who responded to a newspaper article describing the research project who satisfied inclusion criteria and who were also either in

treatment with a psychiatrist or general practitioner and who were either taking antidepressants or who had a chronic GHQ score $\geq$ 13 or a GHQ score $\geq$ 5. While this group was a "symptomatic volunteer" group, all subjects in the group were actually in treatment for chronic depression at the time of the assessment. This group was called the Volunteer Patient (VP) group. Of the 55 respondents to the newspaper article, 38 satisfied all criteria for inclusion.

To examine whether the VP group and the OP group were comparable, OP and VP data are presented separately in this section. It was predicted prior to the study that the OP group would be older and of a lower socioeconomic status and have more medical comorbidity than the VP group. As it emerged, the VP group patients were treated in non-institutional private settings, and therefore it was also possible to compare profiles of patients with chronic depression treated privately with those treated in general hospital/community psychiatric settings.

Alpha for this section was set at 0.05. Categories were pooled for the chi square analysis of categorical variables in order to produce sufficiently large expected frequencies (Seigal and Castellan 1988). Further discussion of the statistical analysis of these data is presented on page .

### 3.2.2 Sociodemographic characteristics

The socio-demographic profile of the population studied with a comparison between the OP and the VP groups is presented in Table 3.1 (see over).

The average patient was middle aged at evaluation, and more likely to be female (72%). One third of patients lived alone and 66% received social security benefits. One third were born outside Australia.

In general, the predicted differences between the OP and VP groups were found. The VP group was significantly younger ($t = 2.2$, $df = 85$, $p = 0.03$) and of significantly higher

socioeconomic status than the OP group ($x^2 = 14.5$, df = 1, p = 0.0001) both in terms of their occupations and father's occupation ($x^2 = 13.1$, df = 1, p = 0.0003). Fewer (but not significantly) VP patients were born outside Australia.

TABLE 3.1

Socio-demographic characteristics of the total sample (n = 87) with comparison between the OP (n = 49) and VP (n = 38) groups. Pooled categories indicated by bars

| | Total Sample | OP | VP | significance |
|---|---|---|---|---|
| Age (mean) (years) | 51.9 SD 13.7 | 54.7 SD 14.2 | 48.3 SD 12.4 | t = 2.2 df = 85 p = 0.03 (1 tailed) |
| Sex | | | | |
| male | 24 (28%) | 16 (33%) | 8 (21%) | $x^2$ = 0.78 |
| female | 63 (72%) | 33 (67%) | 30 (79%) | df = 1 p = 0.4 |
| Country of Birth | | | | |
| Australia | 60 (69%) | 30 (61%) | 30 (79%) | $x^2$ = 3.1 |
| Other | 27 (31%) | 19 (39%) | 8 (21%) | df = 1 p = 0.08 |
| Living Arrangements | | | | |
| alone | 29 (33%) | 14 (29%) | 15 (39%) | $x^2$ = .28 |
| spouse/partner | 25 (29%) | 17 (35%) | 8 (21%) | df = 1 p = 0.3 |
| spouse/partner & dependent children | 17 (20%) | 8 (16%) | 9 (24%) | |
| parents | 4 (5%) | 4 (8%) | 0 (0%) | |
| other | 12 (13%) | 6 (12%) | 6 (16%) | |
| Occupation | | | | |
| professional | 8 (10%) | 0 (0%) | 8 (22%) | $x^2$ = 14.5 |
| self employed | 2 (2%) | 1 (2%) | 1 (3%) | df = 1 |
| clerical | 4 (5%) | 1 (2%) | 3 (8%) | p = 0.0001 |
| skilled trade | 6 (7%) | 2 (4%) | 4 (11%) | |
| unskilled | 9 (10%) | 8 (16%) | 1 (3%) | |
| pensioner/unemployed | 57 (66%) | 37 (76%) | 20 (53%) | |
| Father's Occupation + | | | | |
| professional | 9 (11%) | 2 (4%) | 7 (19%) | $x^2$ = 13.1 |
| self employed | 10 (12%) | 1 (2%) | 9 (24%) | df = 1 |
| clerical | 6 (7%) | 1 (2%) | 5 (14%) | p = 0.0003 |
| skilled trade | 36 (42%) | 23 (47%) | 13 (34%) | |
| unskilled | 23 (27%) | 20 (41%) | 3 (9%) | |
| pensioner/unemployed | 1 (1%) | 1 (2%) | 0 (0%) | |

+ father's occupation was uncertain in 2 cases

### 3.2.3 Longitudinal history of depression

Information regarding the longitudinal history of depression for the entire sample with a comparison between the OP and VP groups is presented in Table 3.2 (see over).

Patients had been in treatment for depression for extensive periods of time, the mean length of time was 10.5 years. Forty eight percent of patients reported occasional periods (of at least one month) of euthymic mood, however the average time since such a euthymic episode was about 8.5 years. The majority of patients reported previous depressive episodes, with a mean number of 6.5 episodes. Forty eight percent of patients reported other psychiatric problems prior to the onset of their depression.

On average, patients felt only about 50% improved since their last depression. Patients reported on average more than one suicide attempt during their lifetime. This figure may have been inflated by several patients who had made multiple suicide attempts. Seven patients made more than 6 suicide attempts. Fifty four patients (62%) had made no suicide attempts.

Regarding differences between the OP and VP groups, unexpectedly the VP group had been in treatment significantly longer ($t = -4.1$, $df = 85$, $p = 0.0001$). While not achieving significance, the VP group had more reported previous depressive episodes, more had attempted suicide and proportionately more reported other psychiatric problems prior to the onset of their first depression. The VP group had improved less since their most recent depression.

TABLE 3.2

Longitudinal history of illness for the whole sample (n = 87) with comparison between the OP (n = 49) and VP (n = 38) groups. Pooling of categories is indicated by bars

| | Total Sample | OP | VP | significance |
|---|---|---|---|---|
| Mean time in treatment (years) | 10.5<br>SD = 9.1 | 7.2<br>SD = 6.1 | 14.8<br>SD = 10.6 | t = -4.1<br>df = 85<br>p = 0.0001 |
| Presence of occasional euthymic periods (not less than one month) | | | | |
| yes | 42 (53%) | 24 (49%) | 18 (49%) | $x^2$ = 0.4 |
| no | 23 (29%) | 11 (22%) | 12 (32%) | df = 1 |
| unsure | 15 (18%) | 8 (16%) | 7 (19%) | p = 0.5 |
| Mean time since last euthymic period (months) | 101.6<br>SD = 149.8 | 81.2<br>SD = 146.7 | 127.9<br>SD = 151.7 | t = -1.53<br>df = 85<br>p = 0.1 |
| Previous depressive episode | | | | |
| yes | 62 (79%) | 32 (73%) | 30 (86%) | $x^2$ = 1.9 |
| no | 9 (11%) | 5 (11%) | 4 (11%) | df = 1 |
| unsure | 8 (10%) | 7 (16%) | 1 (3%) | p = 0.16 |
| Mean number of previous depressive episodes | 6.5<br>SD = 12.8 | 4.5<br>SD = 5.4 | 8.9<br>SD = 18.1 | t = -1.44<br>df = 85<br>p = .016 |
| Ever attempted suicide | | | | |
| yes | 33 (38%) | 21 (43%) | 12 (32%) | $x^2$ = 1.15 |
| no | 54 (62%) | 28 (57%) | 26 (68%) | df = 1<br>p = 0.3 |
| Mean number of suicide attempts | 1.8<br>SD = 5.6 | 2.5<br>SD = 7.1 | .8<br>SD = 7.9 | t = 1.55<br>df = 85<br>p = 0.13 |
| Other psychiatric problems prior to first depression | | | | |
| yes | 42 (48%) | 20 (41%) | 22 (58%) | $x^2$ = 1.8 |
| no | 39 (45%) | 25 (51%) | 14 (37%) | df = 1 |
| unsure | 6 (7%) | 4 (8%) | 2 (5%) | p = 0.18 |

TABLE 3.2 (cont)

| | Total Sample | OP | VP | significance |
|---|---|---|---|---|
| Nature of previous psychiatric problem | | | | |
| alcoholism | 2 | 2 | 0 | † |
| anxiety disorder | 35 | 17 | 18 | |
| phobic disorder | 3 | 1 | 2 | |
| obsessive compulsive disorder | 1 | | 1 | |
| anorexia nervosa | 1 | | 1 | |
| % improved since last depression | | | | |
| mean | 54.6<br>SD = 25.0 | 57.1<br>SD = 27.0 | 51.8<br>SD = 22.7 | t = 0.91<br>df = 85<br>p = 0.4 |

* using Feighner Criteria from Akiskal's Mood Clinic protocol.
† no test of significance performed.

Information regarding current treatment is presented inTable 3.3 (see below). With respect to current treatment, 85% of patients reported taking some form of psychotropic medication (Table 3.3). Significantly fewer VP patients ($x^2 = 4.04$, df = 1, $p < 0.05$) reported taking medication.

TABLE 3.3

Current psychotropic drug treatment: Characteristics of entire sample (n = 87) with comparison between OP (n = 49) and VP (n = 38) groups

| | Entire group | OP | VP | significance |
|---|---|---|---|---|
| Prescribed psychotropics | | | | $x^2 = 4.04$ |
| Yes | 74 (85%) | 45 (92%) | 29 (76%) | df = 1 |
| No | 13 (15%) | 4 (8%) | 9 (24%) | $p < 0.05$ |
| Prescribed antidepressants | | | | $x^2 = 0.1$ |
| Yes | 51 (59%) | 28 (57%) | 23 (56%) | df = 1 |
| No | 36 (41%) | 21 (43%) | 15 (44%) | $p > 0.05$ |
| Prescribed benzodiazepines | | | | $x^2 = 6.59$ |
| Yes | 45 (52%) | 31 (63%) | 14 (37%) | df = 1 |
| No | 42 (48%) | 18 (37%) | 24 (63%) | $p < 0.05$ |
| Multiple psychotropics | | | | $x^2 = 0.4$ |
| Yes | 44 (59%) | 17 (38%) | 13 (45%) | df = 1 |
| No | 30 (41%) | 28 (62%) | 16 (55%) | $p > 0.05$ |

Of note, 59% of patients were taking antidepressant drugs. There was no significant difference in the numbers of patients taking antidepressants between the OP and the VP group.

Approximately half the patients reported taking benzodiazepines (Table 3.3), there were significantly more patients ($x^2 = 6.59$, df = 1, $p < 0.05$) taking benzodiazepines in the OP group .

Only ten percent of patients reported taking neuroleptic drugs. 2 patients were taking lithium carbonate.

One third of subjects overall were taking a single psychotropic drug and in 73% of these cases the drug was an antidepressant. There was no significant difference between the OP and VP groups in terms of numbers of patients taking multiple psychotropic drugs (Table 3.3). 11% of patients were taking more than 2 psychotropic drugs.

## 3.24 Characteristics of first depressive episode

Information regarding the nature of the first depressive episode is presented in Table 3.4 (see over).

Patients first developed depressive symptoms on average in their early thirties. The average length of the first depressive episode was between 3 and 4 years. Eighty-five percent recollected a life event occurring prior to the onset of their first depression. 84% of patients reported their first depression interfered with their capacity to work. 15% did not seek medical help. Half the patients were hospitalised for their first depression. Half the patients remembered suicidal ideation when first depressed and about a quarter recollected making a suicide attempt.

While 27% reported a definite recollection of terminal insomnia and 21% recollected diurnal mood variation. 53% recollected anhedonic feelings. The majority of patients were treated with some form of medication either alone or in combination with psychotherapy or ECT. One fifth of patients were treated with ECT. Few patients were treated with psychotherapy alone. Only half the patients viewed the treatment for their first depression as being helpful.

Regarding these variables, there were no significant differences between the VP and OP groups (Table 3.4) apart from the VP group being younger at the time of their first depression; and the OP group being less likely to perceive their treatment as helpful.

TABLE 3.4

Nature of first depressive episode: characteristics of whole sample (n = 87) with comparison between OP (n = 49) and VP (n = 38) groups. Pooling of categories indicated by bars

| | Total Sample | OP | VP | significance |
|---|---|---|---|---|
| Mean age when first sought any treatment (years) | 33.2<br>SD = 14.9 | 35.3<br>SD = 15.1 | 30.5<br>SD = 14.6 | t = 1.7<br>df = 85<br>p = 0.09 |
| Mean age when first depressed (years) | 33.1<br>SD = 15.2 | 36.2<br>SD = 15.5 | 29.1<br>SD = 14.3 | t = 2.1<br>df = 85<br>p = 0.03 |
| Mean length of first depressive episode (months) | 43.3<br>SD = 84.2 | 47.3<br>SD = 94.7 | 38.1<br>SD = 69.2 | t = 0.47<br>df = 85<br>p = 0.6 |
| Event prior to onset | | | | |
| yes | 74 (87%) | 43 (90%) | 31 (84%) | $x^2$ = 0.62 |
| no | 7 (8%) | 3 (6%) | 4 (11%) | df = 1 |
| unsure | 4 (5%) | 2 (4%) | 2 (5%) | p = 0.4 |
| Sought medical help | | | | |
| yes | 74 (85%) | 41 (84%) | 33 (87%) | $x^2$ = 0.004 |
| no | 13 (15%) | 8 (16%) | 5 (13%) | df = 1 |
| unsure | 0 | 0 | 0 | p = 0.9 |
| Terminal insomnia when first depressed | | | | |
| yes | 39 (46%) | 23 (47%) | 16 (42%) | $x^2$ = 0.34 |
| no | 24 (27%) | 10 (20%) | 14 (37%) | df = 1 |
| unsure | 24 (27%) | 16 (33%) | 8 (21%) | p = 0.5 |
| Diurnal variation of mood when first depressed | | | | |
| yes | 19 (22%) | 11 (27%) | 8 (21%) | $x^2$= 0.0008 |
| no | 23 (49%) | 23 (47%) | 20 (53%) | df = 1 |
| unsure | 25 (29%) | 15 (31%) | 10 (26%) | p = 0.9 |
| Anedonia when first depressed | | | | |
| yes | 46 (53%) | 26 (53%) | 20 (53%) | $x^2$ = 0.003 |
| no | 19 (22%) | 12 (25%) | 7 (18%) | df = 1 |
| unsure | 22 (25%) | 11 (22%) | 11 (29%) | p = 0.9 |

TABLE 3.4 (cont)

| | Total Sample | OP | VP | significance |
|---|---|---|---|---|
| Nature of treatment * | | | | |
| none | 15 (17%) | 8 (17%) | 7 (18%) | $x^2 = 0.07$ |
| tablets | 15 (17%) | 9 (18%) | 6 (17%) | df = 2 |
| psychotherapy | 5 (6%) | 3 (6%) | 2 (5%) | p = 0.9 |
| ECT | 3 (3%) | 2 (4%) | 1 (3%) | |
| tablets and psychotherapy | 32 (37%) | 17 (35%) | 15 (39%) | |
| ECT and tablets | 16 (19%) | 9 (18%) | 7 (18%) | |
| other | 1 (1%) | 1 (2%) | 0 | |
| Patient's perception of treatment efficiency | | | | |
| helpful | 34 (47%) | 24 (59%) | 10 (32%) | $x^2 = 4.8$ |
| unhelpful | 26 (36%) | 11 (27%) | 15 (48%) | df = 1 |
| unsure | 12 (17%) | 6 (14%) | 6 (20%) | p = 0.03 |
| Depression interfered with work | | | | |
| stopped work | 39 (45%) | 24 (49%) | 15 (39%) | $x^2 = 0.38$ |
| continued work but affected | 35 (40%) | 17 (35%) | 18 (47%) | df = 1 |
| no | 13 (15%) | 8 (16%) | 5 (14%) | p = 0.5 |
| Hospitalised for first depression | | | | |
| yes | 43 (49%) | 22 (45%) | 21 (55%) | $x^2 = 1.09$ |
| no | 42 (48%) | 27 (55%) | 15 (39%) | df = 1 |
| unsure | 2 (3%) | 0 | 2 (6%) | p = 0.3 |
| Suicidal ideation when first depressed | | | | |
| yes | 43 (50%) | 20 (41%) | 23 (61%) | $x^2 = 0.51$ |
| no | 32 (37%) | 20 (41%) | 12 (32%) | df = 1 |
| unsure | 12 (13%) | 9 (18%) | 3 (6%) | p = 0.5 |
| Suicide attempt when first depressed | | | | |
| yes | 20 (23%) | 11 (22%) | 9 (24%) | $x^2 = 1.9$ |
| no | 67 (77%) | 38 (78%) | 29 (76%) | df = 1 |
| unsure | 0 | 0 | 0 | p = 0.16 |

* pooled categories: none vs tablets, psychotherapy, tablets and psychotherapy, other vs ECT, ECT and tablets

### 3.2.5 Patient's perception of premorbid personality

Information regarding patient's perception of their premorbid personality with a comparison between the OP and VP groups is presented in Table 3.5 (below).

Approximately one fifth of patients described themselves as unhappy, gloomy and pessimistic prior to the onset of what they saw as their first depression. The investigator judged adjectives patients had used to describe their premorbid personalities to be negative in about one third of cases.

There were no significant differences between the OP and VP groups although more VP patients viewed their premorbid personalities as being gloomy.

TABLE 3.5

Patient's perception of premorbid personality: total sample (n = 87) with comparison between OP (n = 49) and VP (n = 38) groups. Pooling of categories indicated by bars

| | Total sample | OP | VP | significance |
|---|---|---|---|---|
| Sees self as "fairly happy person" premorbidly | | | | |
| yes | 60 (69%) | 36 (73%) | 24 (63%) | $x^2 = 0.77$ |
| no | 18 (21%) | 8 (16%) | 10 (26%) | df = 1 |
| unsure | 19 (10%) | 5 (11%) | 4 (11%) | p = 0.4 |
| Sees self as "gloomy and pessimistic" person premorbidly | | | | |
| yes | 15 (17%) | 7 (14%) | 8 (21%) | $x^2 = 0.75$ |
| no | 57 (66%) | 32 (65%) | 25 (66%) | df = 1 |
| unsure | 15 (17%) | 10 (20%) | 5 (13%) | p = 0.38 |
| Adjectives describing premorbid personality judged as | | | | |
| mainly positive | 60 (69%) | 36 (73%) | 24 (63%) | $x^2 = 1.03$ |
| mainly negative | 27 (31%) | 13 (27%) | 14 (37%) | df = 1 |
| | | | | p = 0.3 |

### 3.2.6 Presence of "sub affective" symptoms

The presence of chronic "sub affective" symptoms in the overall sample is presented in Table 3.6 (see below).

While 57% of patients reported chronic anergia, smaller but substantial proportions of patients reported hypersomnia, chronic anhedonia and chronic diurnal mood variation. There were no significant differences between the OP and the VP groups.

TABLE 3.6

Presence of "sub affective" symptoms (even when "well") comparison of OP (n = 48) and VP (n = 37) groups. Pooling of categories indicated by bars

| | Total sample | OP | VP | significance |
|---|---|---|---|---|
| Anergia | | | | |
| present | 50 (57%) | 27 (55%) | 23 (61%) | $x^2 = 0.36$ |
| absent | 5 (6%) | 3 (6%) | 2 (5%) | df = 1 |
| occasionally present | 32 (37%) | 19 (39%) | 13 (34%) | p = 0.5 |
| Hypersomnia | | | | |
| present | 37 (43%) | 19 (39%) | 18 (47%) | $x^2 = 0.67$ |
| absent | 4 (5%) | 2 (4%) | 2 (6%) | df = 1 |
| occasionally present | 46 (52%) | 28 (57%) | 18 (47%) | p = 0.41 |
| Anhedonia | | | | |
| present | 18 (21%) | 11 (22%) | 7 (8%) | $x^2 = 0.84$ |
| absent | 7 (8%) | 5 (10%) | 2 (5%) | df = 1 |
| occasionally present | 62 (71%) | 33 (68%) | 29 (77%) | p = 0.4 |
| Diurnal mood variation | | | | |
| present | 11 (12%) | 6 (12%) | 5 (13%) | $x^2 = 0.16$ |
| absent | 38 (44%) | 21 (43%) | 17 (45%) | df = 1 |
| occasionally present | 38 (44%) | 22 (45%) | 16 (42%) | p = 0.7 |

### 3.2.7 Family history of depression and alcoholism

Age correlated prevalence rates for depression and for alcoholism in first degree relatives of patients were calculated using the abridged Weinberg method (Slater and Cowie 1971) to derive bezugziffers. The risk periods employed were 18-59 for depression and 18-39 for alcoholism. Following Klein et al (1988a), age-corrected prevalence rates were calculated separately within the family of each proband and the family rather than the relative was used as the unit of analysis. The results of this analysis for the entire sample and the OP and VP groups appear in Table 3.7 (see below). The age corrected prevalence rate for depression in first degree relatives for the whole sample was 18.9% and that for alcoholism was 6.3%.

The morbid risk for depression was slightly higher in first degree relatives of the VP group although not significantly so.

Very few patients reported first degree family members with bipolar disorder, schizophrenia or antisocial personality disorder. The morbid risk for bipolar disorder for the whole sample was 1.4%. Three of the four patients with a family history of bipolar disorder were in the VP group. Each of the two patients with a family history of schizophrenia were in the VP group. There was one patient with a family history of antisocial personality disorder in each of the VP and OP groups.

TABLE 3.7

Age corrected life time prevalence rates of depression and alcoholism in first degree relatives. With comparison between OP (n = 49) and VP (n = 38) groups.

| | Total sample | OP | VP | significance |
|---|---|---|---|---|
| Age corrected life time prevalance rate of depression (%) | 19<br>SD = 21 | 17<br>SD = 20 | 22<br>SD = 22 | t = 1.21<br>df = 85<br>p = 0.23 |
| Age corrected life time rate prevalence rate of alcoholism (%) | 6.3<br>SD = 13 | 6.4<br>SD = 12 | 6.1<br>SD = 14 | t = .11<br>df = 85<br>p = 0.90 |

### 3.2.8 Medical comorbidity

Findings related to medical comorbidity as reported by patients and as judged by the investigator are presented in Table 3.8 (see below).

TABLE 3.8

Medical comorbidity: total sample (n = 87) with comparison between OP (n = 49) and VP (n = 38) groups. Pooling of categories indicated by bars

| | Total sample | OP | VP | significance |
|---|---|---|---|---|
| Subject reports serious illness | | | | |
| yes | 56 (64%) | 37 (76%) | 19 (50%) | $x^2 = 6.07$ |
| no | 30 (34%) | 12 (24%) | 18 (47%) | df = 1 |
| unsure | 1 (2%) | | 1 (3%) | p = 0.01 |
| Investigator judged illness as predating depression and severe and incapacitating | | | | |
| yes | 7 (8%) | 6 (12%) | 1 (3%) | Fisher's |
| no | 60 (69%) | 31 (63%) | 29 (76%) | exact test |
| unsure | 20 (23%) | 12 (25%) | 8 (21%) | p = 0.13 |

Of note over 60% of patients reported experiencing what they perceived as a serious illness. These conditions are listed in Table 3.9 (see over). In 8% of cases the investigator judged there was serious incapacity related to the medical illness following Akiskal's guidelines and that the illness predated the onset of depression.

More patients in the OP group, but not significantly so, were judged as having serious medical illness predating their depression. This was expected given the association of the OP group with a general hospital. Illnesses judged as severe and incapacitating included stroke (x 1), rheumatoid arthritis (x 1), asthma (x 1), insulin dependent diabetes with retinopathy (x 1), chronic obstructive airways disease (x 1), severe renal disease with multiple transplants (x2). Significantly more patients ($x^2 = 6.07$, df = 1, p = 0.01) judged themselves as having an incapacitating medical illness in the OP group.

TABLE 3.9

Illnesses reported as serious by subjects, not necessarily predating depression

asthma (8)
peptic ulcer (7)
thyroid disease (4)
hypertension (3)
angina (3)
irritable bowel (3)
COAD (2)
deafness (2)
migraine (2)
myocardial infarct (2)
arthritis (2)
Meniere's disease (1)
prostatism (1)
poliomyelitis (1)
congenital spasticity (1)
psoriasis (1)
hepatitis (1)
renal calculi (1)
disc prolapse (1)
pituitary tumour (1)
peripheral vascular disease (1)
bowel obstruction (1)
cardiac arythmia (1)
carcinoma of the cervix (1)
ovarian cyst (1)
scleroderma (1)
melanoma (1)
diverticulitis (1)
musculoskeletal injuries following MVA (1)

### 3.2.9 Developmental history

Information gathered regarding the developmental histories of the patients is summarised in Table 3.10 (see over).

It is of interest that 21% of patients experienced developmental object loss according to Akiskal's modification of Amark's (1951) criteria. Five patients reported the death of their mother before they were 15 and 9 reported death of their father before that age, resulting in 16% of patients experiencing parental death before 15. Nonetheless, about half the patients had positive recollections of their mothers and fathers when they were children, and 39% had overall positive recollections of childhood. Just over one third of patients viewed their parent's relationship as poor.

One quarter reported school refusal and about half the subjects had clear recollections of being a "nervy child". While the majority saw themselves as having few friends or being a loner at school, about 40% saw themselves as having an average number of teenage romantic experiences.

With respect to differences between the OP and the VP group, proportionately fewer VP patients had positive recollections of their parents and of their childhoods overall. The VP group attained a significantly higher level of schooling (Table 3.10). The VP group also reported significantly fewer friends at school (Table 3.10).

TABLE 3.10

Developmental history: total sample (n = 87) with comparison between OP (n = 49) and VP (n = 38) groups. Pooling of categories indicated by bars unless otherwise indicated.

| | Total sample | OP | VP | significance |
|---|---|---|---|---|
| Patient brought up by | | | | |
| mother and father | 73 (84%) | 39 (86%) | 34 (89%) | $x^2 = 2.4$ |
| mother alone | 4 (5%) | 3 (6%) | 1 (3%) | df = 1 |
| father alone | 0 | 0 | 0 | p = 0.1 |
| other | 10 (11%) | 7 (14%) | 3 (8%) | |
| Mother still living | | | | |
| yes | 29 (33%) | 15 (31%) | 14 (37%) | $x^2 = 0.63$ |
| no | 56 (64%) | 34 (69%) | 22 (58%) | df = 1 |
| unsure | 2 (2%) | 0 | 2 (5%) | p = 0.4 |
| Mother's death prior to patient 15 | 5 | 4 | 1 | |
| Memories of mother when a child | | | | |
| good | 42 (48%) | 26 (53%) | 16 (42%) | $x^2 = 0.001$ |
| mixed | 26 (30%) | 12 (25%) | 14 (37%) | df = 1 |
| bad | 19 (22%) | 11 (22%) | 8 (21%) | p = 0.9 |
| Feelings towards mother now | | | | |
| good | 51 (61%) | 29 (59%) | 2 (58%) | $x^2 = 0.29$ |
| mixed | 24 (25%) | 14 (29%) | 10 (26%) | df = 1 |
| bad | 12 (14%) | 6 (12%) | 6 (16%) | p = 0.6 |
| Father still living | | | | |
| yes | 22 (26%) | 11 (22%) | 11 (29%) | $x^2 = 0.58$ |
| no | 61 (70%) | 36 (70%) | 25 (66%) | df = 1 |
| unsure | 4 (4%) | 2 (8%) | 2 (5%) | p = 0.4 |
| Father's death prior to patient 15 | 9 | 6 | 3 | |
| Memories of father when a child | | | | |
| good | 40 (46%) | 27 (55%) | 13 (34%) | $x^2 = 0.32$ |
| mixed | 24 (28%) | 11 (22%) | 13 (32%) | df = 1 |
| bad | 23 (26%) | 11 (22%) | 12 (32%) | p = 0.6 |
| Feelings towards father now | | | | |
| good | 40 (46%) | 22 (45%) | 18 (47%) | $x^2 = 1.28$ |
| mixed | 34 (39%) | 18 (37%) | 16 (42%) | df = 1 |
| bad | 13 (15%) | 9 (18%) | 4 (11%) | p = 0.3 |
| Patient's perception of parents marriage | | | | |
| good | 23 (29%) | 11 (25%) | 12 (33%) | $x^2 = 0.81$ |
| good and bad | 26 (32%) | 14 (32%) | 12 (33%) | df = 1 |
| bad | 31 (39%) | 19 (43%) | 12 (33%) | p = 0.4 |

TABLE 3.10 (cont)

| | Total Sample | OP | VP | significance |
|---|---|---|---|---|
| Developmental object loss * | | | | |
| yes | 18 (21%) | 11 (22%) | 7 (18%) | $x^2 = 0.17$ |
| no | 69 (79%) | 38 (78%) | 31 (82%) | df = 1 |
| | | | | p = 0.7 |
| Memories of childhood | | | | |
| good | 34 (39%) | 22 (45%) | 12 (32%) | $x^2 = 0.09$ |
| both good and bad | 31 (36%) | 15 (31%) | 16 (42%) | df = 1 |
| uncertain | 2 (2%) | 0 | 2 (5%) | p = 0.8 |
| bad | 20 (23%) | 12 (24%) | 8 (21%) | |
| Highest level of schooling | | | | |
| primary school | 23 (26%) | 19 (39%) | 4 (10%) | Fisher's |
| up to 4 years secondary | 42 (48%) | 28 (57%) | 14 (37%) | exact test |
| matriculation | 2 (2%) | 1 (2%) | 1 (3%) | (2 tailed) |
| technical certificate | 5 (6%) | 1 (2%) | 4 (11%) | p < .0001 |
| tertiary | 15 (17%) | 0 | 15 (39%) | |
| Friends at school | | | | |
| many friends | 34 (39%) | 27 (55%) | 7 (18%) | $x^2 = 11.5$ |
| few friends | 37 (43%) | 13 (27%) | 24 (64%) | df = 1 |
| a loner | 16 (18%) | 9 (18%) | 7 (18%) | p = 0.0006 |
| School refusal | | | | |
| present | 22 (25%) | 15 (31%) | 7 (18%) | $x^2 = 1.3$ |
| absent | 57 (66%) | 29 (59%) | 28 (74%) | df = 1 |
| unsure | 8 (9%) | 5 (10%) | 3 (8%) | p = 0.2 |
| Patient saw self as a 'nervy' child | | | | |
| yes | 42 (48%) | 23 (47%) | 19 (50%) | $x^2 = 0.16$ |
| no | 35 (40%) | 22 (45%) | 13 (34%) | df = 1 |
| unsure | 10 (12%) | 4 (8%) | 6 (16%) | p = 0.68 |
| Teenage romantic experiences | | | | |
| many | 8 (9%) | 6 (12%) | 2 (5%) | $x^2 = 2.3$ |
| average | 36 (41%) | 22 (45%) | 14 (37%) | df = 1 |
| few | 34 (39%) | 15 (31%) | 19 (50%) | p = 0.12 |
| never | 9 (11%) | 6 (12%) | 3 (8%) | |

* Using Akiskal's criteria modified from Amark (1951)

### 3.2.10 Marital history

Information regarding the marital history of the population studied is summarised in Tables 3.11 - 3.14.

Only 46% of the sample was married or in a defacto relationship (Table 3.11) (see below). While there was no significant difference in terms of marital status between the VP and OP group there were proportionately more widows in the OP group (20% vs 11%). Overall, 18% had never married, with there being more single people in the VP group.

TABLE 3.11

Marital history : total sample (n = 87) with comparisons of OP (n = 49) and VP (n = 38) groups. Pooling of categories indicated by bars

| | Total sample | OP | VP | significance |
|---|---|---|---|---|
| Current marital status | | | | |
| married | 39 (45%) | 23 (48%) | 16 (42%) | $x^2 = 0.41$ |
| defacto | 1 (1%) | 1 (2%) | 0 (0%) | |
| separated | 5 (6%) | 2 (4%) | 3 (8%) | df = 1 |
| divorced | 12 (14%) | 5 (10%) | 7 (18%) | p = 0.5 |
| widowed | 14 (16%) | 10 (20%) | 4 (11%) | |
| single | 16 (18%) | 8 (16%) | 8 (21%) | |

Married patients

Information regarding the marital history of those patients who were married or in stable defacto relationships at the time of the interview is presented in Table 3.12 (see below).

TABLE 3.12

Marital history: sample of patients married or in a stable defacto relationship (n = 40) comparing OP (n = 24) and VP (n = 16) groups. Pooling of categories indicated by bars

| | Total sample | OP | VP | significance |
|---|---|---|---|---|
| Age first married (years) | 22.2<br>SD = 3.5 | 21.8<br>SD = 3.6 | 22.7<br>SD = 3.5 | t = -0.96<br>df = 38<br>p = 0.3 |
| Spouse working at present | | | | |
| yes | 12 (30%) | 3 (13%) | 9 (56%) | Fisher's exact test (2-tailed) p = 0.003 |
| no | 28 (70%) | 21 (87%) | 7 (44%) | |
| Spouse in good health | | | | |
| yes | 22 (55%) | 10 (42%) | 12 (75%) | Fisher's exact test (2-tailed) p = 0.03 |
| no | 18 (45%) | 14 (58%) | 4 (25%) | |
| unsure | 0 (0%) | 0 (0%) | 0 (0%) | |
| Spouse drinks alcohol | | | | |
| yes | 23 (58%) | 11 (46%) | 12 (75%) | Fisher's exact test (2-tailed) p = 0.06 |
| no | 17 (42%) | 13 (54%) | 4 (25%) | |
| Spouse perceived as drinking excessively | | | | |
| yes | 2 (5%) | 2 (8%) | 0 (0%) | Fisher's exact test (2-tailed) p = 0.3 |
| no | 33 (83%) | 19 (79%) | 14 (88%) | |
| unsure | 5 (12%) | 3 (14%) | 2 (12%) | |
| How long together (mean years) | 30.8<br>SD = 14.3 | 32.9<br>SD = 15.7 | 27.7<br>SD = 11.9 | t = 1.2<br>df = 38<br>p = 0.24 |
| Perception of marriage over time | | | | |
| good | 19 (48%) | 12 (50%) | 7 (44%) | Fisher's exact test (2-tailed) p = 0.7 |
| average | 14 (35%) | 7 (29%) | 7 (44%) | |
| poor | 7 (17%) | 5 (21%) | 2 (12%) | |

TABLE 3.12 (cont)

| | Total sample | OP | VP | significance |
|---|---|---|---|---|
| Perception of relationship at present | | | | |
| as good as ever | 27 (68%) | 17 (71%) | 10 (63%) | $x^2 = 0.31$ |
| worse than usual | 12 (30%) | 6 (25%) | 6 (37%) | df = 1 |
| unsure | 1 (2%) | 1 (4%) | 0 (0%) | p = 0.6 |
| "Nerves" perceived as affecting relationship | | | | |
| greatly | 21 (53%) | 13 (54%) | 8 (50%) | $x^2 = 0.06$ |
| a little | 14 (35%) | 8 (33%) | 6 (38%) | df = 1 |
| not at all | 5 (12%) | 3 (13%) | 2 (12%) | p = 0.8 |
| Sexual relationship at present | | | | |
| good | 9 (23%) | 5 (21%) | 4 (25%) | Fisher's |
| bad | 29 (73%) | 18 (75%) | 11 (69%) | exact test |
| unsure | 2 (4%) | 1 (4%) | 1 (6%) | (2-tailed) |
| | | | | p = 1.0 |

Of note 23% had had a previous marriage, 45% reported that their spouse was in poor health. While 58% of spouses drank alcohol, the majority did not see their spouse as drinking excessively. On average, couples had been together for 30 years. While 83% saw their marriage as being either "good or average", 53% viewed their "nerves" as affecting the relationship. Only 23% reported satisfactory sexual relationships. There were significant differences between the VP and the OP groups in terms of the VP group having fewer unhealthy spouses and more spouses currently employed and more spouses who drank alcohol (Table 3.12).

Widowed patients

Information regarding the marital history of the 16% of patients who were widows at the time of the interview is presented in Table 3.13 (see below).

As mentioned previously, there were proportionately more widows in the OP group. 79% reported their spouse having had a long illness prior to their death. 50% reported that their spouse had drunk alcohol excessively. 36% reported their marriage to have been poor overall. Due to the low numbers of widows in the VP group, statistical comparisons between groups were not performed.

TABLE 3.13

Marital history: sample of widowed patients (n = 14) who have not remarried, OP (n = 10) compared with VP (n = 4)

| | Total sample | OP | VP |
|---|---|---|---|
| Spouse had long illness prior to death | | | |
| yes | 11 (79%) | 8 (80%) | 3 (75%) |
| no | 3 (21%) | 2 (20%) | 1 (25%) |
| unsure | | | |
| Spouse drank alcohol | | | |
| yes | 11 (79%) | 8 (80%) | 3 (75%) |
| no | 3 (21%) | 2 (20%) | 1 (25%) |
| Perceived as drinking excessively | | | |
| yes | 7 (50%) | 5 (50%) | 2 (50%) |
| no | 5 (36%) | 3 (30%) | 2 (50%) |
| unsure | 2 (14%) | 2 (20%) | |
| How long together (years) | 31.6 SD = 19.9 | 36.8 SD = 20.4 | 19.4 SD = 13.3 |
| Perception of marriage over time | | | |
| good | 6 (43%) | 6 (60%) | 0 (0%) |
| average | 3 (21%) | 0 (0%) | 3 (75%) |
| poor | 5 (36%) | 4 (40%) | 1 (25%) |

Divorced patients

Information regarding the marital history of the 20% of patients who were divorced or separated at the time of the interview is presented in Table 3.14 (see below).

While 75% of former spouses were healthy, 44% were viewed as having drunk excessive alcohol. 44% saw their "nerves" as having had a great effect on the former relationship. The mean length of the former relationship was 12.9 years. Given the low numbers, statistical comparisons between the OP and VP groups were not performed.

TABLE 3.14

Marital history: sample of divorced or separtated patients (n = 16*) who have not remarried, OP (n = 7) compared with VP (n = 9)

| | Total sample | OP | VP |
|---|---|---|---|
| Spouse in good health | | | |
| yes | 12 (75%) | 7 (100%) | 5 (56%) |
| no | 1 (6%) | | 1 (11%) |
| unsure | 3 (19%) | | 3 (33%) |
| Spouse drank alcohol | | | |
| yes | 10 (63%) | 3 (43%) | 7 (78%) |
| no | 6 (47%) | 4 (57%) | 2 (22%) |
| Spouse perceived as drinking excessively | | | |
| yes | 7 (44%) | 3 (43%) | 4 (44%) |
| no | 8 (50%) | 3 (43%) | 5 (56%) |
| unsure | 1 (6%) | 1 (14%) | |
| Mean length of relationship (years) | 12.9<br>SD = 9.1 | 9.8<br>SD = 6.2 | 15.5<br>SD = 10.8 |
| "Nerves" perceived as affecting relationship | | | |
| greatly | 7 (44%) | 4 (57%) | 3 (34%) |
| a little | 4 (25%) | 2 (29%) | 2 (22%) |
| not at all | 3 (19%) | 1 (14%) | 2 (22%) |
| unsure | 2 (13%) | | 2 (22%) |

* Data missing for one subject, therefore n = 16 not 17

Children of patients

Information regarding the children of the population studied is presented in Table 3.15 (see below).

It is of interest that 65% of patients had regular contact at weekly or more frequent intervals with their children. There were few differences between the VP and OP groups in terms of these variables.

TABLE 3.15

Children: total sample (n = 87) with comparison of OP (n = 49) and VP (n = 38) groups. Pooling of categories indicated by bars

| | Total sample | OP | VP | significance |
|---|---|---|---|---|
| Mean number of children | 2.5<br>SD = 2.1 | 2.6<br>SD = 2.1 | 2.5<br>SD = 2.1 | t = 0.97<br>df = 85<br>p = 0.3 |
| Number with no children | 17 (20%) | 9 (18%) | 9 (21%) | |
| Children's health | | | | |
| good | 57 (81%) | 34 (85%) | 23 (77%) | $x^2 = 0.77$ |
| poor | 11 (16%) | 5 (13%) | 6 (20%) | df = 1 |
| unsure | 2 (3%) | 1 (2%) | 1 (3%) | p > 0.05 |
| Contact with children | | | | |
| daily | 32 (46%) | 17 (42%) | 15 (50%) | $x^2 = 0$ |
| weekly | 24 (34%) | 15 (38%) | 9 (30%) | df = 1 |
| monthly | 7 (10%) | 3 (8%) | 4 (13%) | |
| yearly | 2 (3%) | 2 (4%) | | p = 1 |
| less often | 5 (7%) | 3 (8%) | 2 (7%) | |

3.2.11 Schneiderian depressive features

The presence of Schneiderian Depressive Personality features are summarized in Table 3.16 (see over).

Substantial proportions of patients were judged to display these characteristics. When the presence of individual traits was added together for each patient the mean score was 4.0. VP patients tended to have higher scores although not significantly so ($t = -1.95$, $df = 84$, $p = 0.06$). Using Akiskal's cut off point of the presence of 5 or more traits as indicative of depressive personality, 43% of the sample had a depressive pesonality. Significantly more ($x^2 = 4.8$, $df = 1$, $p = 0.03$) VP patients (55%) had a depressive personality than OP subjects (33%).

TABLE 3.16

Presence of Schneiderian Depressive Personality Features total sample (n = 86*) with comparison of OP (n = 48) and VP (n = 38) groups

| | Total group | OP | VP | significance |
|---|---|---|---|---|
| Quiet | | | | |
| present | 57 (66%) | 35 (73%) | 22 (58%) | $x^2$ =2.14 |
| absent | 29 (34%) | 13 (27%) | 16 (42%) | df = 1 |
| | | | | p = 0.14 |
| Gloomy | | | | |
| present | 36 (42%) | 17 (35%) | 19 (50%) | $x^2$ = 1.85 |
| absent | 50 (58%) | 31 (65%) | 19 (50%) | df = 1 |
| | | | | p = 0.17 |
| Self critical | | | | |
| present | 48 (56%) | 18 (38%) | 30 (79%) | $x^2$ = 14.7 |
| absent | 38 (44%) | 30 (62%) | 8 (21%) | df = 1 |
| | | | | p = 0.001 |
| Sceptical | | | | |
| present | 46 (53%) | 19 (40%) | 27 (71%) | $x^2$ = 8.4 |
| absent | 40 (47%) | 29 (60%) | 11 (29%) | df = 1 |
| | | | | p = 0.004 |
| Conscientious | | | | |
| present | 70 (81%) | 39 (81%) | 31 (82%) | $x^2$ = .001 |
| absent | 16 (19%) | 9 (19%) | 7 (18%) | df = 1 |
| | | | | p = 0.96 |
| Brooding | | | | |
| present | 44 (51%) | 22 (46%) | 22 (58%) | $x^2$ = 1.20 |
| absent | 42 (49%) | 26 (54%) | 16 (42%) | df = 1 |
| | | | | p = 0.26 |
| Pre-occupied with failure | | | | |
| present | 39 (45%) | 20 (42%) | 19 (50%) | $x^2$ = .59 |
| absent | 47 (55%) | 28 (58%) | 19 (50%) | df = 1 |
| | | | | p = 0.44 |
| Summation of Schneiderian depressive traits (Range 0-7) | | | | |
| (high scores more | 4.0 | 3.7 | 4.5 | t = -1.95 |
| traits present) | SD = 1.7 | SD = 1.9 | SD = 1.8 | df = 84 |
| | | | | p = 0.06 |
| Depressive personality present ** | | | | |
| yes | 37 (43%) | 16 (33%) | 21 (55%) | $x^2$ = 4.8 |
| no | 49 (57%) | 33 (67%) | 17 (45%) | df = 1 |
| | | | | p = 0.03 |

** According to Akiskal's operationalised form of Schneider's depressive personality.
* n = 86 not 87 as data missing for one patient.

3.2.12 DSM-III personality disorder diagnoses

Information regarding DSM-III personality disorder diagnoses for the sample is summarised in Table 3.17 (see over).

A diagnosis of dependent personality disorder was made in 36% of cases. Few other personality disorder diagnoses were made, although substantial proportions of subjects were judged at interview to have avoidant traits (49%) compulsive traits (33%), schizoid traits (23%) or borderline traits (14%). There were more OP subjects than VP patients with dependent personality disorder ($x^2 = 4.57$, df = 1, $p = 0.03$), and significantly more OP patients with passive-aggressive personality traits (Fisher's exact test $p = 0.02$).

TABLE 3.17

DSM-III Axis II diagnosis total sample (n = 86*) with comparison of OP (n = 48) and VP (n = 38) groups. Pooled categories indicated by bars

| | Total sample | OP | VP | significance |
|---|---|---|---|---|
| Dependent personality | | | | |
| disorder present | 31 (36%) | 22 (46%) | 9 (24%) | $x^2 = 4.57$ |
| traits present | 35 (41%) | 19 (40%) | 16 (42%) | df = 1 |
| few traits | 20 (23%) | 7 (14%) | 13 (34%) | p = 0.03 |
| Histrionic personality | | | | |
| disorder present | 1 (1%) | 0 (0%) | 1 (3%) | Fisher's |
| traits present | 9 (9%) | 6 (13%) | 3 (8%) | exact test |
| few traits | 76 (90%) | 42 (87%) | 34 (89%) | (2-tailed) |
| | | | | p = 1 |
| Borderline personality | | | | |
| disorder present | 3 (3%) | 2 (4%) | 1 (3%) | $x^2 = .62$ |
| traits present | 12 (14%) | 5 (10%) | 7 (18%) | df = 1 |
| few traits | 71 (83%) | 41 (86%) | 30 (79%) | p = 0.4 |
| Schizoid personality | | | | |
| disorder present | 0 (0%) | 0 (0%) | 0 (0%) | $x^2 = 2.6$ |
| traits present | 20 (23%) | 8 (17%) | 12 (32%) | df = 1 |
| few traits | 66 (77%) | 40 (83%) | 26 (68%) | p = 0.1 |
| Passive aggressive personality | | | | |
| disorder present | 1 (1%) | 1 (2%) | 0 (0%) | Fisher's |
| traits present | 10 | 9 (19%) | 1 (3%) | exact test |
| few traits | 75 (87%) | 38 (79%) | 37 (97%) | (2-tailed) |
| | | | | p = 0.02 |
| Antisocial personality | | | | |
| disorder present | 1 (1%) | 0 (0%) | 0 (0%) | $x^2 = 1.6$ |
| traits present | 2 (2%) | 2 (4%) | 1 (3%) | df = 1 |
| few traits | 83 (97%) | 46 (96%) | 37 (97%) | p = 0.20 |
| Avoidant personality | | | | |
| disorder present | 5 (6%) | 5 (10%) | 0 (0%) | $x^2 = .11$ |
| traits present | 43 (50%) | 21 (44%) | 22 (58%) | df = 1 |
| few traits | 39 (44%) | 22 (46%) | 16 (42%) | p = 0.72 |
| Compulsive personality | | | | |
| disorder present | 4 (5%) | 3 (6%) | 1 (3%) | $x^2 = 0.26$ |
| traits present | 28 (33%) | 16 (33%) | 12 (32%) | df = 1 |
| few traits | 54 (62%) | 29 (61%) | 25 (65%) | p = 0.6 |
| Paranoid personality | | | | |
| disorder present | 0 (0%) | 0 (0%) | 0 (0%) | Fisher's |
| traits present | 5 (6%) | 2 (4%) | 3 (8%) | exact test |
| few traits | 81 (94%) | 46 (96%) | 35 (92%) | (2-tailed) |
| | | | | p = 0.7 |

* missing data on one subject

TABLE 3.17 (cont)

| | Total sample | OP | VP | significance |
|---|---|---|---|---|
| Narcissistic personality | | | | |
| disorder present | 0 (0%) | 0 (0%) | 0 (0%) | Fisher's |
| traits present | 3 (3%) | 3 (6%) | 0 (0%) | exact test |
| few traits | 83 (97%) | 45 (94%) | 38 (100%) | (2-tailed) |
| | | | | p = 0.3 |
| Schizotypal personality | | | | |
| disorder present | 0 (0%) | 0 (0%) | 0 (0%) | Fisher's |
| traits present | 2 (2%) | 0 (0%) | 2 (5%) | exact test |
| few traits | 84 (98%) | 48 (100%) | 36 (95%) | (2-tailed) |
| | | | | p = 0.19 |

3.2.13 SCID diagnoses

DSM-III diagnoses for the study population derived from the SCID are summarised in Table 3.18 (see over).

36% were diagnosed as having a major depression and 67% were diagnosed with dysthymic disorder. 31% of patients had both the diagnosis of major depression and dysthymic disorder so called "double depression". With respect to psychiatric comorbidity, 52% had other non affective psychiatric diagnoses. 21% had panic disorder, 12% a lifetime history of alcohol dependence and 9% a lifetime history of other substance dependence. 18% had no Axis I diagnosis according to SCID.

Significantly more VP patients were given the diagnosis of major depression ($x^2 = 9.6$, df = 1, p - 0.002) and significantly more of this group had a past history of mania (Fisher's exact test p = 0.04) at sub threshold level according to the SCID.

It is of note therefore, that the sample differed from other previous studies of chronic depression in that it consisted predominantly of dysthymic patients rather than patients with major depression.

TABLE 3.18

SCID diagnoses for entire group (n = 86*) comparing OP (n = 48) with VP (n = 38) groups. Pooled categories indicated by bars

| | Entire group | OP | VP | significance |
|---|---|---|---|---|
| Current major depression | | | | |
| present | 31 (36%) | 12 (25%) | 19 (50%) | $x^2 = 9.6$ |
| subthreshold | 3 (3%) | 0 (0%) | 3 (3%) | df = 1 |
| absent | 52 (61%) | 36 (75%) | 16 (42%) | p= 0.002 |
| Past manic syndrome | | | | |
| present | 0 (0%) | 0 (0%) | 0 (0%) | Fisher's exact |
| subthreshold | 9 (10%) | 2 (4%) | 7 (18%) | test (2-tailed) |
| absent | 77 (90%) | 46 (96%) | 31 (82%) | p = 0.04 |
| Current dysthymic syndrome | | | | |
| present | 58 (67%) | 30 (63%) | 28 (74%) | $x^2 = .49$ |
| subthreshold | 2 (2%) | 2 (4%) | 0 (0%) | df = 1 |
| absent | 26 (31%) | 16 (33%) | 10 (26%) | p = 0.5 |
| Panic disorder | | | | |
| present | 18 (21%) | 11 (23%) | 7 (18%) | $x^2 = .13$ |
| subthreshold | 3 (4%) | 0 (0%) | 3 (8%) | df = 1 |
| absent | 65 (75%) | 37 (77%) | 28 (68%) | p = 0.7 |
| Agoraphobia without panic disorder | | | | |
| present | 6 (7%) | 4 (8%) | 2 (5%) | Fisher's exact test |
| subthreshold | | | | (2-tailed) |
| absent | 80 (93%) | 44 (92%) | 36 (95%) | p = 0.68 |
| Social phobia | | | | |
| present | 8 (9%) | 6 (13%) | 2 (5%) | Fisher's |
| subthreshold | 1 (1%) | 1 (2%) | 0 (0%) | exact test |
| absent | 77 (90%) | 41 (85%) | 36 (95%) | (2-tailed) |
| | | | | p = 0.3 |
| Simple phobia | | | | |
| present | 8 (9%) | 7 (15%) | 1 (3%) | Fisher's |
| subthreshold | 1 (1%) | 1 (2%) | 0 (0%) | exact test |
| absent | 77 (90%) | 40 (83%) | 37 (97%) | (2-tailed) |
| | | | | p = 0.7 |
| Obsessive compulsive disorder | | | | |
| present | 5 (6%) | 1 (2%) | 4 (11%) | Fisher's |
| subthreshold | 2 (2%) | 2 (4%) | 0 (0%) | exact test |
| absent | 79 (92%) | 45 (94%) | 34 (89%) | (2-tailed) |
| | | | | p = 0.7 |

* data missing for one subject therefore n = 86

TABLE 3.18 (cont)

| | Entire group | OP | VP | significance |
|---|---|---|---|---|
| Generalised anxiety disorder | | | | |
| present | 8 (9%) | 6 (13%) | 2 (5%) | Fisher's exact test (2-tailed) p = 0.1 |
| subthreshold | 2 (2%) | 2 (4%) | 0 (0%) | |
| absent | 76 (91%) | 40 (83%) | 36 (95%) | |
| Somatization disorder | | | | |
| present | 1 (1%) | 1 (2%) | 0 (0%) | Fisher's exact test (2-tailed) p = 1.0 |
| subthreshold | | 0 (0%) | 0 (0%) | |
| absent | 84 (99%) | 46 (98%) | 38 (100%) | |
| Hypochondriasis | | | | |
| present | 2 (2%) | 0 (0%) | 2 (5%) | Fisher's exact test (2-tailed) p = 0.08 |
| subthreshold | 1 (1%) | 0 (0%) | 1 (3%) | |
| absent | 83 (97% ) | 48 (100%) | 35 (92%) | |
| Undifferentiated somatization disorder | | | | |
| present | 0 (0%) | 0 (0%) | 0 (0%) | Fisher's exact test (2-tailed) p = 0.4 |
| subthreshold | 1 (1%) | 0 (0%) | 1 (3%) | |
| absent | 85 (99%) | 48 (100%) | 37 (97%) | |
| Alcohol dependence (lifetime) | | | | |
| present | 10 (12%) | 6 (13%) | 4 (11%) | $x^2 = .16$ df = 1 p = 0.7 |
| subthreshold | 2 (2%) | 0 (0%) | 2 (5%) | |
| absent | 73 (86%) | 41 (87%) | 32 (84%) | |
| Substance (non alcohol) dependence (lifetime) | | | | |
| present | 8 (9%) | 5 (10%) | 3 (8%) | $x^2 = .16$ df = 1 p = 1 |
| subthreshold | | | | |
| absent | 78 (91%) | 43 (90%) | 35 (92%) | |
| Psychotic screening | | | | |
| psychosis present at some time | 6 (7%) | 3 (6%) | 3 (8%) | $x^2 = .15$ df = 1 p = 0.7 |
| subthreshold | 4 (5%) | 2 (4%) | 2 (5%) | |
| absent | 76 (88%) | 43 (90%) | 33 (87%) | |

### 3.1.14 Questionnaire responses

Information regarding depression severity and self rated personality, negative cognitions, anhedonia is presented in Tables 3.19 to 3.25 (see below).

TABLE 3.19

Mean 17 item Hamilton Depression Severity Score, total sample (n = 85*) and OP (n = 49) compared with VP (n = 38)

| | Total group | OP | VP | significance |
|---|---|---|---|---|
| Hamilton score (mean) | 15.5<br>SD = 7.1 | 14.1<br>SD = 6.7 | 17.2<br>SD = 7.1 | t = -2.1<br>df = 83<br>p = 0.04 |

* Hamilton scores were not available on 2 subjects

TABLE 3.20

Mean IDS scores (depression severity self rated) for entire sample (n = 81*) and a comparison of OP (n = 44) and VP (n = 37) groups

| | Total group | OP | VP | significance |
|---|---|---|---|---|
| Mean IDS score | 37.1<br>SD = 11.6 | 35.0<br>SD = 10.5 | 39.6<br>SD = 12.6 | t = -1.80<br>df = 79<br>p = 0.08 |

* IDS scores were not available for 6 subjects

TABLE 3.21

Mean Hopelessness Score for entire group (n = 73*) and OP (n = 37) and VP (n = 36) groups

| | Total group | OP | VP | significance |
|---|---|---|---|---|
| Mean HS score | 12.8<br>SD = 5.1 | 12.2<br>SD = 5.3 | 13.4<br>SD = 4.9 | Z = 0.98<br>p = 0.33 |

* HS scores were not available for 14 subjects

TABLE 3.22

Mean DAS scores for entire sample (n = 82*) and a comparison of OP (n = 44) and VP (n = 38) groups

| | Total sample | OP | VP | significance |
|---|---|---|---|---|
| Mean DAS score | 139.4<br>SD = 35.4 | 141.1<br>SD = 36.4 | 137.4<br>SD = 34.5 | t = 0.46<br>df = 79<br>p = 0.64 |

* DAS scores were not available for 5 subjects

TABLE 3.23

Mean PS scores for entire group (n = 79*) and a comparison for OP (n = 43) and VP (n = 36) groups

| | Total group | OP | VP | significance |
|---|---|---|---|---|
| Mean PS score | 3.4<br>SD = .75 | 3.2<br>SD = .81 | 3.5<br>SD = .64 | t = -1.88<br>df = 77<br>p = 0.6 |

* PS scores were not available for 8 subjects

TABLE 3.24

Mean MPI neuroticism score for entire group (n = 80*) and comparison between OP (n = 43) and VP (n = 37) groups

| | Total group | OP | VP | significance |
|---|---|---|---|---|
| MPI neuroticism | 35.5<br>SD = 9.5 | 34.4<br>SD = 10.4 | 36.8<br>SD = 8.2 | Z = 0.84<br>p = 0.41 |

MPI-n scores were not available for 7 subjects

TABLE 3.25

Mean MPI extroversion scores for entire group (n = 78)* and OP group (n = 43) and VP (n = 35) groups

| | Total group | OP | VP | significance |
|---|---|---|---|---|
| Mean MPI extroversion | 17.0<br>SD = 9.4 | 17.9<br>SD = 9.3 | 15.9<br>SD = 9.5 | t = 0.94<br>df = 76<br>p = 0.35 |

* MPI-e scores were not available for 9 subjects

The mean Hamilton Depression Severity Score was 15.5, (SD = 7.1) (Table 3.19) with the VP group scoring significantly higher than the OP group. The mean self rated depression severity score (IDS) was 37.1, (SD = 11.6) (Table 3.20) with the VP group scoring higher but not significantly so. With respect to negative cognitions, the mean hopelessness score was 12.8, (SD = 5.1) (Table 3.21) and the mean dysfunctional attitude score 139.4 (SD = 35.4) (Table 3.22) with little difference between the groups. The mean Pleasure Scale score measuring anhedonia was 3.4 (SD = .75) (Table 3.23), with the VP group having more anhedonic scores.

The mean MPI neuroticism score was 35.5 (SD = 9.5) (Table 3.24), and the mean MPI extroversion score was 17.0 (SD = 9.4) (Table 3.25) with the VP group having higher neuroticism and lower extroversion scores, but not significantly so.

The mean CGHQ score for the VP group was 16.1. SD = 4.5 (The GHQ was not administered to the OP group).

### 3.2.15 Dexamethasone suppression

The DST was administered only to the OP sample. 3 patients had positive DSTs with 4 pm cortisol levels above 160mmol/l.

3.2.16 Summary of clinical features

Patients in the study tended to be middle aged and female. Two thirds received social security benefits and one third lived alone. The average length of treatment for chronic depression was 10.5 years (SD = 9.1), with most patients reporting previous depressive episodes and almost half reporting non affective psychiatric disorders prior to the first depression. 38% of patients had attempted suicide at some stage of their illness. While 85% were taking some form of psychotropic medication, only 59% were taking antidepressants. 52% were prescribed benzodiazepines.

Onset of depressive symptoms on average occurred in the early thirties. The average length of the first illness was between 3 and 4 years. Most recollected a life event preceding the first episode and most patients sought medical help when first depressed. A majority reported their depression affected their capacity to work and half were hospitalised for their first depression. About one quarter of patients recollected a suicide attempt when first depressed. While 53% recollected anhedonia, fewer remembered specific neurovegetative change. One fifth were treated with ECT when first depressed and the majority were treated with some form of medication alone or in combination with ECT. Few were treated with psychotherapy. Only half the patients remembered their treatment as helpful.

A minority of patients saw themselves as always being gloomy and pessimistic even prior to their depression. 57% of patients reported chronic anergia and smaller percentages reported other "sub affective" symptoms.

The age corrected prevalence rate for depression in first degree relatives was 18.9% and 6.3% for alcoholism. While 60% of patients reported what they perceived as a serious medical illness, 7% were judged as having a severe and incapacitating illness which predated their depression.

Twenty one percent of patients experienced developmental loss. However, about half the patients had positive recollections of childhood. About half the patients described being "nervy children" and one quarter reported school refusal. The majority saw themselves as having few friends at school.

Only 46% were married or in defacto relationships. On average couples had been together for 30 years. 45% reported a spouse in poor health. 53% saw their "nerves" affecting their relationship and only 23% reported satisfactory sexual relationships. 16% of patients were widows. 79% of these patients reported their spouse had been unwell for an extended time prior to death. 36% reported their marriage had been poor. 20% of patients were divorced or separated. 44% saw their nerves as adversely affecting the previous relationship. Of note 80% of patients had regular contact with their chldren at weekly or more frequent intervals.

Of note 43% were judged to have a depressive personality according to Akiskal's modification (1983) of Schneider's description and 36% had DSM-III dependent personality disorder. Substantial numbers of patients were judged to have either avoidant, compulsive, schizoid or borderline traits. One third were diagnosed with a current major depression according to SCID and two thirds had dysthymic disorder. 31% had a double depression. Half the group had other non affective psychiatric diagnoses.

The mean Hamilton Depressive Severity score was 15.5 (SD = 7.1). The mean self rating depression score (IDS) was 37.1 (SD = 11.6). The mean neuroticism score (MPI) was 35.5 (SD = 9.5) and the mean extroversion score was 17 (SD = 9.4). With respect to depressive cognitions the mean hopelessness (HS) was 12.8 (SD = 5.1) and the mean dysfunctional atittude score (DAS) was 139.4 (SD = 35.4). The mean anhedonia score (PS) was 3.4 (SD = .75).

Three of the 49 patients administered the DST had positive responses.

3.2.17 Summary of differences between OP and VP groups

While all patients, OP and VP, satisfied criteria for inclusion with the study it had been predicted that the OP group would be of lower socio-economic status, be older, and have more medical comorbidity. The findings suggested that the OP group was indeed significantly older and of a lower socio-economic status that the VP group. More OP patients had medical comorbidity but not significantly more. Furthermore, the VP patients were more likely to be Australian born and were significantly better educated.

In general, there was an unexpected trend for the VP patients to show evidence of significantly more psychopathology than the OP group. The VP group had been in treatment longer and were younger when first depressed. They were more often diagnosed with major depression and were more likely to have had a history of mania at the subthreshold level. They had higher scores on the Hamilton Depression Rating scale. While not achieving significance, there was a similar trend for the VP group to display more psychopathology in other areas. For example, the VP group reported more previous depressive episodes, more suicide attempts and more reported other psychiatric problems prior to being depressed. They tended to view their premorbid personalities more negatively. They had a high prevalence of depression and alcoholism in first degree relatives. They had less positive recollections of their parents and their childhoods. The VP group also had higher self rated depression scores (IDS) and higher hopelessness scores (HS). They were more neurotic (MPI-n) and less extroverted (MPI-e). They had more anhedonic responses to the PS. Their DAS scores were marginally lower than the OP group. However, significantly fewer of the VP group were diagnosed with a dependent personality disorder and less were judged as having passive aggressive traits. While the VP group was taking significantly less medication than the OP group, there was no difference in the numbers of patients taking antidepressants in each group.

## 3.3 Classification of chronic depression

### 3.3.1 Introduction

In this section results of a cluster analysis using the SNOB programme for numerical taxonomy are presented. The cluster analysis was performed in an attempt to validate Akiskal's classification of chronic depression. The variables used in the analysis were selected as they reflected features which differentiated groups in Akiskal's classification. Firstly, the variables used in the analysis are described and then output from the SNOB programme detailing the optimum number of classes, class membership and "significance" of variables within each class is presented. A narrative description of each class in terms of the variables used inthe cluster analysis is then given.

### 3.3.2 The classification procedure

The numerical taxonomy programme SNOB categorised patients according to 12 variables which in turn were derived from 27 items from the interview schedule (see Appendix 3 ). The 12 variables are listed in Table 3.26 (see over). Composite variables included:

"Schneiderian Depressive Personality" which reflected the presence of individual scores on the 7 traits suggested by Akiskal for Schneider's depressive personality;

"endogenous" which was the sum of "endogenous" or "neurovegetative" symptoms and the nature of treatment for the first depressive episode;

"chronic sub affective" which was a score of 4 items reflecting chronic "sub affective" change: chronic hypersomnia, chronic anhedonia, chronic diurnal variation of mood, chronic anergia;

"personality" which was a score of features of histrionic, antisocial or borderline traits according to DSM-III, and

"dependence" which reflected the presence of SCID diagnosed life time alcohol or other substance dependence.

TABLE 3.26

SNOB variables and interview schedule items from which they were derived

| SNOB variable | Item(s) from which the variable was derived |
|---|---|
| age first depressed | 022 |
| "endogenous" | 025, 026, 027, 028 |
| intermittent | 016 |
| previous psychiatric illness | 044 |
| premorbid personality | 054 |
| "sub affective" symptoms | 56, 57, 58, 59 |
| family history depression | 60-66 |
| family history alcoholism | 60-66 |
| previous severe medical comorbidity | 073 |
| Schneiderian Depressive Personality | 147-153 |
| DSM-III "unstable" personality | 154-164 |
| alcohol/substance dependence | SCID |

### 3.3.3 Results of the numerical taxonomy procedure

The SNOB programme produced a 4 group solution as the "best" way of categorising patients according to these variables. The 4 groups were unequal in size: Group 1 had 54 patients, Group 2 had 6 patients, Group 3 had 11 patients and Group 4 had 16 patients.

How the groups differed with respect to the 12 variables is illustrated in Table 3.27. As these variables were used to form the groups, the clusters differ on them *a priori* and significance values are given only for illustrative purposes.

Output from SNOB, as well as including the optimum number of classes for sub dividing subjects and the class membership of each subject, gives values for the "statistical significance" of each variable in its contribution to the classification. In the output from SNOB, variables are flagged to show if the variable's distribution within the class differs "significantly" from its distribution in the whole population. The significance flags may be interpreted as indicating the level of "significance" at which a log likelihood ratio test reject the hypothesis that the within class and whole population distributions are the same.

Of the 12 classificatory variables, 7 contributed significantly to the classification. Variables contributing at the level of 0.01% included family history of depression, family history of alcoholism and alcohol and substance dependence.

TABLE 3.27

Comparison of variables across the 4 SNOB generated groups
Asterisks indicate the level at which a log likelihood ratio test rejects the hypothesis that within class and whole populations samples are the same
* = odds ratio of 2:1 or better
** = "significance" of 0.1%
*** "significance" of 0.01%

| Variable | Entire sample (n = 87) | Group 1 (n = 54) | Group 2 (n = 6) | Group 3 (n = 11) | Group 4 (n = 16) |
|---|---|---|---|---|---|
| Age (mean) first depressed | 33.1 | 33.7 | 37.5 | 20.3* | 38.1 |
| SD | 15.3 | 15.6 | 18.5 | 8.5 | 12.8 |
| "Endogenous" (mean) score (Range 4-12) | 8.9 | 9.1 | 8.0 | 8.3 | 8.9 |
| SD | 1.6 | 1.6 | 1.7 | 2.2 | 1.4 |
| Sub affective (mean) score (Range 4-12) | 8.4 | 8.9 | 6.5 | 8.5 | 8.4 |
| SD | 2.4 | 2.2 | 2.4 | 2.3 | 2.9 |
| "Unstable" personality traits (DSM-III) (mean) | 3.4 | 3.3 | 3.0 | 3.9 | 2.3 |
| SD | 0.97 | 0.97 | 0.0 | 1.5 | 0.59 |
| Age adjusted morbid risk of depression | 18.9 | 21.7 | 30.3 | 0.0*** | 18.5 |
| SD | 20.9 | 20.9 | 21.7 | 0 | 21.8 |
| Age adjusted morbid risk of alcoholism | 6.3 | 0.0*** | 4.7 | 22.2*** | 17.3** |
| SD | 12.9 | 0.0 | 7.3 | 25.6 | 6.1 |

TABLE 3.27

| Variable | Entire sample (n = 87) | Group 1 (n = 54) | Group 2 (n = 6) | Group 3 (n = 11) | Group 4 (n = 16) |
|---|---|---|---|---|---|
| Alcohol and/or substance dependence (mean) | 2.4 | 2.0*** | 3.7*** | 4.4*** | 2.0*** |
| (Range 2-6) SD | 0.98 | 0.19 | 0.81 | 1.2 | 0.0 |
| Schneiderian personality features (mean) | 4.0 | 3.9 | 4.1 | 4.4 | 3.8 |
| (Range 0-7) SD | 1.8 | 1.9 | 1.2 | 1.9 | 1.5 |
| Premorbid personality (self description) | | | | | |
| positive | 60 (71%) | 38 (73%) | 5 (83%) | 5 (45%)* | 12 (75%) |
| negative | 24 (29%) | 14 (27%) | 1 (17%) | 6 (55%) | 4 (25%) |
| Primary medical comorbidity (judged by interviewer) | | | | | |
| present | 7 (8%) | 2 (4%) | 0 | 0 | 5 (31%)* |
| absent | 60 (69%) | 41 (76%) | 4 (66%) | 7 (64%) | 8 (50%) |
| uncertain | 20 (23%) | 11 (20%) | 2 (34%) | 4 (36%) | 3 (19%) |
| Previous psychiatric history | | | | | |
| present | 41 (48%) | 19 (36%) | 5 (83%) | 10 (91%)* | 7 (44%) |
| absent | 39 (45%) | 30 (57%) | 1 (17%) | | 8 (50%) |
| uncertain | 6 (17%) | 4 (7%) | 0 | 1 (9%) | 1 (6%) |
| Intermittent symptomatology | | | | | |
| present | 42 (53%) | 27 (51%) | 4 (80%) | 2 (22%) | 9 (69%) |
| absent | 23 (29%) | 17 (32%) | 1 (20%) | 4 (44%) | 1 (8%) |
| uncertain | 15 (19%) | 9 (17%) | | 3 (34%) | 3 (23%) |

In terms of the 12 variables the groups were characterised as follows:

Group 1 (n = 54)

No Group 1 patients had a history of alcoholism in first degree family members. Life time history of drug and alcohol dependence in Group 1 was lower than in the whole sample and specifically Group 2 and Group 3. For other variables, Group 1 did not differ significantly from the entire sample.

Group 2 (n = 6)

Group 2 patients were older on average than the whole group when first depressed. They had the least endogenous picture of depressive symptoms when first depressed and the lowest score for chronic "sub affective symptoms". They were least likely to show "unstable" histrionic, antisocial or borderline traits. They had the highest prevalence of depression in first degree relatives and lower than average prevalence of alcoholism in first degree relatives. They had greater than average lifetime histories of drug and alcohol dependence. They had average scores with respect to the presence of Schneiderian Depressive features. They tended to view themselves premorbidly more positively than other groups, and were more likely to report periods of euthymic mood. They were more likely to report a previous non affective psychiatric disorder than the group overall. The group was not clearly differentiated from the overall sample with respect to the presence of previous significant medical illness.

Group 3 (n = 11)

Group 3 were clearly the youngest group at onset of their first depression. They were on average most likely to demonstrate "unstable" DSM-III personality traits. They had no family history of depression and the highest prevalence of alcoholism in first degree relatives. They were most likely of patients in any group to be alcohol or substance dependent. They had the highest score of any group in terms of Schneiderian depressive personality traits. They were the most likely of any group to display continuous rather than intermittent

symptomatology and the most likely to describe their premorbid personalities in negative terms. They were the most likely of any group to report pre-existing non affective psychopathology.

Group 4 (n = 16)

Group 4 patients were on average the oldest ($\bar{x}$ = 38.0) of any group when first depressed. They were not dissimilar from the overall group in terms of their "endogenous" score, "sub affective" score, "unstable personality traits", family history of depression, Schneiderian depressive personality traits, previous psychiatric history. They displayed more primary medical comorbidity (80%) of any group and more likely to report an episodic course than the group overall. Their self descriptions prior to illness were more positive than average for the overall group. The prevalence of alcohol dependence was higher on average in this group than in the overall group, however, the life time prevalence of drug or alcohol dependence was lower on average in this group than in the entire group.

The cohort was composed of outpatients (OP) and volunteer patients (VP). In order to test whether each subgroup would generate the same typology, the SNOB programme was run independently on each subgroup. SNOB can allocate cases not used in the classification process into a specified typology. In this way, all subjects were allocated to typologies generated firstly by the OP group and then by the VP group. When the OP group alone was used to generate a classification, a similar 4 group structure emerged with no change in the composition of each group. When the VP group alone was used, a 3 group structure emerged. In this classification, while Group 1 and Group 3 remained basically unchanged (Group 1 losing two cases to Group 3, and Group 3 gaining one case from Group 4), Group 2 and Group 4 merged to form a single group. Group 4 (with its predominance of medical comorbidity) may not have emerged from the VP analysis because of the lower prevalence of medical comorbidity in that group. The finding that very similar groupings of patients emerged when the VP and OP subgroups were used to generate clusters provided justification for combining the VP and OP groups in the initial analysis, and also demonstrated extra validity for the classification produced by SNOB.

### 3.3.4 A description of the four groups in terms of variables which were not used to derive the classification

Introduction

In this section, data is presented to enable a comparison between the four groups derived by numerical taxonomy, in terms of other variables not used in the cluster analysis. The extent to which a clinically meaningful picture for each group emerges in terms of these variables is a form of validation of the typology. Also the extent to which the groups are distinct in terms of these variables adds validation to the classification described in 3.2.3.

Data is presented in tabular form. As well, the level of significance at which a log likelihood ratio test rejects the hypotheses that the within class and whole population distributions are the same is presented.

There follows a narrative description of each group in terms of variables not used in the classification procedure.

#### 3.2.4.1 Sociodemographic variables

A comparison across sociodemographic variables for the 4 groups is presented in Table 3.28 (see over).

Group 1 patients were somewhat more likely to be female than the overall sample, they were more likely to hold a clerical, self-employed or professional job if working than other groups. They were the second youngest group at the time of interview.

Group 2 differed from the other groups and from the overall group in that men predominated. They were the oldest at time of presentation. A high proportion were receiving social security benefits.

Group 3 patients had a more equal sex distribution. They were the youngest at time of interview.

Group 4 patients were predominantly female. They were older than average at time of presentation, and a high proportion were receiving social security benefits. The majority of these patients were in the OP group.

There appeared to be no distinctions between the groups in terms of country of origin or general living arrangements.

TABLE 3.28

Comparison of sociodemographic characteristics between the entire sample, and the 4 groups*

| | Entire sample (n = 87) | Group 1 (n = 54) | Group 2 (n = 6) | Group 3 (n = 11) | Group 4 (n = 16) |
|---|---|---|---|---|---|
| Age at evaluation | | | | | |
| (years) | 51.9 | 52.0 | 57.8 | 42.5 | 55.9 |
| SD | 13.7 | 14.6 | 8.2 | 12.4 | 10.0 |
| Sex | | | | | |
| male | 24 (28%) | 11 (20%) | 4 (67%) | 5 (45%) | 4 (25%) |
| female | 63 (72%) | 43 (80%) | 2 (33%) | 6 (55%) | 12 (75%) |
| Country of origin | | | | | |
| Australia | 60 (69%) | 37 (69%) | 4 (67%) | 8 (73%) | 11 (69%) |
| Other | 27 (31%) | 17 (31%) | 2 (33%) | 3 (27%) | 5 (31%) |
| Living arrangements | | | | | |
| alone | 29 (33%) | 20 (37%) | 2 (33%) | 4 (36%) | 3 (18%) |
| spouse/partner | 25 (29%) | 11 (20%) | 3 (50%) | 2 (18%) | 9 (56%) |
| spouse/partner & dependent children | 17 (20%) | 13 (24%) | 1 (17%) | 1 (10%) | 2 (13%) |
| parents | 4 (5%) | 2 (4%) | | 2 (18%) | |
| other | 12 (13%) | 8 (15%) | | 2 (18%) | 2 (13%) |
| Occupation | | | | | |
| professional | 8 (10%) | 7 (13%) | | 1 (9%) | |
| self employed | 2 (2%) | 2 (4%) | | | |
| clerical | 4 (5%) | 4 (8%) | | | |
| skilled trade | 6 (7%) | 1 (2%) | 1 (17%) | 2 (18%) | 2 (13%) |
| unskilled | 9 (10%) | 7 (13%) | | 1 (9%) | 1 (6%) |
| pensioner/ unemployed | 59 (66%) | 32 (60%) | 5 (83%) | 7 (64%) | 13 (81%) |
| Father's occupation | | | | | |
| professional | 9 (11%) | 8 (15%) | 1 (17%) | | |
| self employed | 10 (12%) | 7 (13%) | 1 (17%) | 2 (18%) | |
| clerical | 6 (7%) | 6 (11%) | | | |
| skilled trade | 36 (42%) | 21 (40%) | 3 (50%) | 5 (45%) | 7 (44%) |
| unskilled | 23 (27%) | 10 (19%) | 1 (17%) | 3 (27%) | 9 (56%) |
| pensioner/ unemployed | 1 (1%) | 1 (2%) | | | |
| VP | 38 (44%) | 27 (50%) | 2 (33%) | 5 (45%) | 4 (25%) |
| OP | 49 (56%) | 27 (50%) | 4 (67%) | 6 (55%) | 12 (75%) |

* for none of these variables did a log likelihood ratio test reject the hypothesis that within class distributions and whole population distributions were the same

3.3.4.2 Nature of first depressive episode

A comparison between the 4 groups with respect to the first depressive episode is shown in Table 3.29 (see over).

Group 1 was similar to the entire group on most variables. However Group 1 patients were more likely than the overall sample to have experienced suicidal ideation and to have made a suicide attempt when first depressed.

Group 2 patients had the shortest mean duration of initial illness, that is 31 months. They were less likely to report with certainty an event preceding the initial illness. They were most likely to perceive treatment as helpful when first depressed. They were most likely to be hospitalised for their first depression and to have reported the depression interfered with work. These patients were the most likely to have attempted suicide when first depressed.

Group 3 patients were youngest when they first sought treatment. They had the longest first depressive episode. They were least likely to have sought medical help when first depressed. They reported the treatment for their first depression as being the least effective. Compared with the entire sample, more Group 3 patients reported the depression interfered with work and led to hospitalisation. Interestingly however, suicide attempts and suicidal ideation during the first depressive episode were the lowest in Group 3.

Group 4 patients were most likely to report an event preceding their first depression. They were the most likely to seek medical help but the least likely to be hospitalised for their depression. They reported less suicidal ideation and fewer suicide attempts than the entire sample.

TABLE 3.29

Variables related to first depression: entire sample with comparison between 4 groups*

| | Entire group (n = 87) | Group 1 (n = 54) | Group 2 (n = 6) | Group 3 (n = 11) | Group 4 (n = 16) |
|---|---|---|---|---|---|
| Mean age when first sought treatment (years) | 33.2 | 34.8 | 36.1 | 23.0 | 33.1 |
| SD | 14.9 | 15.8 | 16.3 | 7.5 | 14.9 |
| Mean length of first depressive episode (months) | 43.2 | 42.9 | 31.0 | 52.5 | 42.6 |
| SD | 84.2 | 85.4 | 44.6 | 119.5 | 67.6 |
| Event prior to onset | | | | | |
| yes | 74 (87%) | 46 (87%) | 4 (66%) | 9 (90%) | 15 (94%) |
| no | 7 (8%) | 6 (11%) | | | 1 (6%) |
| unsure | 4 (5%) | 1 (2%) | 2 (34%) | 1 (10%) | |
| Sought medical help | | | | | |
| yes | 74 (85%) | 47 (87%) | 5 (87%) | 7 (64%) | 15 (94%) |
| no | 13 (15%) | 7 (13%) | 1 (17%) | 4 (36%) | 1 (6%) |
| Patient's perception of treatment efficacy | | | | | |
| helpful | 34 (47%) | 21 (49%) | 3 (60%) | 3 (33%) | 7 (50%) |
| unhelpful | 26 (36%) | 13 (30%) | 2 (40%) | 4 (44%) | 7 (50%) |
| unsure | 12 (17%) | 10 (21%) | | 2 (23%) | |
| Inteference of depression with work | | | | | |
| stopped work | 39 (45%) | 22 (40%) | 5 (87%) | 8 (73%) | 4 (24%) |
| continued work but affected | 35 (40%) | 23 (43%) | 1 (17%) | 2 (18%) | 9 (56%) |
| none | 13 (15%) | 9 (17%) | | 1 (9%) | 3 (19%) |
| Hospitalised for first depression | | | | | |
| yes | 43 (49%) | 26 (48%) | 4 (66%) | 7 (64%) | 6 (38%) |
| no | 42 (48%) | 26 (48%) | 2 (34%) | 4 (36%) | 10 (62%) |
| unsure | 2 (3%) | 2 (4%) | | | |
| Suicidal ideation when first depressed | | | | | |
| yes | 43 (50%) | 31 (58%) | 3 (50%) | 3 (27%) | 6 (38%) |
| no | 32 (37%) | 18 (33%) | 1 (17%) | 5 (46%) | 8 (50%) |
| unsure | 7 (13%) | 5 (9%) | 2 (33%) | 3 (27%) | 2 (12%) |
| Suicide attempt when first depressed | | | | | |
| yes | 20 (23%) | 14 (26%) | 2 (33%) | 1 (9%) | 3 (19%) |
| no | 67 (77%) | 40 (74%) | 4 (67%) | 10 (91%) | 13 (81%) |

* for none of these variables did a log likelihood ratio test reject the hypothesis that within class and whole population distributions were the same

3.3.4.3 Longitudinal history of illness

A comparison between the groups with respect to the longitudinal history of illness is presented in Table 3.30 (see below).

TABLE 3.30

Longitudinal history of illness: entire sample with comparison between the 4 groups

| | Entire group (n = 87) | Group 1 (n = 54) | Group 2 (n = 6) | Group 3 (n = 11) | Group 4 (n = 16) |
|---|---|---|---|---|---|
| Time in treatment* | | | | | |
| (years) | 10.5 | 9.8 | 13.0 | 13.7 | 9.7 |
| SD | 9.1 | 8.5 | 14.7 | 10.1 | 8.5 |
| Time since last euthymic period* | | | | | |
| (months) | 101.6 | 84.9 | 152.6 | 151.5 | 104.3 |
| SD | 149.8 | 133.7 | 257.9 | 156 | 152.3 |
| Previous depressive * episode | | | | | |
| yes | 62 (79%) | 37 (77%) | 4 (80%) | 10 (91%) | 11 (74%) |
| no | 9 (11%) | 5 (10%) | 1 (20%) | 1 (9%) | 2 (13%) |
| unsure | 8 (11%) | 6 (13%) | | | 2 (13%) |
| Mean number of previous depressive episodes ** | 6.5 | 5.4 | 16.3 | 6.1 | 6.8 |
| SD | 12.8 | 12.7 | 24.1 | 4.2 | 10.8 |
| Mean number of suicide attempts *** | 1.8 | 1.9 | 3.3 | .45 | 1.6 |
| SD | 5.6 | 6.2 | 5.2 | .93 | 5.2 |
| % improved since * last depression | 54.6 | 54.7 | 63.8 | 39.4 | 58.4 |
| SD | 25.0 | 23.7 | 20.4 | 18.6 | 31.9 |
| Ever attempted * suicide | | | | | |
| yes | 33 (38%) | 23 (43%) | 2 (33%) | 3 (27%) | 5 (31%) |
| no | 54 (62%) | 31 (57%) | 4 (67%) | 8 (73%) | 11 (69%) |

* a log likelihood ratio test did not reject the hypothesis that within class and whole population distributions were the same for these variables

** the number of previous depressive episodes was greater in Group 2 than in the whole population at an odds ratio of 2:1 or better

*** the mean number of suicide attempts in Group 3 was significantly lower in this group than in the whole population at the 1% level

Group 1 reported the shortest time in treatment and reported the most recent euthymic period on average.

Group 2 reported more previous depressive episodes (in terms of the patient's recollection) than the overall group. Group 2 reported the greatest number of suicide attempts. Interestingly, this group reported the greatest improvement since the last depressive episode.

Group 3 had been in treatment the longest. They reported improving the least since their last depressive episode. Group 3 patients had significantly fewer suicide attempts than the whole group.

Group 4 was similar to the overall sample apart from patients in this group reporting less improvement than the overall sample since the last depressive episode.

A comparison of drug treatment received by patients in each of the groups is presented in Table 3.31 (see below).

TABLE 3.31

Current drug treatment, entire sample and comparison with 4 groups *

| | Entire group | Group 1 | Group 2 | Group 3 | Group 4 |
|---|---|---|---|---|---|
| Prescribed psychotropics | | | | | |
| Yes | 74 (85%) | 48 (89%) | 6 (100%) | 8 (73%) | 12 (75%) |
| No | 13 (15%) | 6 (11%) | 0 | 3 (27%) | 4 (25%) |
| Prescribed antidepressants | | | | | |
| Yes | 51 (59%) | 37 (69%) | 4 (66%) | 4 (36%) | 6 (38%) |
| No | 36 (41% | 17 (31%) | 2 (34%) | 7 (64%) | 10 (62%) |
| Prescribed benzodiazepines | | | | | |
| Yes | 45 (52%) | 25 (46%) | 3 (50%) | 6 (55%) | 9 (56%) |
| No | 42 (48%) | 29 (54%) | 3 (50%) | 5 (45%) | 7 (44%) |
| Multiple psychotropics | | | | | |
| Yes | 44 (59%) | 30 (63%) | 3 (50%) | 5 (62%) | 6 (50%) |
| No | 30 (41%) | 18 (37%) | 3 (50%) | 3 (39%) | 6 (50%) |

* a log likelihood test did not reject the hypothesis that within class and whole population distributions were the same

Group 2 patients were most likely to be on psychotropic drugs and Group 3 the least likely. (It is of note that Group 3 had the highest proportion of patients with a SCID diagnosis of major depression.)

Group 3 patients were least likely to be taking antidepressants. While there were not significantly fewer patients taking antidepressants in Group 3, SNOB indicated that specification of distribution parameters for this variable for Group 3 was preferable to assuming the distribution was the same as in the whole population. Groups 1 and 2 were most likely to be taking antidepressants.

Group 1 patients were least likely to be taking benzodiazepines and Groups 3 and 4 were most likely to be taking these drugs.

Group 1 patients were most likely to be taking more than one psychotropic drug and Groups 2 and 4 were the least likely to be taking more than one drug.

3.3.4.4 Premorbid personality

A comparison across groups of patients perceptions of their premorbid personality is presented in Table 3.32 (see below).

TABLE 3.32

Subjects perception of premorbid personality: entire sample with comparison between 4 groups*

| | Entire group (n = 87) | Group 1 (n = 54) | Group 2 (n = 6) | Group 3 (n = 11) | Group 4 (n = 16) |
|---|---|---|---|---|---|
| Seen as "fairly happy person" | | | | | |
| yes | 60 (69%) | 38 (70%) | 4 (67%) | 5 (46%) | 13 (81%) |
| no | 18 (21%) | 10 (19%) | 2 (33%) | 3 (27%) | 3 (19%) |
| unsure | 9 (10%) | 6 (11%) | | 3 (27%) | |
| Seen as "gloomy and pessimistic" person | | | | | |
| yes | 15 (17%) | 9 (16%) | 1 (17%) | 4 (36%) | 1 (6%) |
| no | 57 (66%) | 37 (69%) | 4 (66%) | 4 (36%) | 12 (75%) |
| unsure | 15 (17%) | 8 (15%) | 1 (17%) | 3 (28%) | 3 (19%) |

*A log likelihood test did not reject the hypothesis that within class distribution and whole population distributions were the same

Groups 1 and 2 resembled the entire group with respect to seeing themselves premorbidly as unhappy and gloomy. Group 3 patients were more likely to report a gloomy pessimistic self appraisal and Group 4 patients were the least likely to do this.

3.2.4.5 Family history of schizophrenia, bipolar disorder and antisocial personality disorder

As mentioned in section 3.1.7, there were very few patients reporting a history of either schizophrenia, bipolar affective disorder or antisocial personality disorder. The two patients with a family history of schizophrenia were in Group 1. Three of the 4 patients with a family history of bipolar affective disorder were in Group 1 and 1 patient was in Group 4. The two patients with a family history of antisocial personality disorder were in Group 1.

3.3.4.6 Developmental history

A comparison across groups of developmental variables is presented in Table 3.33.

TABLE 3.33

Developmental History: entire sample with comparison between 4 groups

| | Entire sample (n = 87) | Group 1 (n = 54) | Group 2 (n = 6) | Group 3 (n = 11) | Group 4 (n = 16) |
|---|---|---|---|---|---|
| Patient brought up by: * | | | | | |
| mother & father | 73 (84%) | 46 (85%) | 4 (66%) | 9 (82%) | 14 (88%) |
| mother alone | 4 (5%) | 2 (4%) | 1 (17%) | 0 | 1 (6%) |
| father alone | 0 | 0 | 0 | 0 | 0 |
| other | 10 (11%) | 6 (11%) | 1 (17%) | 2 (18%) | 1 (6%) |
| Mother still living* | | | | | |
| yes | 29 (33%) | 17 (31%) | 2 (33%) | 5 (45%) | 5 (31%) |
| no | 56 (64%) | 36 (67%) | 4 (67%) | 5 (45%) | 11 (69%) |
| unsure | 2 (3%) | 1 (2%) | 0 | 1 (10%) | 0 |
| Number of patients* < 15 when mother died | 5 | 4 | 0 | 1 | 0 |
| Memories of mother when a child ** | | | | | |
| good | 42 (48%) | 27 (50%) | 1 (17%) | 5 (45%) | 9 (56%) |
| bad | 19 (22%) | 14 (26%) | 0 | 1 (10%) | 4 (25%) |
| both | 26 (30%) | 13 (24%) | 5 (83%) | 5 (45%) | 3 (19%) |
| Feelings towards* mother now | | | | | |
| good | 51 (61%) | 33 (61%) | 4 (66%) | 5 (46%) | 9 (56%) |
| bad | 12 (14%) | 6 (11%) | 1 (17%) | 3 (32%) | 2 (13%) |
| both | 24 (25%) | 15 (28%) | 1 (17%) | 3 (32%) | 5 (31%) |
| Father still living* | | | | | |
| yes | 22 (26%) | 16 (30%) | 0 | 4 (36%) | 2 (13%) |
| no | 61 (70%) | 35 (65%) | 6 (100%) | 6 (55%) | 14 (87%) |
| unsure | 4 (4%) | 3 (5%) | 0 | 1 (9%) | 0 |
| Number of patients* < 15when father died | 9 | 5 | 2 | 2 | 0 |

* a log likelihood test did not reject the hypothesis that within class distributions and whole population distributions were the same for these variables
** memories of mother in Group 2 were less positive than the whole group at an odds ratio of 2:1 or better

TABLE 3.33 (cont)

| | Entire sample (n = 87) | Group 1 (n = 54) | Group 2 (n = 6) | Group 3 (n = 11) | Group 4 (n = 16) |
|---|---|---|---|---|---|
| Memories of father* when a child | | | | | |
| good | 40 (46%) | 29 (54%) | 1 (17%) | 4 (34%) | 6 (38%) |
| bad | 23 (26%) | 10 (19%) | 2 (33%) | 3 (32%) | 8 (50%) |
| unsure | 24 (28%) | 15 (27%) | 3 (50%) | 4 (34%) | 2 (12%) |
| Feelings towards* father now | | | | | |
| good | 40 (46%) | 29 (54%) | 2 (33%) | 3 (27%) | 6 (38%) |
| bad | 13 (15%) | 6 (11%) | 1 (17%) | 2 (18%) | 4 (24%) |
| unsure | 34 (39%) | 19 (31%) | 3 (50%) | 6 (55%) | 6 (38%) |
| Patient's perception** of parent's marriage | | | | | |
| good | 23 (29%) | 18 (37%) | 0 | 3 (30%) | 2 (13%) |
| bad | 31 (39%) | 18 (37%) | 0 | 5 (50%) | 8 (50%) |
| good & bad | 26 (32%) | 13 (26%) | 5 (100%) | 2 (20%) | 6 (37%) |
| Developmental object+* loss | | | | | |
| yes | 18 (21%) | 11 (20%) | 2 (33%) | 3 (27%) | 2 (13%) |
| no | 69 (79%) | 43 (80%) | 4 (67%) | 8 (73%) | 14 (87%) |
| Memories of * childhood | | | | | |
| good | 34 (39%) | 23 (43%) | 3 (50%) | 2 (18%) | 6 (38%) |
| bad | 20 (23%) | 12 (22%) | 2 (33%) | 2 (18%) | 4 (25%) |
| both | 31 (36%) | 19 (35%) | 1 (17%) | 6 (56%) | 5 (31%) |
| uncertain | 2 (2%) | 0 | 0 | 1 (9%) | 1 (6%) |
| Highest level of* schooling | | | | | |
| primary school | 23 (26%) | 9 (17%) | 2 (33%) | 3 (27%) | 9 (56%) |
| up to 4 yrs secondary | 42 (48%) | 26 (48%) | 3 (50%) | 8 (73%) | 5 (31%) |
| matriculation | 2 (2%) | 2 (4%) | 0 | 0 | |
| technical certificate | 5 (6%) | 4 (7%) | 0 | | 1 (6%) |
| tertiary | 15 (17%) | 3 (24%) | 1 (17%) | 0 | 1 (6%) |
| Friends at school* | | | | | |
| many friends | 34 (39%) | 19 (35%) | 2 (33%) | 4 (36%) | 9 (56%) |
| few friends | 37 (43%) | 24 (44%) | 3 (50%) | 6 (54%) | 4 (25%) |
| a loner | 16 (18%) | 11 (21%) | 1 (17%) | 1 (10%) | 3 (19%) |
| School refusal* | | | | | |
| present | 22 (20%) | 14 (26%) | 2 (33%) | 2 (18%) | 4 (25%) |
| absent | 57 (66%) | 35 (65%) | 3 (50%) | 8 (73%) | 11 (69%) |
| unsure | 8 (9%) | 5 (9%) | 1 (17%) | 1 (9%) | 1 (6%) |

+ defined according to Akiskal's modification of Amark's criteria (1951)
* a log likelihood test did not reject the hypothesis that within class distributions and whole population distributions were the same
** parent's marriage was perceived more negatively by Group 2 at a odds ratio of 2:1 or better

TABLE 3.33 (cont)

| | Entire sample (n = 87) | Group 1 (n = 54) | Group 2 (n = 6) | Group 3 (n = 11) | Group 4 (n = 16) |
|---|---|---|---|---|---|
| Patient saw self as* "nervy" child | | | | | |
| yes | 42 (48%) | 27 (50%) | 4 (66%) | 4 (36%) | 7 (44%) |
| no | 35 (40%) | 21 (39%) | 2 (34%) | 4 (36%) | 8 (50%) |
| unsure | 10 (12%) | 6 (11%) | 0 | 3 (28%) | 1 (6%) |
| Teenage romantic experiences* | | | | | |
| many | 8 (9%) | 3 (6%) | 1 (17%) | 2 (18%) | 2 (13%) |
| average | 36 (41%) | 21 (39%) | 2 (33%) | 4 (37%) | 9 (56%) |
| few | 34 (39%) | 26 (48%) | 0 | 5 (45%) | 3 (19%) |
| never | 9 (11%) | 4 (7%) | 3 (50%) | 0 | 2 (13%) |

* a log likelihood test did not reject the hypothesis that within class distributions and whole population distributions were the same for these variables

With respect to developmental variables, Group 1 patients were similar to the overall mean for the entire sample on most variables. They experienced similar levels of developmental object loss as the entire group. They reported somewhat more positive recollections of their fathers and of their parents relationship and of their childhoods than the group overall. They were more likely to have had continued their education beyond secondary school than other groups.

With respect to the information gathered regarding developmental history, Group 2 patients had the highest level of developmental object loss. They were less likely to be brought up by their mother and father, and were less likely to have positive recollections of either parent when they were children and less likely to have positive perceptions of their parent's relationship than other groups. However, half of Group 2 subjects (higher than any other group) reported good memories of childhood overall. Group 2 patients were the most likely to report school refusal, to view themselves as "nervy" children and to report never having had a teenage romantic experience. However, the small size of this group, n = 6, limits interpretation of these findings.

Group 3 patients had higher levels of developmental loss than either the entire group or groups 1 and 4. They reported more bad and ambivalent recollections of childhood, although their recollections of their parents when children were not greatly distinct from the overall sample. Group 3 patients were less likely to have completed education beyond secondary school. They were less likely to remember school refusal and were less likely to have perceived themselves as "nervy" children.

Group 4 patients had the lowest level of developmental object loss of any group. They reported more often having many friends at school and had the greatest number of teenage romantic experiences.

3.2.4.7 Marital history

Information regarding differences in marital history between the 4 groups is presented in Tables 3.34 to 3.36.

TABLE 3.34

Marital History: entire sample with comparison with 4 groups

| | Entire sample (n = 87) | Group 1 (n = 54) | Group 2 (n = 6) | Group 3 (n = 11) | Group 4 (n = 16) |
|---|---|---|---|---|---|
| Current marital status | | | | | |
| married | 39 (45%) | 22 (41%) | 4 (67%) | 3 (27%) | 10 (63%) |
| defacto | 1 (1%) | 1 (2%) | 0 | 0 | 0 |
| separated | 5 (6%) | 3 (22%) | 0 | 2 (29%) | 0 |
| divorced | 12 (14%) | 9 (17%) | 0 | 1 | 2 (13%) |
| widowed | 14 (16%) | 10 (19%) | 1 (16%) | 2 (18%) | 1 (6%) |
| single | 16 (18%) | 9 (17%) | 1 (16%) | 3 (27%) | 3 (19%) |

Group 1 patients were similar and the entire sample mean with respect to marital status. Group 2 and Group 4 patients were more likely to be married than patients in other groups. Group 3 had the lowest percentage of married patients and the highest percentage of divorced and never married subjects. With respect to other variables relating to marital history assessed, low numbers make interpretation difficult but the data is presented in tabular form for interest.

TABLE 3.35

Marital History: entire sample of patients married or in stable defacto relationships with comparison of 4 groups *

| | Entire group (n = 40) | Group 1 (n = 23) | Group 2 (n = 4) | Group 3 (n = 3) | Group 4 (n = 10) |
|---|---|---|---|---|---|
| Mean age first married | | | | | |
| years | 22.2 | 21.8 | 25.8 | 22.3 | 22.0 |
| SD | 3.5 | 3.2 | 2.6 | 4.8 | 3.8 |
| More than one marriage | | | | | |
| yes | 9 (23%) | 7 (33%) | 1 (25%) | 1 (33%) | 0 |
| no | 31 (77%) | 16 (67%) | 3 (75%) | 2 (67%) | 10 (100%) |
| Spouse working | | | | | |
| yes | 12 (30%) | 10 (43%) | 0 | 0 | 2 (20%) |
| no | 28 (70%) | 13 (57%) | 4 (100%) | 3 (100%) | 8 (80%) |
| Spouse in good health | | | | | |
| yes | 25 (55%) | 13 (56%) | 2 (50%) | 1 (35%) | 6 (60%) |
| no | 18 (45%) | 10 (44%) | 2 (50%) | 2 (65%) | 4 (40%) |
| Spouse drinks alcohol | | | | | |
| yes | 23 (58%) | 13 (56%) | 1 (25%) | 1 (33%0 | 8 (80%) |
| no | 17 (42%) | 10 (44%) | 3 (75%) | 2 (67%) | 2 (20%) |
| Perceived as drinking excessively | | | | | |
| yes | 2 (5%) | 0 | 0 | 0 | 2 (20%) |
| no | 3 (92%) | 23 (100%) | 1 (100%) | 1 (100%) | 7 (70%) |
| unsure | 1 (3%) | 0 | 0 | 0 | 1 (10%) |
| How long together | | | | | |
| years | 30.8 | 27.6 | 31.0 | 28.6 | 39.0 |
| SD | 14.3 | 13.5 | 10.3 | 5.1 | 17.6 |
| Perception of marriage over time | | | | | |
| good | 19 (48%) | 12 (52%) | 1 (25%) | 2 (67%) | 4 (40%) |
| average | 14 (35%) | 8 (35%) | 2 (50%) | 0 | 4 (40%) |
| poor | 7 (17%) | 3 (13%) | 1 (25%) | 1 (33%) | 2 (20%) |
| Perception of relationship at present | | | | | |
| as good as ever | 27 (68%) | 7 (14%) | 2 (50%) | 2 (70%) | 6 (60%) |
| worse than usual | 12 (30%) | 6 (26%) | 2 (50%) | 1 (30%) | 3 (30%) |
| unsure | 1 (2%) | 0 | 0 | 0 | 1 (10%) |
| "Nerves" perceived as affecting relationship | | | | | |
| greatly | 21 (53%) | 11 (48%) | 2 (50%) | 2 (66%) | 6 (60%) |
| a little | 14 (35%) | 9 (39%) | 1 (25%) | 0 | 4 (40%) |
| not at all | 5 (12%) | 3 (13%) | 1 (25%) | 1 (34%) | 0 |

TABLE 3.35 (cont)

| | Entire group | Group 1 | Group 2 | Group 3 | Group 4 |
|---|---|---|---|---|---|
| Sexual relationship at present * | | | | | |
| good | 9 (23%) | 7 (30%) | 0 | 0 | 2 (20%) |
| bad | 29 (73%) | 14 (61%) | 4 (100%) | 3 (100%) | 8 (80%) |
| unsure | 2 (4%) | 2 (9%) | 0 | 0 | 0 |
| Patient attributes sexual problems to self * | | | | | |
| yes | 12 (39%) | 7 (41%) | 2 (50%) | 0 | 3 (42%) |
| no | 5 (16%) | 1 (6%) | 0 | 2 (66%) | 2 (29%) |
| both at fault | 14 (45%) | 9 (53%) | 2 (50%) | 1 (34%) | 2 (29%) |

* A log likelihood test did reject the hypothesis that within class distributions and whole population distributions were the same for these variables.

There were too few divorced, separated or widowed patients in Groups 2, 3 and 4 of to compare usefully differences between groups.

With respect to their children, Group 2 had a greatest percentage of patients with no living children. There were no major differences between the groups in terms of contact with children (Table 3.36) (see below).

TABLE 3.36

Children: entire sample with comparison with 4 groups

| | Entire sample (n = 87) | Group 1 (n = 54) | Group 2 (n = 6) | Group 3 (n = 11) | Group 4 (n = 16) |
|---|---|---|---|---|---|
| Number with no living children * | 17 (20%) | 10 (19%) | 2 (33%) | 2 (18%) | 3 (19%) |
| Children's health * | | | | | |
| good | 57 (81%) | 37 (83%) | 3 (75%) | 7 (78%) | 10 (77%) |
| poor | 11 (16%) | 7 (17%) | 0 | 1 (11%) | 3 (23%) |
| unsure | 2 (3%) | 0 | 1 (25%) | 1 (11%) | 0 |
| Contact with children * | | | | | |
| daily | 32 (46%) | 22 (50%) | 1 (25%) | 5 (55%) | 4 (32%) |
| weekly | 24 (34%) | 14 (32%) | 2 (50%) | 1 (11%) | 7 (54%) |
| monthly | 6 (9%) | 3 (7%) | 1 (25%) | 1 (11%) | 1 (7%) |
| yearly | 2 (3%) | 1 (2%) | 0 | 0 | 1 (7%) |
| less often | 6 (9%) | 3 (7%) | 0 | 2 (23%) | 0 |

* A log likelihood test did not reject the hypothesis that within class distributions and whole population distributions were the same.

3.3.4.8 SCID diagnoses

A comparison of DSM-III diagnoses generated by the SCID interview for each of the groups is presented in table 3.37 (see over).

Patients in Group 1 were diagnosed with major depression (32%), dysthymic disorder (64%), agoraphobia without panic disorder (6%), social phobia (8%), simple phobia (9%), obsessive compulsive disorder (8%), and generalised anxiety disorder (6%) with about the same frequency as the overall sample. No patients in Group 1 had a lifetime history of alcoholism or other substance dependence. Panic disorder was diagnosed more frequently in this group (26%) than in others. A similar proportion to the overall sample (6%) were judged as having had evidence of psychosis at some stage. While the presence of alcohol or substance dependence was a variable used in the numerical taxonomy procedure it is worth noting here that there was little evidence of either in this group. One third of Group 1 patients (the highest proportion) had a history of a manic syndrome (at the SCID subthreshold level).

While low numbers in Group 2 make interpretation difficult, half the patients in Group 2 had a major depresion, this is more than in Groups 1 or 4 and less than in Group 3.

Patients in Group 3 were most likely of any group to be diagnosed as having major depression (73%) or dysthymic disorder (82%). There were no cases of a past manic syndrome in this group. Panic disorder (18%), social phobia (9%) generalised anxiety disorder and obsessive compulsive disorder occurred with about the same frequency as the overall sample. 73% of this group were diagnosed as having non alcoholic substance dependence (a variable used in the analysis) at the subthreshold level at some stage of their lives; and 45% had a life time diagnosis of alcoholism. The proportion of patients diagnosed as being psychotic at some stage during life was similar to the overall sample.

Group 4 patients were least likely to be diagnosed as having major depression. 75%, above the overall sample average, were diagnosed with dysthymic disorder. No patients in this

group had a history of a past manic episode. Fewer patients in this group were diagnosed with panic disorder (6%) than in other groups, although this group had the highest percentage of patients with generalised anxiety disorder (19%). None of these patients had life time histories of drug or alcohol dependence. The proportion of patients with a history of psychosis was similar to that for the overall group.

TABLE 3.37

SCID diagnoses for entire sample with comparison of the 4 groups

| | Entire sample (n = 86) † | Group 1 (n = 53) | Group (n = 6) | Group 3 (n = 11) | Group 4 (n = 16) |
|---|---|---|---|---|---|
| Current major * depression | | | | | |
| present | 31 (36%) | 17 (32%) | 3 (50%) | 8 (73%) | 3 (19%) |
| subthreshold | 3 (3%) | 2 (4%) | 0 | 0 | 1 (6%) |
| absent | 52 (61%) | 34 (64%) | 3 (50%) | 3 (27%) | 12 (75%) |
| Past manic * syndrome | | | | | |
| present | 0 | 0 | 0 | 0 | 0 |
| subthreshold | 9 (10%) | 7 (13%) | 2 (33%) | 0 | 0 |
| absent | 77 (90%) | 46 (87%) | 4 (67%) | 11(100%) | 16 (100%) |

TABLE 3.37 (cont)

| | Entire sample | Group 1 | Group 2 | Group 3 | Group 4 |
|---|---|---|---|---|---|
| Current dysthymic * syndrome | | | | | |
| present | 58 (67%) | 34 (64%) | 3 (50%) | 9 (82%) | 12 (75%) |
| subthreshold | 2 (2%) | 1 (2%) | 1 (17%) | 0 | 0 |
| absent | 26 (31%) | 18 (34%) | 2 (33%) | 2 (18%) | 4 (25%) |
| Panic disorder * | | | | | |
| present | 18 (21%) | 14 (26%) | 1 (17%) | 2 (18%) | 1 (6%) |
| subthreshold | 3 (4%) | 2 (4%) | 1 (17%) | | |
| absent | 65 (75%) | 37 (70%) | 4 (66%) | 9 (88%) | 15 (94%) |
| Agoraphobia without panic disorder * | | | | | |
| present | 6 (7%) | 3 (6%) | 0 | 2 (22%) | 1 (6%) |
| subthreshold | 0 | 0 | 0 | 0 | 0 |
| absent | 80 (93%) | 50 (94%) | 6 (100%) | 9 (78%) | 15 (94%) |
| Social phobia * | | | | | |
| present | 8 (9%) | 4 (8%) | 2 (33%) | 1 (9%) | 1 (7%) |
| subthreshold | 1 (1%) | 1 (2%) | 0 | 0 | 0 |
| absent | 77 (90%) | 48 (90%) | 4 (67%) | 10 (91%) | 15 (93%) |
| Simple phobia * | | | | | |
| present | 8 (9%) | 5 (9%) | 1 (17%) | 0 | 2 (13%) |
| subtheshold | 1 (1%) | 1 (2%) | 0 | 0 | 0 |
| absent | 77 (90%) | 47 (89%) | 5 (83%) | 11 (100%) | 14 (87%) |
| Obsessive compulsive disorder * | | | | | |
| present | 5 (6%) | 4 (8%) | 0 | 1 (9%) | 0 |
| subthreshold | 2 (2%) | 2 (4%) | 0 | 0 | 0 |
| absent | 79 (92%) | 47 (88%) | 6 (100%) | 10 (91%) | 16 (100%) |
| Generalised anxiety disorder * | | | | | |
| present | 8 (9%) | 3 (6%) | 1 (17%) | 1 (9%) | 3 (19%) |
| subthreshold | 2 (2%) | 1 (2%) | 0 | 0 | 1 (6%) |
| absent | 76 (91%) | 49 (92%) | 5 (83%) | 10 (91%) | 12 (75%) |
| Somatisation disorder * | | | | | |
| present | 1 (1%) | 1 (2%) | 0 | 0 | 0 |
| subthreshold | 0 | 0 | 0 | 0 | 0 |
| absent | 84 (99%) | 51 (98%) | 6 (100%) | 11 (100%) | 16(100%) |
| Hypochondriasis * | | | | | |
| present | 2 (2%) | 0 | 0 | 0 | 0 |
| subthreshold | 1 (1%) | 1 (2%) | 0 | 1 (9%) | 1 (7%) |
| absent | 83 (97%) | 52 (98%) | 6 (100%) | 10 (91%) | 15 (93%) |

TABLE 3.37 (cont)

| | Entire sample | Group 1 | Group 2 | Group 3 | Group 4 |
|---|---|---|---|---|---|
| Undifferentiated * somatoform disorder | | | | | |
| present | | | | | |
| subthreshold | 1 (1%) | 1 (2%) | 0 | 0 | 0 |
| absent | 85 (99%) | 52 (98%) | 6 (100%) | 11 (100%) | 16(100%) |
| Alcohol dependence** | | | | | |
| present | 10 (12%) | 0 | 5 (83%)** | 5 (45%) | 0 |
| subthreshold | 2 (2%) | 2 (4%) | 0 | 0 | 0 |
| absent | 73 (86%) | 50 (96%) | 1 (17%) | 6 (55%) | 16 (100%) |
| Substance dependence** (non alcohol) lifetime | | | | | |
| present | 8 (9%) | 0 | 0 ** | 0 | 0 |
| subthreshold | 0 | 0 | 0 | 8 (73%) | 0 |
| absent | 78 (91%) | 53 (100%) | 6 (100%) | 3 (27%) | 16 (100%) |
| Lifetime evidence of psychosis * | | | | | |
| present | 6 (7%) | 3 (6%) | 1 (17%) | 1 (9%) | 1 (6%) |
| subthreshold | 4 (5%) | 1 (2%) | 0 | 3 (27%) | 0 |
| absent | 76 (88%) | 49 (92%) | 5 (83%) | 7 (64%) | 15 (94%) |

† data missing on one subject
* A log likelihood test did not reject the hypothesis that within class distributions and whole population distributions were the same.
** The presence of alcohol and substance dependence was a variable included in the numerical taxonomy analysis, and the Groups 2 and 3 differ significantly on alcohol and non alcohol substance dependence respectively a priori.

3.2.4.9 DSM-III personality diagnosis

A comparison of DSM-III personality diagnoses across the 4 groups is presented in Table 3.38 (see below).

TABLE 3.38

DSM-III Axis II diagnosis: Entire sample with comparison of 4 numerical taxonomy groups

| | Entire group (n = 86) | Group 1 (n = 53) | Group 2 (n = 6) | Group 3 (n = 11) | Group 4 (n = 16) |
|---|---|---|---|---|---|
| Dependent personality * | | | | | |
| disorder present | 31 (36%) | 21 (40%) | 0 | 4 (36%) | 6 (38%) |
| traits present | 35 (41%) | 20 (38%) | 5 (83%) | 2 (18%) | 8 (50%) |
| traits absent | 20 (23%) | 12 (22%) | 1 (17%) | 5 (46%) | 2 (12%) |
| Histrionic personality** | | | | | |
| disorder present | 1 (1%) | 1 (2%) | 0 | 0 | 0 |
| traits present | 9 (%) | 6 (11%) | 0 | 2 (20%) | 1 (6%) |
| traits absent | 76 (90%) | 46 (87%) | 6 (100%) | 9 (80%) | 15 (94%) |
| Borderline personality** | | | | | |
| disorder present | 3 (3%) | 2 (4%) | 0 | 0 | 1 (6%) |
| traits present | 12 (14%) | 8 (15%) | 0 | 3 (27%) | 1 (6%) |
| traits absent | 71 (83%) | 43 (81%) | 6 (100%) | 8 (73%) | 14 (88%) |
| Schizoid personality* | | | | | |
| disorder present | 0 | 0 | 0 | 0 | 0 |
| traits present | 20 (23%) | 13 (25%) | 1 (17%) | 3 (27%) | 3 (19%) |
| traits absent | 66 (77%) | 40 (75%) | 5 (83%) | 8 (73%) | 13 (81%) |
| Passive aggressive personality* | | | | | |
| disorder present | 1 (1%) | 0 | 0 | 1 (9%) | 0 |
| traits present | 10 (12%) | 7 (13%) | 1 (17%) | 1 (9%) | 1 (6%) |
| traits absent | 75 (87%) | 46 (87%) | 5 (83%) | 9 (82%) | 15 (94%) |
| Antisocial personality** | | | | | |
| disorder present | 1 (1%) | 0 | 0 | 1 (9%) | 0 |
| traits present | 2 (2%) | 1 (2%) | 0 | 1 (9%) | 0 |
| traits absent | 83 (97%) | 52 (98%) | 6 (100%) | 9 (82%) | 16 (100%) |
| Avoidant personality* | | | | | |
| disorder present | 5 (6%) | 3 (6%) | 1 (17%) | 0 | 1 (6%) |
| traits present | 43 (50%) | 24 (45%) | 2 (33%) | 7 (63%) | 10 (62%) |
| traits absent | 38 (44%) | 26 (49%) | 3 (50%) | 4 (37%) | 5 (32%) |
| Compulsive personality* | | | | | |
| disorder present | 4 (5%) | 1 (2%) | 1 (17%) | 1 (9%) | 1 (6%) |
| traits present | 28 (33%) | 18 (34%) | 2 (33%) | 3 (27%) | 5 (30%) |
| traits absent | 54 (62%) | 34 (64%) | 3 (50%) | 7 (64%) | 10 (64%) |

** These disorders were included as variables in the numerical taxonomy analysis

TABLE 3.38 (cont)

| | Entire group | Group 1 | Group 2 | Group 3 | Group 4 |
|---|---|---|---|---|---|
| Paranoid personality* | | | | | |
| disorder present | 0 | 0 | 0 | 0 | 0 |
| traits present | 5 (6%) | 4 (8%) | 1 (17%) | 0 | 0 |
| traits absent | 81 (94%) | 49 (92%) | 5 (83%) | 11 (100%) | 16 (100%) |
| Narcissistic personality* | | | | | |
| disorder present | 0 | 0 | 0 | 0 | 0 |
| traits present | 3 (3%) | 2 (4%) | 0 | 1 (9%) | 0 |
| traits absent | 83 (97%) | 51 (96%) | 6 (100%) | 10 (91%) | 16 (100%) |
| Schizotypal personality* | | | | | |
| disorder present | 0 | 0 | 0 | 0 | 0 |
| traits present | 2 (2%) | 2 (4%) | 0 | 0 | 0 |
| traits absent (100%) | 84 (98%) | 51 (96%) | 6 (100%) | 11 (100%) | 16 |

* A log likelihood ratio test did not reject the hypothesis that within class and whole population variables were the same for these variables.

Histrionic, borderline and antisocial data are included only for comparative purposes as they were used in the numerical taxonomy procedure.

Group 1 patients were most likely to be diagnosed as having a dependent personality disorder (40%). Proportions of Group 1 patients demonstrating other personality disorders or personality traits were about average for the entire sample and in comparison with the other groups. Group 2 patients were most likely of any group to be described as having compulsive or paranoid personality traits. Group 3 patients had the highest proportion of subjects with either schizoid, passive-aggressive, or narcissistic traits or personality disorder described. Group 4 patients had generally lower proportions of personality disorder or personality traits described than other groups, apart from having the highest proportion of patients with avoidant traits or disorder present.

3.3.5 Rating scale and questionnaire data

A comparison of the four groups in terms of depression severity (Hamilton Rating Scale, HRS), (Inventory for Depressive Symptoms, IDS), neurotism and extroversion (MPI), dysfunctional attitudes, (DAS), hopelessness (HS), anhedonia (PS) is given in Tables 3.39 to 3.45 (see over).

Group 1 patients had scores near the mean for the entire group for most of these measures. They were the most anhedonic of any group.

Group 2 patients had the lowest Hamilton Depression Severity score ($\bar{x}$ = 12.7), the lowest IDS score ($\bar{x}$ = 33.6), the highest PS score ($\bar{x}$ = 3.5) indicating a greater capacity to experience pleasure and the highest MPI extroversion score ($\bar{x}$ = 19.1). However, they had the highest mean DAS score ($\bar{x}$ = 143.3).

Group 3 patients had the highest mean HRS score ($\bar{x}$ = 19.6), while this did not reach significance, the SNOB programme preferred to specify distribution parameters rather than assume the distribution of HRS scores for Group 3 was the same as the overall group. Patients in this group also had the highest mean IDS score ($\bar{x}$ = 41.1) the highest mean HS score ($\bar{x}$ = 15.0), the lowest mean MPI-e score ($\bar{x}$ = 16.0), the highest mean MPI-n score ($\bar{x}$ = 40.1), but the lowest mean DAS score ($\bar{x}$ = 134).

Group 4 patients had the lowest mean HS score ($\bar{x}$ = 11.3), the lowest MPI neuroticism score ($\bar{x}$ = 34.3) and the equal highest anhedonia score.

TABLE 3.39

Mean HRS scores for entire sample and numerical taxonomy groups

| | Entire sample (n = 85) | Group 1 (n = 52) | Group 2 (n = 6) | Group 3 (n = 11) | Group 4 (n = 16) |
|---|---|---|---|---|---|
| Mean HRS score* | 15.5 | 15.0 | 12.7 | 19.6 | 15.2 |
| SD | 7.1 | 7.5 | 7.6 | 5.6 | 5.6 |

TABLE 3.40

Mean IDS score for the entire sample and the 4 groups

| | Entire sample (n = 81) | Group 1 (n = 51) | Group 2 (n = 6) | Group 3 (n = 10) | Group 4 (n = 14) |
|---|---|---|---|---|---|
| Mean IDS score* | 37.1 | 37.1 | 33.6 | 41.1 | 35.7 |
| SD | 11.6 | 12.7 | 10.6 | 10.4 | 8.4 |

TABLE 3.41

Mean HS scores for entire sample and the 4 groups

| | Entire sample (n = 73) | Group 1 (n = 46) | Group 2 (n = 5) | Group 3 (n = 9) | Group 4 (n = 12) |
|---|---|---|---|---|---|
| Mean HS score* | 12.8 | 12.8 | 13.4 | 15.0 | 11.3 |
| SD | 5.1 | 4.7 | 7.3 | 5.4 | 4.9 |

TABLE 3.42

MPI-e scores for the entire sample and the 4 groups

| | Entire sample (n = 78) | Group 1 (n = 46) | Group 2 (n = 6) | Group 3 (n = 10) | Group 4 (n = 16) |
|---|---|---|---|---|---|
| Mean MPI-e scores* | 17.0 | 16.9 | 19.1 | 16.0 | 17.0 |
| SD | 9.4 | 9.9 | 14.1 | 7.3 | 7.4 |

* A log likelihood ratio test did not reject the hypothesis that within class and whole population distributions for this variable were the same.

TABLE 3.43

MPI-n scores for the entire sample 4 numerical taxonomy groups

| | Entire sample (n = 80) | Group 1 (n = 50) | Group 2 (n = 6) | Group 3 (n = 9) | Group 4 (n = 15) |
|---|---|---|---|---|---|
| Mean MPI-n scores* | 35.5 | 35.1 | 35.0 | 40.1 | 34.3 |
| SD | 9.5 | 8.8 | 15.8 | 5.0 | 10.6 |

TABLE 3.44

Mean PS scores for entire sample and the 4 groups

| | Total group (n = 79) | Group 1 (n = 49) | Group 2 (n = 6) | Group 3 (n = 10) | Group 4 (n = 14) |
|---|---|---|---|---|---|
| Mean PS scores* | 3.4 | 3.3 | 3.5 | 3.4 | 3.5 |
| SD | .75 | .76 | .76 | .73 | .66 |

TABLE 3.45

Mean DAS scores for entire sample and the 4 groups

| | Entire sample (n = 82) | Group 1 (n = 51) | Group 2 (n = 6) | Group 3 (n = 10) | Group 4 (n = 15) |
|---|---|---|---|---|---|
| Mean DAS scores* | 139.4 | 140.8 | 143.3 | 134.0 | 136.2 |
| SD | 35.4 | 32.4 | 47.9 | 35.8 | 42.4 |

* A log likelihood ratio test did not reject the hypothesis that within class and whole population distributions for these variables were the same.

The GHQ was only administered to the SV group, as such, low numbers in some of the numerical taxonomy groups makes comparison of group scores difficult. Table 3.46 presents the data available (see below).

TABLE 3.46

Comparison of mean CGHQ scores for the SV group and the 4 groups

| SV group (n = 37) | Group 1 (n = 26) | Group 2 (n = 2) | Group 3 (n = 5) | Group 4 (n = 4) |
|---|---|---|---|---|
| 16.1 SD = 4.5 | 15.9 SD = 4.5 | 15.5 SD = 6.3 | 18.6 SD = 3.6 | 14.5 SD = 5.8 |

* A log likelihood ratio test did not reject the hypothesis that within class and whole population distributions for these variables were the same.

### 3.3.6 Dexamethasone suppression

The DST was administered only to the OP sample (n = 49). 3 patients had 4 pm cortisol levels > 160nmol/l. 2 of these patients were in Group 4 (17% of those tested in that group). The other patient was in Group 1 representing 4% of those tested in that group.

### 3.3.7 Summary of features typifying each group

The following is a summary of the features which typify each of the groups. These variables were not used in the original numerical taxonomy procedure.

Group 1 (n = 54)

Patients were on average aged 52 at the time of interview. 80% were female, 37% lived alone and 13% held professional jobs and overall more were likely to be working than in other groups. On average they reported more positive relationships with fathers and more positive recollections of their parent's relationships and their childhoods overall than other groups. They were better educated. They were more likely to have experienced suicidal ideation when first depressed. 32% had major depression and 64% had dysthymic disorder. Panic disorder was diagnosed frequently (26%). Dependent personality disorder was diagnosed frequently (40%). Depression severity, neuroticism, extroversion, hopelessness, dysfunctional attitudes did not distinguish this group from the means for the entire sample. This group was the most anhedonic. Patients in this group were most likely to be taking antidepressants and most likely to be taking other psychotropic drugs in combination with antidepressants at evaluation.

Group 2 (n = 6)

Group 2 patients were more likely to be male and older at time of presentation. A high proportion was receiving social security benefits. These patients had the shortest initial illness and were most likely to perceive treatment as helpful. They were most likely to be hospitalised for their first depression and most likely to have attempted suicide. They reported the greatest number of previous depressive episodes, although they reported the greatest improvement since their last episode. These patients reported the highest level of developmental object loss. They were least likely to have been brought up by their mother and father and had less positive recollections of their parents when young, although they reported good memories of childhood overall. They commonly reported school refusal, being nervy children and a large proportion had very few teenage romantic experiences. Group 2 patients were more likely than Group 1 patients to be married. Three of the six patients were diagnosed with major depression and

three of the six with dysthymic disorder. Two of six had a history of a manic episode at the SCID subthreshold level. This group had the highest percentage of subjects with a history of psychosis occurring at score stage. These patients were more likely to have compulsive and paranoid personality traits. They had the lowest depression severity scores, were least anhedonic, most extroverted, but had the most dysfunctional attitude scores. All Group 2 patients were taking psychotropic medication and 4 of 6 were taking antidepressants at the time of evaluation.

Group 3 (n = 11)

Group 3 patients had a more equal sex distribution (45% male) than other groups. They were youngest at the time of interview and youngest when they first sought treatment, although they were least likely of any group to have sought treatment. They reported treatment of their first depression as being least effective of any group. Interestingly, suicide attempts were least frequent in this group and occurred significantly less than in the overall group. These patients had been in treatment the longest and they reported improving the least since their last depressive episode. These patients reported more bad and ambivalent recollections of childhood overall although their recollections of their parents were not greatly distinct from the group overall. They were less likely to have completed education beyond secondary school, were less likely to recall school refusal or being a "nervy" child than the overall group. This group had the lowest percentage of married subjects and the highest percentage of never married and divorced subjects. 73% (the highest percentage) of Group 3 patients had a diagnosis of major depression. 82% had dysthymic disorder. These patients were most likely to have schizoid, passive-aggressive or narcissistic personality disorder or traits described. They had the highest depression severity scores, the highest neuroticism scores and the lowest extroversion scores and the highest hopelessness scores, but the lowest dysfunctional attitudes scores. These patients were least likely to be taking psychotropic medication when assessed and least likely to be taking antidepressants.

Group 4 (n = 16)

Group 4 patients were predominantly female, they were older than average at presentation and more likely to be receiving social security benefits than the other groups. Group 4 patients were most likely to report an event preceding their first depression. They were most likely to seek medical help, but least likely to be hospitalised, they reported fewer suicidal attempts than the entire sample. They reported less improvement than average since their last depression. Group 4 was least likely to give a gloomy premorbid self appraisal than the overall group. This group had the lowest level of developmental object loss. They reported more friends at school than average and had the greatest number of teenage romantic experiences. With Group 2, they were the most likely to be married. They were least likely to be diagnosed with major depression, although three quarters had dysthymic disorder. No patients had a history of mania. There was a low frequency of panic disorder but a higher than average frequency of generalised anxiety disorder. These patients had generally lower proportions of personality disorder or traits reported than other groups although the group had the highest proportion of subjects with avoidant traits or disorder present. This group had the lowest hopelessness score and the lowest neuroticism score and the equal highest anhedonia score. Seventy five percent were taking psychotropic medication. Over one third were taking antidepressants and 56%, the highest percentage, were taking benzodiazepines at evaluation.

## 3.4 Results of 12 month follow up

### 3.4.1 Introduction

12 month follow up data is presented in the following section. Firstly, a comparison between those subjects were followed and those who were not available for follow up is presented. Data relating to change in depression severity, personality, depressive cognitions and anhedonia in those patients followed up is then presented.

### 3.4.2 Comparison of those followed and those not followed

69 patients, that is 79% of the initial sample of 87 were followed up. A number of comparisons between those followed and those not followed were made to determine how representative the followed group were. Specifically, comparisons were made between questionnaire scores, age, sex and presence of major depression and dysthymic disorder for those followed and those not followed. These comparisons are illustrated in Tables 3.47 to 3.50 (see below).

TABLE 3.47

A comparison of the mean age of those followed (n = 69) and those not followed (n = 18)

| | Followed | Not followed | significance |
|---|---|---|---|
| Mean age | 54.0 | 44.7 | t = -2.34 |
| SD | 12.6 | 15.6 | df = 85 |
| | | | p = 0.03 |

Those followed were significantly older than those not followed up.

There were no significant difference in the numbers of men and women followed up (Table 3.48) (see over).

TABLE 3.48

A comparison of men and women followed up and not followed

| | Men | Women | significance |
|---|---|---|---|
| Followed | 18 (75%) | 51 (81%) | $x^2 = 0.09$ |
| Not followed | 6 (25%) | 12 (18%) | df = 1 |
| | | | p = 0.75 |

Table 3.49 (see below) illustrates there was no significant difference in those diagnosed with a major depression at initial interview between those who were followed and those who were not followed.

TABLE 3.49

Comparison of those diagnosed with or without major depression and follow up status

| | Followed | Not followed | Significance |
|---|---|---|---|
| Major depression | | | |
| absent | 44 (64%) | 9 (53%) | $x^2 = 0.24$ |
| subthreshold* | 1 (1%) | 1 (6%) | df = 1 |
| present* | 24 (35%) | 7 (41%) | p = 0.62 |

* These categories pooled for chi-square analysis

Table 3.50 (see over) presents data regarding the presence or absence of dysthymic disorder in those who were and were not followed. There was no significant difference between the two groups.

TABLE 3.50

Comparison of those with or without dysthymic disorder and follow up status

| | Followed | Not followed | significance |
|---|---|---|---|
| Dysthymic disorder | | | |
| absent | 22 (32%) | 4 (24%) | $x^2 = 0.78$ |
| subthreshold * | 2 (3%) | 0 | df = 1 |
| present * | 45 (65%) | 13 (76%) | p = 0.38 |

* Categories pooled for chi-square analysis

There were no significant differences in mean IDS, mean DAS, mean PS, mean HS, mean MPI neuroticism, and mean MPI extroversion scores at the initial interview for the followed group compared with the not followed group (Tables 3.51 to 3.56) (see below).

Variations in the number of subjects reported for each of these questionnaires result from missing data.

TABLE 3.51

Comparison of initial mean IDS scores in those followed and not followed (t-test)

| | Followed (n = 66) | Not followed (n = 15) | significance |
|---|---|---|---|
| Initial mean IDS score | 36.7 | 38.6 | t = 0.54 |
| SD | 11.6 | 11.9 | df = 79 |
| | | | p = 0.59 |

TABLE 3.52

Comparison of initial mean DAS scores in those followed and not followed (t-test)

| | Followed (n = 66) | Not followed (n = 16) | significance |
|---|---|---|---|
| Initial DAS score | 140.3 | 135.4 | t = -0.42 |
| SD | 33.4 | 43.6 | df = 80 |
| | | | p = 0.68 |

TABLE 3.53

Comparison of initial mean PS scores in those followed and not followed (t-test)

| | Followed (n = 65) | Not followed (n = 14) | significance |
|---|---|---|---|
| Initial mean PS score | 3.4 | 3.5 | t = 0.91 |
| SD | 0.76 | 0.69 | df = 77 |
| | | | p = 0.37 |

TABLE 3.54

Comparison of mean HS scores in those followed and not followed (Mann Whitney U test)

| | Followed (n = 59) | Not followed (n = 15) | significance |
|---|---|---|---|
| Mean HS score | 12.7 | 13.5 | z = -0.64 |
| SD | 4.9 | 5.5 | p = 0.52 |

TABLE 3.55

Comparison of mean MPI neuroticism scores for those followed and not followed (Mann Whitney U test)

| | Followed (n = 65) | Not followed (n = 15) | significance |
|---|---|---|---|
| Mean MPI neuroticism score | 35.1 | 37.1 | z = -0.49 |
| SD | 9.9 | 7.1 | p = 0.66 |

TABLE 3.56

Comparison of mean MPI extroversion scores for those followed and not followed (t-test)

| | Followed (n = 16) | Not followed (n = 65) | significance |
|---|---|---|---|
| Mean MPI extroversion scores | 17.1 | 16.4 | t = -0.26 |
| SD | 9.3 | 10.0 | df = 79 |
| | | | p = 0.80 |

At follow up all patients remained in treatment with either their GP or psychiatrist. All except two patients continued to see both a psychiatrist and a general practitioner.

91% of those followed up were taking psychotropic drugs. 76% were taking antidepressants and 37% were taking benzodiazepines or hypnotics and 14% were taking antipsychotic drugs.

In summary there were no significant differences between those followed and those not followed in terms of sex, diagnosis of major depression, diagnosis of dysthymic disorder or mean IDS, PS, DAS, HS, MPI-neuroticism scores and MPI-extroversion scores. The group of followed patients however, was significantly older than the group who could not be followed.

### 3.4.3 Changes in depression severity, personality measures, depresive cognitions and anhedonia over 12 months

Mean initial and follow up scores for the IDS, the MPI neuroticism scale, the MPI extroversion scale, the DAS, the PS, and HS are presented in the following tables. The initial and follow up scores were compared using paired t-tests or Wilcoxon matched pairs tests where the assumption of normality was violated. Given that multiple decisions (6) were being made, the alpha level was set at 0.05/6, that is Bonferroni adjusted univariate tests were employed.

Initial mean IDS scores and mean IDS scores at follow at are presented in Table 3.57 (see over). Using a paired t-test there was a significant difference ($t = 3.99$, $df = 52$, $p = 0.0001$) between the initial and follow up scores, the follow up score being 16% lower.

There was little change occurring across time with respect to the personality measures of neuroticism and extroversion. There was little change in anhedonia. Dysfunctional attitudes scores did not appear to change over time. There was however a significant decrease ($z = -3.6$, $p = 0.003$) in HS over time.

An item analysis of the IDS was performed to determine which items changed most over the follow up period. Items with significantly lower scores at the $p < .05$ level were item 3 "waking up too early", item 5 "feeling sad", item 12 "increased appetite", item 16 "self blame", item 18 "thoughts of death or suicide" and item 26 "autonomic arousal".

An item analysis of the HS revealed significant changes at the 0.05 level for item 11 "all I can see ahead of me is unpleasantness rather than pleasantness" and item 19 "I can look forward to more good times than bad times".

TABLE 3.57

Comparison of mean initial and mean follow up scores on measures of personality, cognition and anhedonia, using paired t-tests, or Wilcoxon matched paired tests where appropriate

| | Mean initial score | Mean follow up score | significance |
|---|---|---|---|
| Mean IDS score (n = 53*) | 37.7 | 31.4 | t = 3.99 |
| SD | 11.8 | 12.4 | df = 52 |
| | | | p = 0.0001** |
| MPI-n (n = 56*) | 34.7 | 33.8 | z = -1.58 |
| SD | 10.4 | 9.4 | df = 55 |
| | | | p = 0.11 |
| MPI-e (n = 52*) | 17.3 | 18.3 | t = -0.97 |
| SD | 9.5 | 9.2 | df = 51 |
| | | | p = 0.34 |
| HS (n = 52*) | 12.8 | 10.3 | z = -3.6 |
| SD | 4.8 | 5.8 | p = 0.003** |
| DAS (n = 58*) | 138.9 | 135.6 | t = 0.85 |
| SD | 34.2 | 38.7 | df = 57 |
| | | | p = 0.40 |
| PS (n = 58*) | 3.38 | 3.44 | t = -0.57 |
| SD | 0.76 | 0.83 | df = 57 |
| | | | p = 0.57 |

* n's lower than 69 due to missing data
** $p < 0.008$ (0.05/6)

3.4.4 Predictors of change over time in depression severity

Review of the literature suggested that certain variables were correlated with chronicity of depression. However, at present there is no clear consensus regarding the success of various factors in predicting persisting depression. The investigator chose to include the following variables (Table 3.58) in a multiple regression analysis, using change in IDS score during the follow up period as the dependent variable. A stepwise selection procedure was employed. Categorical variables were entered as dummy variables.

TABLE 3.58

Variables entered into multiple regression

Age of onset
Marital status
Neuroticism score (MPI)
Extroversion score (MPI)
Depression severity (Hamilton Rating Scale)
Number of depressive episodes
Length of depressed mood at initial interview
Whether treated with antidepressants at follow up

Subsequently none of these variables were entered into a regression equation.

Criteria for entry into the multiple regression were PIN = 0.05 and POUT = 0.1. There were non significant first order correlations between change in IDS score and age of onset (r = -0.08), neuroticism (r = 0.1), extroversion (r = 0.09), depression severity (r = 0.25), number of depressive episodes (r = -0.07) and duration of depression at initial interview (r = 0.22).

3.4.5 Changes over 12 months in the 4 groups derived by numerical taxonomy

Mean scores on depression severity, personality, cognition and anhedonic measures initially and at follow up for each of the 4 groups are presented in the following tables. Low numbers in some of the groups limits interpretation of this data. (Tables 3.59 to 3.64) (see below).

TABLE 3.59

Changes in mean IDS scores over time for each group

| | Mean initial score | Mean follow up score |
|---|---|---|
| Group 1 (n = 34) | 38.3 SD = 12.8 | 32.1 SD = 12.6 |
| Group 2 (n = 4) | 35.2 SD = 10.8 | 36.3 SD = 8.1 |
| Group 3 (n = 6) | 40.3 SD = 13.3 | 29.8 SD = 16.6 |
| Group 4 (n = 9) | 34.8 SD = 6.8 | 28.0 SD = 10.7 |

TABLE 3.60

Change in mean MPI-e scores over time for each group

| | Mean initial score | Mean follow up score |
|---|---|---|
| Group 1 (n = 29) | 16.9 SD = 10.2 | 17.4 SD = 10.2 |
| Group 2 (n = 5) | 20.6 SD = 15.3 | 21.0 SD = 10.0 |
| Group 3 (n = 6) | 15.3 SD = 5.2 | 18.3 SD = 7.7 |
| Group 4 (n = 12) | 17.8 SD = 7.3 | 19.3 SD = 7.6 |

TABLE 3.61

Changes in mean MPI-n scores over time for each group

| | Mean initial score | Mean follow up score |
|---|---|---|
| Group 1 (n = 33) | 34.5 SD = 9.7 | 33.6 SD = 9.8 |
| Group 2 (n = 5) | 32.8 SD = 16.7 | 35.8 SD = 8.8 |
| Group 3 (n = 6) | 40.3 SD = 4.8 | 39.7 SD = 8.8 |
| Group 4 (n = 12) | 33.1 SD = 11.2 | 30.5 SD = 8.8 |

TABLE 3.62

Changes in mean DAS scores over time for each group

| | Mean initial score | Mean follow up score |
|---|---|---|
| Group 1 (n = 35) | 142.1 SD = 28.5 | 134.6 SD = 36.4 |
| Group 2 (n = 5) | 144.4 SD = 53.5 | 135.8 SD = 52.5 |
| Group 3 (n = 6) | 121.7 SD = 36.8 | 125.5 SD = 43.7 |
| Group 4 (n = 12) | 136.5 SD = 41.2 | 143.5 SD = 41.1 |

TABLE 3.63

Changes in mean HS scores over time for each group

| | Mean initial score | Mean follow up score |
|---|---|---|
| Group 1 (n = 34) | 13.3 SD = 4.5 | 10.4 SD = 5.4 |
| Group 2 (n = 4) | 12.0 SD = 7.6 | 9.3 SD = 8.1 |
| Group 3 (n = 5) | 13.6 SD = 7.2 | 14.2 SD = 6.5 |
| Group 4 (n = 10) | 10.9 SD = 4.4 | 8.7 SD = 5.6 |

TABLE 3.64

Changes in mean PS scores over time for each group

| | Mean initial score | Mean follow up score |
|---|---|---|
| Group 1 (n = 34) | 3.29 SD = 0.85 | 3.34 SD = 0.97 |
| Group 2 (n = 5) | 3.7 SD = 0.61 | 3.48 SD = 0.68 |
| Group 3 (n = 6) | 3.46 SD = 0.49 | 3.78 SD = 0.82 |
| Group 4 (n = 13) | 3.49 SD = 0.68 | 3.52 SD = 0.62 |

A repeated measure MANOVA showed no significant main effect for SNOB group ($F = .86$, $df = 18$, $p > 0.05$) and no significant interaction between SNOB gorups and time ($F = .59$, $df = 18$, $p > 0.05$). A repeated measures MANOVA showed no significant main effect for SNOB groups ($F = 0.86$, $df = 18$, $p > 0.05$), and no significant interaction between SNOB groups and time ($F = 0.59$, $df = 18$, $p > 0.05$).

While numbers are very low, it is of note that Group 3 patients who were characterised more in terms of personality pathology showed a considerable lowering of depression severity

scores occurring without substantiated changes in other measures. Group 2 which was characterised retospectively by patients with a more episodic affective picture was the only group to show an increase in depression severity over time.

# CHAPTER 4

# DISCUSSION

## 4.1 General Issues

Before discussing specific findings, several methodological issues which broadly affect the interpretation of the results will be discussed. Several of these issues have already been raised in Section 2 in some detail. Prior to this review of general methodological issues, it may be helpful to highlight the essentially clinical nature of the investigation. Firstly, large amounts of data were collected on a relatively small number of patients. Secondly, the data consisted either of clinical impressions of a single interviewer (the investigator) or of subjective accounts obtained via questionnaire of the subject's emotional life. Thirdly, much data was retrospective in nature, often relating to events and emotions experienced some time in the past. The author judged that given the current rudimentary understanding of the nature of chronic depression the advantages of such a clinical approach outweighed any disadvantages.

### 4.1.1 How representative was the sample?

This issue was addressed by using three distinct sources of referral for patients (see p 62). The author's concern that a sample consisting entirely of general hospital psychiatric outpatients would lead to over representation of older, more medically ill, and given the location of the hospital, a population skewed towards having low socio-economic status, led to patients being recruited from a local community mental health centre and also to the recruitment of patients by inviting participation through newspaper articles. The use of a "symptomatic volunteer" population, of course, as previously discussed (p 63 ), brings with it the issue of the "caseness" of the sample so recruited. However, this issue was addressed by the use of criteria that volunteer subjects should either be in treatment by a psychiatrist or general practitioner for chronic depression, prescribed antidepressant medication or score above a cut off point on the CGHQ. Thus the volunteer subjects were required to be patients.

However, the sample was biased in the sense that only patients who agreed to participate in the OP group or who volunteered to participate in the VP group were included in the study. The issue of how patients who decline to participate may differ from those who

agree or volunteer to participate in psychiatric research studies has not been widely addressed (Condon 1986), although differences between volunteer and non volunteer subjects in healthy populations have been extensively studied (Rosenthal and Rosnow 1975). Kokes et al (1977) reported few differences in terms of demographic features, psychiatric symptoms, or type of treatment between psychiatric inpatients who agreed or who declined to participate in a battery of research interviews and questionnaires. However, Schubert et al (1984) argued that extrapolations of differences between those who participate and those who do not in healthy populations probably cannot be generalised to psychiatric patient groups. They suggested that patients who decline to participate may be less compliant, more alienated and paranoid, while those who participate, being more compliant, may tend to supply responses which they believe the investigator may wish to hear.

There was a relatively low rate of refusal to participate among the OP patients and this was conceivably related to the mode of approaching patients and the close association between the research project and the clinic providing their treatment. The numbers of possible patients who did not respond to the newspaper articles is not of course known, it is quite possible that a more compliant and motivated group made up those who volunteered, although on many measures the VP group gave more indications of severe psychopathology than the OP group. Clearly, these points regarding the representativeness of the sample require consideration in evaluating the findings of the study.

### 4.1.2 The reliability and validity of retrospective patient accounts of depression

This issue has been discussed (p 68 ). To recapitulate, evidence for the validity for life time psychiatric diagnoses comes from Leckman et al's (1982) report where SADS-L diagnoses compared favourably with information collated from other sources, for example relatives and medical records. The reliability of life time diagnoses using structured interview approaches seems to be adequate for patient populations (Mazure and Gershon, 1979) but may not be so for non patient populations (Parker, 1987). Keller and Lavori (1981) reported good reliability for the rating of past psychiatric symptoms in patients who were currently ill.

Schrader et al, (1990) found that while inpatients tended to over estimate the intensity of recent affective experience, those who were more depressed had more accurate recall. Of some concern, Leckman et al, (1982) found lower than average validity for the diagnosis of minor depression and Keller et al, (1981) reported difficulties in distinguishing recurrent unipolar depression from chronic depression.

As previously mentioned, lack of access to those patient's casenotes who had not been treated in the author's hospital made it not possible to use Leckman et al's "best evidence of life time psychiatric diagnosis" method. However, the literature had suggested that a structured interview approach was helpful in improving the reliability of retrospective accounts of illness. The writer used a structured approach in interviewing, but the interview was not subject to tests of reliability prior to the study and neither was its validity checked against information from other sources for the VP patients. It could be argued that findings from the study are thereby compromised. However, it was the author's view that the published findings with respect to reliability and validity of life time psychiatric diagnosis generally supported the strategy taken. Furthermore, using the clinical interview as the source of historical information about patients follows standard clinical practice. Nonetheless, the data base of the investigation is clinical and interpretations of findings should be made with this knowledge.

### 4.1.3 Interviewer bias

As previously mentioned, the writer had formulated the hypotheses to be tested by the data gathered in the study and therefore it was possible that a bias towards grouping patient's responses in a particular manner could have occurred. Prior to the study the author proceeded on the basis of arguments that the quantity of data collected on each patient would make it difficult to unconsciously bias patient responses, that a structured interview would reduce bias, that training in the administration of interviews such as SCID and that experience in eliciting psychiatric phenomenology would alleviate possible sources of bias. Nevertheless, it

is conceivable that some form of systematic bias did occur during the assessment procedure. This caveat should be considered in interpreting the findings.

### 4.1.4 Statistical analysis

The population was initially described in terms of information derived from the structured interview and from the series of questionnaires. This information was presented in the form of simple frequencies for the entire group and in terms of set of comparisons between the OP and VP components of the overall sample. These comparisons were drawn initially to ensure the comparability of the two components of the sample, but unexpectedly interesting variations between these two groups emerged. Tests of significance were applied to these differences, and while alpha was set at 0.05, where possible, actual p values are given. Clearly caution is required in evaluating these findings, given the chance of wrongly rejecting the null hypothesis when multiple decisions are being taken.

A central aim of the study was to confirm a classification of chronic depression which had been proposed on the basis of clinical observations by using a form of multivariate statistical analysis. The use of numerical taxonomy in developing classifications of depression has been discussed. To recapitulate, cluster analysis, the form of numerical taxonomy most widely used in studies of the classification of psychiatric disorders, is beset by a number of problems, for example: the user must decide which is the "best" number of groups; programmes will find groups where none exist; and different programmes will produce different classification solutions. However, cluster analysis does have an appeal to the clinician, as patients rather than the symptoms are grouped. According to Grove and Andreasen (1986 p. 349) "cluster analysis is the mathematical equivalent of Kraepelin's summer vacation past time of sorting patient's charts into like featured groups". The author chose to use a form of numerical taxonomy, the SNOB programme, which overcomes some of the problems associated with cluster analysis . In particular SNOB decides how many groups best characterise the data, and SNOB will not produce a group structure where none exists. Professor C. Wallace, the author of the SNOB programme was consulted and he

advised SNOB was suitable given the size and nature of the data set and the number of variables. As it was a confirmatory numerical taxomical study, following Grove et al (1981), the author chose a small set of variables to characterise the patients. The variables reflected those which Akiskal had proposed as distinguishing between his different sub-groups of chronic depression. The reliability and validity of the variables used has been commented upon in general in the previous section of the discussion. To improve modestly reliable measurements, for example the presence chronic anergia, the author, following Grove and Andreasen (1981) grouped items into scales for example "sub affective score" (see page 74 ).

A theme of the literature review had been the difficulty classifiers of depression had experienced when devising useful classifications on the basis of symptoms alone. Another argument in the literature review was that for historical and cultural reasons, an "adequate semiology of affect" has not developed, and that when advances in classification of affective disorder have occurred, non symptomatic variables such as natural history and family history have been taken into account. Following this argument, and as Akiskal had used family history and natural history in his classification, non symptomatic variables were included in the numerical taxonomy programme. As previously mentioned (p 91 ), the use of such variables has been strongly supported by Roth et al (1979).

In order to test the stability of the typology which SNOB produced, the programme was also run on the VP and the OP groups individually. When this was done using the OP group to generate a typology, the same set of groups emerged. When the VP group was used to generate the typology a 3 group structure emerged, where Group 1 and Group 3 remained basically unchanged and Group 2 and Group 4 merged. The overall stability of the classifications generated using subsets of the cohort demonstrated extra validity for the typology and provided justification for combining the OP and VP groups in the analysis. In the analysis using only VP patients, the lower numbers of patients with medical comorbidity probably led to Groups 2 and 4 merging. How the VP and OP groups differ is discussed further on p 189.

The 4 group typology which emerged from the numerical taxonomy was validated against other clinical variables not used in the analysis, the SNOB programme having the capacity to decide whether within group distributions of variables not used in the analysis differ significantly from their distribution in the whole population. Simple frequency data were also presented, supplemented with narrative descriptions, in an attempt to convey how the groups differed on these variables which were derived from the structured interview and the questionnaires.

In the follow up section when univariate statistics were employed, alpha was adjusted using the Bonferroni method where necessary on account of multiple measures. Multivariate statistical approaches used in the follow up section included multiple regression and MANOVA. Low numbers hampered the interpretation of these findings.

## 4.2 Discussion relevant to specific findings

In this section, the sample is compared with other samples of patients with chronic depression described in the literature. The degree to which the OP and the VP groups vary on the variables investigated is commented upon in terms of how similar the VP group is to the OP group, that is how valid it is to combine the groups; and in terms of differences between the OP and VP group, that is how populations of patients with chronic depression may differ in different treatment settings. The decision to compare subgroups of the sample on the basis of the mode of recruitment was taken out of concern that while strict criteria for caseness had been applied, the volunteer group might not have been as ill as the patients from T.Q.E.H. and Beaufort Clinic who had been recruited by more traditional means.

There are few descriptions of comparable cohorts of chronically depressed patients in the literature. Comparisons with those descriptions which are in existence are complicated by factors such as low numbers, for example Scott et al (1988) had a sample size of 24, and somewhat different inclusion criteria. For example, in that study only patients with chronic major depressive illness who had been inpatients were included. Other studies are of various sub groups of chronically depressed patients, for example, late onset dysthymia or early onset dysthymia (Klein et al 1988c). Those cohorts while more comparable in terms of numbers and sources of patients, for example, Akiskal et al (1981) do not always describe the variables measured in the present study. The following section of the discussion is undertaken with these caveats in mind.

### 4.2.1 Comparison of VP and OP groups

The predicted differences between the OP and VP groups with respect to socio-economic class were observed, in that the VP group was of significantly higher socio-economic class. This finding is in keeping with the literature (Brauzer and Goldstein, 1973, Rosenthal and Rosnow, 1975) where it is a consistent finding that volunteer patients are of relatively high socio-economic status. In keeping with predictions, the VP group was significantly younger than the OP group. The literature with respect to the age of volunteer

patients is somewhat divided, with some studies suggesting volunteers are older and others that they tend to be younger. Rosenthal and Rosnow (1975) suggested that on balance youth rather than age, is associated with volunteering. One of the rationales for using a group of volunteer patients was to broaden the age range of the group to be studied, as the QEH OP group consisted of predominantly older patients. Similarly, as expected, the volunteer group had less medical comorbidity than the OP group. It would appear then that including the volunteer group in the study achieved to some extent the aim of reducing a bias evident in the OP group towards patients who were older, of lower socio-economic status and high medical comorbidity.

Patients in the OP and VP groups had all met the inclusion criteria for the study. The VP group consisted of patients who were in treatment by a psychiatrist (73%) or by their local doctor (27%) for chronic depression. As a proportion were in treatment by doctors without specific psychiatric training, two further tests of psychiatric "caseness" were devised. They were that the patient was required to be either taking antidepressant medication or score above a cut off point on the chronic version of the 28 item GHQ (Koeter et al 1989).

The initial purpose behind comparing the VP group and the OP group on a range of variables was to further ensure the "caseness" of the sample, before the entire cohort was used in the confirmatory numerical taxonomy analysis. When these comparisons were made, an unexpected but clear trend emerged: the VP sample tended to report more extensive psychopathology in nearly all areas of the assessment interview and in the questionnaires administered. In summary, the VP group had been in treatment significantly longer. They reported more previous depressive episodes and more suicide attempts and more reported other psychiatric problems prior to being depressed. The VP group was younger when first depressed, and tended to view their premorbid personalities negatively. The VP group had a marginally higher prevalence of depression and of alcoholism in first degree relatives. They had less positive recollections of their parents and their childhoods and reported fewer friends at school. There were more single patients in the VP group and more widows in the OP

group. VP patients tended to show more evidence of Schneidenian Depresive Personality features, but significantly less were judged to have DSM-III dependent personality disorder and passive aggressive personality disorder. Significantly more VP patients were diagnosed with major depression and significantly more had a past history of mania (at the subthreshold level). The VP group scored significantly higher on the Hamilton Depression Scale. The VP group had higher self rated depression scores (IDS) and higher hopelessness scores (HS). They were more neurotic (MPI-n) and less extroverted (MPI-e). They had more anhedonic responses on the PS. Their DAS scores were marginally lower than the OP group.

There are a number of possible explanations for these findings. Firstly, the greater severity of psychopathology in the VP group may be related to the sampling technique. It could be argued that of those patients with chronic depression who were exposed to the newspaper article describing the study, those who were more depressed and in an active phase of their illness might have been more likely to volunteer for the study, while those who were less severely depressed and in a relatively quiescent phase of their depression might have been less likely to bother to volunteer for the study. Certainly, while it was clearly stated that there were no treatments offered as part of the study, a considerable number of VP subjects were despairing of their lack of progress in their treatment and were interested in discovering new treatments and approaches during the assessment interviews. Of course, those who were very severely depressed would also have been less likely to respond. In the OP group, a greater proportion of less depressed patients may have consented to participate on the basis of situational determinants discussed by Rosenthal and Rosnow (1975), such as the knowledge that the investigator was a part of the treatment team at the clinic they attended, rather than the salience of the study to their own problems. A further possible explanation may be that in Australia, severe non psychotic chronic psychiatric disorders are frequently treated in private practice (Andrews 1989) and that the finding reflects actual practice. Of note, Akiskal (1990) suggested that disproportionately more patients with sub affective dysthymia may be seen in private than in public settings.

The lower depression severity and the fewer cases of major depression in the OP group may be also explained by psychiatric caseness in these individuals being determined more by personality factors than by depressive symptoms. Of note, there were significantly greater numbers of patients with dependent and passive aggressive personalities in the OP group. However, this view is not entirely supported as on other personality measures, for example neuroticism, extroversion and Schneiderian Depressive Personality traits, the VP group demonstrated more abnormal responses than the OP group. These personality measures however, may have been affected by the greater severity of depression in the VP group, that is they may be more sensitive to the depressive state than DSM-III personality judgements.

A further possible explanation for the lower levels of depressive symptomatology in the OP group may have been related to the presence of greater medical comorbidity in this group. At first thought, it may seem that a medical illness may exacerbate and increase chronic depressive symptoms. However, in a general hospital setting, it may be that for patients with medical comorbidity, lower levels of depressive symptoms are required for the patient to remain in the psychiatric clinic compared with patients with depression without medical comorbidity. In such circumstances the psychiatrist may inadvertently take on the role of general physician/general practitioner, as well as managing the specific psychiatric problems of the patient.

Differences between the VP and OP groups were most marked in areas reflecting depression severity and less evident in terms of developmental history variables and family history. This would tend to give support to the argument that differences between the OP and VP groups were due to the different sampling techniques used for the two groups; the VP group consisting of fewer patients in remission of their symptoms and the OP group including some patients seen when in relative remission of their illness.

In conclusion, the two groups differed in the predicted manner in terms of age and socio-economic status and medical comorbidity. The unexpected finding of greater severity of psychopathology in the VP group was thought to reflect the differing methods of subject recruitment in each group, although it is conceivable it may reflect the nature of chronic depresion seen in different treatment settings. The author concluded that the differences between the VP and the OP groups tended to make the overall sample more representative of chronically depressed patients in general and therefore an appropriate sample for a taxonomic study.

### 4.2.2 Sample characteristics

#### 4.2.2.1 Socio demographic characteristics

a. Age at evaluation

The mean age at evaluation of the group studied, 51.9 years was comparable to Scott et al (1988) who studied a group of 24 chronically depressed patients with a mean age at evaluation of 49.9. The age at evaluation in the present study is similar to that commonly reported for age of onset in the literature (Akiskal et al 1981; Berti Ceroni et al 1984).

b. Sex

Women predominated in the sample (72%) as they did in Scott et al's (1988) sample (62%) and in most samples reported (Akiskal et al 1981; Berti Ceroni et al 1984; Winokur and Morrison, 1973; Markowitz et al 1992).

c. Marital status

Of note only 46% of the sample was married or in a defacto relationship. This was lower than the 75% of married patients reported by Scott et al (1988) 18% of the group had never married compared with Scott et al's (1988) sample where 4% were single. Available literature regarding marital status and depression is contradictory, with Keller and Shapiro (1981) finding unexpectedly that there was a lower rate of recovery from depression among married as opposed to non married patients. The high proportion of never married patients in the present sample may reflect the effect of an early age of onset of depression affecting the likelihood of relationships developing in the twenties and thirties. The mean

age of onset of the first depressive episode was 33.1 years in the present study, a comparable figure is not available in Scott et al's report. However, Klein et al (1988c) described a group of early-onset dysthymic patients where 56% were single, and Markowitz et al (1992) reported 82% of patients were single.

d. Social class

In the present study, 76% of patients were receiving social security benefits or were in unskilled jobs. This compares with Scott et al (1988) where 30% of patients were in social class IV and V (Registrar General Classification). To some extent this difference may reflect the low socio-economic status of the area in which most OP patients lived, for their were fewer VP patients on social security benefits. The proportion of patients with unskilled jobs or on social security benefits (76%) was substantially higher than the number of patients father's who fitted these categories (28%). This finding is difficult to interpret given the confounding effects of the age of the patients, the age of the father, and changes in availability of social security benefits.

Brown and Harris (1978) found an association between lower social class and chronicity of depression, and Keller and Shapiro (1981) found that low family income predicted chronicity of depression.

e. Country of birth

The proportion of patients were from outside Australia, (31%) compares with a figure of 26% (SAHC 1986) for metropolitan Adelaide. The higher figure is probably explained by the higher than average

proportion of non Australian born patients in the OP group which reflects the demography of the OP catchment area.

4.2.2.2 Longitudinal history of depression

The mean length of treatment in the present study was 10.5 years and the mean length of current episode was 8.5 years. Scott et al (1988) found males in their sample had been ill for 3.2 years and females for 5.1 years. The shorter duration of illness may reflect that in that study, the study population was confined to inpatients with chronic major depression and did not include outpatients who perhaps had more personality pathology. Akiskal et al (1981) reported differing durations of depressive symptoms for different subgroups of chronic depression. For example, two thirds of patients with chronic secondary dysphoria had been ill "a decade or longer". Akiskal's patients with chronic primary depression had been ill for five years on average. Markowitz et al (1992) found their sample had reported depressive symptoms for 15 years on average. Half the patients with double depression described by Keller et al (1983) had been depressed for 10 years or more. On average patients in the present study had 6.5 previous depressive episodes. This compares with Scott et al (1988) where females reported 5.8 previous episodes and males 2.8 episodes on average.

History of suicidal behaviour is a factor not widely discussed in the chronic depression literature. In the present study, 38% of patients reported a suicide attempt at some stage during their illness. This compares a rate of 14% previously reported for outpatients attending the same clinic (Schrader et al 1986). Klein et al (1988a) reported that 45% of a group of patients with double depression had a history of a suicide attempt; this was significantly higher than the 24% reported in a control group of patients with episodic depression. Akiskal et al (1981) reported that three of his 137 patients completed suicide and that each of these patients had either a chronic medical or a non affective psychiatric disorder complicating their chronic depression.

While patients in the present study with a history of a suicide attempt had marginally more pathological scores on measures of depression severity, personality, anhedonia, depressive cognitions and hopelessness, the differences were not significant (Table 4.1).

TABLE 4.1

Comparison of patients with and without a history of suicide attempt regarding depression severity (HRS, IDS); depressive cognition (DAS, HS,) personality (MPIn, MPIe) and anhedonia (PS)

| | suicide attempters | non attempters | significance |
|---|---|---|---|
| DAS | | | |
| mean score | 140.9 (n = 31) | 138.4 (n = 51) | t =0.31 |
| SD | 35.5 | 35.6 | df = 80 |
| | | | p = 0.8 |
| IDS | | | |
| mean score | 38.3 (n = 31) | 36.4 (n = 50) | t =-0.71 |
| SD | 11.7 | 1.6 | df = 79 |
| | | | p = 0.5 |
| MPI-n | | | |
| mean score | 36.5 (n = 32) | 34.8 (n = 48) | t = -0.77 |
| SD | 9.3 | 9.6 | df = 78 |
| | | | p = 0.5 |
| MPI-e | | | |
| mean score | 15.8 (n = 30) | 17.7 (n = 48) | t = 0.86 |
| SD | 9.6 | 9.3 | df = 76 |
| | | | p = 0.4 |
| HS | | | |
| mean score | 13.2 (n = 27) | 12.7 (n = 45) | t = -0.41 |
| SD | 5.1 | 5.1 | df = 70 |
| | | | p = 0.7 |
| PS | | | |
| mean score | 3.3 (n = 30) | 3.4 (n = 49) | t = 0.63 |
| SD | .78 | .72 | df = 77 |
| | | | p = 0.5 |
| HRS | | | |
| mean score | 15.8 (n = 32) | 15.2 (n = 53) | t = -0.42 |
| SD | 7.1 | 7.0 | df = 81 |
| | | | p = 0.7 |

4.2.2.3 The Primary-secondary distinction

Almost half the subjects reported having a non affective psychiatric disorder prior to the onset of their first depression. Using the diagnostic system suggested by Akiskal which in turn follows the Feighner diagnostic criteria, the majority of these previous psychiatric disorders fell into the "unspecified group". Patients predominantly reported anxiety symptoms, phobic symptoms and very occasionally obsessional symptoms. The investigator experienced some difficulty in determining the nature of this reported psychopathology. Most subjects' reports of particular symptoms were difficult to disentangle from general comments about premorbid personality such as "I always had no self esteem", "I had no confidence, I was always shy and nervy". It may be that the lack of structured inquiry in this particular section of the interview hampered accurate data collection. Relatively few subjects reported alcoholism prior to their first depressive episode. Only two of those 11 subjects with threshold or sub threshold SCID scores for life time prevalence of alcoholism reported onset of alcoholism prior to the onset of depression. In their prospective study, Keller and Lavori et al (1986) found that the primary-secondary distinction did not predict the duration of a depressive episode; although in an earlier report Keller, Klerman et al (1984) found that history of a non affective psychiatric disorder, particularly alcoholism, predicted a chronic course. The validity of the primary-secondary distinction in terms of a distinctive family history for affective disorder has been questioned by data presented by Grove et al (1987) where there was no increased risk for affective disorders in families of patients with primary as opposed to secondary affective disorders.

In Akiskal's original study, 23% of his patients had depressions secondary to non affective psychiatric disorder and 12% had depressions secondary to a chronic medical illness. One third of Akiskal's secondary depression patients had anxiety, phobic or obsessive-compulsive disorders and one third had somatisation disorder. The low prevalence of somatisation disorder in the present study may be attributable to factors relating to the selection procedure. For the VP group, somatisation disorder patients may have been less likely to participate in a study of chronic depression due to their conceptualisation of their

problems in physical rather than emotional terms. The low prevalence of patients with depression secondary to somatisation disorder in the OP sample is more difficult to explain. The presence of multi-disciplinary clinics in the general hospital setting, for example the pain clinic, may provide an explanation in that patients with somatisation disorder may be managed in these settings rather than in general psychiatric OPD. Clearly however, this argument to some extent runs against that raised in section 4.2.1 regarding differences between the OP and VP groups.

4.2.2.4 Treatment

In the present study, 59% of subjects were taking antidepressant drugs. This compares with 75% of patients with affective disorder taking antidepressants previously reported in this OPD clinic (Schrader et al 1986b). In that study, 49% of outpatients with affective disorder were taking antidepressants alone, this compares with 25% of patients with chronic depression in the present study taking antidepressants alone. This finding tends to confirm the previous finding of a positive correlation between time in treatment and increasing polypharmacy (Schrader et al 1986b). It is of note that fewer patients with chronic depression were taking antidepressant medication compared with the overall group of affective disorder patients in the same clinic. This is in line with previously reported findings of the low utilisation of antidepressant drugs in patients with chronic depression (Weissman and Klerman 1977; Akiskal 1982; Berti Ceroni et al 1984; Markowitz et al 1992). There were only two subjects treated with lithium carbonate in conjunction with antidepressants. It is of note that this pattern of prescription has persisted some time after the publication of reports of the efficacy of antidepressant treatment for some forms of chronic depression (Kupfer et al 1989; Koscis et al 1988; Ward et al 1979; Rounsaville et al 1980).

4.2.2.5 Characteristics of first depressive episode

As discussed in the literature review, a large number of factors have been proposed as predictors of a chronic course of depressive illness. Some of these relate to the nature of the first depressive episode. The mean age of onset for the first depressive episode in the present

study was 33.2 years, which is comparable to Hirschfeld et al (1986) who described a mean age for first affective disorder in a group of chronically depressed patients of 33.4 years. Akiskal et al (1981) reported that 36% of his original sample had early onset depression (< 25 years). However, Keller et al (1984) reported that age of onset was not associated with chronicity. Duration of depressive episode is also consistently associated with chronicity, (Toone and Ron 1977; Keller et al 1984; Keller and Shapiro 1982) with longer episodes indicating chronicity. Certainly the mean duration of the initial depressive episode in this sample, 43.3 months, is in line with the literature. Half of the subjects in the present study were hospitalised during their first episode. Keller et al (1984) found that inpatient status was associated with subsequent chronicity.

Whether the presence or absence of endogenous symptoms is associated with chronicity has been addressed in the literature, with recent reports finding a poor outcome may occur with either endogenous or non endogenous symptom profiles (Lee and Murray 1988, and Kiloh and Andrews 1988). In the present study, 53% of subjects recollected anhedonic feelings, 45% recalled terminal insomnia and 22% diurnal variation of mood when first depressed. Clearly the previously mentioned caveats regarding the interpretation of such recollections must be applied to these data.

Of interest 21% of subjects were treated with ECT during their first depressive episode, 74% were treated with some form of psychotropic medication, and only 6% were treated with psychotherapy alone. 15% sought no treatment. These figures are similar to those reported by Hirschfeld et al, (1986) and would tend to suggest that at least initially patients with chronic depression may be treated quite strenuously, and are consistent with the view that some forms of chronic depression may not be responsive to currently available treatments. Of note, only half the subjects in the present study recalled treatment of their first depressive episode as being helpful.

In response to a single question inquiring about the presence of life events prior to the onset of their first depression, 85% of subjects recalled an event they related to the onset of their illness. The investigator had decided against further inquiry in this area on account of methodological difficulties relating to retrospectivity of the information. The measure of "chronic strain" developed by Klein et al, (1988c) to measure ongoing environmental stress was not available at the time the study was carried out.

4.2.2.6 Patient's perception of premorbid personality

While a majority of subjects saw themselves having been gloomy and pessimistic, less than half of the subjects were judged as having predominantly negative perceptions of themselves prior to the onset of their first depression. As discussed in the literature review, there is evidence from prospective studies which suggests that traits such as "lower emotional strength", increased "emotional dependency" (Hirschfeld et al 1989) and "sub validity" and autonomic instability (Nystrom and Lindegarde 1975) are present premorbidly in people who subsequently become depressed. Other authors have employed the use of clinical vignettes (Akiskal 1983) to describe the premorbid personalities of chronically depressed patients. The investigator lent towards a clinical evaluation of premorbid personality by simply asking patients to describe themselves prior to being depressed and then judging those descriptions as optimistic, pessimistic and positive or negative. This approach is clearly limited by a number of factors, not least being the subjects emotional state at the time of interview. Clearly however, not all patients had negative self perceptions extending prior to the onset of their illness.

4.2.2.7 Presence of "sub affective" symptoms

Akiskal suggested (1983) that some patients with early onset chronic depression demonstrated a number of features suggestive of endogenous depression. In particular, he mentioned psychomotor inertia, hypersomnia, anhedonia and diurnal variation of mood. In this study 57% of subjects reported anergia, 43% hypersomnia, 21% anhedonia, and 12% reported diurnal variation of mood even when "feeling at their best". The investigator

decided to ask subjects about the presence of these symptoms when they were "feeling at their best" in order to distinguish an "habitual sub syndromal pattern" (Akiskal et al 1981) from symptoms reflecting depression severity. Akiskal found that about 15% of his sample of chronically depressed patients had what he saw as a sub syndromal form of endogenous depression. There are few other reports of this symptom pattern in the recent literature, although as mentioned in the literature review, there are descriptions of mild forms of melancholia dating back to antiquity.

4.2.2.8 Family history of depression and alcoholism

Rates of depression among first degree relatives of normal controls are usually estimated to be about 6%, and those for alcoholism about 8% (Weissman et al 1984). Reported rates of major depression among first degree relatives of patients with major depression vary depending on the methodology of the study and the diagnostic criteria applied (Weissman et al 1982) but in general they range between 10-20% (McGuffin and Katz 1989). Rates of alcoholism among first degree relatives of patients with depression have been found similar to those of normal controls (Merikangas et al 1985).

In the present study, the age correlated prevalence rate for depression in first degree relatives of patients with chronic depression was 19% and the rate for alcoholism in first degree relatives was 6%. These figures are similar to those reported for major depression. Akiskal et al (1981) reported that 22% of their subjects had a family history of depression and 27% had a history of alcoholism. Akiskal's data were not age corrected. Scott et al (1988) reported that 50% of their patients had a family history of depression, but again no information regarding age corrected morbid risk was presented. Klein et al (1988b) reported very high age corrected prevalence rates for depression in first degree relatives on patients with early onset chronic depression of 49%, and 29% in late onset chronic depression. They found rates of alcoholism in first degree relatives of patients with early onset chronic depression of 17%, and 14% in late onset depression. Of note, (Klein et al 1988c) also found high rates of depression in first degree relatives of patients with episodic major depression.

The present study used the family history method and followed Winokur's criteria for diagnosis of depression in relatives. The family history method tends to under estimate the number of affected relatives. Klein et al used a similar approach, the Family History Research Diagnostic Criteria Interview Guide (Andreasen et al 1977). Both Klein's study and the present study addressed the issue of the lack of independence of observations in family data (Weissman et al 1986) by calculating age corrected prevalence rates within the family and using the family as the unit of analysis.

Rates of depression in first degree relatives of subjects in this study appear comparable to those reported by Akiskal et al (1981) and Scott et al (1988) and somewhat lower than those reported by Klein et al (1988b). Whether rates of depression in family members are greater in patients with chronic depression compared with episodic depression was a question not directly addressed by this study, due to there not being a comparison group of episodically depressed patients. While the morbid risk for depression in the present sample was 19%, which is within the range of reported prevalence rates for depression in relatives of patients with episodic depression, there was considerable variability in the number of affected relatives between individual families, a factor which was taken up in the subsequent classification of these patients.

Rates for alcoholism in relatives were lower than those reported by Akiskal et al (1981) or Klein et al (1988b) and more comparable for rates of alcoholism in relatives of patients with episodic depression.

Again, there was considerable variability between individual families regarding the presence of alcohol dependent relatives, reflecting the heterogeneity of the group and again this issue is taken up in the subsequent classification of these patients.

The low rates of schizophrenia and antisocial personality disorder in first degree relatives was not unexpected and is in line with the literature (Klein et al 1988a; Weissman et

al 1984). It is conceivable however, that some relatives reported as having alcoholism may have actually been more completely described as having antisocial personalities, had the family study rather than the family history method of evaluation been employed. The rate of bipolar disorder in first degree relatives was similar to that reported in Weissman et al (1984) in families with severe major depression and double depression (Klein et al 1988a) but not as high as rates reported by Akiskal et al (1981) in one of his sub groups of chronic depression (sub affective dysthymia). The explanation for this may lie in different methodological approaches employed by each of the studies, for example Weissman et al (1984), Klein et al (1988) and the present study used age corrected rates to determine morbid risk while Akiskal et al (1981) simply reported positive or negative family history for bipolar disorder.

4.2.2.9 Medical comorbidity

In the present study, 8% of subjects were judged as having a serious incapacitating medical illness predating the onset of their depression. This is somewhat lower than the 12% with medical illnesses predating chronic depression, described by Akiskal. This difference may be explained by the fact that Akiskal included in his sample patients with organic psychiatric disorders such as dementia whereas these patients were specifically excluded from the present study. The majority of subjects with severe medical illness predating their depressions were in the OP group, clearly demonstrating the effect of sampling technique on the nature of the population obtained.

64% of the present sample described themselves as having a serious illness. These illnesses were not judged as severe and incapacitating by the investigator and did not necessarily predate the onset of depression. Asthma was the most commonly reported condition, followed by peptic ulcer and thyroid disease. Akiskal et al (1981) described a similar finding of substantial medical comorbidity in his description of patients with chronic depression. The finding that thyroid disease was one of the most common co-existing medical conditions is of interest as Scott et al (1988) reported significantly more patients with chronic depression having a history of thyroid disease than patients with episodic depression.

4.2.2.10 Developmental history

Of interest 21% of subjects reported developmental object loss according to Akiskal's criteria which were modified from Amark (1951). This is somewhat lower than Akiskal et al (1981) reported figure of 35% of chronically depressed patients experiencing developmental loss, and is similar to Akiskal's figure of 18% for such losses occurring episodically depressed patients. Other reports have suggested little difference in terms of developmental loss with respect to patients with episodic depression and depressed patients who remain chronically depressed (Weissman and Klerman 1977) and patients with chronic major depression (Hirschfeld et al 1986; Scott et al 1988). Although Alnaes and Torgensen (1989) reported that patients with major depression and dysthymic disorder had more developmental loss and unsatisfactory childhood experiences than patients with major depression alone. In the present study, while substantial numbers of subjects reported difficulties in relationships with their parents, viewed their parents relationship as poor, saw themselves as nervous children, were school refusers and had few friends, about 40% of subjects reported overall positive recollections of childhood.

4.2.2.11 Marital history

Information was gathered regarding several qualitative aspects of the marriages of subjects in the study. While 83% reported their marriage as being either good or average, 45% had spouses in poor health and only 23% described satisfactory sexual relationships. About half saw their depression as having a negative effect on the relationship. Couples had been together on average for long periods of time viz 30 years. This may reflect the age structure of the group studied. Keller and Shapiro (1981) reported that being married was unexpectedly associated with a greater likelihood of a depression becoming chronic. Akiskal et al (1981) referred to "impaired marital deadlock occurring in almost all married chronic depressives". They also described ill health in spouses as occurring more frequently in chronic unipolar patients than in episodically depressed patients. The descriptions of the marriages of the chronically depressed patients in this study are consistent to some extent

with Akiskal's data in that the marriages were long lasting but characterised often by illness in the spouse, and poor sexual adjustment. It is interesting however, that so few subjects reported their marriages as poor. This may reflect the dependency of these patients on their spouses.

In general terms of frequency of interpersonal interactions, it is noteworthy that over 60% of subjects had contact with their children at weekly or more frequent intervals.

Of note 16% of the sample were widows. In terms of factors which might be suggestive of unresolved or complicated bereavement it is of note that of these widowed subjects, 79% reported their spouse being ill for a lengthy period prior to death, 50% reported their spouse drank alcohol excessively and 36% saw their marriages to have been poor. In terms of the effect of their depression on their relationship it is of note that 44% of those subjects who were divorced or separated saw their depression as having had a great effect on the relationship. There are no reports in the literature on the nature of the previous relationships of patients with chronic depression who were widows or divorced.

4.2.2.12 Schneiderian depressive features

In the present study, 43% of subjects were judged as having a depressive personality using Akiskal's modification of Schneider's concept of depressive personality. Akiskal et al (1981) reported that 30% of their sample of chronically depressed patients had depressive personalities, however, differing proportions of patients in each of Akiskal's proposed grouping of chronic depression had depressive personalities. Presence of Schneiderian Personality Features was a variable used in the numerical taxonomy procedure and the variability of depressive personality scores in the classification developed in the present study is discussed further on page 221. Klein (1990) has recently presented data indicating that Schneider's criteria for depressive personality have moderate to good inter rater reliability, internal consistency, and test retest stability. He also reported that the assessment of depressive personality traits was not affected by the patient's clinical state. He found only

modest associations between depressive personality and DSM-III affective disorder diagnosis. For example, only 30% of patients who met criteria for depressive personality or DSM-III dysthymia met both sets of criteria. It appeared from his data that patients who met criteria for DSM-III dysthymic disorder but not depressive personality displayed more chronic affective symptoms and had higher rates of non bipolar depressive disorder in relatives, than patients with depressive personality alone. Patients with depressive personalties alone however, still had higher lifetime rates of affective disorder in relatives than in controls. Klein argued that while his data suggested that depressive personality and dysthymia may not be equivalent constructs, the finding of high levels of affective disorder in relatives of patients with depressive personality suggests that depressive personality is best conceptualised as a milder less symptomatic form of dysthymia. A further analysis of the data from the present study showed the morbid risk for depression amongst subjects with depressive personality (n = 37) to be greater (22.3%) but not significantly so than the morbid risk (16.6%) for depression in those without depressive personality (n = 49), which would tend to support this contention.

4.2.2.13 DSM-III personality disorder diagnoses

The most common DSM-III personality disorder among subjects in the present study was dependent personality disorder. This condition was reported in 36% of subjects. Avoidant traits were recorded in 49% of subjects and compulsive traits in 33%. The high prevalence of dependent and avoidant traits is consistent with the literature regarding the personality of patients who are predisposed to depression or have experienced a depressive episode (Metcalfe 1975; Hirschfeld et al 1983; Nystrom and Lindegard 1975; Hirschfeld et al 1986).

One third of subjects were recorded as having either histrionic, borderline, passive-aggressive or antisocial personality traits present. This compares with 44% of Akiskal et al's (1981) group having so called "unstable" DSM-III personality traits present. Akiskal et al (1981) suggested an "inverse relationship" between the presence of depressive personality

traits and passive-aggressive, histrionic, borderline and sociopathic DSM-III traits. A further analysis of data in the present study however, revealed that 57% of subjects with so called "unstable traits" also qualified as having a depressive personality and did not therefore provide strong evidence for Akiskal et al's suggestion of this negative correlation.

4.2.2.14 SCID diagnoses - presence of DSM-III psychiatric disorder and psychiatric comorbidity

Given the inclusion criteria for the study, it was expected that substantial numbers of subjects would qualify for DSM-III affective disorder diagnoses. In fact 36% of subjects had major depression, 67% dysthymic disorder, and 31% of subjects qualified for both major depression and dysthymic disorder diagnoses, so called "double depression". However, of note, 52% of subjects qualified for other non affective diagnoses when the exclusion criterion of the presence of affective disorder was suspended for other disorders. These were predominantly of either anxiety disorders or substance dependence. Akiskal et al (1981) and Scott et al (1988) reported the coexistence of other psychiatric disorders in somewhat lower proportions of the groups they studied, while Klein et al (1988) reported substantial comorbidity (for example 45% history of substance dependence, 71% history of anxiety disorder) in a group of patients with double depression. Klein's comorbidity data was based on life time diagnoses with hierarchical exclusion rules suspended, while in the present study the comorbidity data for anxiety disorder was for current disorder only. Thus the present study indicates that many patients with chronic depression also display characteristics of other disorders, in particular the anxiety disorders.

The fact that 18% of the subjects, while satisfying inclusion criteria for the study, did not receive an Axis I diagnosis supports Koscis and Francis (1987) contention that the DSM-III criteria for dysthymic disorder were too similar to those for major depression, and that the DSM-III-R criteria place too much stress on somatic rather than psychological symptoms. The majority of those subjects in the present study who did not have an Axis I diagnosis did

receive a DSM-III personality disorder diagnosis, or the diagnosis of depressive personality using Schneider's criteria.

4.2.2.15 Depression severity

Clinician rated: Hamilton Depression Rating Scale

a. The mean HRS score for subjects in the present study was 15.5. The literature generally suggests little difference in clinician rated measures of severity between patients who go on to become chronic and those who recover (Hirschfeld et al 1986; Scott et al 1988) or between groups of episodically depressed outpatients and chronically depressed outpatients (Klein et al 1988c).

The relatively low score on the HRS in this population of chronically depressed patients was not unexpected given the predominance of somatic and vegetative items in the scale and concern in the literature (Koscis and Francis 1987) that the chronic depressive syndrome may be more accurately characterised by more psychologically orientated items. Nonetheless, the mean score in the present study was comparable to that reported in studies of outpatient depressed populations and was substantially above the scores reported in normal populations (Rush et al 1985).

b. Self rated: Inventory for Depressive Symptomatology

The IDS was administered to subjects in the present study. This questionnaire was chosen for the study on the basis that it has more scale points available between the upper end of the normal range and the mean depressive level. It therefore was expected to be more sensitive in detecting mild to moderate depressive symptoms than other scales. The mean IDS score was 37.1 which is comparable to the 36.5 reported by Rush et al (1985) for depressed outpatients. While they suggested the IDS may be useful in measuring depression in

patients with dysthymic disorder, there have been no reports of its use with such populations in the literature.

4.2.2.16 Depressive cognitions

a. Hopelessness

The mean hopelessness score in the present study was 12.8, which is comparable to the mean of 10.8 reported in depressed inpatients and outpatients (Greene 1989) during illness episodes. Beck et al (1990) reported that depressed outpatients who scored above 9 on the HS at the time of index evaluation were 11 times more likely to commit suicide than outpatients who scored below this level. They furthermore argue that hopelessness may have some trait as well as state like properties, and that some people are chronically hopeless irrespective of whether they are depressed, and are as such continually prone to suicidal behaviour. Certainly the high HS scores described in the present population of relatively stable chronically depressed outpatients would be consistent with the view that hopelessness may have trait like properties. Furthermore, hopelessness may be a determinant of the chronicity of depression. There have been no other reports describing the measurement of hopelessness among chronically depressed patients. The findings of the present study, in terms of the high levels of hopelessness, when viewed from the perspective of Beck et al (1990) raise important implications regarding the risk of completed suicide among patients who are chronically depressed. Although interestingly, hopelessness scores in suicide attempters were not significantly higher than those who had not attempted suicide in this study.

b. Dysfunctional attitudes

Dysfunctional attitudes were measured in the present study using the DAS. The mean DAS score was 139.4 which is comparable to a mean DAS score of 134 reported for patients with episodic major depression (Klein et al 1988a)

and with the mean score of 146.9 for patients with neurotic depression (Parker et al 1984). The mean DAS score was somewhat lower than the mean score of 160.3 reported by Klein et al (1988a) for a group of patients with double depression. In previous work with subjects from the QEH OPD clinic (Schrader et al 1986), the author found a mean DAS score of 111.7 SD = 31.2 in 18 patients who had recovered some 2-3 years previously from a depressive illness which had required hospital admission. This score is significantly lower ($t = -3.1$, $df = 98$, $p = 0.003$) than that in the present study. Thus the DAS scores of subjects in the present study were higher than those who had recovered from a depressive illness and comparable to patients who were acutely depressed, indicating these patients may have persisting access to negative cognitive schemata (Beck 1967) or a persisting negative cognitive style (Teasdale 1988).

4.2.2.17 Anhedonia

Anhedonia was measured in the present study as the investigator was interested in the presence of one of the more "psychological" indicators of melancholic or endogenous depressions in a population of patients with chronic depression. Anhedonia was measured using the self rated PS. The mean score on the PS in the present study was 3.4, this is somewhat more anhedonic than mean scores in normal populations (3.8) and in depressed patients (3.5) reported by Fawcett et al (1983). They found a sub group of depressed patients with anhedonia scores 2 SD below the mean of the normal population. This group was found to respond well to antidepressant treatment (Clark et al 1984), but unexpectedly, even when they recovered, they had lower anhedonia scores than normal subjects. This finding suggested that the inability to experience pleasure may have some trait like properties. There have been no reports of the measurement of anhedonia in chronically depressed patients, however, the presence of low anhedonia scores in the present study is consistent with either the depressed mood of chronically depressed patients affecting their anhedonia scores or of there being an "anhedonic trait" present in chronic depression. This issue is discussed further

in section 4.2.3.2. In the present study there was a group of 17% who had anhedonia scores more than 2 SD below the mean of Fawcett et al's (1983) normal group. This is of note given Akiskal's description (1983) of "sub affective dysthymia" having anhedonia as one of its characteristics.

4.2.2.18 Neuroticism and Extroversion

The expectation from the literature was that chronically depressed patients should display high neuroticism and low extroversion scores. For example Weissman and Klerman (1977) reported mean MPI neuroticism scores in group of patients who remained chronically depressed as 32.3 compared with 21.3 in those who recovered. Hirschfeld et al (1986) similarly found high neuroticism scores at index evaluation were predictive of a chronic course. While Weissman and Klerman (1977) found no differences in extroversion scores between chronic and non chronically depressed subjects, Klein et al (1988c) found significantly lower levels of extroversion measured using the EPQ in early onset dysthymia compared with subjects with episodic major depression. In the present study mean neuroticism scores (35.8) and mean extroversion scores (17.0) were substantially outside Eysenck's normal range (normal neuroticism score 19.9, normal extroversion score 24.9) and were similar to his mean scores for "hospitalised dysthymics". (Eysenck 1959). Of note the scores differed significantly from those previously reported by the author (Schrader et al 1986a) in a group of recovered depressed inpatients from the same clinic as the OP subjects in the present study. In that study, the mean MPI neuroticism score of recovered depressed patients ($n = 18$) was 20.2 SD = 15.7 ($t = 4.8$, $df = 96$, $p = 0.0001$) while the extroversion score was 26.4 SD = 9.7 ($t = 3.46$, $df = 94$, $p = 0.0001$), indicating that subjects in the present study were significantly more neurotic and introverted than a group of recovered depressed patients from the same clinic.

4.2.2.19 Caseness - The General Health Questionnaire

The GHQ was administered to the VP group as part of the process of determining eligibility for those subjects to enter the study. As previously described (p 67), the revised

scoring procedure for chronic illness suggested by Koeter et al, (1989) was used in this study. The mean GHQ score was 16.1 substantially above the cut off point of 13 suggested by Koeter et al. The 5 patients with GHQ scores below 13 were included in the study as they were either in treatment with a psychiatrist for chronic depression or taking antidepressant drugs.

4.2.2.20 Dexamethasone suppression

The outpatient version of the DST was administered to TQEH outpatient group of subjects. Using an outpatient version of the DST with a cut off point of greater than 160umol/L of cortisol at 4 pm, only 3 subjects had a positive DST. Considering the patient sample as a whole, this would indicate very low rates of dexamethasone non suppression, a finding consistent with that of Howland and Thase (1992). However, Akiskal (1982) has argued on the basis of REM latency data that there are similarities at the biological level between some forms of chronic and episodic depression. If this were the case, the overall rate of dexamethasone suppression in the present study would be expected to be higher. The proportion of patients with each sub type of chronic depression would of course be critical in determining the overall rate of dexamethasone suppression in a sample of chronically depressed patients. In Akiskal et al's (1981) report, 15% of their cohort had "sub affective dysthymia". Assuming a similar rate of sub affective in the present study and with a sensitivity of about 50% for the DST then only 3 positive DSTs would be expected in the OP sample of 49. However, it would also be expected that a proportion of the chronic primary depressive sub group would demonstrate dexamethasone non suppression, and thus even when considering different sub groups of the population, rates of non suppression are low in the present study.

4.2.3 Classification by numerical taxonomy

The second aim of the present study was to use a form of numerical taxonomy to provide statistical validation of Akiskal's classification of chronic depression. This section of the discussion will be structured as follows:

1. A review of the groups which emerged after the application SNOB numerical taxonomy programme.
2. The extent to which the groups resembled Akiskal's groups.
3. The extent to which the groups were clinically recognisable and internally consistent in terms of data not used in the classification process.
4. How the groups resembled other classifications of depression.

A discussion of the rationale for the choice of the SNOB programme for numerical taxonomy is presented in the methodology section. In summary, the principle advantages of the SNOB programme are its capacity not to find a structure in data where none exists and its capacity to decide on the "best" number of groups rather than leaving this to the user, as do most cluster analysis programmes.

4.2.3.1 A review of the groups emerging from the SNOB programme

Using the 12 variables chosen to reflect the distinguishing characteristics of Akiskal's classification (these are described in detail on pages 73-78), the SNOB programme's "best" classification consisted of 4 groups. A description of these 4 groups in terms of a summary of the 12 variables is presented in Table 4.2.

The groups were unequal in number, the largest consisted of 54 subjects (62%) and the smallest consisted of 6 subjects (7%).

TABLE 4.2

Characteristics of the 4 groups derived by SNOB in terms of variables used in the classification. (Significance flags indicate the level at which a log likelihood ratio test rejects the hypothesis within class and whole population samples are the same)

* odds ratio 2:1
** significance of 0.1%
*** significance of 0.01%

| Variable | Group | | | |
|---|---|---|---|---|
| | 1 | 2 | 3 | 4 |
| mean age of onset (years) | 33 | 38 | 20* | 38 |
| mean "endogenous" score (range 4-12) | 9.1 | 8.0 | 8.3 | 8.9 |
| mean "sub affective" score (range 4-12) | 8.9 | 6.5 | 8.5 | 8.4 |
| mean "unstable traits" score (3-9) | 3.3 | 3.0 | 3.9 | 3.3 |
| age adjusted morbid risk of depression in first degree relations (%) | 21.7 | 30.3 | 0*** | 18.5 |
| age adjusted morbid risk (%) of alcoholism in first degree relatives | 0*** | 4.7 | 22.2*** | 17.3** |
| mean score of SCID alcohol/ substance abuse/dependence (Range 2-6) | 2.0*** | 3.7*** | 4.4*** | 2.0*** |
| mean score of items reflecting Schneider's depressive personality score (Range 0-7) | 3.9 | 4.1 | 4.4 | 3.8 |
| % of subjects with negative premorbid self description | 27 | 17 | 55* | 25 |
| % of subjects with pre-existing serious medical condition | 4 | 0 | 0 | 31* |
| % with psychiatric history prior to onset of depression | 36 | 83 | 91* | 44 |
| % with continuous rather than intermittent symptoms | 32 | 20 | 44 | 8 |

Group 1

Group 1 was the largest group, consisting of 62% of all patients. In terms of variables used in the classification, the mean age of onset was 33 years. This group had the greatest number of "endogenous" features when first depressed. It had the most evidence of "sub affective" symptoms such as chronic anergia, hypersomnia, anhedonia and diurnal variation of mood. Very few of these patients gave evidence of DSM-III borderline, histrionic or antisocial traits. The age adjusted morbid risk for depression in first degree relations was 21.7%, while no probands in this group reported alcohol dependence in first degree relatives. No subjects in this group were drug or alcohol dependent. The mean score for the presence of Schneiderian depressive personality traits was 3.9, which is just below Akiskal's cut off point for the presence of depressive personality. However, one third of these patients gave positive descriptions of their premorbid personalities. Very few had serious medical problems prior to the onset of their depression, although about one third reported another psychiatric problem prior to the onset of their first depression. One third of these patients reported continuous rather than intermittent symptoms.

Group 2

Group 2 was the smallest group and consisted of 6 subjects (7% of the overall sample). The mean age of onset in this group was 38 years. This group had the lowest score of endogenous items when first depressed, and the lowest score of items reflecting "sub affective" symptoms. No subjects in this group had DSM-III histrionic, borderline or antisocial traits. This group had a very high age corrected morbid risk for depression in first degree relatives, 30%. The morbid risk for alcohol dependence in first degree relatives was 4.7%, and some subjects reported substance dependence or alcohol dependence. The mean score for Schneiderian depressive traits was 4.1, just above Akiskal's cut off for depressive personality. Only one patient in this group reported a negative premorbid self description. No subjects had serious pre-existing medical disease, although 83% (5 of 6) reported another psychiatric problem prior to the onset of their depression. Only one fifth reported continuous symptoms.

Group 3

Group 3 consisted of 11 patients, 13% of the overall sample. This group had the earliest mean age of onset, 20 years. The mean score of endogenous items was marginally lower than that for the entire group, and the score of items reflecting sub affective symptoms was similar to the average for the entire group. This group was the most likely to be described as having some DSM-III borderline, histrionic or antisocial personality traits. Surprisingly suicide attempts were least frequent in this group. No patients in this group reported a first degree relative with a depressive disorder, however, the morbid risk for alcohol dependence in first degree relatives was the highest of all groups, 22%. More patients in this group were diagnosed as substance or alcohol abusers. This group had the highest level of Schneiderian depressive features, and the highest proportion of subjects reporting a negative premorbid self description. No patients in this group were judged to have had a serious pre-existing medical illness however, 91% reported pre-existing psychiatric problems. This group reported the highest percentage of continuous rather than intermittent symptoms of any group.

Group 4

Group 4 consisted of 16 patients, 18% of the overall sample. The average age at onset was 38 years, equal to the latest onset for any group. Scores on items reflecting endogenous symptoms when first depressed and sub-affective symptoms were similar to the group overall. The proportion of patients with DSM-III antisocial, histrionic, or borderline traits was similar to that for the entire group. The morbid risk for depression in first degree relatives was 18.5% similar to that for the overall group, while the morbid risk for alcoholism was higher than that for the group as a whole. No subjects in this group were substance or alcohol abusers. The average score for items reflecting Schneider's depressive personality was 3.8 the lowest of any group. One quarter had negative premorbid self descriptions. One third of these patients, (the greatest population of any group) had a serious pre-existing medical illness and 44% reported a previous psychiatric problem. Only one patient in this group reported continuous rather than intermittent symptoms.

4.2.3.2 Resemblance between SNOB groups and Akiskal's proposed classification

SNOB derived a "best" classification consisting of 4 groups of unequal sizes. Akiskal's proposed classification consisted similarly of 4 groups. Each of the 4 SNOB groups bore some resemblance to an Akiskal group although for some SNOB groups the resemblance was substantially greater.

Group 3 of the present study was similar in many respects to Akiskal's "character spectrum" subgroup. Like Akiskal's "character spectrum" sub group, Group 3 was characterised by an early age of onset, the presence of either histrionic, borderline or antisocial traits, an absence of strong family history of depression but the presence of a strong family history of alcoholism, the presence of substance and or alcohol dependence or abuse, the presence of another psychiatric disorder prior to the onset of the depression. However, a feature of Group 3 which was not reported in "character spectrum disorder" group was a high Schneiderian Depressive Personality Score. In fact, in Akiskal's character spectrum group there was typically little evidence of depressive personality. However, it is of note that depressive personality scores were not strong discriminators of any of the SNOB groups.

Group 4 in the present study was similar in many respects to Akiskal's "chronic secondary depression" sub group, in particular to those patients in that group with pre-existing severe medical illness. 31% of Group 4 were judged as having a severe medical illness prior to the onset of their depression and 44% reported a previous non affective psychiatric disorder. The age of onset for Group 4 was similar to that reported by Akiskal et al (1981). Similarly, there was a family history of both alcoholism and depression in Group 4 and Akiskal's "chronic secondary depression" group. However, unlike Akiskal's chronic secondary group, Group 4 had little evidence of drug or alcohol abuse, and not much evidence of "unstable personality traits". Group 4 also had relatively high "endogenous" scores which would not be predicted for Akiskal's "chronic secondary depression" group. Like Akiskal's "chronic secondary" depression group, Group 4 had the lowest score on Schneiderian

depressive personality features, although as previously mentioned the SNOB groups did not differ greatly on this variable.

Group 2 in the present study also showed some resemblance to Akiskal's "chronic secondary" group, but there were also substantial differences. Group 2 was similar to the chronic secondary group in having a high proportion of patients with pre-existing psychiatric illness, having patients with alcohol and or substance abuse, in terms of age of onset, and having the lowest scores in terms of endogenous features. Group 2 differed however, in having a very high morbid risk for depression and a relatively low morbid risk for alcoholism and an absence of patients with unstable personality traits.

Group 1 in the present study resembled Akiskal's "chronic primary unipolar depression" in some respects and his "sub affective dysthymia" group in others. The high score for endogenous features, the low score for unstable DSM-III personality traits, the strong family history of depression, the lack of family history of alcoholism, the lack of substance and or alcohol dependence, the low levels of other non affective previous psychiatric disorder present in Group 1 were consistent with either of Akiskal's "chronic primary depressive" or his "sub affective disorder" group. Group 1's age of onset, 33 years, was closer to that for the "sub affective" group and the high score on the "sub affective symptoms" scale was consistent with that group. However, the scores with respect to Schneiderian depressive personality traits and the finding that two thirds of these people had positive pre-morbid self descriptions and that only one third had continuous symptoms were somewhat more consistent with the "chronic primary depression" group. Furthermore, the finding that Group 1 was the largest sub group, given the reported low prevalence of Akiskal's "sub affective" disorder, made it less likely this group was directly analogous with the "sub affective" dysthymic group.

It appeared to the investigator that the numerical taxonomy programme had classified both Akiskal's "chronic primary unipolar depression" group and his "sub affective" dysthymia group together into Group 1.

The SNOB programme has the capacity to forcibly split classes on particular variables. When this procedure was followed, splitting Group 1 at the mean age of onset for that group, a five class typology was obtained, with Group 1 now consisting of 2 groups, one with a mean age of onset of 25 years and the other with a mean age of onset of 44. This 5 class typology was judged by SNOB to be substantially longer in terms of message length viz 1673 "nits" for the 5 class typology compared with 1649 "nits" for the 4 class typology. According to Patrick and Wallace, the difference in message lengths between two different class structures can be regarded as being the log of their posterior odds ratio. Thus if the 5 class structure gives a message length 24 "nits" longer than 4 class structure, one may conclude the 4 class structure was the more probable explanation of the data by a factor of the order of $e^{24}$. According to Patrick and Wallace (1990) a message length difference exceeding 10 units may be taken as showing strong evidence in favour of the class structure with the shorter message.

Of interest, looking at differences between the two sub groups of Group 1, the younger group had significantly more Schneiderian depressive features, a higher morbid risk for depression in first degree relatives, and more "sub affective" symptoms. (Table 4.3) (see over)

TABLE 4.3

Differences between "early" and "late" onset Group 1 subjects, (split at mean age of onset)

| | early n = 27 | late n = 27 | |
|---|---|---|---|
| Schneiderian Depressive traits score | 4.7 | 3.1 | t = -3.13<br>df = 52<br>p = 0.003 |
| Morbid risk of depression in 1st degree relatives (%) | 30 | 14 | t = -2.94<br>df = 52<br>p = 0.005 |
| Sub affective symptom score | 9.6 | 8.2 | t = -2.4<br>df = 52<br>p = 0.02 |

Therefore, while according to the SNOB programme in a general classification of chronic depression, early and late onset Group 1 patients were most economically classified together, the early and late onset sub groups did differ in terms of morbid risk for depression, presence of Schneiderian depressive traits, and "sub affective symptoms" in the manner suggested by Akiskal.

In summary, groups resembling Akiskal's "character spectrum disorder" and the "chronic secondary depressions" emerged from the "best" solution of the numerical taxonomy procedure. The SNOB programme produced a single group which appeared to contain both Akiskal's chronic primary unipolar depression and the sub affective dysthymia groups. Within this group the early onset patients appeared to resemble the "sub affective dysthymia" group and the later onset group resembled the "chronic unipolar group".

4.2.3.3 The clinical meaningfulness of the classification in terms of variables not used in the analysis

In this section of the discussion the extent to which each of the groups were internally consistent and clinically recognisable in terms of other variables not used in determining the classification will be discussed. The strategy of examining groups derived from cluster analysis in terms of variables not used in the analysis is an established method of testing the validity of a typology derived by cluster analysis (Paykel 1972). Variables used to validate the typology were derived from structured interviews and responses to questionnaires.

Whether variables differed significantly in their distributions between particular groups and the overall distribution was also examined. Of interest, rarely did the log-likelihood ratio test incorporated in the SNOB programme demonstrate a significant difference between within group and overall population distributions. This may reflect the low numbers evident in some of the classes in the "best" typology produced by SNOB. The lack of statistically significant differentiation between groups for these variables may also reflect the general homogeneity of the sample with respect to these variables. Similar difficulties in demonstrating differences, between phenomenological variables in Winokur's classification of depression have been previously described (Behar et al 1980). However, some general trends did emerge in terms of the internal consistency of each of the groups examined.

Group 1

In terms of the variables not used in the numerical taxonomy procedure, a clinically recognisable picture of Group 1 patients emerged.

On average they were aged 52 at the time of the interview, 80% were female, 13% had professional jobs and 37% lived alone. They were the most likely to be hospitalised when first depressed and the most likely to have attempted suicide when first depressed. 32% were diagnosed using SCID with major depression, 64% with dysthymia disorder and 26% with

panic disorder. 40% had dependent personality disorder. They were the most anhedonic of all groups and had high neuroticism, introversion and dysfunctional attitude scores. These patients were the most likely to have been prescribed antidepressants and the least likely to be taking benzodiazepines.

The clinically recognisable picture is of a middle aged woman with a history of depressive illness, who remains depressed with clear cut affective symptoms but also character pathology, typically with dependent personality traits and high levels of neuroticism. The patient has evidence of relatively good functioning in terms of educational history and occupational functioning and usually receives continuing treatment with antidepressant drugs.

Group 2

Low numbers in this group limit interpretation of the data, however, a distinct group emerged in terms of variables not used in the numerical taxonomy analysis.

On average these patients were aged 58 at time of interview, and males predominated, 33% lived alone and 83% were pensioners. 67% of this group were in the OP group. They had the shortest initial depressive episode, and found treatment to be helpful. They had the largest number of episodes of depression and reported the greatest improvement since their last episode. These patients reported the highest level of developmental object loss. 50% were diagnosed according to SCID as having major depression, and 50% had dysthymic disorder. Of note 33% had a history (at the sub threshold level) of a manic episode. At the time of interview these patients had the lowest depression severity scores, were the least anhedonic and most extroverted of all groups and had the most dysfunctional attitudes scores. All Group 2 patients were taking psychotropic drugs and 66% were taking antidepressants.

A clinically recognisable picture emerged of a patient who presents in late middle-age with a history of an initial depressive episode which responded relatively well to treatment

but which was followed by multiple episodes of depression and possibly hypomania. While there is a disturbed developmental history there is less evidence of character pathology, and symptomatology is episodic and is seen as related to affective disorder in terms of the patient being treated with antidepressants.

Group 3

In terms of variables not used in the numerical taxonomy procedure once more a relatively coherent clinical picture emerged for patients in Group 3.

These patients were on average aged 43 at the time of interview, the youngest of any group. They were equally likely to be male or female. They were least likely to have sought treatment when first depressed and the least likely to report treatment as being successful. They reported more developmental object loss and more bad and ambivalent recollections of childhood than the group overall. They had been in treatment the longest and reported the least improvement since the last episode. In terms of interpersonal relations, the group had the lowest percentage of married subjects and highest percentage of never married or divorced patients. These patients were the most likely to have passive-aggressive personality traits. They had the highest neuroticism and lowest extroversion scores. They had the highest hopelessness scores, and surprisingly, the lowest dysfunctional attitude scores. Of note they also had the highest depression severity scores both in terms of clinician rated and self rated measures. According to SCID 73% (the highest percentage of all groups) had major depression and 82% had dysthymic disorder. However, these patients were the least likely to be prescribed psychotropic medication, particularly antidepressants.

The clinically recognisable picture is of the patient who presents relatively early, has a disturbed developmental history and ongoing difficulties with interpersonal relationships. While the patient demonstrates affective symptoms often these are judged to be related to personality pathology and therefore unresponsive to antidepressant medication. Management is often prolonged and relatively unsuccessful.

Group 4

In terms of variables not used in the numerical taxonomy procedure a clinically recognisable picture emerged for Group 4 patients.

Group 4 patients were predominantly female, they were older at interview than average for the entire group. They were the most likely to seek medical help and they reported fewer suicide attempts than the overall group. They reported a less gloomy premorbid self appraisal than the group overall. They had the lowest level of developmental object loss, and reported fewer difficulties in terms of interpersonal relationships. For example they reported more friends at school and were more likely to be married than the overall group. This group had lower proportions of personality disorder and the lowest neuroticism scores of the entire group. They had the lowest hopelessness scores. 19% of these patients were diagnosed with a major depression and 75% had dysthymic disorder. 75% were prescribed psychotropic drugs, 38% were taking antidepressants and 56% (the highest percentage) were prescribed benzodiazepines.

The clinically recognisable picture is of a patient with relatively good premorbid functioning and relatively minor personality disturbance who presents with chronic affective symptoms later in life. While not extremely severe, the depressive symptoms are viewed as "affective" rather than personality based and such patients are often treated with antidepressant medication.

Thus each of the groups appeared to be generally internally consistent and clinically recognisable in terms of variables not used in the numerical taxonomy procedure. Furthermore, descriptions of patients from each group in terms of variables not used in the analysis had been also consistent with the picture which had emerged for each group from the variables which had been used in the numerical taxonomy procedure.

For example, treatment received by patients in each group appeared to differ in the expected manner, with high proportions of Group 1 and 2 patients and to a lesser extent Group 4 patients being treated with antidepressants and Group 3 patients being less likely to be treated with antidepressants. The use of response to drug treatment as a validation strategy for classifications of depression derived from cluster analysis is well described in the literature. Paykel (1972b) reported that his typology of depression derived from cluster analysis predicted response to treatment with amitriptyline, with "anxious depressions" improving the least. Overall et al (1966) and Raskin and Look (1976) also used drug response as a validating criterion for clusters. It was beyond the scope of the present study to compare the efficacy of antidepressant treatment in a prospective manner across the groups generated, however, the finding of differential rates of antidepressant prescription between the groups in a "naturalistic" setting may be worthy of further more vigorous examination.

Of interest, patients with a history suggestive of a manic episode were all in Group 1 or 2, groups which had the highest age adjusted prevalence rate for depression in first degree relatives. A family history for bipolar disorder in first degree relatives was relatively rare among the overall sample, with only 4 subjects reporting a bipolar family history. Three of those patients were in Group 1 and one in Group 4. None were in Group 2. The small size of group 2 (n = 6) severely limits interpretations of these findings. Seven patients in Group 1 (13%) had a past history suggestive of a manic episode. The finding that patients in Group 1 were more likely to have histories of either a previous probable manic episode or a family history of bipolar disorder may suggest a relationship between Group 1 chronic depression and bipolar disorder. An association between some forms of chronic depression and bipolar disorder has been suggested by Akiskal (1983) on the basis of a tendency some chronically depressed patients have become hypomanic when treated with tricyclics and their having a family history of bipolar disorder (Akiskal et al 1981). While the rates of bipolar disorder in the present series was somewhat lower in first degree relations than in other reports (Klein et al 1988a), the finding that those patients with both a family history of bipolar disorder and a

history suggestive of a previous manic episode were in either Group 1 or 2, both groups with clear cut "affective" characteristics is consistent with previous reports.

Group 3 patients, who were considered as similar to Akiskal's "character spectrum disorder" group, demonstrated evidence of developmental object loss and ongoing interpersonal problems, although on phenomenological grounds they had high depression severity scores and SCID diagnoses of either major depression or dysthymic disorder were common. The low DAS scores found in Group 3 warrant comment. The DAS is designed to measure negative cognitive schemata which are purported to relate in some manner to depression. A possible explanation for the low DAS scores in Group 3 is that these patients had more a personality disorder than a depressive illness per se. The lower levels of suicidal behaviour in this group may be consistent with this explanation. The high depression severity scores and high levels of depressive diagnoses would of course not be consistent with this explanation, unless these measures were viewed as being less specific, general measures of distress in this group of patients.

An examination of variables not used in the numerical taxonomy procedure generally corroborated the picture of Group 4 patients as having relatively good premorbid adjustment, fewer personality difficulties and a chronic depression secondary to severe and incapacitating medical illness.

In summary an examination of variables not used in the numerical taxonomy programme provided validation of the four groups derived, both in terms of the groups being internally consistent, and clinically recognisable. Furthermore, the description of each group in terms of these variables was broadly consistent with the description of each group in terms of variables used in the analysis.

4.2.3.4 How the SNOB groups resembled other classifications of depression

In this section the SNOB classification of chronic depression will be compared with other existing classifications of depression. As these typologies were derived primarily from a consideration of acute depressive episodes, it could be argued that they may bear little resemblance to any classification of chronic depression. However, in the absence of other classificatory schemes for chronic depression, these acute depressive typologies will be compared with the SNOB classification of chronic depression. The extent to which the SNOB classification resembles other classifications will be examined with particular reference to the neurotic/psychotic distinction, Winokur's sub division of unipolar depression on the basis of family history, and a number of other typologies produced by multivariate statistics.

a. The 'neurotic/psychotic' distinction and the SNOB classification

The "neurotic/psychotic"'or "reactive/endogenous" distinction was discussed in the literature review (see p 10 ). Each group produced by the numerical taxonomy procedure in the present study demonstrated evidence of features often associated with neurotic depression. By definition, all groups were characterised by chronicity and historically chronicity has been associated with more neurotic forms of depression. Furthermore, each group was characterised by patients who demonstrated to some degree evidence of disturbance in personality and interpersonal relationships. Neuroticism scores were high in each of the groups. However, one group, Group 3 demonstrated other features such as an early age of onset, poor response to treatment and a family history of alcoholism which are also often associated with neurotic depression (Bronisch and Klerman 1988). As such, Group 3 may be considered the group which most closely resembled neurotic depression. Of note however, some features of Group 3 were not entirely consistent with neurotic depression, for example these patients had the highest depression severity scores (both on clinician rated and self rated measures), their scores on the PS (a measure of anhedonia) were not dissimilar from the other groups. Furthermore, more patients were diagnosed with major depression in Group 3 than in any other group. The other groups, while all having high neuroticism scores relative to normal controls (Eysenck 1959), had less evidence of 'unstable' personality traits,

more evidence of 'endogenous' features and a larger proportion of patients taking antidepressant medication. They thus more resembled mild forms of endogenous depression. As previously mentioned in the literature review, until recently, with the introduction of Akiskal's concept of sub-affective dysthymia, the concept of mild endogenous depression had not received wide currency. In very general terms then, the SNOB classification of chronic depression conformed to the notion that sub groups of chronic depression can be described on the basis of the predominance of either "neurotic" or "endogenous" features.

b. Winokur's typology and the SNOB classification

Winokur's sub division of unipolar depression into sub groups based on family history has been described previously (see p 12 ). To recapitulate, he proposed dividing unipolar depression into three groups depending on the presence or absence of a family history of depression or alcoholism. Family pure depressive disease (FPDD) occurred in patients with unipolar depression who had a family history of depression in first degree relatives. Sporadic depressive disease (SDS) occurred in patients with unipolar depression who had no family history of psychiatric disorder in first degree relatives and Depressive Spectrum Disease (DSD) occurred in patients with unipolar depression who had a family history of alcoholism or sociopathy (and perhaps of depression) in first degree relatives.

In the classification produced by the SNOB procedure, family history of depression and family history of alcoholism were potent discriminators of the 4 groups. For example, within class distributions differed significantly from whole population distributions at the 0.01% level for family history of alcoholism in Group 1, 3 and at the 0.1% level for Group 4, and for family history for depression in Group 3 at the 0.01% level. Put simply, Group 1 consisted of patients without a family history of alcoholism. Group 3 consisted of patients without a family history of depression and Groups 2 and 4 had some patients with family histories of depression and some patients with family histories of alcoholism (Table 4.4) (see over). Thus Group 1 could be seen as analogous to FPDD, and Group 3 to DSD. Patients in Group 2 and 4 could also be analogous to DSD or to FPDD.

TABLE 4.4

Family History of Alcoholism and Depression in the 4 SNOB groups

| | Group 1 (? FPDD) | Group 2 (?DSD) (?FPDD) | Group 3 (?DSD) | Group 4 (?DSD) (?FPDD) |
|---|---|---|---|---|
| F.H. depression | + | + | - | + |
| F.H. alcoholism | - | - | + | + |

At a clinical level, patients with either FPDD, SDD or DSD all have unipolar depression and have similar phenomenology by definition, however differences in severity and in personality variables have been described (Behar et al 1980), with DSD patients having more neurotic and unstable personality characteristics and interpersonal difficulties. SDD tended to have a later age of onset than the other two groups. FPDD has also been described as more chronic in terms of recurrent episodes than DSD (Behar et al 1980). Winokur (1985) has related his DSD category to neurotic depression and has argued that a family history of alcoholism is related to the diagnosis of neurotic depression.

In terms of clinical characteristics were the SNOB groups comparable with Winokur's classification? Group 3 shared features with DSD in terms of having the highest neuroticism scores, the greatest level of disturbed interpersonal relationships, and the highest scores for 'unstable' DSM-III personality traits. However, unlike DSD patients, Group 3 patients in this series had the most severe depressions in terms of symptoms, not the mildest. Group 1 shared characteristics with FPDD in terms of having high "endogenous" scores and high anhedonia scores and evidence for less disrupted social and occupational functioning. However, unlike FPDD patients, Group 1 patients had evidence for high levels of neuroticism and personality difficulties, for example dependent personality disorder. Group 1 patients had a family history of depression but they also had high levels of neuroticism. Group 3 patients had family histories of alcoholism which may have in some manner related to their high levels of

neuroticism and interpersonal difficulties, but they also had symptomatically severe depression. It may be that patients with FPDD who have co-existing personality difficulties are more likely to pursue a chronic course and DSD patients with severe depressive symptomatology may be more likely to become chronic. In both cases it may be the combination of personality and affective disturbance which determines chronicity.

How the other SNOB groups stand in relation to Winokur's classification was less clear. Both Groups 2 and 4 had patients with family histories of either alcoholism or depression. In Group 2 however, the morbid risk for alcoholism (4.7%) was about that for normal controls, while the morbid risk for depression was extremely high (30%). It could be argued therefore that these patients resembled FPDD patients more in terms of the low family history for alcoholism and strong family history of depression. Of note however, a number of Group 2 patients had a history suggestive of mania and as such patients in this group may have had a form of bipolar disorder, rather than a unipolar depression.

Group 4 patients would be designated DSD in terms of their family history of both alcoholism and depression. However, in clinical terms they had lower levels of neuroticism and interpersonal disturbance, (relative to the Group 3 SNOB group) but they still had relatively high MPI neuroticism scores and their late age of onset was not entirely consistent with DSD.

Winokur saw his classification of unipolar depression as applicable to patients whose depression was primary and not secondary. The primary/secondary distinction was introduced (Woodroff et al 1967) as an attempt to reduce heterogeneity among depressed patients. The assumption was that primary depression may reflect a 'purified' and perhaps heritable form of depression, while secondary depression may be reactive to the stress of the primary disorder and therefore not so likely to be associated with a family history of depression. In the present study, both patients with primary and secondary depressions were included in the numerical taxonomy analysis. This approach was taken in the light of studies

which demonstrated no increase in family history of affective disorder in patients with primary as opposed to secondary depression (Grove et al 1987; Stancer et al 1984; Reveley et al 1988). Also, the literature suggested a considerable proportion of chronic depressions may be secondary (Akiskal et al 1981). The groups with the highest proportion of secondary depression were Groups 3 and 2. However, as previously discussed, the designation of primary or secondary needs to be interpreted with some caution in the present study, due to the retrospective nature of the inquiry and the fact that long periods were often encountered between illness episodes and assessment.

If patients with secondary depression were excluded from the group structure devised by SNOB, then Groups 2 and 3 to a large extent disappeared (they were composed predominantly of patients with secondary depression). Group 1 continued to resemble FPDD and Group 4 as previously mentioned resembled DSD. Schlesser and Winokur (1980) have argued that secondary depression and DSD both have a great deal in common with each other and with neurotic depression, and that patients with neurotic depression, like patients with DSD show a family history of clinically important alcoholism. Certainly, in the present study, Group 3 which was characterised by high prevalence of alcoholism in first degree family members and no family history of depression emerged only when both patients with primary and secondary unipolar depression were included in the analysis.

In conclusion, while the debate as to the usefulness of the primary/secondary distinction and the division of unipolar depression into sub types on the basis of family history remains unresolved, and distinctions between DSD and secondary depression, and between FPDD and bipolar disorder (Alarcon et al 1987) may not be as clear as once thought, it is of note that in the present study, family history of alcoholism and family history of depression were found to be important discriminators between groups derived by numerical taxonomy. It is interesting that this occurred in a population of patients with chronic depression quite unlike the acute populations from which the notion of sub dividing unipolar depression on the basis of family history was derived. In terms of clinical characteristics,

those patients with a family history of alcoholism often had similar stormy lifestyles to those reported with family histories of alcoholism in acutely depressed populations, however, this was not always the case viz Group 4. The largest sub group (Group 1) and the majority of the overall group did not have a family history of alcoholism, but rather a high prevalence of depression in first degree family members. To reiterate, the distinction between FPDD and DSD occurring in chronic as opposed to acute populations may be that in chronic populations FPDD is associated with depressive symptoms *and* high levels of neuroticism and DSD is associated with neuroticism *and* with high levels of depressive symptomatology. Chronicity is determined by the interplay of personality and affective symptomatology.

c. The SNOB classification and other multivariate statistical studies of depression.

There have been no studies published where the techniques of cluster analysis have been applied to the problem of the classification of chronic depression. However, as previously reviewed, those cluster analytic studies of non-chronic depression have uniformly described a "endogenous" cluster (Blashfield and Mory 1979) and a number of other non endogenous groups. The present study of chronic depression differs in that a relatively clear cut "neurotic" group emerged (Group 3) along with 3 groups with varying degrees of more "endogenous" features.

Paykel's three "non psychotic" groups appear to share some characteristics with the groups produced in the present study. For example his "anxious depressives" shared characteristics of middle-age, high neuroticism and chronicity with Groups 1, 2 and 4 in the present study, while his "hostile depressives" shared some characteristics with Group 3. Similarly his "young depressives with personality disorder" demonstrated similarities with Group 3 in terms of high neuroticism, personality disorder and disturbed social relationships. While Paykel's classification was of acutely depressed patients, the symptom pictures described for his "non psychotic" groupings would classically be thought to predict chronicity and therefore it is not surprising there should be some similarity between his typology and the findings of the present study.

Also of interest is Copeland's (1985) study where 27 items including non mental state items relating to type of onset, developmental and family history were used in a cluster analysis, and the groups derived were followed up after 5 years. His "slow onset depression of younger age" group demonstrated both endogenous and neurotic features and was associated with relatively poor outcome. It appeared to share some features with Group 1 in the present study, in terms of the mixture of endogenous and neurotic features and chronicity. His "rapid onset-depression of younger age" was associated with a very poor outcome, and consisted of patients "with poor coping ability reacting with severe distress to long as well as short term environmental problems" (Copeland 1985). He termed this group "morbid distress". It would appear to share characteristics of longstanding severe personality difficulties and severity of emotional response with Group 3 in the present study.

Using the multivariate technique of Grade of Membership analysis, Davidson et al (1989) reported a typology of depression derived from a series of outpatients. One of the classes of this typology, Type 5 resembled Group 3 in the present study. For example, Type 5 displayed both endogenous and neurotic features, unstable interpersonal relationships, a family history of alcoholism and poor response to antidepressant treatment.

In summary, it was possible to draw comparisons between some classes of typologies of non chronic depression produced by multivariate statistical techniques and the SNOB chronic depression groups. Generally the SNOB groups compared most easily with "non endogenous" classes of typologies of non chronic depression. However, some more recently derived typologies (Copeland 1985; Davidson et al 1989) have produced classes with mixtures of endogenous and neurotic features, difficulties with interpersonal relationships and poor response to treatment . It is with these classes that groups in the SNOB classification shared many features.

### 4.2.4 The Follow Up Study

#### 4.2.4.1 Introduction

To recapitulate, the aims of the follow up component of the study were:

1. To ascertain prospectively the chronicity of depression in the sample.
2. To discover if when changes in depression severity occurred they were accompanied by changes in personality measures, dysfunctional cognitions and anhedonia.
3. To discover whether any factors predicted change in depression severity scores.
4. To examine whether membership of particular SNOB groups was associated with different patterns of change over time.

Patients were followed up approximately one year after their initial interviews. The follow up component of the study was naturalistic in that patient's management continued without interference by the investigator over the one year follow up. The achievement of the aims of the study was limited by a number of factors. While a reasonable number of subjects (79%) were able to be followed, unfortunately the pattern of missing data, and the fact that the groups produced by the SNOB procedure were unequal, and in some cases very small, severely limited analysis of the data and interpretation of statistical findings.

The group of patients followed was similar to the overall group apart from being older. This may reflect the fact that the OP group were over represented among the follow up patients, and this group was older than the VP group. That more OP patients were able to be followed may be related to the fact that in many cases these patients continued to be reviewed in the outpatient clinic of the hospital where the investigator worked and were therefore more accessible and perhaps more inclined to participate in follow up.

The following discussion will relate to some extent to qualitative changes with consistent trends in the data being commented upon.

4.2.4.2 Change in depression severity over time

A significant decrease in IDS scores occurred during the follow up period. IDS scores at one year follow up were 16% lower than at initial presentation. It is not clear however, that this decrease was of clinical significance. For example, no patients IDS scores at follow up were anywhere near the average score for a normal non depressed population (2.1) (Rush et al 1986). However, the item analysis of the IDS revealed items central to the concept of depression such as feeling sad, early morning awakening, self blame, thoughts of death and suicide among those changing significantly over time. Overall however, it was felt that the mean IDS score at follow up, of 31, while significantly lower than the initial mean score probably indicated the continuing presence of a clinical depression and as such provided some prospective validation for the chronicity of the depressive symptomatology of the group.

4.2.4.3 Were changes over time in depression severity scores accompanied by changes in scores reflecting personality, dysfunctional cognitions and anhedonia?

This aspect of the study had attempted to address the extent to which chronic depression is better construed as an "affective disorder" or as a "personality disorder" or some other trait like disturbance. The author was interested in discovering whether when depression scores varied in the chronically depressed, did measures such as neuroticism, extroversion and dysfunctional thinking and anhedonia also vary. For example, a finding of neuroticism scores and DAS scores becoming more normal with decreasing severity of depression (as occurs in patients recovering from acute depression) would be evidence for the abnormal personality traits and dysfunctional cognitions found in chronic depression being to some extent determined by the abnormal affective state. If personality and cognitive style remained constantly abnormal while depression severity varied, then this would be evidence for personality and dysfunctional thinking having roles in the maintenance of chronic depression independent of the severity of affective symptoms.

This aspect of the study was dependent on measures of neuroticism such as the MPI being affected by depressed state. While the literature regarding this issue was not

unanimous, recent studies suggested that depressed state affects measurement of variables such as neuroticism, even when instructions to disregard present feelings are made. Hirschfeld et al (1983) found that depressive state strongly influenced the assessment of neuroticism and extroversion, even when clear instructions were made for respondents to respond to questionnaires as they would "usually" or when well. This finding was in contradistinction to Kendell and Discipio (1968) who reported that depressed patients responses to the Eysenck Personality Inventory when depressed were similar to those when recovered, if they were specifically instructed to respond in the way they would when well. Hirschfeld et al argued that Kendell and Discipio's findings may have been related to the fact that in their experiment the questionnaire was administered to depressed patients twice in the same day, the second time with instructions to disregard their present state. This method of administration may have more strongly drawn the attention of the patients to the modified instructions. Leibowitz et al (1979), like Hirschfeld found that affective state influenced personality trait assessment even when instructions expressedly directed the patient's response to his/her usual functioning.

In the present study instructions of the DAS and MPI were for respondents to respond as they would feel usually, the IDS referred specifically to how they felt in the last 7 days, the PS referred to how they felt "right now" and the BHS had no specific instructions as to what time frame was implied.

As previously discussed, at 12 months follow up, there was a statistically significant lowering of self rated depression severity scores, there was also a statistically significant lowering of hopelessness scores while mean neuroticism, extroversion, anhedonia and dysfunctional attitude scores remained little changed. The findings suggested that, with at least this degree of change of depression severity, neuroticism, extroversion, dysfunctional attitudes and anhedonia were unaffected and therefore they were supportive of the concept of chronic depression as "personality disorder".

A number of qualifying points should be made however. The stability of the MPI scores and the DAS scores over time could be explained in terms of the effect described by Kendell and Discipio (1968), as both these questionnaires were administered with instructions to disregard the current emotional state and respond "as usual". However, as previously mentioned, recent studies suggest that the MPI is state dependent and certainly reported studies of the DAS suggest that it too is state dependent (Hamilton and Abrahamson 1983; Schrader et al 1986).

Perhaps with more substantial changes in depression severity, changes in the other variables could occur. The mean final score for depression severity was still high and comparable still to the Rush et al (1986) reported score for major depression. However, the analysis of individual item changes in the IDS did show some significant reductions in items reflecting sadness, early morning wakening, self blame and suicidal ideation.

The findings relating to the relative stability of dysfunctional attitude scores and anhedonia scores were evidence in favour of dysfunctional attitudes and anhedonia having trait like qualities in the chronically depressed. The dysfunctional attitudes scale was in fact designed to tap the negative set of beliefs which is said to characterise in a persisting way the thinking of those predisposed to depression. Most studies have found however, that DAS scores do not distinguish prospectively between those who will and those who will not become depressed (Lewinshohn et al 1981) and that on recovery from depression DAS scores return to normal levels (Hamilton and Abrahamson 1983; Schrader et al 1986a). It was of interest therefore, that in this group of chronically depressed patients, DAS scores changed little, remaining abnormal while depression scores fell significantly. This may indicate the presence of a set of negative beliefs in the chronically depressed which is stable and evident irrespective of the degree of change in depressive symptoms seen in this study.

The other measure of dysfunctional cognition, a measure of negative expectancies, the HS, showed a significant decline during the follow up period as depression scores fell.

However, at follow up the mean HS score was still 10.3 which is comparable to that for depressed populations (Greene 1989) and above a cut off point of 9 which has been associated with a greater likelihood of eventual suicide (Beck et al 1990). It could be argued that while there was a statistical variation occurring in HS scores, in a clinical sense these patients remained as hopeless as a population of acutely depressed patients even though their HS were lower than previously. The statistically lower, but persistently high HS scores may reflect chronically depressed patients demonstrating what Beck et al (1990) have described as the trait-like properties of hopelessness in some individuals.

Anhedonia was measured originally in the study as it was considered that as a "psychological" concomitant of the endogenous depressive syndrome, it might be more evident in milder chronic forms of endogenous depression than neurovegetative change. As previously mentioned PS scores were similar in the present study to those reported in acutely depressed patients. With the fall in depression severity score however, PS scores showed very little variation. This finding was consistent with Clark et al's (1984) finding that patients who were most anhedonic when depressed continued to show more anhedonic responses than normals when recovered. They described this trait-like aspect of anhedonia as an "unexpected finding, totally at odds with Klein's hypothesis of an acutely anhedonic state". If what is measured by the PS does indeed measure a psychological state associated with endogenous depression, then it could have been expected that a decrease in affective symptoms would have been associated with a concomitant decrease in PS scores. In order to explain the continuing abnormality in PS scores with the reduction in depression severity scores, a persisting endogenous like trait needs to be posited. Such as trait would of course echo Akiskal's "sub affective dysthymia". Characterological anhedonia has been previously described by Meehl (1975) in terms of patients who have insufficient biological positive reinforcers and therefore function at the low end of a normally distributed continuum of basic "hedonic capacity".

The findings of the study suggest therefore that while depression severity may vary, other aspects of psychological functioning in patients with chronic depression remain more stable over time. The findings could be explained in terms of patients with chronic depression having depressive episodes superimposed over persisting traits of neuroticism, introversion, dysfunctional thinking and anhedonia. Apart from suggesting that depressive severity and personality and cognitive style and anhedonic capacity are distinct, to the extent that they do not vary uniformly over time, the present study can shed little light on any aetiological relationship between depression severity and the other more trait like qualities. Although the present findings would be consistent with the concept of the post-depressive personality, that is the concept of depressive illness having an enduring effect on personality .

4.2.4.4 Factors predicting change in depression severity scores in chronically depressed patients

There has been little systematic study into factors associated with the persistence of chronic depression. The independent variables entered into the multiple regression were age at onset, severity, number of depresive episodes, and treatment with antidepressants at follow up, with change in depression severity as the dependent variable. The independent variables were chosen as the literature had suggested they were associated with the development of chronicity but not necessarily the persistence of established chronic depression. Although age of onset had been reported in a follow up study of chronic depression (Klein et al 1988b) as being associated with higher levels of depression over a 6 month follow up. The lack of a significant contribution by these independent variables to the variance in depression severity over time warrants comment. It may be that these factors play no role in predicting the continuation of depressive symptoms in chronic depression. Certainly, the evidence in the literature was only for their association with the development of chronicity, not its continuation. Perhaps these variables, while predicting chronicity, have little effect on the chance of the resolution of the chronic depression once chronicity is established. It may be that for a resolution of chronic depression to occur some form of positively perceived event needs to occur. Obviously the chances of such a positively perceived event occurring in a

chronically depressed patient are reduced by the nature of the illness, but presumably positively perceived external events do serendipitiously occur.

This issue has been discussed by Brown et al (1988) in a study where the role of "fresh starts" and the "reduction of ongoing difficulties" was assessed in relation to recovery from chronic depression. "Fresh starts" were defined as events which involved a direct change in the woman's life, in terms of role, activity or status. They were associated with a "reduction in difficulties" and in some sense involved the promise of a better future. They found that such "fresh starts" did indeed often appear to precede recovery. Clearly, a major difficulty with this approach is determining whether the "fresh start" preceded the recovery or vice versa.

Alternatively, it may be that factors studied are important in determining the maintenance of chronicity, but that changes in depression severity observed in the present study were not large enough to observe their effect. The amount of change in depression severity scores was relatively small, on average 16%. The clinical significance of this degree of change, particularly when the final mean depression score was still comparable to that reported in acute major depression is arguable. It may be therefore, that factors such as age of onset, marital status, number of depressive episodes etcetera while not associated with the variations in depressive severity seen in this study may predict larger changes in depressive severity.

The finding that treatment with antidepressants at follow up did not predict change in depressive severity was interesting, but probably not surprising, given that issues relating to drug dosage, compliance and length of course of treatment were not considered.

4.2.4.5 Membership of SNOB groups and change over time

Low numbers and the unequal sizes of the groups produced by SNOB severely limited the interpretation of findings regarding changes in depression severity, personality, depressive cognitions and anhedonia for individual groups. Two aspects of changes occurring for particular groups did appear to be interpretable and will be commented upon.

Group 2 patients unlike those in the other groups had a higher mean depression score at follow up compared with initial scores. They were also more anhedonic and had higher neuroticism scores at follow up. Group 2 was similar in some respects to Akiskal's chronic secondary depression group, in terms of patients having pre-existing psychiatric disorder, alcohol and or substance abuse and few endogenous features. Unlike Akiskal's chronic secondary group, Group 2 patients had very high morbid risk for depression and relatively low morbid risk for alcoholism. These patients were the oldest at time of interview, had the greatest number of episodes and at the time of the initial interview had the second lowest depression severity score. 33% of this group had a history of a previous manic episode at the subthreshold level. The increased severity of depressed mood noted at follow up would be consistent with the episodic relapsing course which had been retrospectively described for this group.

Group 3 patients had the largest decline in depression severity scores in absolute terms. This fall in depression severity was accompanied by a negligible change in neurotism scores. Of note dysfunctional attitude scores remained the lowest of all groups in group 3, although they were marginally higher at follow up than initially. The low DAS scores in this group may be understandable if one considers that these patients have "character spectrum" disorders rather than affective disorders. Akiskal (1983) views such "character spectrum" patients as not necessarily having affective disorders. Hopelessness, the other measure of negative cognitions used in the study showed some increase over time in this group, and Group 3 patients remained the highest scorers on this measure of negative expectancies. Group 3 in the present study was similar to Akiskal's "character spectrum group" in terms of the early age of onset, presence of histrionic, borderline or antisocial traits, absence of family history of depression and the presence of drug and alcohol abuse. The persistence of very high neuroticism scores and hopelessness scores over time in spite of a reduction of depressive symptomatology is consistent with Group 3 patients as being best viewed of in terms of personality pathology. There is some evidence then, suggestive of a degree of predictive validity in terms of natural history, for the typology produced by the SNOB.

Clearly, larger numbers of subjects would be required to demonstrate significant differences in terms of outcome between the groups.

# CHAPTER 5

# CONCLUSIONS

## 5.1 Introduction

Several conclusions with either theoretical, clinical or social implications can be drawn from each of the three broad areas of the investigation.

## 5.2 Clinical description

The study confirmed in a carefully selected population, the previously reported extensive morbidity associated with chronic depressive illness. As well as suffering from chronic depression the patients studied had substantial psychiatric and medical comorbidity. There was also considerable co-existing personality pathology, either in terms of DSM-III personality disorder diagnoses or the Schneiderian Depressive Personality.

Life time rates of attempted suicide were high, and rates of antidepressant prescription low in comparison to outpatients with affective disorder. Rates of depression and alcoholism in first degree family members were similar to those reported for patients with episodic depression.

The poor social functioning of the group was reflected in the finding of the high proportion of patients who were recipients of social welfare benefits.

Differing referral sources for subjects allowed for a comparison between patients treated in public and private settings and unexpectedly, patients treated predominantly in private practice had evidence of more severe impairment on many indices. However, this finding was probably related to the sampling technique.

The finding of extensive psychiatric, personality and medical pathology has clear implications in terms of clinical practice. Such a combination of problems serves to make the management of chronically depressed patients more complex. This complexity probably results in part, simply from the multiplicity of factors involved,

but the presence of personality pathology, particularly passive aggressive, borderline and dependent traits increases the chance of negative counter transference being evoked by the patient, thus further complicating management. Issues related to negative counter transference in chronic depression and its confounding effects in diagnosis and treatment have been previously raised (Akiskal 1983).

The high rate of attempted suicide and the low use of antidepressant drugs have implications regarding management. Either conventional approaches to the treatment of depression in this group need more vigorous application or alternatively novel treatments may need to be developed.

The confirmatory finding that on average, the prevalence rates for depression and alcoholism in first degree family members were similar to those in episodic depression (with considerable variability between families) has nosological and aetiological implications which were addressed in the second component of the study.

## 5.3 The nosology of chronic depression

This component of the study produced multivariate statistical evidence in support of some aspects of Akiskal's classification of chronic depression. While groups resembling Akiskal's "character spectrum disorder" and "chronic secondary depression" emerged from the numerical taxonomy procedure, "chronic unipolar depression" and "sub affective dysthymia" appeared to be grouped together. Family history of depression and family history of alcoholism emerged as potent discriminators between groups. An examination of variables which had not been used to derive the classification provided some evidence that the typology was internally consistent and clinically recognisable. Furthermore, the classification resembled to some extent classifications of non chronic depression, viz the endogenous/neurotic distinction, Winokur's sub division of unipolar depression and recent typologies produced by multivariate analyses. These findings are of theoretical interest with respect to the

nosology of chronic depression. They may also have clinical implications in terms of more specifically focusing available treatments on particular clinical syndromes.

## 5.4 Natural history of chronic depression

Some evidence for the independence of personality and affective symptoms emerged from this component of the study. Over a twelve month period, depression severity differed significantly, while measures of personality, some measures of cognitive functioning and anhedonia remained stable. Several factors complicate the interpretation of this finding, not least of which is the extent to which present state effects the measurement of trait variables. The finding is in line with clinical experience that resolution of affective symptoms in chronic depression will not invariably lead to a resolution of other aspects of the condition.

The finding is consistent with Akiskal's recently developed notion of "affective personality types" (1989), if one argues that for such patients an "underlying" affective dysregulation leads to the development of an habitual depressive mode of interaction which need not necessarily change when the affective dysregulation is treated or in remission. The finding is also in line with the concept of the post depressive personality.

The finding that factors associated with the development of chronicity such as age of onset, marital status, neuroticism, extroversion, depression severity, number of depressive episodes, length of initial depressive episode and treatment with antidepressants were not associated with continuing depressive severity, suggests that other factors are required to explain the natural history of depression once chronicity has developed. A possible predictor of natural history may be related to Brown's concept of the "fresh start".

Due to the low numbers involved, conclusions regarding variability in natural history for the groups derived by numerical taxonomy were not able to be made, although the outcome of two of the groups over 12 months was predictable in terms of an episodic course for Group 2, and Group 3 being viewed in terms of personality pathology, rather than in terms of chronic affective disorder.

# APPENDICES

APPENDIX 1

## GENERAL HEALTH QUESTIONNAIRE

We would like to know how your health has been in general, over the past few weeks. Remember that we want to know about present and recent complaints, not those that you had in the past. It is important that you try to answer ALL questions by circling the correct answer.

Have you recently:

1. Have you recently been feeling perfectly well and in good health?

   Better than usual | Same as usual | Worse than usual | Much worse than usual

2. Been feeling in need of a good tonic?

   Not at all | No more than usual | Rather more than usual | Much more than usual

3. Been feeling run down and out of sorts?

   Not at all | No more than usual | Rather more than usual | Much more than usual

4. Felt that you are ill?

   Not at all | No more than usual | Rather more than usual | Much more than usual

5. Been getting any pains in your head?

   Not at all | No more than usual | Rather more than usual | Much more than usual

6. Been getting a feeling of tightness or pressure in your head?

   Not at all | No more than usual | Rather more than usual | Much more than usual

7. Been having hot or cold spells?

   Not at all | No more than usual | Rather more than usual | Much more than usual

8. Lost much sleep over worry?

   Not at all | No more than usual | Rather more than usual | Much more than usual

9. Had difficulty in staying asleep once you are off?

   Not at all | No more than usual | Rather more than usual | Much more than usual

10. Felt constantly under strain?

| | | | |
|---|---|---|---|
| Not at all | No more than usual | Rather more than usual | Much more than usual |

11. Been getting edgy and bad-tempered?

| | | | |
|---|---|---|---|
| Not at all | No more than usual | Rather more than usual | Much more than usual |

12. Been getting scared or panicky for no good reason?

| | | | |
|---|---|---|---|
| Not at all | No more than usual | Rather more than usual | Much more than usual |

13. Found everything getting on top of you?

| | | | |
|---|---|---|---|
| Not at all | No more than usual | Rather more than usual | Much more than usual |

14. Been feeling nervous and strung-up all the time?

| | | | |
|---|---|---|---|
| Not at all | No more than usual | Rather more than usual | Much more than usual |

15. Been managing to keep yourself busy and occupied?

| | | | |
|---|---|---|---|
| More so than usual | Same as usual | Rather less than usual | Much less than usual |

16. Been taking longer over the things you do?

| | | | |
|---|---|---|---|
| Quicker than usual | Same as usual | Longer than usual | Much longer than usual |

17. Felt on the whole you were doing things well?

| | | | |
|---|---|---|---|
| Better than usual | About the same | Less well than usual | Much less well |

18. Been satisfied with the way you've carried out your task?

| | | | |
|---|---|---|---|
| More satisfied | About the same as usual | Less satisfied than usual | Much less satisfied |

19. Felt that you are playing a useful part in things?

| | | | |
|---|---|---|---|
| More so than usual | Same as usual | Less useful than usual | Much less useful |

20. Felt capable of making decisions about things?

| | | | |
|---|---|---|---|
| More so than usual | Same as usual | Less so than usual | Much less capable |

21. Been able to enjoy your normal day-to-day activities?

| | | | |
|---|---|---|---|
| More so than usual | Same as usual | Less so than usual | Much less than usual |

22. Been thinking of yourself as a worthless person?

| | | | |
|---|---|---|---|
| Not at all | No more than usual | Rather more than usual | Much more than usual |

23. Felt that life is entirely hopeless?

| | | | |
|---|---|---|---|
| Not at all | No more than usual | Rather more than usual | Much more than usual |

24. Felt that life isn't worth living?

| | | | |
|---|---|---|---|
| Not at all | No more than usual | Rather more than usual | Much more than usual |

25. Thought of the possibility that you might do away with yourself?

| | | | |
|---|---|---|---|
| Definitely not | I don't think so | Has crossed my mind | Definitely have |

26. Found at times you couldn't do anything because your nerves were too bad?

| | | | |
|---|---|---|---|
| Not at all | No more than usual | Rather more than usual | Much more than usual |

27. Found yourself wishing you were dead and away from it all?

| | | | |
|---|---|---|---|
| Not at all | No more than usual | Rather more than usual | Much more than usual |

28. Found that the idea of taking your own life kept coming into your mind?

| | | | |
|---|---|---|---|
| Definitely not | I don't think so | Has crossed my mind | Definitely has |

APPENDIX 2

Letters regarding study

Letter re initial assessment to VPs

10th March 1989

Dear

Thank you for participating in our study into chronic depression. We have made an appointment for an interview on .....

If this time is not suitable please ring and we will arrange another time. We have enclosed several questionnaires which we would like you to complete. It would be most helpful if you could answer all questions, even though some may seem repetitive. The instructions for each questionnaire vary, so make sure you check each form before you start. We would like you to return the questionnaires when you come for your interview.

Once again thank you for your interest in our research.

Yours sincerely,

(DR) G.D. SCHRADER
Lecturer in Psychiatry

enc.

Letter to psychiatrists/GPs for VPs

6th March 1989

Dear Doctor,

Your patient ..... has volunteered to participate in a study into the symptoms of chronic depression conducted by the University of Adelaide Department of Psychiatry at The Queen Elizabeth Hospital. ..... responded to an article describing our research which appeared in the local press. Participation in the study involves a single interview with myself and the completion of several questionnaires. Naturally, the study involves no changes in management.

If you would like to know more about our research project into chronic depression please do not hesitate to contact me.

Yours sincerely,

(DR) G.D. SCHRADER
Lecturer in Psychiatry

APPENDIX 3

## CHRONIC DEPRESSION INTERVIEW SCHEDULE

Ensure inclusion criteria are satisfied.

For S.V. subjects only complete the following:-

| | | |
|---|---|---|
| Seeing local doctor for depression | Yes ☐ No ☐ | |
| Seeing other therapist for depression | Psychiatrist | Yes ☐ No ☐ |
| | Psychologist | Yes ☐ No ☐ |
| | Social Worker | Yes ☐ No ☐ |
| | Other | Yes ☐ No ☐ |
| Specify..... | | |
| Nature of current treatment | Antidepressants | Yes ☐ No ☐ |

I am going to be asking you many questions about emotional problems you have had over the years and may still be experiencing. Some of my questions relate to how you felt some years ago and some questions relate to how you feel now. I will always explain which period of time I'm asking about, but if it is not clear do not hesitate to ask me to make it clearer. I'll be taking notes as we go. Do you have any questions before we begin?

---

Enter ID number,UR number,date this Schedule given then the results filled in the boxes.

Missing Data = 9

DEMOGRAPHIC INFORMATION:

QST001 SEX:
----- 1=male
----- 2=female

QST002 HOW OLD ARE YOU?
----- -----
----- ----- yrs.

QST003 WERE YOU BORN IN AUSTRALIA?

----- 1=yes
----- 2=no

QST004 HOW LONG HAVE YOU BEEN LIVING IN AUSTRALIA?

----- -----

----- ----- Yrs.

QST005 WHERE DO YOU LIVE?

| ADDRESS: | LMO ADDRESS |
|---|---|
| ---------- | ---------- |
| ---------- | ---------- |
| ---------- | ---------- |
| PHONE: | LMO PHONE: |
| ---------- | ---------- |

QST006 WHO DO YOU LIVE WITH?

-----

-----

1=Alone
2=Spouse/Partner
3=Spouse/Partner and dependent children
4=Parents
5=Other

If other SPECIFY
---
---
---

QST007 WHAT KIND OF WORK DO YOU DO?

-----

-----

1=Professional
2=Own Business
3=Clerical
4=Skilled Trade
5=Unskilled
6=Pensioner,unemployed

If not working or retired:

QST008 PREVIOUS OCCUPATION:

-----

-----

1=Professional
2=Own Business
3=Clerical
4=Skilled Trade
5=Unskilled
6=Pensioner,unemployed

If on pension,then ask:

QST009 WHAT TYPE OF PENSION DO YOU RECEIVE?
---
---
1=Invalid
2=Worker's Compensation
3=Widows' pension
4=Supporting mother
5=Other (Specify_____)
9=Missing data

QST010 REASON FOR PENSION:

---
---
1=Incapacitating Medical Illness
2=Incapacitating Psychiatric Illness
3=Work Accident
4=Death of Spouse
5=Separated parent
6=Other (Specify_____)
9=Missing data

If working, then ask:

QST011 ARE YOU WORKING NOW?
---
---
1=Yes
2=No
3=N/A

If NO to QST011,Then ask

QST012 IS IT BECAUSE OF YOUR NERVES THAT YOU ARE NOT
--- WORKING?

---
1=Yes
2=No (Specify why_____)
3=N/A

LONGITUDINAL HISTORY OF ILLNESS

QST013 WHEN DID YOU FIRST COME TO THE PSYCHIATRY
--- --- OUTPATIENT CLINIC? (SEEK OUT TREATMENT)
--- ---
No. of years ago

QST014 CHECK FROM HOSPITAL NOTES
--- ---
--- --- No. of years ago

QST015 WHAT KEEPS YOU COMING HERE?
(Give overview of Sx.)

---
---
---
---
---
---
---
---
---
---

QST016 SINCE YOU HAVE BEEN COMING TO THE CLINIC FOR TREATMENT, HAVE THERE BEEN ANY PERIODS OF SOME MONTHS WHEN YOU HAVE FELT YOUR
----- USUAL SELF?
-----

1=Yes
2=No
3=Somewhat

QST017 WHEN WAS IT THEN THAT YOU WERE LAST FEELING YOUR USUAL SELF?

----- ----- -----
----- ----- ----- Time: months ago

QST018 IS THE WAY YOU ARE FEELING NOW A RETURN OF SOMETHING YOU HAD BEFORE?

----- 1=yes
----- 2=no
3=unsure

QST019 DID ANYTHING HAPPEN JUST BEFORE YOU BEGAN TO HAVE THESE PROBLEMS?

----- 1=yes
----- 2=no
3=unsure

QST020 WAS THAT JUST BEFORE THE WHOLE PROBLEM BEGAN, OR WAS THAT BEFORE IT GOT WORSE MORE RECENTLY?

----- 1=original event
----- 2=recent event
3=both original and recent
4=unsure

QST021 WHEN WAS THE FIRST TIME YOU SAW SOMEONE FOR EMOTIONAL OR PSYCHIATRIC PROBLEMS?

----- -----

AGE: in years

----- -----

QST022 HOW OLD WERE YOU WHEN YOU FIRST HAD A SEVERE DEPRESSION?
(exclude normal grief)

----- ----- AGE: in years
----- -----

QST023 HOW LONG DID IT LAST?

----- ----- ----- TIME: in months
----- ----- -----

QST024 DID YOU SEE A DOCTOR?

----- 1=yes
----- 2=no
3=unsure

---

I am going to ask you some questions now about the sorts of symptoms you had when you were first depressed. These questions are to do with how you felt then, NOT how you feel at the moment.

---

QST025 WHEN YOU WERE DEPRESSED THAT TIME DID YOU WAKE UP EARLY IN THE MORNING?

_____ 1=yes
_____ 2=no
3=unsure
9=nil

QST026 DID YOU FEEL BETTER IN THE MORNING AND WORSE IN THE AFTERNOONS?

_____ 1=yes
_____ 2=no
3=unsure
9=nil

QST027 DID YOU LOSE ALL INTEREST AND NEVER BRIGHTEN UP EVEN FOR A SHORT TIME WHEN YOU WERE DEPRESSED?

_____ 1=yes
_____ 2=no
3=unsure
9=nil

QST028 WHAT TREATMENT DID YOU HAVE?

_____ 1=none
_____ 2=tablets
3=psychotherapy
4=ECT
5=tablets and psychotherapy
6=ECT and tablets
7=other combinations

QST029 IF YOU HAD TABLETS, DO YOU REMEMBER WHICH TABLETS THEY WERE (SEE KEY 1 PAGE 304)

99=no tablets used

TYPE (i) ----- ----- ----- ----- DOSE (i) ----- ----- ---- ----- ----- ----

(ii) ----- ----- ----- ----- (ii) ----- ----- ---- ----- ----- ----

(iii) ---- ----- ---- ----- (iii) ---- ----- ---- ---- ----- ----

Computing; END Record 1
GO to next line on data file

(iv) ----- ----- ----- ----- (iv) ----- ---- ---- ----- ---- ----

(v) ----- ----- ----- ----- (v) ----- ---- ---- ----- ---- ----

QST030 DID THE TREATMENT HELP OUT?

---
---
1=yes
2=no
3=unsure
9=nil

QST031 DID THE DEPRESSION INTERFERE WITH YOUR WORK?

---
---
1=yes
2=continued work but interfered
3=no
9=nil

QST032 DID YOU GO TO HOSPITAL FOR THE DEPRESSION?

---
---
1=yes
2=no
3=unsure
9=nil

QST033 CHECK HOSPITAL NOTES FOR NATURE OF PAST DEPRESSIVE EPISODES.

---
---
1=endogenous
2=non-endogenous
3=indeterminate

QST034 AT THAT TIME DID YOU EVER THINK OF TAKING YOUR LIFE?

---
---
1=yes
2=no
3=unsure

If YES, then ask:

QST035 DID YOU ATTEMPT TO TAKE YOUR LIFE WHEN YOU WERE DEPRESSED?

------- 1=yes
------- 2=no
3=unsure
4=N/A
9=nil

If NO:

WHAT WAS IT THAT KEPT YOU FROM ATTEMPTING SUICIDE?
---
---
---
---
---

QST037 HAVE YOU TRIED TO TAKE YOUR LIFE SINCE THAT FIRST TIME YOU WERE DEPRESSED?

------- 1=yes
------- 2=no
3=unsure
9=nil

If YES to QST037,

QST038 HOW MANY TIMES HAVE YOU TRIED?
------ ------
------ ------ 99=N/A

QST039 THE LAST TIME HOW DID YOU TRY TO TAKE YOUR LIFE?
------ ------
------ ------

1=gesture with a few pills or wrist scratching
2=serious overdose or poisoning that may have led to coma
3=serious bleeding from vein
4=jumping from a building
5=reckless driving or throwing oneself in front of a car
6=jumping into a river or other method of drowning
7=gassing
8=self stabbing or shooting
9=hanging or suffocation
10=other (specify.....)

QST040 CHECK HOSPITAL NOTES FOR FURTHER INFORMATION
(i)
----- ----- No. recorded attempts:
----- -----

QST041 HOW MANY DEPRESSIONS AS SEVERE AS THE ONE WE HAVE BEEN TALKING ABOUT HAVE YOU HAD?

----- -----
----- ----- Number:

QST042 CHECK HOSPITAL NOTES FOR FURTHER INFORMATION

----- -----
----- ----- No. depressions recorded:

QST043 DO YOU FEEL YOU HAVE COMPLETELY RECOVERED FROM YOUR LAST SEVERE DEPRESSION?

----- (i) 1=yes
----- 2=no
(ii)
----- -----
----- ----- % Improved

QST044 DID YOU HAVE ANY PROBLEMS WITH YOUR NERVES BEFORE THAT FIRST DEPRESSION?

----- (i) 1=yes
----- 2=no
3=unsure

QST045 OTHER NERVE PROBLEMS APART FROM DEPRESSION EPISODE 1:

(ii) SPECIFY: Type of nerve problem at any time apart from depression.

-----
----- Refer to Key 2, (Feighner Criteria page 305)

SPECIFY if unclassifiable _____
_____
_____

(iii) TREATMENT USED

----- 1=none
----- 2=tablets
3=psychotherapy
4=ECT
5=tablets and psychotherapy
6=ECT and tablets
7=other combinations

(iv) HOSPITALISED

----- 1=yes
----- 2=no
3=unsure
9=N/A

REPEAT THE ABOVE QST045 QUESTIONS FOR EACH SEPARATE EPISODE OF ILLNESS:

OTHERWISE GO TO QST051

---

QST046 OTHER NERVE PROBLEMS APART FROM DEPRESSION

EPISODE 2:

(ii) SPECIFY: Type of nerve problem at any time apart from depression.

_____

_____ Refer to Key 2 (page 305)

SPECIFY if unclassifiable _____
_____
_____

(iii) TREATMENT USED

_____ 1=none
_____ 2=tablets
3=psychotherapy
4=ECT
5=tablets and psychotherapy
6=ECT and tablets
7=other combinations

(iv) HOSPITALISED

_____ 1=yes
_____ 2=no
3=unsure
9=N/A

QST047 OTHER NERVE PROBLEMS APART FROM DEPRESSION
EPISODE 3:

(ii) SPECIFY: Type of nerve problem at any time apart from depression.

_____

_____ Refer to Key 2, (Feighner Criteria page 305)

SPECIFY if unclassifiable _____
_____
_____

(iii) TREATMENT USED

----- 1=none
----- 2=tablets
3=psychotherapy
4=ECT
5=tablets and psychotherapy
6=ECT and tablets
7=other combinations

(iv) HOSPITALISED

----- 1=yes
----- 2=no
3=unsure
9=N/A

QST048 OTHER NERVE PROBLEMS APART FROM DEPRESSION

EPISODE 4:

(ii) SPECIFY: Type of nerve problem at any time apart from depression.
-----
----- Refer to Key 2, (Feighner Criteria page 305)

SPECIFY if unclassifiable _____
_____
_____

(iii) TREATMENT USED

----- 1=none
----- 2=tablets
3=psychotherapy
4=ECT
5=tablets and psychotherapy
6=ECT and tablets
7=other combinations

(iv) HOSPITALISED

----- 1=yes
----- 2=no
3=unsure
9=N/A

QST049 OTHER NERVE PROBLEMS APART FROM DEPRESSION

EPISODE 5:

(ii) SPECIFY: Type of nerve problem at any time apartfrom depression.

---
---

Refer to Key 2, (Feighner Criteria page 305)

SPECIFY if unclassifiable _____
_____
_____

(iii) TREATMENT USED

---
---

1=none
2=tablets
3=psychotherapy
4=ECT
5=tablets and psychotherapy
6=ECT and tablets
7=other combinations

(iv) HOSPITALISED

---
---

1=yes
2=no
3=unsure
9=N/A

QST050 OTHER NERVE PROBLEMS APART FROM DEPRESSION

EPISODE 6:

(ii) SPECIFY: Type of nerve problem at any time apart from depression.

---
---

Refer to Key 2, (Feighner Criteria page 305)
SPECIFY if unclassifiable _____
_____
_____

(iii) TREATMENT USED

---
---

1=none
2=tablets
3=psychotherapy
4=ECT
5=tablets and psychotherapy
6=ECT and tablets
7=other combinations

(iv) HOSPITALISED

----- 1=yes
----- 2=no
3=unsure
9=N/A

QST051 CHECK HOSPITAL NOTES FOR INFORMATION RE PREVIOUS OTHER DISORDERS

----- Episode 1
-----

----- Episode 2
-----

----- Episode 3
-----

----- Episode 4
-----

----- Episode 5
-----

----- Episode 6
-----

PREMORBID PERSONALITY

QST052 BEFORE YOU FIRST BECAME DEPRESSED, DID YOU SEE YOURSELF AS A FAIRLY HAPPY PERSON?

----- 1=yes
----- 2=no
3=unsure

QST053 BEFORE YOU FIRST BECAME DEPRESSED, DID YOU SEE YOURSELF AS MORE OF A GLOOMY, PESSIMISTIC PERSON?

----- 1=yes
----- 2=no
3=unsure

QST054 WHAT WORDS WOULD YOU USE TO DESCRIBE YOURSELF BEFORE YOU FIRST BECAME DEPRESSED?

SPECIFY:

----- 1=mainly positive words
----- 2=mainly negative words

QST055 SINCE YOU HAVE BEEN COMING TO THE CLINIC, HAVE YOU FELT LOW AND NOT YOURSELF PRETTY MUCH?

----- 1=always
----- 2=occasional good days
3=good and bad days
4=more bad than good days

SUBAFFECTIVE SYMPTOMS

---

The next few questions I am going to ask refer to how you USUALLY feel when you are AT YOUR BEST.

---

QST056 DO YOU TEND TO BE A PERSON WHO IS ALWAYS SLOW TO MOVE ABOUT AND WHO OFTEN FEELS LACKING IN ENERGY?

----- 1=yes
----- 2=no
3=sometimes

QST057 DO YOU SEEM TO BE A PERSON WHO OFTEN FINDS IT HARD TO WAKE UP AND IS OFTEN SLOW IN THE MORNING?

----- 1=yes
----- 2=no
3=sometimes

QST058 DO YOU OFTEN FEEL AS IF YOU DON'T GET AS MUCH PLEASURE OUT OF LIFE AS OTHERS SEEM TO?

----- 1=yes
----- 2=no
3=sometimes

QST059 DO YOU USUALLY FEEL BETTER AT A PARTICULAR TIME OF THE DAY?

----- 1=night
----- 2=morning
3=neither

FAMILY HISTORY

---

I am now going to ask you about illnesses in your family

---

QST060 DO YOU KNOW OF ANYONE IN YOUR FAMILY WHO HAS HAD A PROBLEM WITH NERVES?

----- 1=yes
----- 2=no
3=unsure

---

If YES, to QST061 ANSWER QST 062 TO QST066
Else GO to QST067

---

QST061 HOW MANY RELATIVES DO YOU HAVE WITH A NERVOUS PROBLEM?

(i) 9=N/A
-----
----- Number

(ii) SPECIFY RELATIVES----------

QST062 NOW I AM GOING TO ASK YOU SOME QUESTIONS ABOUT EACH OF THEIR PROBLEMS, WHAT ABOUT (Specify_____)?

FOR EACH AFFECTED RELATIVE SPECIFY:

RELATIVE 1

(i) Relationship

----- -----
----- -----

1=Mother
2=Father
3=Brother
4=Sister
5=Paternal Grandmother
6=Paternal Grandfather
7=Maternal Grandmother
8=Maternal Grandfather
9=Paternal Aunt
10=Paternal Uncle
11=Maternal Aunt
12=Maternal Uncle
13=Paternal Cousin - Male
14=Paternal Cousin - Female
15=Maternal Cousin - Male
16=Maternal Cousin - Female
17=Son
18=Daughter
19=Other (SPECIFY_____)
99=N/A

(ii)
----- ----- Age
----- -----

(iii) Suicide attempts or completed suicide
-----
-----

(iv) Age of onset
----- -----
----- -----

Computing: END Record 2 at column 78
GO TO Record 3

(v) Number of Episodes
----- -----
----- ----- 99=Unsure or N/A

(vi) Intermittent (Number of episodes of chronic illness)

---
---

1=Intermittent
2=Chronic
9=N/A

(vii) Inpatient/Outpatient Treatment

---
---

1=Hospitalised
2=Outpatient Treatment

(viii) Type of treatment

---
---

1=None
2=Tablets
3=Psychotherapy
4=ECT
5=Tablets and psychotherapy
6=ECT and tablets
7=Other combinations

(ix) Most plausible diagnosis based on MCDQ Guide (Key 3)

---
---

(Refer to Key 3 page 314)

SPECIFY if unclassifiable_____
_____
_____
_____

QST063 NOW I AM GOING TO ASK YOU SOME QUESTIONS ABOUT EACH OF THEIR PROBLEMS, WHAT ABOUT (Specify_____)?

FOR EACH AFFECTED RELATIVE SPECIFY:

RELATIVE 2

(i) Relationship

----- -----

----- -----

1=Mother
2=Father
3=Brother
4=Sister
5=Paternal Grandmother
6=Paternal Grandfather
7=Maternal Grandmother
8=Maternal Grandfather
9=Paternal Aunt
10=Paternal Uncle
11=Maternal Aunt
12=Maternal Uncle
13=Paternal Cousin - Male
14=Paternal Cousin - Female
15=Maternal Cousin - Male
16=Maternal Cousin - Female
17=Son
18=Daughter
19=Other (SPECIFY_____)
99=N/A

(ii)

----- ----- Age

----- -----

(iii) Suicide attempts or completed suicide

-----

-----

(iv) Age of onset

----- -----

----- -----

(v) Number of Episodes

----- -----

----- ----- 99=Unsure or N/A

(vi) Intermittent (Number of episodes of chronic illness)

-----

----- 1=Intermittent
2=Chronic
9=N/A

(vii) Inpatient/Outpatient Treatment

-----

----- 1=Hospitalised
2=Outpatient Treatment

(viii) Type of treatment
---
---

1=None
2=Tablets
3=Psychotherapy
4=ECT
5=Tablets and psychotherapy
6=ECT and tablets
7=Other combinations

(ix) Most plausible diagnosis based on MCDQ Guide
--- (Refer to Key 3 page 314)
---

SPECIFY if unclassifiable_____
_____
_____
_____

QST064 NOW I AM GOING TO ASK YOU SOME QUESTIONS ABOUT EACH OF THEIR PROBLEMS, WHAT ABOUT (Specify_____)?

FOR EACH AFFECTED RELATIVE SPECIFY:

RELATIVE 3

(i) Relationship
--- ---
--- ---

1=Mother
2=Father
3=Brother
4=Sister
5=Paternal Grandmother
6=Paternal Grandfather
7=Maternal Grandmother
8=Maternal GrandFather
9=Paternal Aunt
10=Paternal Uncle
11=Maternal Aunt
12=Maternal Uncle
13=Paternal Cousin - Male
14=Paternal Cousin - Female
15=Maternal Cousin - Male
16=Maternal Cousin - Female
17=Son
18=Daughter
19=Other (SPECIFY_____)
99=N/A

(ii)
--- --- Age
--- ---

(iii) Suicide attempts or completed suicide
---
---

(iv) Age of onset

----- -----
----- -----

(v) Number of Episodes

----- -----
----- ----- 99=Unsure or N/A

(vi) Intermittent (Number of episodes of chronic illness)

-----
----- 1=Intermittent
2=Chronic
9=N/A

(vii) Inpatient/Outpatient Treatment

-----
----- 1=Hospitalised
2=Outpatient Treatment

(viii) Type of treatment

-----
----- 1=None
2=Tablets
3=Psychotherapy
4=ECT
5=Tablets and psychotherapy
6=ECT and tablets
7=Other combinations

(ix) Most plausible diagnosis based on MCDQ Guide
----- (Refer to Key 3 page 314)
-----

SPECIFY if unclassifiable_____
_____
_____
_____

QST065 NOW I AM GOING TO ASK YOU SOME QUESTIONS ABOUT EACH OF THEIR PROBLEMS, WHAT ABOUT (Specify_____)?

FOR EACH AFFECTED RELATIVE SPECIFY:

RELATIVE 4

(i) Relationship

----- -----

----- -----

1=Mother
2=Father
3=Brother
4=Sister
5=Paternal Grandmother
6=Paternal Grandfather
7=Maternal Grandmother
8=Maternal Grandfather
9=Paternal Aunt
10=Paternal Uncle
11=Maternal Aunt
12=Maternal Uncle
13=Paternal Cousin - Male
14=Paternal Cousin - Female
15=Maternal Cousin - Male
16=Maternal Cousin - Female
17=Son
18=Daughter
19=Other (SPECIFY_____)
99=N/A

(ii)

----- ----- Age

----- -----

(iii) Suicide attempts or completed suicide

-----

-----

(iv) Age of onset

----- -----

----- -----

(v) Number of Episodes

----- -----

----- ----- 99=Unsure or N/A

(vi) Intermittent (Number of episodes of chronic illness)

-----

----- 1=Intermittent
2=Chronic
9=N/A

(vii) Inpatient/Outpatient Treatment

-----

----- 1=Hospitalised
2=Outpatient Treatment

(viii) Type of treatment

-----
-----

1=None
2=Tablets
3=Psychotherapy
4=ECT
5=Tablets and psychotherapy
6=ECT and tablets
7=Other combinations

(ix) Most plausible diagnosis based on MCDQ Guide
----- (Refer to Key 3 page 314)
-----

SPECIFY if unclassifiable_____
_____
_____
_____

QST066 NOW I AM GOING TO ASK YOU SOME QUESTIONS ABOUT EACH OF THEIR PROBLEMS, WHAT ABOUT (Specify_____)?

FOR EACH AFFECTED RELATIVE SPECIFY:

RELATIVE 5

(i) Relationship

----- -----
----- -----

1=Mother
2=Father
3=Brother
4=Sister
5=Paternal Grandmother
6=Paternal Grandfather
7=Maternal Grandmother
8=Maternal Grandfather
9=Paternal Aunt
10=Paternal Uncle
11=Maternal Aunt
12=Maternal Uncle
13=Paternal Cousin - Male
14=Paternal Cousin - Female
15=Maternal Cousin - Male
16=Maternal Cousin - Female
17=Son
18=Daughter
19=Other (SPECIFY_____)
99=N/A

(ii)
----- -----
----- -----

Age

(iii) Suicide attempts or completed suicide

-----
-----

(iv) Age of onset

----- -----
----- -----

(v) Number of Episodes

----- -----
----- -----

99=Unsure or N/A

(vi) Intermittent (Number of episodes of chronic illness)

-----
-----

1=Intermittent
2=Chronic
9=N/A

(vii) Inpatient/Outpatient Treatment

-----
-----

1=Hospitalised
2=Outpatient Treatment

(viii) Type of treatment

-----
-----

1=None
2=Tablets
3=Psychotherapy
4=ECT
5=Tablets and psychotherapy
6=ECT and tablets
7=Other combinations

(ix) Most plausible diagnosis based on MCDQ Guide
----- (Refer to Key 3 page 314)
-----

SPECIFY if unclassifiable_____
_____
_____
_____

MEDICAL CO-MORBIDITY

Now I will ask you about your general health

---

QST067 HAVE YOU HAD ANY SERIOUS ILLNESSES THROUGHOUT YOUR LIFE?
-----
-----

1=yes
2=no
3=unsure
9=no response

(i) SPECIFY SERIOUS ILLNESSES:----------
---
---

(ii) CONSULT CASENOTES BEFORE FINAL ENTRY
-----
-----

1=yes
2=not recorded illness
3=N/A

QST068 DID THIS ILLNESS COME ON BEFORE YOU STARTED GETTING DEPRESSED?
-----
-----

1=yes
2=no
3=unsure
9=N/A

QST069 DO YOU SEE THIS ILLNESS AS A MAJOR CAUSE OF YOUR DEPRESSION?
-----
-----

1=yes
2=no
3=unsure
9=N/A

QST070 HAVE YOU BEEN IN HOSPITAL FOR THESE ILLNESSES?

-----
-----

1=yes
2=no
3=unsure
9=N/A

QST071 DID YOU TAKE TABLETS FOR THESE ILLNESSES?

(i) 1=yes
----- 2=no
----- 3=unsure
9=N/A

SPECIFY TABLETS FOR SERIOUS MEDICAL ILLNESS
---
---
---
---

(ii) CONSULT CASENOTES

----- 1=yes
----- 2=no
3=unsure
9=N/A

QST072 DID YOU HAVE ANY OPERATIONS?

(i) 1=yes
----- 2=no
----- 3=unsure
9=N/A

(ii) SPECIFY WHERE:----------
---
---
---

QST073 ILLNESS JUDGED AS PRIMARY SEVERE AND INCAPACITATING

----- 1=yes
----- 2=no
3=borderline
9=N/A

TREATMENT

QST074 WHAT TABLETS DO YOU TAKE AT PRESENT?

(i) (Refer to Key 1)

TYPE (i) ----- ----- DOSE (i) ----- ----- -----
----- ----- ----- ----- -----

(ii) ----- ----- (ii) ----- ----- ----
----- ----- ----- ----- ----

Computing: END Record 3 at Column 76
Go to Record 4

(iii) ----- ----- (iii) ----- ----- ----
----- ----- ----- ----- ----

(iv) ----- ----- (iv) ----- ----- ----
----- ----- ----- ----- ----

(v) ----- ----- (v) ----- ----- ----
----- ----- ----- ----- ----

SPECIFY OTHERS_____
_____
_____
_____
_____

(ii) CHECK FROM HOSPITAL NOTES

TYPE (i) ----- ----- DOSE (i) ----- ----- -----
----- ----- ----- ----- -----

(ii) ----- ----- (ii) ----- ----- ----
----- ----- ----- ----- ----

(iii) ----- ----- (iii) ----- ----- ----
----- ----- ----- ----- ----

(iv) ----- ----- (iv) ----- ----- ----
----- ----- ----- ----- ----

(v) ----- ----- (v) ----- ----- ----
----- ----- ----- ----- ----

SPECIFY:_____
_____
_____
_____
_____

DEVELOPMENTAL HISTORY

I am going to ask you some questions now about your childhood and your parents

---

QST075 WHO BROUGHT YOU UP?

--- ---

--- --- 1=Mother and Father
2=Mother
3=Father
4=Stepmother and Father
5=Stepfather and Mother
6=Stepfather and Stepmother
7=Grandparent
8=Adopted
9=Uncle/Aunt
10=Institution
11=Other

(SPECIFY.....)

---

First of all I'll ask you some questions about your mother

---

QST076 IS YOUR MOTHER YOUR NATURAL MOTHER?

---

--- 1=Yes
2=No
3=Unsure
9=N/A

QST077 WERE YOU BROUGHT UP BY YOUR MOTHER?

(i)

---

--- 1=Yes
2=No
3=Unsure
9=N/A

(ii) If NO then with,

---

--- 1=Father
2=Stepmother
3=Other relative
4=Institution
5=Other (SPECIFY.....)
9=N/A

QST078 DID YOUR MOTHER HAVE A JOB OUTSIDE OF THE HOME?
---
--- 1=Yes
2=No
9=N/A

QST079 WHAT WAS HER JOB?
---
--- 1=Professional
2=Own Business
3=Clerical
4=Skilled Trade
5=Unskilled
6=Pensionner, Unemployed
7=N/A

QST080 IS YOUR MOTHER STILL LIVING?
---
--- 1=Yes
2=No
3=Unsure
9=N/A

If dead,

QST081 HOW OLD WERE YOU WHEN SHE DIED?
--- ---
--- --- age at mother's death
(years)
99=N/A

If still living,

QST082 ARE YOUR PARENTS STILL TOGETHER?
---
--- 1=Yes
2=No
3=Unsure
9=N/A

If NO,

QST083 WHEN DID THEY SEPARATE?
--- ---
--- --- years ago
99=N/A

QST084 YOUR MOTHER, DO YOU HAVE GOOD OR BAD MEMORIES OF HER WHEN YOU WERE A CHILD?
---
--- 1=Good
2=Bad
3=Both
9=N/A

QST085 HOW ABOUT NOW, DO YOU HAVE GOOD OR BAD FEELINGS TOWARDS HER NOW?

---
---

1=Good
2=Bad
3=Both
9=N/A

IF THERE WAS ANOTHER PRINCIPLE CARE GIVER APART FROM MOTHER/FATHER THEN ASK

QST086 DO YOU HAVE GOOD OR BAD MEMORIES OF.....AS A CHILD?

---
---

1=Good
2=Bad
3=Both
9=N/A

QST087 HOW ABOUT NOW, DO YOU HAVE GOOD OR BAD FEELINGS TOWARDS .....NOW?

---
---

1=Good
2=Bad
3=Both
9=N/A

---

And now I am going to ask you some questions about your father

---

QST088 IS YOUR FATHER STILL LIVING?

---
---

1=Yes
2=No
3=Does not know
9=N/A

QST089 WHAT WAS YOUR FATHER'S JOB?

---
---

1=Professional
2=Own Business
3=Clerical
4=Skilled Trade
5=Unskilled
6=Pensionner, Unemployed
7=N/A

If Father is dead,

QST090 HOW OLD WERE YOU WHEN YOUR FATHER DIED?

--- ---
--- ---

age at father's death
(years)
99=N/A

QST091 YOUR FATHER, DO YOU HAVE GOOD OR BAD MEMORIES OF HIM WHEN YOU WERE A CHILD?

---
--- 1=Good
2=Bad
3=Both
9=N/A

QST092 HOW ABOUT NOW, DO YOU HAVE GOOD OR BAD FEELINGS TOWARDS HIM NOW?

---
--- 1=Good
2=Bad
3=Both
9=N/A

QST093 DO YOU SEE YOUR PARENTS AS HAVING HAD A GOOD MARRIAGE?

---
--- 1=Good
2=Bad
3=Both
9=N/A

QST094 HOW MANY BROTHERS AND SISTERS DO YOU HAVE?

--- ---
--- --- number

(list giving sex, position of patient and whether still living)

---
---
---
---
---
---
---

QST095 DO YOU HAVE GOOD OR BAD MEMORIES OF YOUR CHILDHOOD?

---
--- 1=Good
2=Bad
3=Both
4=Uncertain
9=N/A

QST096 WHAT WAS YOUR HIGHEST LEVEL OF SCHOOLING?

---
--- 1=No school
2=Primary school
3=Up to 4 years secondary school
4=Matriculation
5=Technical Certificate
6=Tertiary

---

I am going to ask you some questions about friendships you had when you were growing up

---

QST097 HOW ABOUT FRIENDS AT SCHOOL, DID YOU HAVE MANY FRIENDS, A FEW FRIENDS, OR WERE YOU A LONER?

---

---

1=Many friends
2=Few friends
3=Loner
9=No Response

QST098 WERE THERE TIMES WHEN YOU FOUND IT VERY HARD TO GO TO SCHOOL AND STAYED AT HOME?

---

---

1=Yes
2=No
3=Unsure
9=No response

QST099 WERE YOU A NERVY CHILD?

---

---

1=Yes
2=No
3=Unsure
9=No response

QST100 WHEN YOU WERE A TEENAGER, DID YOU GO OUT WITH BOYS/GIRLS?

---

---

1=A lot
2=About the same as others
3=Not often
4=Never

QST101 DID YOU HAVE MANY ROMANTIC DISAPPOINTMENTS?

---

---

1=Yes
2=No
3=Unsure
9=No response

MARITAL HISTORY

I am now going to ask you some questions about marriage.

---

From the interview thus far marital status will no doubt have become evident. If not, then determine current marital status

---

QST102 CURRENT MARITAL STATUS

---

--- 1=Married
2=Separated
3=Divorced
4=Widowed
5=Single
6=De Facto

---

If ever married or in stable de facto relationship, continue,
If not, GO TO QST140

---

QST103 WHEN DID YOU FIRST MARRY?

--- ---

--- --- Age at first marriage

QST104 HAVE YOU BEEN MARRIED MORE THAN ONCE?

(i)

---

--- 1=Yes
2=No
3=N/A

(ii) HOW MANY TIMES HAVE YOU BEEN MARRIED?

---

--- No. of marriages.

---

QST105 IS YOUR SPOUSE WORKING AT PRESENT

---

--- 1=Yes
2=No

QST106 WHAT IS THEIR OCCUPATION?

---

--- 1=Professional
2=Own Business
3=Clerical
4=Skilled Trade
5=Unskilled
6=Pensionner, Unemployed

QST107 IS YOUR SPOUSE IN GOOD HEALTH AT PRESENT?
---
--- 1=Yes
2=No
3=Unsure
9=No response

If
no,SPECIFY.....
.....

QST108 DOES YOUR SPOUSE DRINK ALCOHOL?
---
--- 1=yes
2=No

QST109 DO YOU THINK THEY DRINK EXCESSIVELY?
---
--- 1=Yes
2=No
3=Unsure
9=No response

QST110 HOW LONG HAVE YOU BEEN TOGETHER?
--- ---
--- --- No. of years

QST111 LOOKING BACK OVER THE YEARS HOW DO YOU THINK
THE MARRIAGE HAS WORKED?
---
--- 1=Well
2=Middling
3=Poorly

QST112 HOW IS THE RELATIONSHIP AT PRESENT?
---
--- 1=As well as ever
2=Worse than usual
3=Unsure
9=No response

QST113 DO YOUR NERVES AFFECT THE RELATIONSHIP?
---
--- 1=A lot
2=A little
3=Not at all
4=Unsure
9=No response

QST114 HOW ABOUT YOUR SEXUAL RELATIONSHIP AT PRESENT?
DO YOU FEEL IT IS O.K.?
---
--- 1=Yes
2=No
3=Unsure
9=No response

If NO,

QST115 DO YOU FEEL THIS IS YOUR FAULT OR YOUR SPOUSE'S FAULT?

---
---

1=Self
2=Spouse
3=Both

If patient is widowed and now single ask the following:

Computing:END Record 4 at column 80
GO TO Record 5

QST116 DID YOUR SPOUSE WORK?

---
---

1=Yes
2=No

QST117 WHAT WAS THEIR OCCUPATION?

---
---

1=Professional
2=Own Business
3=Clerical
4=Skilled Trade
5=Unskilled
6=Pensionner, Unemployed

QST118 WAS YOUR SPOUSE IN POOR HEALTH FOR SOME TIME BEFORE THEY DIED?

---
---

1=Yes
2=No
3=Unsure
9=No response

If yes,SPECIFY.....

QST119 DID YOUR SPOUSE DRINK ALCOHOL?

---
---

1=yes
2=No

QST120 DID YOU THINK THEY USED TO DRINK EXCESSIVELY?

---
---

1=Yes
2=No
3=Unsure
9=No response

QST121 HOW LONG HAD YOU BEEN TOGETHER?
--- ---
--- --- No. of years

QST122 LOOKING BACK OVER THE YEARS HOW DO YOU FEEL THE MARRIAGE WORKED?
---
--- 1=Well
2=Middling
3=Poorly

QST123 DID YOUR NERVES USED TO AFFECT THE RELATIONSHIP?
---
--- 1=A lot
2=A little
3=Not at all
4=Unsure
9=No response

If patient has been divorced or separated but not remarried ask,

QST124 DID YOUR SPOUSE WORK?
---
--- 1=Yes
2=No

QST125 WHAT WAS THEIR OCCUPATION?
---
--- 1=Professional
2=Own Business
3=Clerical
4=Skilled Trade
5=Unskilled
6=Pensionner, Unemployed

QST126 WAS YOUR SPOUSE IN GOOD HEALTH?
---
--- 1=Yes
2=No
3=Unsure
9=No response

If NO,SPECIFY.....

QST127 DID YOUR SPOUSE DRINK ALCOHOL?
---
--- 1=yes
2=No

QST128 DID YOU THINK THEY USED TO DRINK EXCESSIVELY?
---
--- 1=Yes
2=No
3=Unsure
9=No response

QST129 HOW LONG HAD YOU BEEN TOGETHER?
--- ---

--- --- No. of years

QST130 DID YOUR NERVES USED TO AFFECT THE RELATIONSHIP?
---
--- 1=A lot
2=A little
3=Not at all
4=Unsure
9=No response

---

If patient has had previous marriages and is now married then continue with the following questions for each marriage
QST131 TO QST139
ELSE GO TO QST140

---

I am going to ask you some questions about your previous marriage(s)

Marriage 1

QST131 HOW LONG DID THE MARRIAGE LAST?
--- ---
--- --- Years

QST132 WHY DID IT END?
---
--- 1=No clear single reason
2=Alcohol
3=Physical abuse
4=Other person
5=Other reasons (SPECIFY.....)
9=N/A

QST133 DO YOU FEEL YOUR CURRENT MARRIAGE IS
---
--- 1=Better
2=Worse
3=Unsure
4=No Response
9=N/A

Marriage 2

QST134 HOW LONG DID THE MARRIAGE LAST?
--- ---
--- --- Years

QST135 WHY DID IT END?
---
--- 1=No clear single reason
2=Alcohol
3=Physical abuse
4=Other person
5=Other reasons (SPECIFY.....)
9=N/A

QST136 DO YOU FEEL YOUR CURRENT MARRIAGE IS
---
--- 1=Better
2=Worse
3=Unsure
4=No Response
9=N/A

Marriage 3

QST137 HOW LONG DID THE MARRIAGE LAST?
--- ---
--- --- Years

QST138 WHY DID IT END?
---
--- 1=No clear single reason
2=Alcohol
3=Physical abuse
4=Other person
5=Other reasons (SPECIFY.....)
9=N/A

QST139 DO YOU FEEL YOUR CURRENT MARRIAGE IS
---
--- 1=Better
2=Worse
3=Unsure
4=No Response
9=N/A

QST140 YOU HAVE NEVER MARRIED, IS THIS BECAUSE
---
--- 1=Just fate
2=My personality
3=Not clear
4=Other (SPECIFY.....)

QST141 DO YOU HAVE CHILDREN?
---
--- 1=Yes
2=No
9=N/A

QST142 HOW MANY CHILDREN DO YOU HAVE?
---

---  Number

QST143  ARE THEY STILL LIVING?
---
---  Number alive

QST144  ARE THEY ALL PHYSICALLY WELL?
---
---  1=Yes
2=No
9=N/A

If NO,

SPECIFY
.....

.....

.....

.....

QST145  HOW MANY OF YOUR CHILDREN LIVE IN ADELAIDE?
--- ---
--- ---  Number

QST146  HOW OFTEN DO YOU SEE YOUR CHILDREN?
---
---  1=Every day
2=Weekly
3=Monthly
4=Yearly
5=Less often
(SPECIFY.....)
9=N/A

PERSONALITY ASSESSMENT BY INTERVIEWER

Completed at the end of the interview using guidelines of Schneider's Depressive Personality Criteria (Akiskal, 1983) and relevant DSMIII Axis II criteria

---

SCHNEIDER'S DEPRESSIVE PERSONALITY:

1=Yes
2=No

| | |
|---|---|
| QST147 | QUIET, PASSIVE AND INDECISIVE |
| --- | |
| --- | |
| QST148 | GLOOMY, PESSIMISTIC, HUMOURLESS, INCAPABLE OF FUN |
| --- | |
| --- | |
| QST149 | SELF-CRITICAL, SELF REPROACHING, SELF DEROGATORY |
| --- | |
| --- | |
| QST150 | SCEPTICAL, HYPERCRITICAL, COMPLAINING |
| --- | |
| --- | |
| QST151 | CONSCIENTIOUS, SELF DISCIPLINING |
| --- | |
| --- | |
| QST152 | BROODING AND GIVEN TO WORRY |
| --- | |
| --- | |
| QST153 | PREOCCUPIED WITH FAILURE AND INADEQUACY |
| --- | TO THE POINT OF MORBID ENJOYMENT OF ONE'S |
| --- | FAILURES |

DSMIII AXIS II:

1=Yes
2=No
3=Border
9=Diagnosis Deferred

QST154 DSMIII DEPENDENT PERSONALITY:
---
--- Passively allows others to assume responsibility

Subordinates own needs to others

Lacks self confidence

QST155 DSMIII HISTRIONIC PERSONALITY:
---
--- Self dramatising
Draws attention to self
Craves activity
Overreaction to minor events
Irrational outbursts
Seems shallow
Egocentric
Vain,demanding
Constant seeking of reassurance
Manipulative suicidal threats

QST156 DSMIII BORDERLINE PERSONALITY:
---
--- Impulsivity
Pattern of unstable relationships
Inappropriate anger
Identity disturbance
Affective instability
Intolerance of being alone
History of self damaging acts
Chronically bored or empty feelings

QST157 DSMIII SCHIZOID PERSONALITY
---
---

Emotional coldness
Indifferance to praise
Few close friendships
No eccentricities

QST158 DSMIII PASSIVE AGGRESSIVE PERSONALITY
---
---

Resists demands for adequate performance
Procrastination
Dawdling
Stubborness
Intentional inefficiency
"Forgetfulness"

QST159 DSMIII ANTISOCIAL PERSONALITY
---
--- BEFORE 15:

Truancy
Expulsion
Delinquancy
Running away from home
Persistent lying
Repeated sexual intercourse in a casual relationship
Repeated thefts
Repeated drunkenness
Vandalism
School grades below expectation
Chronic rule violation
Initiation of fights

AFTER 15:

Inability to sustain consistent work behaviour
Poor parenting function
Unlawful behaviour
Inability to sustain enduring
Attachments
irritability
Failure to honour financial obligations
Failure to plan ahead
Disregard for the truth
Recklessness

QST160 DSMIII AVOIDANT PERSONALITY
---
---

Hypersensitivity to rejection
Won't enter relationship without guarantee for acceptance
Social withdrawal
Desire for affection
Low self esteem

QST161 DSMIII COMPULSIVE PERSONALITY
---
---

Restricted emotional expression
Perfectionism
Insistence others submit to own way of doing things
Excessive devotion to work
Indecisiveness

QST162 DSMIII PARANOID PERSONALITY
---
--- Pervasive unwarranted suspiciousness
Hypersensitivity
Restricted affectivity

QST163 DSMIII NARCISSISTIC PERSONALITY
---
--- Grandiosity
Preoccupation with fantasies of successes
Exhibitionism
Atypical response to criticism
Disturbed interpersonal relationships

QST164 DSMIII SCHIZOTYPAL PERSONALITY
---
--- Magical thinking
Ideas of reference
Social isolation
Recurrent illusions
Odd speech
Inadequate rapport
Suspiciousness
Undue social anxiety

CURRENT DEPRESSION SEVERITY

(Hamilton Rating Scale)

Computing;(Week 0) Begin record 6

QST165 DEPRESSED MOOD

---
--- HD01

0 Absent
1 Doubtful or trivial
2 Mild-occasional weeping
3 Moderate-frequent weeping clear non verbal signs of depression
4 Severe-reports constant depression

QST166 GUILT FEELING

---
--- HD02

1 Feelings of self reproach because of illness
2 Ideas of guilt also about past actions
3 Belief illness might be a punishment
4 Delusions of guilt

QST167 SUICIDE

---
--- HD03

0 Absent
1 Feelings life not worth living but no wish to die
2 Wishing he were dead
3 Probably now contemplating suicide
4 Serious attempt in last few days

QST168 INITIAL INSOMNIA

---
--- HD04

0 Absent
1 In last 3 days waits >30 mins to sleep once or twice
2 In last 3 days waits .30 mins to sleep each night

QST169 MIDDLE INSOMNIA

---
--- HD05

0 Absent
1 In last 3 days wakes between 12 and 5 occasionally
2 In last 3 days wakes between 12 and 5 every night

QST170 LATE INSOMNIA

0 Absent
1 In last 3 days wakes before planned but returns to sleep
2 In last 3 days wakes early and stays awake

------- HD06

QST171 HYPERSOMNIA

0 Absent
1 In last 3 days sleeps in half hour longer than desired

QST172 WORK AND INTERESTS

0 No difficulty
1 Thoughts of incapacity but carries on
2 Loss of interest in work or hobbies, extra required may miss days
3 Decrease in time spent in activities, is on sick leave
4 Inability to perform basic tasks

------- HD07

QST173 RETARDATION

0 None
1 Slight flattening affect and fixity of expression
2 Monotonous voice, delay in answers, tendency to sit motionless
3 Interview extremely prolonged
4 Interview impossible

------- HD08

QST174 AGITATION

0 None
1 Fidgetiness at interview
2 Restless, picks at clothes and hands
3 Patient gets up
4 Patient paces tearing at clothes

------- HD09

QST175 PSYCHIC ANXIETY Key words:worry,uncertainty, experience of dread

---
--- HD10

0 None
1 Doubtful tension and irritability
2 Difficulty relaxing,worry over minor matters
3 Apprehensive,difficulty concentrating,feels jumpy, interfering with life
4 Severe feelings of panic

QST176 SOMATIC ANXIETY Key concept: autonomic overactivity

---
--- HD11

0 Absent
1 Doubtful or minimal
2 Mild
3 Moderate
4 Severe

QST177 GASTRO-INTESTINAL SYMPTOMS

---
---
HD12

0 Absent
1 Loss of appetite
2 Difficulty eating, constipation

QST178 GENERAL SOMATIC SYMPTOMS

---
---
HD13

0 None
1 Doubtful fatigability, loss of energy
2 Clear symptoms, back ache etc.

QST179 LOSS OF LIBIDO

---
--- HD14

0 None (or not ascertained)
1 Mild
2 Severe

QST180 HYPO-CHONDRIASIS

---
--- HD15

0 Absent
1 Minor bodily concerns
2 Preoccupation with physical symptoms and thoughts of disease
3 Strong conviction condition due to organic disease but can be reassured
4 Delusions

QST181 LOSS OF INSIGHT

-------
------- HD16

0 Acknowledges depression (if depressed)
1 Acknowledges depression but says it is due to over-work etc.
2 Denies illness at all

QST182 LOSS OF WEIGHT

-------
------- HD17

0 None
1 Slight or doubtful
2 Weight loss of 3 kg or more

DSMIII AXIS I DIAGNOSIS

SUMMARY OF SCID SCHEDULE:
0 = inadequate information
1 = absent or false
2 = subthreshold
3 = threshold or true

---

Computing; (Week 0) Continue on Record 6 Starting Column 36 END
Record 6 at Column 51 (DSMIII part ends)

QST183 CURRENT MAJOR DEPRESSIVE SYNDROME
---
---

QST184 CURRENT MANIC SYNDROME
---
---

QST185 PAST MANIC SYNDROME
---
---

QST186 DYSTHYMIC SYNDROME (CURRENT)
---
---

QST187 PANIC DISORDER
---
---

QST188 AGORAPHOBIA WITHOUT A HISTORY OF PANIC DISORDER
---
---

QST189 SOCIAL PHOBIA
---
---

QST190 SIMPLE PHOBIA
---
---

QST191 OBSESSIVE COMPULSIVE DISORDER
---
---

QST192 GENERALISED ANXIETY DISORDER (CURRENT)
---
---

QST193 SOMATISATION DISORDER
---
---

QST194 HYPOCHONDRIASIS
---
---

QST195 UNDIFFERENTIATED SOMATOFORM DISORDER
----- (CURRENT)
-----

QST196 ALCOHOL DEPENDENCE (LIFETIME)
-----
-----

QST197 SUBSTANCE DEPENDENCE NON-ALCOHOL (LIFETIME)
-----
-----

QST198 PSYCHOTIC SCREENING
-----
-----

QST199 ADJUSTMENT DISORDER with depressed mood
-----
-----

Computing; (Week 0) END Record 6 at Column 51

KEY 1
List of Psychotropic medication

ANTIDEPRESSANTS

1 = Amitripryline
2 = Doxepin
3 = Dothiepin
4 = Imipramine
5 = Clomipramine
6 = Desipramine
7 = Mianserin
8 = Nomifensine
9 = Nortriptyline
10 = Protriptyline
11 =Trimipramine

MAOS

12 = Tranylcypromine
13 = Phenelzine
14 = Isocarboxazid
15 = Iproniazid
16 = L-Tryptophan
17 = Pyridoxine (B6)
18 = LiCo3 Lithicarb
19 = LiCo3 Piradel

MAJOR TRANQUILISERS:

20 =Chlorpromazine
21 = Fluphenazine HCl
22 = Modecate
23 = Perphenazine
24 = Trifluoroperazine
25 = Perycyazine
26 = Pipothiazine
27 = Thioridazine
28 = Haloperidol
29 = Flupenthixol
30 = Thiothixene
31 = Pimozide

MINOR TRANQUILISERS:

32 = Chlordiazepoxide
33 = Diazepam
34 = Oxazepam
35 = Lorazepam
36 = Chlorazepate
37 = Bromazepam
38 = Alprazolam
39 = Clobazam
40 = Medazepam

BETA BLOCKERS

41 = Propranolol

HYPNOTICS

42 = Chloral Hydrate
43 = Hemineurin
44 = Flunitrazepam
45 = Flurazepam
46 = Nitrazepam
47 = Paraldehyde
48 = Temazepam

OTHERS

49 = Carbamazepine
50 = Disulfiram
51 = Clonazepam
52 = Barbiturates

KEY 2

FEIGHNER CRITERIA

From Diagnostic Criteria for the Use in Psychiatric Research (Feighner et al 1972)

1. Schizophrenia

For a diagnosis of schizophrenia A through C are required.

A. Both of the following are necessary: (1) A chronic illness with at least six months of symptoms prior to the index evaluation without return to the premorbid level of psychosocial adjustment. (2) Absence of a period of depressive or manic symptoms sufficient to qualify for affective disorder or probable affective disorder.

B. The patient must have at least one of the following: (1) Delusions or hallucinations without significant perplexity or disorientation associated with them. (2) Verbal production that makes communications difficult because of a lack of logical or understandable organisation. (In the presence of muteness the diagnostic decision must be deferred.)

(We recognise that many patients with schizophrenia have characteristic blunted or inappropriate affect; however, when it occurs in mild form, interrater agreement is difficult to achieve. We believe that, on the basis of presently available information, blunted affect occurs rarely or not at all in the absence of B-1 or B-2).

C. At least three of the following manifestations must be present for a diagnosis of "definite" schizophrenia, and two for a diagnosis of "probable" schizophrenia. (1) Single. (2) Poor premorbid social adjustment or work history. (3) Family history of schizophrenia. (4) Absence of alcoholism or drug abuse within one year of onset of psychosis. (5) Onset of illness prior to age 40.

2. Anxiety Neurosis

For a diagnosis of anxiety neurosis, A through D are required.

A. The following manifestations must be present: (1) Age of onset prior to 40. (2) Chronic nervousness with recurrent anxiety attacks manifested by apprehension, fearfulness, or sense of impending doom, with at least four of the following symptoms present during the majority of attacks: (a) dyspnoea, (b) palpitations, (c) chest pain or discomfort, (d) choking or smothering sensation, (e) dizziness and (f) paresthesias.

B. The anxiety attacks are essential to the diagnosis and must occur at times other than marked physical exertion or life threatening situations, and in the absence of medical illness that could account for symptoms of anxiety. There must have been at least six anxiety attacks, each separated by at least a week from the others.

C. In the presence of other psychiatric illness(es) this diagnosis is made only if the criteria described in A and B antedate the onset of the other psychiatric illness by at least two years.

D. The diagnosis of probable anxiety neurosis is made when at least two symptoms listed in A-2 are present, and the other criteria are fulfilled.

3. Obsessive Compulsive Neurosis

For a diagnosis of obsessive compulsive neurosis, both A and B are required.

A. Manifestations 1 and 2 are required. (1) Obsessions or compulsions are the dominant symptoms. They are defined as recurrent or persistent ideas, thoughts, images, feelings, impulses or movements, which must be accompanied by a sense of subjective compulsion and a desire to resist the event, the event being recognised by the individual as foreign to his personality or nature, ie "ego-alien". (2) Age of onset prior to 40.

B. Patients with primary or probable primary affective disorder, or with schizophrenia or probable schizophrenia, who manifest obsessive compulsive features, do not receive the additional diagnosis of obsessive compulsive neurosis.

4. Phobic Neurosis

For a diagnosis of phobic neurosis, both A and B are required.

A. Manifestations 1 and 2 are required. (1) Phobias are the dominant symptoms. They are defined as persistent and recurring fears which the patient tries to resist or avoid and at the same time considers unreasonable. (2) Age of onset prior to 40.

B. Symptoms of anxiety, tension, nervousness, and depression may accompany the phobias; however, patients with another definable psychiatric illness should not receive the additional diagnosis of phobic neurosis.

5. Hysteria

For a diagnosis of hysteria, both A and B are required.

A. A chronic or recurrent illness beginning before age 30, presenting with a dramatic, vague or complicated medical history.

B. The patient must report at least 25 medically unexplained symptoms for a "definite" diagnosis and 20 to 24 symptoms for a "probable" diagnosis in at least nine of the following groups.

Group 1

headaches

sickly majority of life

Group 2

blindness

paralysis

anaesthesia

aphonia

fits or convulsions

unconsciousness

amnesia

deafness

hallucinations

urinary retention

trouble walking

other unexplained "neurological" symptoms

Group 3

fatigue

lump in throat

fainting spells

visual blurring

weakness

dysuria

Group 4

breathing difficulty

palpitation

anxiety attacks

chest pain

dizziness

Group 5

anorexia

weight loss

marked fluctuations in weight

nausea

abdominal bloating

food intolerances

diarrhoea

constipation

Group 6

dysmenorrhoea

menstrual irregularity

amenorrhoea

excessive bleeding

Group 8

sexual indifference

frigidity

dyspareunia

other sexual difficulties

vomiting all nine months of pregnancy at least once, or hospitalisation for hyperemesis gravidarum

Group 9

back pain

joint pain

extremity pain

burning pains of the sexual organs, mouth or rectum

other bodily pains

Group 10

nervousness

fears

depressed feelings

need to quite working, or inability to carry on regular duties because of feeling sick

crying easily

feeling life was hopeless

thinking a good deal about dying

wanting to die

thinking about suicide

suicide attempts

6. Antisocial Personality Disorder

A chronic or recurrent disorder with the appearance of at least one of the following manifestations before age 15. A minimum of five manifestations are required for a "definite" diagnosis, and four are required for a "probable" diagnosis.

A. School problems as manifested by any of the following: truancy (positive if more than once per year except for the last year in school), suspension, expulsion or fighting that leads to trouble with teachers or principals.

B. Running away from home overnight while living in parental home.

C. Troubles with the police as manifested by any of the following: two or more arrests for nontraffic offences, four or more arrests (including tickets only) for moving traffic offences, or at least one felony conviction.

D. Poor work history as manifested by being fired, quitting without another job to go to, or frequent job changes not accounted for by normal seasonal or economic fluctuations.

E. Marital difficulties manifested by any of the following: deserting family, two or more divorces, frequent separations due to marital discord, recurrent infidelity, recurrent physical attacks upon spouse, or being suspected of battering a child.

F. Repeated outbursts of rage or fighting not on the school premises: if prior to age 18 this must occur at least twice and lead to difficulty with adults; after age 18 this must occur at least twice, or if a weapon (eg club, knife or gun) is used, only once is enough to score this category positive.

G. Sexual problems as manifested by any of the following: prostitution (includes both heterosexual and homosexual activity), pimping, more than one episode of venereal disease, or flagrant promiscuity.

H. Vagrancy or wanderlust, eg at least several months of wandering from place to place with no prearranged plans.

I. Persistent and repeated lying, or using an alias.

7. Alcoholism

A "definite" diagnosis is made when symptoms occur in at least three of the four following groups. A "probable" diagnosis is made when symptoms occur in only two groups.

A. Group One: (1) Any manifestation of alcohol withdrawal such as tremulousness, convulsions, hallucinations, or delirium, (2) History of medical complications, eg cirrhosis, gastritis, pancreatitis, myopathy, polyneuropathy. Wernicke-Korsakoff's syndrome. (3) Alcoholic blackouts, ie, amnesic episodes during heavy drinking not accounted for by head trauma. (4) Alcoholic binges or benders (48 hours or more of drinking associated with default of usual obligations: must have occurred more than once to be scored as positive).

B. Group Two: (1) Patient has not been able to stop drinking when he wanted to do so. (2) Patient has tried to control drinking by allowing himself to drink only under certain circumstances, such as only after 5.00 pm, only on weekends, or only with other people. (3) Drinking before breakfast. (4) Drinking nonbeverage forms of alcohol, eg hair oil, mouthwash, Sterno, etc.

C. Group Three: (1) Arrests for drinking. (2) Traffic difficulties associated with drinking. (3) Trouble at work because of drinking. (4) Fighting associated with drinking.

D. Group Four: (1) Patient thinks he drinks too much. (2) Family objects to his drinking. (3) Loss of friends because of drinking. (4) Other people object to his drinking. (5) Feels guilty about his drinking.

8. Drug Dependence (Excluding Alcoholism)

This diagnosis is made when any one of the following are present. The drug type is specified according to DSM-II.

A. History of withdrawal symptoms.

B. Hospitalisation for drug abuse or its complications.

C. Indiscriminate prolonged use of central nervous system active drugs.

9. Undiagnosed Psychiatric Illness

Some patients cannot receive a diagnosis for one or more reasons. Among the more common problems that cause a patient to be considered undiagnosed are the following: (1) Cases in which only one illness is suspected but symptoms are minimal. (2) Cases in which more than one psychiatric illness is suspected but symptoms are not sufficient to meet the criteria of any of the possibilities. (3) Cases in which symptoms suggest two or more disorders but in an atypical or confusing manner. (4) Cases in which the chronology of important symptom clusters cannot be determined. (5) Cases in which it is impossible to obtain the necessary history to establish a definitive diagnosis.

KEY 3: GUIDE FOR FAMILY PSYCHOPATHOLOGY (From Akiskal's MCDQ)
Derived from Winokur's approach as incorporated into the RDC - family history version (1977) Andreason et al.

NOTE: BEFORE MAKING FINAL CODINGS FOR FAMILY HISTORY CONSULT CASE NOTES IF AVAILABLE

CRITERIA FOR DIAGNOSES:

1. DEPRESSIVE DISORDER
   1. Evidence for features (especially vegetative) of a depressive syndrome
   2. At least one of the following:
      a) ECT or antidepressants
      b) Hospitalisation
      c) Suicidal Behaviour
      d) Social incapacitation: (At work, school or housework)
   3. Non-deteriorating illness
      (Especially if onset is after 40)
   4. Exclude normal grief

2. MANIA
   1. Evidence of features of a manic syndrome
   2. At least one of the following:
      a) Hospitalised
      b) Lithium treatment for psychosis
      c) Impairment at work, housework or socially
   3. Non-deteriorating course

3. CYCLOTHYMIA
   1. Moody with definite up periods
   2. Never treated
   3. No social incapacitation because of mood
   4. No evidence of suicidal behaviour

4. ALCOHOLISM (at least three)
   1. Legal complications (Driving under the influence)
   2. Medical complications (Cirrhosis, Pancreatitis, Ulcer)
   3. DTs or blackouts
   4. Interpersonal problems through alcohol or alcohol induced problems at work
   5. Treatment (Antabuse, AA...)

5. DRUG ABUSE (at least three)
   1. Legal complications (Peddling, Disorderly conduct)

2. Health complications (Inadvertent overdoses and infectious Hepatitis)

3. Withdrawal phenomena or evidence for tolerance

4. Interpersonal or vocational complications

5. Treatment for drug abuse

6. ANTISOCIAL PERSONALITY
   1. Onset before 15 years

   2. Same criteria as in this manual (see Key 2)

7. PROCESS SCHIZOPHRENIA
   1. No evidence of prominent affective symptomatology

   2. Evidence for delusions, hallucinations, incoherence or bizarre behaviour

   3. An illness that does not permit full recovery/especially if early onset/ may lead to chronic hospitalisation

   4. Exclude chronic brain syndromes

8. UNCLASSIFIABLE PSYCHIATRIC ILLNESS
   1. Patient reports unspecific psychiatric problems in family members

APPENDIX 4

NAME.....

MAUDSLEY PERSONALITY INVENTORY (MPI)

Here are some questions regarding the way you behave, feel and act. After each question there is a "Yes", a "?" and a "No".

Try and decide whether "Yes" or "No" represents your USUAL way of acting or feeling; then put a circle round the "Yes" or "No". If you find it absolutely impossible to decide, put a circle round the "?", but do not use this answer except very occasionally. Work quickly, and don't spend too much time over any question; we want your first reaction, not a long drawn-out thought process! The whole questionnaire shouldn't take more than a few minutes. Be sure not to omit any questions. No go ahead, work quickly, and remember to answer every question. There are no right or wrong answers, and this isn't a test of intelligence or ability, but simply a measure of the way you behave.

| | | | | |
|---|---|---|---|---|
| 1. | Are you happiest when you get involved in some project that calls for rapid action? | Yes | ? | No |
| 2. | Do you sometimes feel happy, sometimes depressed, without any apparent reason? | Yes | ? | No |
| 3. | Does your mind often wander while you are trying to concentrate? | Yes | ? | No |
| 4. | Do you usually take the initiative in making new friends? | Yes | ? | No |
| 5. | Are you inclined to be quick and sure in your actions? | Yes | ? | No |
| 6. | Are you frequently "lost in thought" even when supposed to be taking part in a conversation? | Yes | ? | No |
| 7. | Are you sometimes bubbling over with energy and sometimes very sluggish? | Yes | ? | No |
| 8. | Would you rate yourself as a lively individual? | Yes | ? | No |
| 9. | Would you be very unhappy if you were prevented from making numerous social contacts? | Yes | ? | No |
| 10. | Are you inclined to be moody? | Yes | ? | No |
| 11. | Do you have frequent ups and downs in mood, either with or without apparent cause? | Yes | ? | No |
| 12. | Do you prefer action to planning for action? | Yes | ? | No |
| 13. | Are your daydreams frequently about things that can never come true? | Yes | ? | No |
| 14. | Are you inclined to keep in the background on social occasions? | Yes | ? | No |
| 15. | Are you inclined to ponder over your past? | Yes | ? | No |

| | | | | |
|---|---|---|---|---|
| 16. | Is it difficult to "lose yourself" even at a lively party? | Yes | ? | No |
| 17. | Do you ever feel "just miserable" for no good reason at all? | Yes | ? | No |
| 18. | Are you inclined to be over conscientious? | Yes | ? | No |
| 19. | Do you often find that you have made up your mind too late? | Yes | ? | No |
| 20. | Do you like to mix socially with people? | Yes | ? | No |
| 21. | Have you often lost sleep over your worries? | Yes | ? | No |
| 22. | Are you inclined to limit your acquaintances to a select few? | Yes | ? | No |
| 23. | Are you often troubled about feelings of guilt? | Yes | ? | No |
| 24. | Do you ever take your work as if it were a matter of life and death? | Yes | ? | No |
| 25. | Are your feelings rather easily hurt? | Yes | ? | No |
| 26. | Do you like to have many social engagements? | Yes | ? | No |
| 27. | Would you rate yourself as a tense or "highly strung" individual? | Yes | ? | No |
| 28. | Do you generally prefer to take the lead in group activities? | Yes | ? | No |
| 29. | Do you often experience periods of loneliness? | Yes | ? | No |
| 30. | Are you inclined to be shy in the presence of the opposite sex? | Yes | ? | No |
| 31. | Do you like to indulge in a reverie (daydreaming)? | Yes | ? | No |
| 32. | Do you nearly always have a "ready answer" for remarks directed at your? | Yes | ? | No |
| 33. | Do you spend much time in thinking over good times you have had in the past? | Yes | ? | No |
| 34. | Would you rate yourself as a happy-go-lucky individual? | Yes | ? | No |
| 35. | Have you often felt listless and tired for no good reason? | Yes | ? | No |
| 36. | Are you inclined to keep quiet when out in a social group? | Yes | ? | No |
| 37. | After a critical moment is over, do you usually think of something you should have done but failed to do? | Yes | ? | No |
| 38. | Can you usually let yourself go and have a hilariously good time at a fun party? | Yes | ? | No |
| 39. | Do ideas run through your head so that you cannot sleep? | Yes | ? | No |

| | | | | |
|---|---|---|---|---|
| 40. | Do you like work that requires considerable attention? | Yes | ? | No |
| 41. | Have you ever been bothered by having a useless thought come into your mind repeatedly? | Yes | ? | No |
| 42. | Are you inclined the take your work casually, that is as a matter of course? | Yes | ? | No |
| 43. | Are you touchy on various subjects? | Yes | ? | No |
| 44. | Do other people regard you as a lively individual? | Yes | ? | No |
| 45. | Do you often feel disgruntled? | Yes | ? | No |
| 46. | Would you rate yourself as a talkative individual? | Yes | ? | No |
| 47. | Do you have periods of such great restlessness that you cannot sit long in a chair? | Yes | ? | No |
| 48. | Do you like to play pranks upon others? | Yes | ? | No |

APPENDIX 5

NAME.....

DYSFUNCTIONAL ATTITUDES SCALE (DAS)

FORM A

This Inventory lists different attitudes or beliefs which people sometimes hold. Read EACH statement carefully and decide how much you agree or disagree with the statement.

For each of the attitudes, show your answer by placing a checkmark (✓) under the column that BEST DESCRIBES HOW YOU THINK. Be sure to choose only one answer for each attitude. Because people are different, there is no right answer or wrong answer to these statements.

To decide whether a given attitude is typical of your way of looking at things, simply keep in mind what you are like MOST OF THE TIME.

---

EXAMPLE:

| ATTITUDES | TOTALLY AGREE | AGREE VERY MUCH | AGREE SLIGHTLY | NEUTRAL | DISAGREE SLIGHTLY | DISAGREE VERY MUCH | TOTALLY DISAGREE |
|---|---|---|---|---|---|---|---|
| 1. Most people are ok once you get to know them | | | | | | | |

Look at the example above. To show how much a sentence describes your attitude, you can check any point from totally agree to totally disagree. In the above example, the checkmark at "agree slightly" indicates that this statement is somewhat typical of the attitudes held by the person completing the inventory.

Remember that your answer should describe the way you think MOST OF THE TIME.

NOW TURN THE PAGE AND BEGIN

DAS

| ATTITUDES | TOTALLY AGREE | AGREE VERY MUCH | AGREE SLIGHTLY | NEUTRAL | DISAGREE SLIGHTLY | DISAGREE VERY MUCH | TOTALLY DISAGREE |
|---|---|---|---|---|---|---|---|
| REMEMBER, ANSWER EACH STATEMENT ACCORDING TO THE WAY YOU THINK MOST OF THE TIME | | | | | | | |
| 1. It is difficult to be happy unless one is good looking, intelligent, rich and creative | | | | | | | |
| 2. Happiness is more a matter of my attitude towards myself than the way other people feel about me | | | | | | | |
| 3. People will probably think less of me if I make a mistake | | | | | | | |
| 4. If I do not do well all the time, people will not respect me | | | | | | | |
| 5. Taking even a small risk is foolish because the loss is likely to be a disaster | | | | | | | |
| 6. It is possible to gain another person's respect without being especially talented at anything | | | | | | | |
| 7. I cannot be happy unless most people I know admire me | | | | | | | |
| 8. If a person asks for help, it is a sign of weakness | | | | | | | |
| 9. If I do not do as well as other people, it means I am an inferior human being | | | | | | | |
| 10. If I fail at my work, then I am a failure as a person | | | | | | | |

| ATTITUDES | | TOTALLY AGREE | AGREE VERY MUCH | AGREE SLIGHTLY | NEUTRAL | DISAGREE SLIGHTLY | DISAGREE VERY MUCH | TOTALLY DISAGREE |
|---|---|---|---|---|---|---|---|---|
| 11. | If you cannot do something well, there is little point in doing it at all | | | | | | | |
| 12. | Making mistakes is fine because I can learn from them | | | | | | | |
| 13. | If someone disagrees with me, it probably indicates he does not like me | | | | | | | |
| 14. | If I fail partly, it is as bad as being a complete failure | | | | | | | |
| 15. | If other people know what you are really like, they will think less of you | | | | | | | |
| 16. | I am nothing if a person I love doesn't love me | | | | | | | |
| 17. | One can get pleasure from an activity regardless of the end result | | | | | | | |
| 18. | People should have a reasonable likelihood of success before undertaking anything | | | | | | | |
| 19. | My value as a person depends greatly on what others think of me | | | | | | | |
| 20. | If I don't set the highest standards for myself, I am likely to end up a second-rate person | | | | | | | |
| 21. | If I am to be a worthwhile person, I must be truly outstanding in at least one major respect | | | | | | | |
| 22. | People who have good ideas are more worthy than those who do not | | | | | | | |

| ATTITUDES | | TOTALLY AGREE | AGREE VERY MUCH | AGREE SLIGHTLY | NEUTRAL | DISAGREE SLIGHTLY | DISAGREE VERY MUCH | TOTALLY DISAGREE |
|---|---|---|---|---|---|---|---|---|
| 23. | I should be upset if I make a mistake | | | | | | | |
| 24. | My own opinions of myself are more important than other's opinions of me | | | | | | | |
| 25. | To be a good, moral, worthwhile person, I must help everyone who needs it | | | | | | | |
| 26. | If I ask a question, it makes me look inferior | | | | | | | |
| 27. | It is awful to be disapproved of by people important to you | | | | | | | |
| 28. | If you don't have other people to lean on, you are bound to be sad | | | | | | | |
| 29. | I can reach important goals without slave driving myself | | | | | | | |
| 30. | It is possible for a person to be scolded and not get upset | | | | | | | |
| 31. | I cannot trust other people because they might be cruel to me | | | | | | | |
| 32. | If others dislike you, you cannot be happy | | | | | | | |
| 33. | It is best to give up your own interests in order to please other people | | | | | | | |
| 34. | My happiness depends more on other people than it does on me | | | | | | | |
| 35. | I do not need the approval of other people in order to be happy | | | | | | | |

| ATTITUDES | | TOTALLY AGREE | AGREE VERY MUCH | AGREE SLIGHTLY | NEUTRAL | DISAGREE SLIGHTLY | DISAGREE VERY MUCH | TOTALLY DISAGREE |
|---|---|---|---|---|---|---|---|---|
| 36. | If a person avoids problems, the problems tend to go away | | | | | | | |
| 37. | I can be happy even if I miss out on many of the good things in life | | | | | | | |
| 38. | What other people think about me is very important | | | | | | | |
| 39. | Being isolated from others is bound to lead to unhappiness | | | | | | | |
| 40. | I can find happiness without being loved by another person | | | | | | | |

APPENDIX 6

NAME .....

BECK HOPELESSNESS SCALE (HS)

Please answer these questions as quickly as possible. Put a circle round your answer.

| | | | |
|---|---|---|---|
| 1. | I look forward to the future with hope and enthusiasm | True | False |
| 2. | I might as well give up because I can't make things better for myself | True | False |
| 3. | When things are going badly, I am helped by knowing they can't stay that way forever | True | False |
| 4. | I can't imagine what my life would be like in 10 years | True | False |
| 5. | I have enough time to accomplish the things I most want to do | True | False |
| 6. | In the future, I expect to succeed in what concerns me most | True | False |
| 7. | My future seems dark to me | True | False |
| 8. | I expect to get more of the good things in life than the average person | True | False |
| 9. | I just don't get the breaks, and there's no reason to believe I will in the future | True | False |
| 10. | My past experiences have prepared me well for my future | True | False |
| 11. | All I can see ahead of me is unpleasantness rather than pleasantness | True | False |
| 12. | I don't expect to get what I really want | True | False |
| 13. | When I look ahead to the future, I expect I will be happier than I am now | True | False |
| 14. | Things just don't work out the way I want them to | True | False |
| 15. | I have great faith in the future | True | False |
| 16. | I never get what I want to it's foolish to want anything | True | False |
| 17. | It is very unlikely that I will get any real satisfaction in the future | True | False |
| 18. | The future seems vague and uncertain to me | True | False |
| 19. | I can look forward to more good times than bad times | True | False |
| 20. | There's no use in really trying to get something I want because I probably won't get it | True | False |

APPENDIX 7

NAME.....

FAWCETT-CLARK PLEASURE SCALE (PS)

What follows is a list of situations that might influence how a person feels. Please read each one carefully and decide how much the situation would give you pleasure right now, in your present mood. Then circle the number that best describes your response.

Rate a situation as pleasurable if:

You would enjoy the situation
The situation would lift your spirits; or
The situation would be fun for you

Circle only one number for each situation and do not skip any items. If a situation does not apply to you, try and imagine that it does anyway.

| | | No pleasure at all | Mild pleasure | Moderate pleasure | Great pleasure | Extreme and lasting pleasure |
|---|---|---|---|---|---|---|
| 1. | You sit watching a beautiful sunset in an isolated, untouched part of the world | 1 | 2 | 3 | 4 | 5 |
| 2. | When you leave the house wearing new and attractive clothes, several people give you compliments on how good you look | 1 | 2 | 3 | 4 | 5 |
| 3. | You accidentally overhear your child boasting to playmates about what a terrific parent you are | 1 | 2 | 3 | 4 | 5 |
| 4. | You are listening to beautiful music in peaceful surroundings | 1 | 2 | 3 | 4 | 5 |
| 5. | While fishing, you feel a tug on your line and watch a 6 pound fish jump out of the water with your bait in its mouth | 1 | 2 | 3 | 4 | 5 |
| 6. | You reach full sexual climax with someone you love very much | 1 | 2 | 3 | 4 | 5 |
| 7. | You come to the end of a job that you find satisfying because of its immediate results | 1 | 2 | 3 | 4 | 5 |

| | | No pleasure at all | Mild pleasure | Moderate pleasure | Great pleasure | Extreme and lasting pleasure |
|---|---|---|---|---|---|---|
| 8. | Several years after your youngest child has moved out of the house, you realise that all your children have made happy and successful lives for themselves | 1 | 2 | 3 | 4 | 5 |
| 9. | Your spouse surprises you with a tender hug and tells you that "No one could have a better companion or lover" | 1 | 2 | 3 | 4 | 5 |
| 10. | After much concentration and hard work you finally master a new skill on your own | 1 | 2 | 3 | 4 | 5 |
| 11. | After some vigorous physical exercise, you pause to catch your breath and relax your muscles | 1 | 2 | 3 | 4 | 5 |
| 12. | You discover in the newspaper that your lottery ticket is worth $5000 | 1 | 2 | 3 | 4 | 5 |
| 13. | Your supervisor gives you an unexpected pay increase in recognition for outstanding work | 1 | 2 | 3 | 4 | 5 |
| 14. | You are skiing down a mountain very fast while still in good control of yourself | 1 | 2 | 3 | 4 | 5 |
| 15. | While raking leaves on a beautiful autumn day, you pause to watch your children playing in the leaf piles | 1 | 2 | 3 | 4 | 5 |
| 16. | A group of your neighbours selects you to receive an award for your work in the community | 1 | 2 | 3 | 4 | 5 |
| 17. | You lie soaking in a warm bath | 1 | 2 | 3 | 4 | 5 |
| 18. | You are skilfully flying an aeroplane by yourself on a clear day | 1 | 2 | 3 | 4 | 5 |
| 19. | You lie basking in the sun on a relaxed week-end | 1 | 2 | 3 | 4 | 5 |

| | | No pleasure at all | Mild pleasure | Moderate pleasure | Great pleasure | Extreme and lasting pleasure |
|---|---|---|---|---|---|---|
| 20. | During a quiet early morning walk along the seashore, you feel very much at peace and at one with the universe | 1 | 2 | 3 | 4 | 5 |
| 21. | You sit savouring a good meal of well prepared food | 1 | 2 | 3 | 4 | 5 |
| 22. | Someone whose career you have taken an interest in and encouraged begins to become very successful | 1 | 2 | 3 | 4 | 5 |
| 23. | You come to the end of a difficult and complicated task without having made a single mistake | 1 | 2 | 3 | 4 | 5 |
| 24. | You win a very large bet you have made on a football game | 1 | 2 | 3 | 4 | 5 |
| 25. | Your work on a physical fitness programme results in many compliments on how healthy and trim you are looking | 1 | 2 | 3 | 4 | 5 |
| 26. | Someone gently begins to scratch your back | 1 | 2 | 3 | 4 | 5 |
| 27. | Your neighbours rave about the way you keep up your house and yard | 1 | 2 | 3 | 4 | 5 |
| 28. | You take off on a trip to China, scheduled to visit all the places you've read and heard about | 1 | 2 | 3 | 4 | 5 |
| 29. | You find yourself at a lively party with many fascinating people | 1 | 2 | 3 | 4 | 5 |
| 30. | Someone who makes you feel loved wraps you in his/her arms and holds you close | 1 | 2 | 3 | 4 | 5 |
| 31. | You sit with good friends, huddled close to a warm bonfire and roasting marshmallows on a chilly night | 1 | 2 | 3 | 4 | 5 |

| | | No pleasure at all | Mild pleasure | Moderate pleasure | Great pleasure | Extreme and lasting pleasure |
|---|---|---|---|---|---|---|
| 32. | You spend a slow and gentle period of time in sexual foreplay with someone you love very much | 1 | 2 | 3 | 4 | 5 |
| 33. | Someone calls on you for help during an emergency, and your help sees him/her through a difficult situation | 1 | 2 | 3 | 4 | 5 |
| 34. | You come to the end of a difficult work project that has taken much of your energy and many weeks of time | 1 | 2 | 3 | 4 | 5 |
| 35. | You find that one of your close friends is someone you can talk to about almost anything | 1 | 2 | 3 | 4 | 5 |
| 36. | A member of the opposite sex takes a special interest in your | 1 | 2 | 3 | 4 | 5 |

APPENDIX 8

NAME.....

INVENTORY FOR DEPRESSIVE SYMPTOMATOLOGY

Please circle the one response to each item that best describes you for the past 7 days.

1. Falling asleep:
   0 I never take longer than 30 minutes to fall asleep
   1 I take at least 30 minutes to fall asleep, less than half the time
   2 I take at least 30 minutes to fall asleep, more than half the time
   3 I take more than 60 minutes to fall asleep, more than half the time

2. Sleep during the night:
   0 I do not wake up at night
   1 I have a restless, light sleep with a few brief awakenings each night
   2 I wake up at least once a night, but go back to sleep easily
   3 I awaken more than once a night and stay awake for 20 minutes or more, more than half the time

3. Waking up too early:
   0 Most of the time, I awaken no more than 30 minutes before I need to get up
   1 More than half the time, I awaken more than 30 minutes before I need to get up
   2 I almost always awaken at least one hour or so before I need so, but I go back to sleep eventually
   3 I awaken at least one hour before I need to, and can't go back to sleep

4. Sleeping to much:
   0 I sleep no longer than 7-8 hours/night, without napping during the day
   1 I sleep no longer than 10 hours in a 24 hour period, including naps
   2 I sleep no longer than 12 hours in a 24 hour period, including naps
   3 I sleep longer than 12 hours in a 24 hour period, including naps

5. Feeling sad:
   0 I do not feel sad
   1 I feel sad less than half the time
   2 I feel sad more than half the time
   3 I feel sad nearly all of the time

6. Feeling irritable:
   0 I do not feel irritable
   1 I feel irritable less than half the time
   2 I feel irritable more than half the time
   3 I feel extremely irritable nearly all of the time

7. Feeling anxious or tense:
   0 I do not feel anxious or tense
   1 I feel anxious (tense) less than half of the time
   2 I feel anxious (tense) more than half of the time
   3 I feel extremely anxious (tense) nearly all of the time

8. Response of your mood to good or desired events:
   - 0 My mood brightens to a normal level which lasts for several hours when good events occur
   - 1 My mood brightens, but I do not feel like my normal grief when good events occur
   - 2 My mood brightens only somewhat to a rather limited range of desired events
   - 3. My mood does not brighten at all, even when very good or desires events occur in my life

9. Mood in relation to the time of day:
   - 0 There is no regular relationship between my mood and time of day
   - 1 My mood often relates to the time of day because of environmental events (eg being alone, working)
   - 2 In general my mood is more related to time of day than to environmental events
   - 3 My mood is clearly and predicably better or worse at a particular time each day

10. The quality of your mood:
   - 0 The mood (internal feelings) that I experience is very much a normal mood
   - 1 My mood is sad, but this sadness if pretty much like the sad mood I would feel if someone close to me died or left
   - 2 My mood is sad. But this sadness has a rather different quality to it than the sadness I would feel if someone close to me died or left
   - 3 My mood is sad. This sadness is different from the type of sadness associated with grief or loss.

Please complete <u>either</u> 11 <u>or</u> 12 (not both)

11. Decreased appetite:
   - 0 There is no change in my usual appetite
   - 1 I eat somewhat less often or lesser amounts of food than usual
   - 2 I eat much less than usual and only with personal effort
   - 3 I rarely eat within a 24 hour period, and only with extreme personal effort or when others persuade me to eat

12. Increased appetite:
   - 0 There is no change from my usual appetite
   - 1 I feel a need to eat more frequently than usual
   - 2 I regularly eat more often and/or greater amounts of food than usual
   - 3 I feel driven to overeat both a mealtimes and between meals

Please complete <u>either</u> 13 <u>or</u> 14 (not both)

13. Within the last 2 weeks:
   - 0 I have not had a change in my weight
   - 1 I feel as if I've had a slight weight loss
   - 2 I have lost 2 pounds or more
   - 3 I have lost 5 pounds or more

14. Within the last 2 weeks:
   - 0 I have not had a change in my weight
   - 1 I feel as f I've had a slight weight gain
   - 2 I have gained 2 pounds or more
   - 3 I have gained 5 pounds or more

15. Concentration/decision making:
    0 There is no change in my usual capacity to concentrate or make decisions
    1 I occasionally feel indecisive or find that my attention wanders
    2 Most of the time, I struggle to focus my attention or to make decisions
    3 I cannot concentrate well enough to read or cannot make even minor decisions

16. View of myself:
    0 I see myself as equally worthwhile and deserving as other people
    1 I am more self blaming than usual
    2 I largely believe that I cause problems for others
    3 I think almost constantly about major and minor defects in myself

17. View of my future:
    0 I have an optimistic view of my future
    1 I am occasionally pessimistic about my future, but for the most part I believe things will get better
    2 I'm pretty certain that my immediate future (1-2 months) does not hold much promise of good things for me
    3 I see no hope of anything good happening to me anytime in the future

18. Thoughts of death or suicide:
    0 I do not think of suicide or death
    1 I feel that life is empty or wonder if it's worth living
    2 I think of suicide or death several times a week for several minutes
    3 I think of suicide or death several times a day in some detail, or I have made specific plans for suicide or actually tried to take my life

19. General interest:
    0 There is no change from usual in how interested I am in other people or activities
    1 I notice that I am less interested in people or activities
    2 I find I have interest in only one or two of my formerly pursued activities
    3 I have virtually no interest in formerly pursued activities

20. Energy level:
    0 There is no change in my usual level of energy
    1 I get tired more easily than usual
    2 I have to make a big effort to start or finish my usual daily activities (for example, shopping, homework, cooking, going to work)
    3 I really cannot carry out most of my usual daily activities because I just don't have the energy

21. Capacity for pleasure or enjoyment, excluding sex:
    0 I enjoy pleasurable activities just as much as usual
    1 I do not feel my usual sense of enjoyment from pleasurable activities
    2 I rarely get a feeling of pleasure from any activity
    3 I am unable to get any pleasure or enjoyment from anything

22. Interest in sex (please rate <u>interest</u> not activity)
    0 I'm just as interested in sex as usual
    1 My interest in sex is somewhat less than usual or I do not get the same pleasure from sex as I used to
    2 I have little desire for or rarely derive pleasure from sex
    3 I have absolutely no interest in or derive no pleasure from sex

23. Feeling slowed down:
    0 I think, speak, and move at my usual rate of speed
    1 I find my thinking is slowed down or my voice sounds dull or flat
    2 It takes me several seconds to response to most questions, and I'm sure my thinking is slow
    3 I am often unable to respond to questions without extreme effort

24. Feeling restless:
    0 I do not feel restless
    1 I'm often fidgety, wring my hands, or need to shift how I am sitting
    2 I have impulses to move about and am quite restless
    3 At times, I am unable to stay seated and need to pace around

25. Aches and pains:
    0 I don't have any feeling of heaviness in my arms or legs and don't have any aches or pains
    1 Sometimes I get headaches or pains in my stomach, back, or joints, but these pains are only sometimes present and they don't stop me from doing what I need to do
    2 I have these sorts of pains most of the time
    3 These pains are so bad they force me to stop what I am doing

26. Other bodily symptoms:
    0 I don't have any of these symptoms: heart pounding fast, blurred vision, sweating, hot and cold flashes, chest pain, heart turning over in my chest, ringing in my ears, or shaking
    1 I have some of these symptoms, but they are mild and are present only sometimes
    2 I have several of these symptoms, and they bother me quite a bit
    3 I have several of these symptoms, and when they occur, I have to stop doing whatever I am doing

27. Panic/phobic symptoms:
    0 I have no spells of panic or specific fears (phobias) (such as animals or heights)
    1 I have mild panic attacks or fears that do not usually change my behaviour or stop me from functioning
    2 I have significant panic episodes or fears that force me to change my behaviour but do not stop me from functioning
    3 I have panic episodes at least once a week or several fears that stop me from carrying on my daily activities

28. Constipation/diarrhoea:
    0 There is no change in my usual bowel habits
    1 I have intermittent constipation or diarrhoea which is mild
    2 I have diarrhoea or constipation most of the time but it does not interfere with my day-to-day functioning
    3 I have constipation or diarrhoea for which I take medicine or which interferes with my day-to-day activities

## APPENDIX 9 - CONSENT FORMS

### OP CONSENT FORM

### CONSENT TO PARTICIPATE IN A RESEARCH STUDY

You are invited to participate in a research study conducted by the University of Adelaide Department of Psychiatry. The aim of the study is to discover more about the symptoms and problems associated with chronic forms of depression.

If you chose to participate, you will be interviewed by a psychiatrist who will obtain information from you about your condition. You will also be asked to complete several questionnaires which are designed to further understand your problems. You will be asked to take 1mg of dexamethasone at night and the following day a blood sample will be taken. The major benefit of this study will be to future patients like yourself, as problems like yours are better understood.

There is no significant foreseeable risk to you, apart from the inconvenience of the questionnaires and the appointments. There is no significant risk in having a blood sample taken or in taking 1mg of dexamethasone. This is a sample procedure, routinely undertaken in this Hospital. All information we obtain from you will remain strictly confidential, available only to the research workers in this study and to the doctors and other staff involved in your treatment. Your are free to chose whether or not to be involved in this study. If you chose to participate you are free to withdraw at any time. If you refuse to participate or withdraw from the study, this will not harm your treatment at this Hospital in any way.

Before you sign the attached form, please ask any questions about aspects of the study which are unclear to you, or about which you are in any way concerned.

I, ..... have read and understood the above, and give my consent to participate in the research study.

Signed ..... Witness .....

Date ..... Date .....

VP CONSENT FORM

## CONSENT TO PARTICIPATE IN A RESEARCH STUDY

You are invited to participate in a research study conducted by the University of Adelaide Department of Psychiatry. The aim of the study is to discover more about the symptoms and problems associated with chronic forms of depression.

If you choose to participate, you will be interviewed by a psychiatrist who will obtain information from you about your condition. You will also be asked to complete several questionnaires which are designed to further understand your problems.

The major benefit of this study will be to future patients like yourself, as problems like yours are better understood.

There is no significant foreseeable risk to you, apart from the inconvenience of the questionnaires and the appointments.

All information we obtain from you will remain strictly confidential, available only to the research workers in this study and to the doctors and other staff involved in your treatment. You are free to choose whether or not to be involved in the study. If you choose to participate you are free to withdraw at any time. If you refuse to participate or withdraw from the study, this will not harm any treatment you may receive at this Hospital in any way.

Before you sign the attached form, please ask any questions about aspects of the study which are unclear to you, or about which you are in any way concerned.

I, ..... have read and understood the above, and give my consent

to participate in the research study.

Signed ..... Witness .....

Date ..... Date .....

Consent form for follow up study

The Department of Psychiatry, University of Adelaide, invites you to participate in the follow up portion of a study in which you were involved in last year. The study overall is designed to help us understand more about depression. The follow up part of the study involves completing several questionnaires. All information we obtain will remain strictly confidential and available only to doctors and research workers involved in the study.

I, ..... have read and understand the above and give my consent to participate in the study.

Signed ..... Witness .....

Date ..... Date .....

## APPENDIX 10 - FOLLOW UP LETTERS

### Letter to subjects regarding follow up

Dear

Last year you participated in a study into chronic depression conducted at the University Department of Psychiatry at The Queen Elizabeth Hospital. We are now interested in following up people who we interviewed last year. The follow up does not involve another interview. It does involve completing again the set of questionnaires you completed last year. The questionnaires are mailed to participants, they take about one hour to complete. If you are interested in participating in the follow up study, please contact my Secretary on 45 0222 ext. 7552 and she will arrange for the questionnaires to be posted to you.

Thank you once more for your help with this research.

Yours sincerely,

(Dr) G.D. SCHRADER
Lecturer in Psychiatry

Letter re follow up to subjects

Dear

Thank you for agreeing to complete the enclosed questionnaires. They form the follow up portion of the study into depression that you participated in last year. The questionnaires take about one hour to complete. Please read and complete the consent form enclosed. Please follow individual instructions at the top of each questionnaire form. Please carefully check that you have responded to each individual item of each questionnaire. Remember some questionnaires have items on both sides of the paper. If you have any questions do not hesitate to contact me at T.Q.E.H. on 45 0222 ext. 7552. When you have completed the forms, post them back to me in the postage paid envelope supplied.

Thank you once again for participating in this research project.

Yours sincerely,

(DR) G.D. SCHRADER
Lecturer in Psychiatry

enc.

DEPRESSION FOLLOW-UP QUESTIONNAIRE

HOW OFTEN DO YOU SEE THE DOCTOR/THERAPIST WHO TREATS YOU DEPRESSION?

.....

.....

HOW OFTEN DO YOU SEE YOUR FAMILY DOCTOR (IF NOT THE PERSON WHO TREATS YOUR DEPRESSION)?

.....

.....

ARE YOU TAKING ANY MEDICATION? YES NO
(PLEASE CIRCLE)

(IF YES, GIVE NAME OF TABLETS AND DOSE)

.....

.....

.....

.....

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