PERSONALITY FACTORS INVOLVED IN SUICIDAL BEHAVIOUR

Alistair E. Philip

Ph.D.
University of Edinburgh
1968

SUMMARY OF THESIS

PERSONALITY FACTORS INVOLVED IN SUICIDAL BEHAVIOUR

The aim of the study, to provide information on the personality characteristics of persons who have attempted suicide, was prompted by the lack of psychological information on persons attempting suicide and by the presence of a considerable body of psychiatric and social information on suicidal behaviour in Edinburgh. It was felt that a descriptive psychological study would complement the psychiatric and social work studies of Kessel (1965) and McCulloch (1965).

Several thousand contributions have been made to the psychiatric literature on suicide and attempted suicide and only the relevant British literature has been reviewed. Until about ten years ago research was concerned mainly with the discovery of aetiological factors and other clinical aspects of persons who had attempted suicide. Currently there is more accent on the social aspects of attempted suicide which is viewed as a phenomenon worthy of study in its own right rather than as a special case of completed suicide. Clinicians have been unable to delineate an "attempted suicide personality" although a number of characteristics have been consistently found in many studies.

Almost all studies of attempted suicide using psychological tests are American and show many serious failings in methodology and theory. These failings, and the lack of any adequate British contributions, stress the need for a psychological study of a well defined population of attempted suicide patients.

Fifty men and 50 women who were admitted to the Poisoning Treatment Centre, Ward 3 of the Royal Infirmary of Edinburgh having deliberately poisoned or injured themselves were tested. Each patient was seen individually in the ward and completed the questionnaires and inventories which were chosen for their wide coverage of personality variables and for the availability of normative data. Demographic and clinical information was gathered and the patients tested did not differ on these data from a randomly selected group of patients admitted over the same period of time.

The main findings were these: (1) An SSI diagnosis of character disorder occurred in almost half the cases seen; this was twice the frequency with which it occurs in psychiatric populations, (2) attempted suicides were much more hostile than normals or neurotics, (3) attempted suicides were more anxious, somewhat more introverted and less conscientious than average, (4) when within-group comparisons were carried out it was found that the sexes behaved differently, men varying mainly along the dimension of extrapunitive hostility while women varied most on anxiety.

ACKNOWLEDGEMENTS

The author is indebted to the many people whose cooperation made this study possible. Thanks are due to Dr. H.J. Matthew and all the medical and nursing staff of the Poisoning Treatment Centre, Ward 3, Royal Infirmary of Edinburgh, and especially the patients in the Centre who cooperated in the study. The encouragement and interest of past and present colleagues in the Medical Research Council Unit for Research on the Epidemiology of Psychiatric Illness, in particular Dr. G.A. Foulds and Professor G.M. Carstairs who supervised this study, was much appreciated as was the meticulous secretarial work of Mrs. Ruth Hannah.

CONTENTS

		Page
Chapter 1	INTRODUCTION	1
	Aims of the study.	
	Definitions of attempted suicide.	
Chapter 2	REVIEW OF THE PSYCHIATRIC LITERATURE ON ATTEMPTED SUICIDE IN BRITAIN	8
	Early studies.	
	Stengel.	
	Kessel and other Edinburgh workers.	
	Other studies.	
	Summary.	
Chapter 3	REVIEW OF THE PSYCHOLOGICAL TEST LITERATURE ON ATTEMPTED SUICIDE	28
	Projective techniques.	
	Questionnaires and inventories.	
	Semantic measures.	
	Performance tests.	
	Summary.	
Chapter 4	THEORETICAL AND METHODOLOGICAL ASPECTS OF THE TESTS USED IN THE PRESENT STUDY	51
	Response sets, social desirability and acquiescence.	
	The Symptom Sign Inventory.	
	The Hostility and Direction of Hostility Questionnaire.	
	The Sixteen Personality Factor Questionnaire.	

Page

Chapter 5 GENERAL METHODOLOGY OF THE STUDY 70

The physical setting.

Selection of patients.

Psychiatric rating scales.

The Social Prognosis Index.

Treatment of results.

Statistical methods.

Chapter 6 RESULTS 82

Characteristics of the group as a whole.

Within-group comparisons.

Chapter 7 DISCUSSION AND CONCLUSIONS 132

Characteristics of the group as a whole.

Within-group comparisons.

Conclusions and future research lines.

APPENDIX A 148

The items of the SSI, HDHQ and 16PF.

APPENDIX B 157

Schedules used in the study.

APPENDIX C 165

Sex differences and group differences on social and demographic variables for tested and random control patients.

APPENDIX D 181

Detailed results of within-group comparisons.

REFERENCES 232

CHAPTER 1

INTRODUCTION

Aims and scope of the study

The aim of this study is to provide information on the personality characteristics of persons who have attempted suicide. Such an aim was prompted by two factors; the lack of psychological test data on persons attempting suicide and the presence of a considerable body of psychiatric and social information on suicidal behaviour in Edinburgh. Psychological techniques have not featured with any great frequency in studies of suicidal behaviour, only two investigations using such techniques having been carried out in Britain (Vinoda, 1964, 1966; Philip and McCulloch, 1967b, 1968). Neither of these investigations provided a broadbased, general description of the personality of those who attempt suicide, indeed the second study merely incorporated two short psychological tests in a study which was concerned mainly with social variables in attempted suicide. It is the aim of this thesis to cover a wide range of personality traits as well as investigating symptoms and signs of mental illhealth and to relate those measures to the findings of previous workers in Edinburgh. The study is descriptive rather than predictive; it is intended to provide a body of psychological information on those citizens of Edinburgh and its environs who are admitted to the Royal Infirmary following an episode of suicidal behaviour, thus complementing the psychiatric and social information provided by Kessel (1965) and McCulloch (1965).

The literature on suicidal behaviour is copious and covers a wide range of topics. Farberow and Shneidman (1961) provided a bibliography covering the period 1897-1957 in which over 1500 articles or books were cited. The decade since 1957 has been one of increased activity in the field and has led to more than 1000 entries in Index Medicus relating to some aspect of suicide. The quality and scientific standing of these contributions are varied; speculative, woolly papers vie with others whose conclusions are cautious and closely related to observed data. These dissimilarities reflect the wide range of interests, orientations and training of the many professions involved in studying suicidal behaviour. Few authors have made more than a passing contribution to the literature and four centres stand out as having made major contributions in theory, methodology and experimental findings. Pride of place must go to Farberow and Shneidman of Los Angeles whose prodigious output of fact and theory has led to the rapid development of suicide prevention agencies throughout the United States as well as providing much stimulation to other workers. In Philadelphia, the work of Tuckman and his co-workers has contributed much factual information, especially in relating suicidal behaviour to other indices of social disorder. In Britain, Stengel has contributed much to our awareness of the magnitude of the problem posed by suicidal behaviour; like the Los Angeles workers his theoretical formulations have been as important as his experimental findings. Edinburgh, by virtue of having had a ward in the Royal Infirmary for many years where persons attempting suicide could be treated, and of having had a succession of psychiatrists who turned their attention to the problem of suicidal behaviour in general rather than to its manifestations in the limited sphere of the psychiatric hospital, merits being ranked alongside Los Angeles,

Philadelphia and Sheffield. The contributions of Batchelor in the 1950s and Kessel a decade later have been influential and provocative. Their writings highlight the value of serial studies of suicidal behaviour where one can recognise not only the growing magnitude of the problem but also shifts in orientation and assumptions about the population under scrutiny.

Many authors have reviewed the literature relating to all or part of the field of suicidal behaviour (Dublin, 1963; Farberow and Shneidman, 1961; Vinoda, 1964) and it would be repetitious to paraphrase such work. For the purpose of the present study the most pertinent literature would appear to be that concerned with attempted suicide in Britain, in particular the work carried out in Edinburgh, with studies using formal psychological techniques, and with work relating to methodological and theoretical aspects of the psychological tests to be used in this study. The first area is of course essential in order to define the population under study and to take note of personality and other features which have been brought to light in clinical and epidemiological studies. Stengel (1964) has expressed doubts about the value of international comparisons in suicidal behaviour and so attention has been focussed on British studies. It is inevitable that the present work will be most closely related to the large body of research [results] emanating from previous work carried out in Edinburgh.

In view of the paucity of good studies on the formal psychological characteristics of attempted suicides, all studies considered to be relevant have been reviewed, regardless of their country of origin. The test instruments used in this thesis have all been shown to have acceptable reliability and validity; reports relating to these properties and to the theories underlying the tests are particularly pertinent and have been included for review.

Definitions of attempted suicide

Much early research on attempted suicide looked upon this phenomenon as failed, frustrated or bungled suicide. Stengel and Cook (1958) in their survey of the literature commented that, "Research into attempted suicide, therefore, has largely been pursued with the aim of aiding that into suicide". These authors made an important contribution to the study of suicidal behaviour by contending that attempted suicide presented issues peculiar to itself as well as sharing problems with suicide. The definition of attempted suicide offered by Stengel (1964) is as follows, "A suicidal attempt is any act of self-damage inflicted with self-destructive intention, however vague and ambiguous. Sometimes this intention has to be inferred from the patient's behaviour". Suicidal attempts as thus defined are frequently insufficient to cause death and must be related to the social setting of the patient. In situations which Carstairs (1964) has called "crises of despair" some people injure themselves in order to appeal for help, to spite others or to submit themselves to trial by ordeal. Stengel has described the suicidal attempt as being Janus-faced, looking at the one and the same time towards life and death.

Kessel (Kessel, McCulloch and Simpson, 1963) considered that since it was generally accepted that attempted suicide was something other than incomplete suicide it was misleading to continue to use the former term. To say that a person had attempted suicide provided neither a diagnosis nor a description of behaviour but rather an interpretation of behaviour. Such an interpretation was often difficult to make. Kessel suggested that the term self-poisoning might describe more accurately the behaviour observed and might also facilitate the adequate treatment of patients by obviating

the need for difficult judgements of "seriousness of intent" by non-psychiatric medical staff. Kessel (1966) elaborated his reasons for using the terms self-poisoning and self-injury by stressing that not all the persons in his cohort had demonstrated lethal intent in their act.

Kessel's didactic efforts appear to have two main targets. He is concerned to impress on non-psychiatric medical practitioners the need to refer all cases of deliberate self-poisoning or self-injury to a psychiatrist, irrespective of the apparent seriousness or triviality of the act. He is also concerned to impress upon the psychiatrist the need to approach these cases with an open mind and to ascertain the cause of the distress which led to the act. He considers that in treating the patient there is little to be gained by attempting to infer the presence of intent to die.

While these efforts are praiseworthy and are necessary to arrive at a better understanding and treatment of persons who "poison themselves" or "attempt suicide", Kessel's new labels are less necessary. To cover all aspects of the behaviour to be described it is necessary to use self-poisoning and self-injury. Further, it must be denoted whether the behaviour is "accidental" or "deliberate". This is an interpretation of behaviour. To paraphrase Kessel, McCulloch and Simpson (1963), deliberate self-poisoning or self-injury is neither a diagnosis nor a description of behaviour but rather an interpretation of behaviour which is not always easy to make. Deliberate self-poisoning or self-injury fails to reflect the link between such behaviour and completed suicide; of 216 suicides occurring in Edinburgh between 1963 and 1965, 53 (24.5%) had had a recorded history of at least one previous episode of attempted suicide (McCulloch, Philip and Carstairs, 1967). The odds against the average Edinburgh citizen committing suicide are 6536-1;

for those who have a history of attempted suicide the odds drop to 29-1 against. In this way a person who has had a suicidal attempt enters a group whose chances of dying by suicide are 225 times greater than average.

Of the 511 persons seen by Kessel and McCulloch following acts of deliberate self-poisoning and self-injury in 1962-1963, 126 were re-admitted to the Poisoning Treatment Centre at least once in the four years following their key admission (Buglass, personal communication). Of these repeaters, 11 (8.7%) subsequently committed suicide in the follow-up period while 12 of the non-repeaters (3.1%) also died by suicide. In all, almost one in twenty of Kessel's cohort have died by suicide, a high figure for so rare an event. While it is true that the overlapping population of those who have committed suicide having had a previous attempt accounts for just under 5 per cent of all attempted suicides, it accounts for 25 per cent of all completed suicides. The term attempted suicide reminds practitioners that persons behaving in a self-damaging way frequently kill themselves at a later date. Attempts to predict future episodes of suicidal behaviour are being made (Buglass, ibid.) but these have not yet attained any degree of sophistication. Until such time as this population can be divided into more homogeneous sub-groups about whose future behaviour some prediction can be made, it is surely appropriate to regard every case as a potential suicide. Kessel (1966) wished to discard the term attempted suicide on the grounds that many such acts lack lethal intent. But he himself has shown (Kessel and McCulloch, 1966) that his measure of seriousness of intent failed to predict further episodes of suicidal behaviour, whether fatal or not.

Another term, pseudocide has been suggested by Lennard-Jones and Asher (1959) to describe some cases of non-fatal self-injury. These physicians

studied thirty-four cases of attempted suicide and considered thirteen of these to have made a spurious attempt in that they never meant to kill themselves. Stengel (1964) has pointed out that the term pseudocide is ambiguous and, like deliberate self-poisoning or self-injury, neglects the suicidal component in this behaviour.

In this study the term attempted suicide, as defined by Stengel (1964), will be used to denote the self-damaging behaviour under investigation. The imperfections of this term are recognised but it describes the implications and hazards of self-damaging behaviour more accurately than any other term offered in its place. Where the terms self-poisoning, self-injury, self-damaging or non-fatal suicidal behaviour are used they should be considered as synonymous with attempted suicide.

CHAPTER 2

REVIEW OF THE PSYCHIATRIC LITERATURE ON ATTEMPTED SUICIDE IN BRITAIN

In a study which is concerned with the psychological characteristics of persons attempting suicide the main contribution of the psychiatric literature is to provide information on the characteristics of the population under study. Descriptions of various patient populations in terms of variables such as age, sex and other basic data, method used in the attempt, psychiatric and social factors present and ultimate disposal are plentiful and permit the formation of an overall impression of attempted suicide in Britain. Differences between this overall picture and the situation as it appears in Edinburgh are relevant in determining the extent to which psychological results obtained in Edinburgh can be generalized to other parts of the country. Equally important is the fact that the findings and conclusions of clinical studies are of value in providing grounds for studying possible within-group differences in personality.

Kessel (1965) has drawn attention to the steep rise in the incidence of attempted suicide in recent years and such a rise makes the detailed findings of early workers of doubtful value. Both East (1913) and Hopkins (1937) studied large numbers of cases of attempted suicide and, while time and the change of law in England have reduced the value of their detailed results, their lucid comments and descriptions are still very relevant. In his account of 1000 men seen in Brixton Prison between 1907 and 1910 East (1913) spoke out in favour of attempted suicide remaining an offence under the law. This attitude was more enlightened than might appear at

first sight; he said, "Remanded to prison they have an opportunity afforded them of recovering themselves with the assistance of rest, good food, quiet and medical attention in the prison hospital. The insane often for the first time come under medical observation, and can be treated as such, and at last be prevented from continuing as a danger to themselves or others. During the remand the court missionary, or some other philanthropic person, or charitable society or prison visitor, may find the accused employment and render material assistance to those in need". Clearly, East regarded prison as a place of asylum for those who had attempted suicide and nowadays a poisoning treatment centre with psychiatric and social work help avaliable would serve such a function. East found that alcoholism, unemployment, destitution, insanity, domestic troubles and morbid mental states not amounting to insanity were all common causes of attempted suicide. Of his 1000 cases only 3 per cent had a history of psychiatric illness. Twenty-seven per cent of his cases had had intemperate parents and in 39 per cent of his sample alcoholism was considered wholly or partly the cause of the attempt. Despite its now outmoded literary style this vintage paper describes a population which is recognisably similar to that seen in Edinburgh's Poisoning Treatment Centre. Although a male prison population, it was also a remanded attempted suicide population and appears to have been much more varied in its composition than many later studies in which the mentally ill were over-represented.

Between 1932 and 1935, in Liverpool, 656 patients were seen following a suicidal attempt. Hopkins (1937) studied these patients and gave a detailed analysis of the first 100 cases. There was a slight excess of men (358 M, 298 F) which is unusual in studies of attempted suicides. The most frequent

age group for women was the early twenties, while for men it was the late twenties. Domestic gas was used in the attempt by one third of all cases, and for men throat cutting (21%) and ingestion of poison (19%) were the next most commonly used methods. Poisoning accounted for a further third of women, who used cutting methods much less often (7%) than men. Of the 100 cases he studied in detail, Hopkins found that 64 per cent of men and 16 per cent of women were unemployed while 18 per cent of the sample were living in conditions of economic stress. A previous attempt had been made by twelve patients. He reported that mental disorder was present in one third of his patients while only 13 per cent were alcoholics. The attitudes of the patients to their attempt varied considerably; almost half (48 per cent) of the cases expressed regret at what they had done, 10 per cent denied suicidal intent and 22 per cent said that they still wished to die. Hopkins, like East, saw that the patients he had studied and treated would continue to require help when they resumed their ordinary lives. He advocated the setting up of a clinic which, "will provide them with necessary "moral support". Such a clinic, however, will have its strongest appeal at present when divorced from mental ward or mental hospital".

During the years 1950-1952 Batchelor studied 200 cases of attempted suicide (92 M, 108 F) who were admitted to Ward 3 of the Royal Infirmary of Edinburgh. His findings were published in piecemeal fashion (Batchelor, 1954a,b,c, 1955; Batchelor and Napier, 1953a,b, 1954) and it is not possible to present an accurate picture of his sample as a whole. Both Stengel and Cook (1958) and McCulloch (1965) have cast doubt on the representativeness of Batchelor's sample, the latter suggesting that Batchelor's "consecutive admissions" were in fact "consecutive referrals" since even as late as 1962

patients in Edinburgh were referred to psychiatrists only at the discretion of the physician-in-charge (Kessel and Lee, 1962). Batchelor (1954a) reported that 21.5 per cent of his cases gave a history of excessive drinking while 28.5 per cent had given a family history of alcoholism or excess drinking. At the time of their attempt 19.5 per cent of his cohort were under the influence of alcohol. Almost one quarter of his patients had made a previous suicidal attempt (Batchelor, 1954b). He reported that, while only 14 per cent of patients diagnosed as suffering from depression had made a previous attempt, 45 per cent of those diagnosed as psychopaths were repeaters. Batchelor put forward the notion of suicidal attempts being acute frustration reactions which occurred in temperamentally unstable personalities. Diagnoses of psychopathy were made in 42 cases (Batchelor, 1954a) of whom 28 gave a family history of psychiatric abnormality, alcoholism being prominent. In six patients a family history of suicidal behaviour was recorded. Of the 20 cases who gave a history of alcoholism, 16 had first degree relatives who were also alcoholics. Thirty-one (74%) psychopaths had experienced a broken home in childhood compared with the figure of 58 per cent for the series as a whole (Batchelor and Napier, 1953b). For the 40 cases aged 60 or over (Batchelor and Napier, 1953a), physical illness was a major precipitant, being present in 45 per cent of these cases. Loneliness was even more common, 57.5 per cent of these older cases being thus motivated in their attempt. Reporting on a one year follow-up, Batchelor and Napier (1954) stated that 7 patients had another suicidal attempt while 3 were known to have committed suicide. A further case died in circumstances suggestive of suicide but conclusive evidence was not available. Only in this follow-up study were details of age and diagnosis given for the group

as a whole; for both sexes the peak age of incidence was in the twenties while depression (56%) and psychopathy (21%) were the major diagnoses. McCulloch (1965) criticised the lack of stated definitions and criteria in Batchelor's study, particularly in respect to the follow-up investigation. Despite these drawbacks the study affords a certain amount of information on attempted suicide in Edinburgh which is useful when taken in conjunction with later research in that city.

At the same time as Batchelor was operating in Edinburgh, Stengel was at work in London gathering data on attempted suicides who had been admitted to hospital. The results of his studies (Stengel and Cook, 1958) were impressive and his argument for regarding suicidal attempts as social behaviour patterns provided impetus for a renewed interest in the phenomenon. Five groups of patients were studied between 1946 and 1953 and two of these groups, comprising 210 patients, were followed up to ascertain the patients' state of health as well as the immediate and long-term effects of the suicidal attempt on their relationships with the environment. Stengel was careful to point out that he had no way of telling how representative his various samples were and he elected not to carry out any statistical analysis. Most of his patients were aged between 24 and 44 years, women being somewhat younger than men. The ratio of men to women varied from group to group, two groups having more men than women. Depression was the most common psychiatric diagnosis with personality disorder being next most frequent. Alcoholism was much less common than it had been in Batchelor's (1954a) cohort. Since the groups were studied at different times, Stengel was able to report that as time passed narcotics were used more often and gas less often as a method of attempt. Some information on family background was available for the

patients in the two groups which were followed up. A broken home in childhood had occurred in only one third of these cases, few of them in cases where the diagnosis was of psychopathy, and 38 per cent of patients reported a history of "nervous breakdown" in the family. In the absence of control data Stengel wisely refused to speculate on the implications of these findings.

While remaining aware of the importance of dynamic motivations, which psychoanalytically-oriented writers such as Menninger (1938) had discussed at length, Stengel's efforts were aimed at integrating the suicidal attempt with its social context. On the basis of the cases he had studied Stengel considered that most suicidal attempts appeared to have made intervention possible or even probable, so that survival was at least as natural and legitimate an outcome as death. Regardless of the underlying mental condition of the patient, each suicidal attempt was seen to have a discernible social element; two common aspects of this social element were its <u>appeal function</u> and its <u>ordeal character</u>.

Stengel considered the appeal function to be inherent in most suicidal attempts although the patient was not necessarily aware of its presence. He thought it inappropriate to talk of genuine and non-genuine attempts when such a distinction was based on whether or not the patient was aware of the appeal quality of his act. Nonetheless, it seemed that attempts in which the patient seemed unaware of his appeal mobilized a greater desire to help on the part of the environment. Attempts where the appeal was obvious were often labelled "hysterical" but Stengel pointed out that it was erroneous to say that attempted suicide, because of its appeal quality, was an hysterical reaction for, "Hysteria produces no behaviour pattern of

its own; it avails itself, and accentuates common patterns, preferably of high communicative value". The ordeal character of suicidal attempts appeared relevant in view of the fact that many people accepted the outcome of the act without demur, often ascribing the result to fate, chance or the will of God. On subsequent occasions Stengel (1960a,b, 1964) has reiterated these views on the social aspects of attempted suicide and his efforts, coupled with the general increase of interest in social and community psychiatry, have had a great influence on subsequent research. His attempts to propagate the view that attempted suicide can be studied in its own right, not simply as an aspect of completed suicide, have facilitated the formulation of new ways of studying the phenomenon. While recognizing that suicide and attempted suicide comprise two overlapping populations, Stengel rightly pointed out that only a small proportion of attempted suicides subsequently kill themselves. It has been shown earlier in this thesis that in Edinburgh the overlap between the populations is such that it accounts for only 5 per cent of attempted suicides but 25 per cent of completed suicides. Thus while a greater knowledge of factors influencing attempted suicide may be of aid in understanding many suicides the converse does not hold true. Indeed, to attempt to explain the behaviour of persons attempting suicide using theories and notions based on the study of completed suicides often leads to error and confusion.

To emphasise the difference between the two populations Kessel (1963) introduced the concept of "self-poisoning" to replace "attempted suicide"; his reasons for seeking a new term have already been discussed. Kessel's research in Edinburgh took up where Stengel's work left off; the size of the city, the organization of medical services and the presence of a research

team all facilitated the progress of a study whose main findings on the clinical, social and follow-up characteristics of self-destructive behaviour were presented in the Milroy Lectures of 1965 (Kessel, 1965).

A preliminary study by Kessel and Lee (1962) on 265 patients admitted to Ward 3 of the Royal Infirmary of Edinburgh during 1960 revealed an excess of married women; this confirmed the authors' opinion that marital conflict played an important role in non-fatal suicidal behaviour. Psychiatric in-patient treatment was given to 26 per cent of cases, out-patient treatment to 24.5 per cent while the remaining 49.5 per cent received no further psychiatric attention. The authors commented on the lack of adequate social work facilities, pointing out that many of the problems presented by their cases were of the kind best solved by social follow-up. By 1962 a social worker had been added to the team and the psychiatric service in Ward 3, as described by Kessel, McCulloch and Simpson (1963), laid great emphasis on the assessment and treatment of social ills found in patients who had attempted suicide. This paper reported on the characteristics of 436 attempted suicide patients admitted to Ward 3, Royal Infirmary of Edinburgh, during 1962. Women were admitted in greater numbers than men, the sex ratio being 3 women to 2 men. The admission rate indicated that one in every thousand adult citizens of Edinburgh was admitted to hospital having attempted suicide. In both men and women the 25-34 age group manifested the greatest incidence, the peak being most marked for women. Barbiturates were taken in over half the cases (56%) while aspirin (13%), "other drugs" (20%) and coal gas (9%) were also used with some frequency. The methods commonly used were quite different from those reported by East (1913) and Hopkins (1937). Few patients suffered from organic disorders or from psychoses. Women were seen to suffer from

depression or a neurotic condition in 59 per cent of the cases seen; 12 per cent were diagnosed as personality disorders and 17 per cent were deemed to have no psychological illness. The most common diagnosis for men was personality disorder, 29 per cent being so diagnosed, with depression and neurosis accounting for a further 32 per cent of cases. A primary diagnosis of alcoholism was given to 17 per cent of the men, a further 13 per cent had alcoholism as a secondary diagnosis, and 10 per cent were free from psychiatric abnormality. Those cases where no psychiatric disorder was found seemed to have been prompted to poisoning by adverse social factors alone, debt-ridden housewives and jilted girls being prominent in this category. Almost one quarter of all patients were discharged within 24 hours of their admission, a further quarter left within two days and only 10 per cent remained longer than eight days. Older people tended to remain in hospital for longer periods, this in part reflecting the difficulty experienced in obtaining in-patient accommodation for older persons. As in the previous report (Kessel and Lee, 1962), one quarter of all cases were given psychiatric in-patient treatment. Those given out-patient care, including social work treatment, accounted for 46 per cent of cases, a figure almost double that of the earlier report, leaving 30 per cent of the cohort with no further psychiatric attention. Kessel and his co-workers concluded that much of the benefit of their service could be attributed to its timeliness; patients were seen promptly and while they were still in hospital.

While most cases of attempted suicide in Edinburgh are admitted to Ward 3 of the Royal Infirmary, some patients are admitted elsewhere. The extent to which other institutions admitted attempted suicides and the subsequent psychiatric disposal of such patients was investigated by Kessel, McCulloch,

Hendry, Leslie, Wallace and Webster (1964). Of 547 patients attending a hospital following an episode of attempted suicide during the twelve months from June 1962, 502 presented at the Royal Infirmary. Of these 502 patients, 484 (96%) were admitted and nearly all of the latter (92%) were seen by a psychiatrist. The patients not presenting at Ward 3 showed similar characteristics as regards age, sex, mode of referral and method of attempt, although more of them had used coal gas as a method, yet only one half of them were seen by a psychiatrist, usually because they had been transferred to Ward 3 of the Royal Infirmary. The authors expressed concern that psychiatric aid for persons attempting suicide should be so dependent on their being sent to one hospital rather than another.

The Milroy Lectures given by Kessel (1965) presented a wealth of information on patients who had poisoned themselves; while there was some doubt about his new terminology there was no doubt as to the importance of his results (Anon., 1965). The cohort studied comprised 465 persons admitted to Ward 3 of the Royal Infirmary of Edinburgh following a suicidal attempt. These patients were admitted to hospital during the twelve months from June 1962 and hence overlap with the population studied by Kessel, McCulloch and Simpson (1963). The basic characteristics of patients reported in the earlier paper apply to the later cohort and need not be repeated here. Rates of incidence for attempted suicide were found to vary considerably from ward to ward of the city, being highest in the old slum areas and an area where many slum families had been rehoused, and lowest in the middle class areas to the west of the city. On the basis of these rates four groups of wards were formed, group 1 consisting of the six wards with highest rates, group 2 consisting of the next six, group 3

the next five and group 4 the six wards with the lowest rates. Similar groupings were carried out for a number of demographic variables which were considered to be indices of social disorganisation and social isolation: these latter being important factors in the ecology of suicide in London (Sainsbury, 1955). The indices of social disorganization; overcrowding, family dislocation and where criminals resided, were all significantly correlated with self-poisoning. On the other hand, social isolation, as measured by the proportion of single-person households and proportion of people living in hotels, did not relate to self-poisoning.

An attempt to assess the degree of endangerment to life was made by drawing together information about the amount of poison taken and about the extent to which precautions had been taken to avoid or ensure detection. Four categories of predicted outcome were derived; these ranged from certain death to certain survival. Although almost one half of all patients fell within the "certain to survive" category, Kessel pointed out that this did not mean that these patients were not in need of help. In view of his earlier findings on the prevalence of marital conflict in these patients (Kessel and Lee, 1962) it was no surprise to find that half of the patients who were married had poor relationships with their spouses; hostility, unfaithfulness and drunkenness being common. Interpersonal relationships outwith marriage were little better; whether married or single these patients showed an inability to relate well to the key individuals in their lives. Parental loss in childhood or early adolescence was common; by the age of fifteen over half the patients had lost one or other of their parents.

Given such a background of broken homes, poor social circumstances and impoverished interpersonal relations, it was not surprising that Kessel found

that disharmony with spouse, kin or lover, drunkenness and financial and work problems all acted as precipitating factors. The main methods used did not differ from those reported earlier (Kessel, McCulloch and Simpson, 1963). Kessel emphasized the steep rise in the use of barbiturate as a method, reminding his audience of the lethal potential of powerful drugs given for therapeutic purposes. Compared with the earlier study, Kessel's cohort showed more patients diagnosed as having no psychiatric illness, 26 per cent of men and 20 per cent of women being so classified. Patients with psychiatric illnesses other than character disorder were more likely to have acted in a life-endangering manner than persons diagnosed as personality disorders or those deemed normal. Alcoholism was a dominant factor, 39 per cent of men and 8 per cent of women being addicted. In addition, over half the men and almost a quarter of the women had taken alcohol shortly before their suicidal attempt.

Kessel considered that distress, despair and unhappiness, whether springing from within the patient or resulting from social pressures, were important factors in self-poisoning behaviour. The act itself appeared to have been impulsive in about two thirds of all cases, younger persons being impulsive rather more frequently than their elders. Such impulsive acts were less life-endangering than premeditated acts, although 26 per cent of these impulsive acts had a predicted outcome of probable or certain death. In one third of all acts some warning of intention was given; the appeal quality of such warnings was obvious to the patient in many of these cases.

Much of Kessel's attention was given to considering possible means of reducing the availability of drugs which could be taken on impulse. Excessive prescribing of sedative and tranquillizing drugs, and the ready

availability of aspirin, were features of medical practice which could be brought under closer scrutiny; he thought that if drugs were not readily available people would seek other, less dangerous ways of getting help.

McCulloch (1965) reported on a one year follow-up of the patients whose clinical and social factors were reported by Kessel (1965). Patients were followed up and changes in their social and marital situations assessed four months and twelve months after their hospital admission. Information at these points in time was obtained for 99 per cent of the cohort. The social and marital assessments of patients at four months and at twelve months were very similar. Married persons were seen to have the best social prognosis, especially in those cases where the patient was aged over 34 years, had been married for more than five years and had, prior to the suicidal attempt, an adequate relationship with the marriage partner. Patients whose marriages had been beset by violence, infidelity or excessive drinking showed a poor social prognosis. Degree of life endangerment was not related to subsequent social improvement but patients who were psychiatrically ill had a better prognosis than those who suffered from personality abnormalities. In particular, those patients who were both character disordered and alcoholic had a very poor prognosis. As regards method, patients who had used aspirin showed better than average social improvement while those who had cut themselves or had used a method not involving poison manifested poor improvement. Where the precipitating factor in the suicidal attempt had been material circumstances, the prognosis was less favourable than where interpersonal difficulties had been the motive.

McCulloch considered that the most important factor in both marital and social improvement was alteration of the patients' attitudes towards the key

persons in their lives. He found that where the patients' attitudes were unchanged improvement was rare. Changes in the attitudes of key persons towards patients did have some effect on marital and social outcome, but this effect was less marked than change brought about by modifications in the patients' behaviour.

Of the patients seen by Kessel (1965) and followed-up by McCulloch (1965), 97 (19%) repeated their acts within one year of their key admission (Kessel and McCulloch, 1966). This percentage of repeated attempts was similar to the findings of Batchelor (1954b) and Stengel and Cook (1958). Kessel and McCulloch considered that some people were repeat prone; 39 per cent of the original cohort had given a history of a previous suicidal attempt but of those who repeated their acts in the follow-up year 58 per cent had given such a history at their key admission. Most repeat episodes occurred within three months of the initial attempt, men and women being equally represented. Patients who were unmarried, separated or divorced were over-represented in the repeat group; Kessel and McCulloch concluded that an extant marriage reduced the likelihood of repeated suicidal attempts. One third of those patients who had inflicted injuries on themselves repeated their attempt as compared with one fifth of those who poisoned themselves. In general, people who repeated used the same method, injury or poisoning, as had been used in the initial attempt. No association was found between repeated suicidal behaviour, whether fatal or not, and Kessel's life endangerment scale. Those whose initial act had been considered impulsive were found to be more likely to repeat their act. Considering the group on the basis of the diagnoses which had been given on their key admission, it was found that patients with personality disorders had the highest repeat rate; this was especially

true for those who were alcoholics or dependent on drugs. Kessel and McCulloch concluded that many attempted suicides needed prolonged contact with some social agency so that support was available when required. These conclusions differ only in details from those put forward by East (1913) and Hopkins (1937).

Kessel (1965) touched on some ecological correlates of attempted suicide and this topic was further explored by Philip and McCulloch (Philip and McCulloch, 1966, 1967a; McCulloch and Philip, 1967b). They studied the relationships between a number of social factors and deviant or psychiatrically disturbed behaviour, using a simple method of typal analysis (McQuitty, 1957) to group the social indices into clusters. Analysis of the ecological data (Philip and McCulloch, 1966) revealed a cluster of items relating attempted suicide to children taken into care, R.S.S.P.C.C. contacts and school absenteeism. The addition of further variables (Philip and McCulloch, 1967a) resulted in "repeated suicidal attempts" being added to this cluster. On the basis of these findings it was hypothesized that persons admitted to Ward 3 of the Royal Infirmary of Edinburgh following a suicidal attempt would show high rates of incidence for the variables presented above as well as for other variables which, although outwith the cluster, were significantly correlated with attempted suicide. Of 108 patients consecutively admitted to Ward 3 following a suicidal attempt, 95 were interviewed with reference to the variables found in the ecological study to be related to attempted suicide. McCulloch and Philip (1967b) reported that the rates of incidence for these variables - repeated attempted suicide, overcrowding, prosecutions following trouble with the law, having been taken into care as a child, having been absent from school or having been in contact with the

R.S.S.P.C.C. as a child - were far in excess of the annual rates of incidence of these variables for the city of Edinburgh. Forty-four patients had children, not all of whom were of an age to have been absent from school or to have appeared before a court. It was found that the rates of incidence shown by these children were also in excess of the city rates. McCulloch and Philip concluded that ecological variables, when suitably analysed, could be used to provide testable hypotheses about individuals; certainly their findings added to the body of data relating to the amount of social pathology present in those who attempt suicide.

The papers thus far reviewed have all been of some note, either because of the seminal ideas they have put forward or because, in the case of the Edinburgh work, they provided a series of inter-related studies on the same population. The remainder of this chapter is given over to the review of studies considered to be of lesser importance to the present study. In their review of the literature pertaining to social factors associated with attempted suicide, McCulloch and Philip (1967a) considered that lack of agreement on definitions and criteria had contributed to the many differing estimates of the incidence of various social factors. The role of the broken home or parental deprivation in attempted suicide has been considered in varying detail by numerous writers (Batchelor and Napier, 1953b; Bruhn, 1962; Bruhn and McCulloch, 1962; Greer and Gunn, 1966; Greer, Gunn and Koller, 1966; Kessel, 1965; Stengel and Cook, 1958; Walton, 1958). These studies show only too well the lack of agreed criteria and definitions mentioned by McCulloch and Philip. Walton (1958) found that in a group of depressed patients, parental deprivation was significantly associated with having made a suicidal attempt or having threatened suicide. Bruhn (1962)

found that 42 per cent of a series of attempted suicides admitted to Ward 3 of the Royal Infirmary of Edinburgh had suffered the loss of one or both parents by death or separation before the age of fifteen years. Only 25 per cent of a control group of psychiatric out-patients had suffered this parental loss. Bruhn considered that while the role of the parental home was of great importance, other factors such as household stability, employment, residential mobility and marital disharmony were equally important. Dealing with the same data, Bruhn and McCulloch (1962) were of the opinion that paternal deprivation had been neglected as an aetiological factor.

In another comparative study, Greer, Gunn and Koller (1966) found that 49 per cent of patients who had attempted suicide had suffered parental loss compared with 28 per cent of non-suicidal psychiatric in-patients and 28 per cent of non-psychiatric in-patients. These figures agree remarkably well with those obtained by Bruhn (1962). Greer and Gunn (1966) compared those attempted suicides who had a history of a broken home with those who came from intact homes. They found that patients who came from broken homes manifested marked disruption of close interpersonal relationships and were commonly diagnosed as sociopaths or considered psychiatrically normal. Patients from intact homes tended to be somewhat older and were more often diagnosed as schizophrenics or depressives.

There have been many papers which give varying amounts of case note information on admissions for attempted suicide. Such data are available for a number of communities; Gateshead (Middleton, Ashby and Clark, 1961), Hartlepools (Nicholson, 1963), Newcastle (Whitlock and Schapira, 1967), Birmingham (Harrington and Cross, 1959), Leicester (Ellis, Comish and Mower, 1966), South Wales (Carstairs and Brown, 1958; Graham and Hitchens, 1967),

Glasgow (Sclare and Hamilton, 1963) and London (Woodside, 1958; Taylor, Hart and Burley, 1964; Bridges and Koller, 1966). In all those cities and towns attempted suicides present at casualty departments where decisions as to admission and the need for psychiatric opinion are made. Not all cases are admitted and of those admitted not all are seen by a psychiatrist. Local factors such as the number of beds available and the degree of cooperation between physicians and psychiatrists make comparisons between these studies and Edinburgh of doubtful value.

Two studies, however, are worthy of note in their attempt to provide basic data on attempted suicide. Parkin and Stengel (1965) aimed to establish the incidence of suicidal attempts in Sheffield for 1960 and 1961. They obtained data about patients who had attempted suicide from general hospitals, mental hospitals and general practitioners. Their attempt to obtain data from general practitioners was praiseworthy although, since only two thirds of their survey questionnaires were returned, the results were subject to an unknown degree of bias. They estimated that there had been some 820 suicidal attempts in the two years under study - such a figure would yield an annual incidence rate rather similar to that of Edinburgh (Kessel, 1965). Evans (1967) made use of the sophisticated record linkage facilities in Oxford to provide information on the 702 patients admitted to hospital between 1962 and 1965 following a suicidal attempt. The annual prevalence rates showed an increase from 41 per 100,000 persons in 1962 to 67 per 100,000 in 1965. These rates were lower than those for Edinburgh (Kessel, 1965) but show a similar upward trend. The peak incidence was for women in their late teens, the rate declining steadily after the twenties. For men the peak incidence was

in the early twenties. Length of stay, civil state, social class and psychiatric disposal were all similar to Kessel's findings.

Clearly the increasing availability of good case register and computer facilities should make possible more valuable comparisons of rates of incidence and other basic items of information available from case notes. Kidd and Mackie (1967) have provided a timely warning that case register data must be interpreted with caution since many differences in the data can be attributed to differences in medical personnel rather than to real differences between patients.

Summary

Attempted suicide has been a much studied phenomenon in Britain over the past twenty years. Prior to the publication of Stengel's monograph (Stengel and Cook, 1958), research was primarily concerned with the discovery of aetiological factors and other clinical aspects of patients who had attempted suicide. Conceptually, attempted suicide was viewed as a special case of suicide and theories elaborated about the latter were used to explain the former, without much success. Stengel's emphasis on the social aspects of attempted suicide and on the need to study it in its own right gave impetus to many studies and recent work has been concerned with interpersonal rather than intrapsychic relationships.

Edinburgh, fortunate in having both a medical ward where the treatment of poisoning could be undertaken and a team of researchers who could exploit this situation, has been to the fore in the study of clinical and social aspects of attempted suicide. Studies concerned with the basic characteristics

of patients seen in the Poisoning Treatment Centre have been complemented by reports on specific features of attempted suicide. In consequence it seems certain that more is known about the attempted suicide population in Edinburgh than in any other centre in Britain. A wide range of suicidal behaviour is seen in Ward 3 of the Royal Infirmary since all persons who have attempted suicide and arrive at the Infirmary are admitted. This admission policy has led to the population under study being more diverse in its characteristics than the populations studied in other centres. Compared with many of the latter the Edinburgh attempted suicide population contains fewer psychiatrically ill persons; distress, unhappiness and impulsiveness are more common than delusions. Clinically there is no "attempted suicide personality" although impulsive behaviour, poor interpersonal relationships and undesirable social conditions have been remarked upon by researchers in all parts of the country.

CHAPTER 3

REVIEW OF THE PSYCHOLOGICAL TEST LITERATURE ON ATTEMPTED SUICIDE

Most of the literature to be reviewed in this chapter emanates from the United States and the majority of persons tested have been psychiatric in-patients in Veterans Administration hospitals. Even when reports on completed suicides are excluded, the studies under review are concerned with very diverse aspects of suicidal behaviour; they deal with persons who have attempted suicide, threatened suicide or thought about suicide. It has been shown in Chapter 2 that attempted suicide has come to be accepted as a phenomenon worthy of study in its own right in Britain, but this attitude does not seem to have spread to America. The differences in orientation between British and American studies must be kept in mind when assessing the relevance of American studies to British populations.

The psychological literature can be considered most conveniently by the type of test used rather than by authors as was the case in the previous chapter. The tests used fall into three main categories; projective techniques, questionnaires and inventories, and semantic measures. Prominent in the first category have been the Rorschach Inkblots (Rorschach, 1921), the Thematic Apperception Test (Murray, 1943), the Make-A-Picture-Story test (Shneidman, 1949) and the Rosenzweig Picture Frustration Study (Rosenzweig, 1948). The Minnesota Multiphasic Personality Inventory (Hathaway and McKinley, 1943) has been the most commonly used questionnaire; its frequent use is often due to the fact that it is a routinely administered test in many hospitals and clinics. Semantic measures such as semantic differential

techniques (Osgood, Suci and Tannenbaum, 1957) and repertory grids (Kelly, 1955) have been used less frequently than might have been expected in view of their flexibility.

Projective techniques

The Rorschach has long been the most popular psychological technique in the United States (Sundberg, 1961) despite having been subjected to several scathing reviews, the most recent being that by Jensen (1964). Many studies on attempted suicide have used this technique and a variety of strategies have been employed; global assessments, ratios of one scoring category to another, single signs, multiple signs and content analyses have all been used in the search for the "suicidal Rorschach".

Hertz (1948) attempted to find configurations of responses to the cards which were characteristic of persons with suicidal tendencies. This work proved to be a starting point for subsequent studies which attempted to support or reject her findings. Her definition of suicidal tendencies included patients who had expressed suicidal ideas, had threatened or attempted suicide or who had committed suicide at some time after testing. The groups eventually studied consisted of 50 suicidal neurotics, 63 suicidal psychotics, 63 non-suicidal neurotics, 53 non-suicidal psychotics, 46 normal adults and 50 female university students. The Rorschach features which she found to be characteristic of suicidal trends were as follows: depressed state, active conflict, deep anxiety, neurotic structure, ideational symptomatology, withdrawal, constriction, inappropriate emotional outbursts, resignation and agitation. These configurations were cross-validated (Hertz, 1949) by

analysing the Rorschach protocols of a series of 178 patients of all diagnoses. If five or more of the configurations were present the patient was considered "suicidal". An independant judgement of "suicidal" or "not suicidal" was made on the basis of the patients' case histories. Rorschach and case history allocations were in agreement in nearly 80 per cent of the patients. Hertz's work was criticised by Fisher (1951) who found that her configural method did not distinguish a group of 20 schizophrenics who had made an overt suicidal attempt from a group of 20 non-suicidal schizophrenics. Fisher concluded that little evidence existed regarding the value of the Rorschach in detecting suicidal trends.

Sakheim (1955) compared the Rorschach protocols of 40 psychiatric inpatients who had a history of an overt suicidal attempt with 40 non-suicidal patients. He found that Hertz's configural scoring had some validity; five of her features, marked anxiety, depressed state, resignation, withdrawal and agitation distinguished the two groups.

White and Schreiber (1952) in an avowedly non-statistical use of the Rorschach judged that 105 out of 1,250 protocols gathered on a sample of psychiatric patients were indicative of suicidal risk. They found that when their assessment of suicidal risk was validated against clinical evidence two months later, 77 per cent of their 105 patients had considered, threatened or attempted suicide. No evidence was presented regarding those in the "non-suicidal" category who subsequently considered, threatened or attempted suicide and so their findings cannot be interpreted in any meaningful way.

Martin (1952) utilized a sign check-list in his search for differentiae. He arrived at this list by comparing the Rorschach protocols of 36 male

psychiatric in-patients who had had a suicidal attempt with 36 non-suicidal patients matched for age, education, intelligence, occupation, diagnosis and total number of Rorschach responses. The sixteen signs which differentiated the two groups were cross-validated by comparing the protocols of a further 36 attempted suicide patients with 36 non-suicidal cases, again matched on certain variables. Five signs concerned with colour or shading responses survived cross-validation and were considered to be reliable indicators of suicidal risk. These signs were typical of persons who were impulsive, reacted in an exaggerated manner to affective stimuli, and were lacking in anxiety. Martin's sign check-list was used by Daston and Sakheim (1960) to test the hypothesis that completed suicides would have higher scores on the check-list than both non-suicidal patients and attempted suicides. They found that the two suicidal groups did not differ from each other but were easily distinguished from the controls. The authors concluded that suicidal patients were more impulsive and reacted more to affective stimuli. The finding that sociopaths with no history of suicidal behaviour also scored high on the check-list introduced a note of caution to their conclusions about the validity of Martin's signs.

Weiner (1961) tested Martin's signs on the Rorschach protocols of 63 non-suicidal and 24 attempted suicide patients. The attempted suicide group had significantly more check-list signs but no useful cutting scores were found. Although the number of signs present was significantly related to severity of psychiatric illness as well as to the presence of suicidal behaviour, there was no interaction between diagnostic classification and suicidal behaviour.

Neuringer, McEvoy and Schlesinger (1965) set out to ascertain whether Martin's check-list, which had been devised using male subjects, would be successful in identifying women who had shown a history of suicidal behaviour. Their subjects consisted of 21 patients who had attempted or committed suicide, the latter having been tested between 3 and 12 months prior to their deaths, 15 non-suicidal psychiatric in-patients, 13 criminals and 8 normals. Blind scoring for Martin's signs resulted in 83 per cent agreement between two raters. The results showed that the check-list did not separate suicidal women from other subjects and the authors discussed the possibility of sex differences in suicidal behaviour.

Lindner (1946) proposed that card IV of the Rorschach be considered as the "suicide card". He considered that responses such as "a decaying tooth" or "a rotted tree trunk" were indicative of severe depressive states with suicidal overtones and self-annihilative thought content. Sakheim (1955) in his previously cited study found no evidence to support Lindner's proposition. Broida (1954) compared a group of 20 psychiatric, mainly schizophrenic, in-patients who had made a suicidal attempt or who had expressed "excessive suicidal contemplation" with 20 similarly diagnosed, non-suicidal patients. None of the control patients and only 3 of the suicidal patients gave any "suicide responses" to card IV. Broida's conclusions, "that the evidence was meagre but tended tentatively and with qualifications to support the contention that card IV may be viewed as a 'suicidal card'", were not justified by his data. Schachter (1957) analysed the Rorschach records of 30 patients who had displayed suicidal preoccupations or had attempted suicide. She refuted the notion that card IV was a "suicide card". Her conclusions were that the Rorschach was of doubtful utility as an indicator

of suicidal behaviour.

Undeterred by the poor results reported above, Sapolsky (1963), assuming that suicide represented a wish to return to the womb and desire to be reborn, hypothesised that subjects with suicidal tendencies would be attracted to and would utilize the lower centre detail of card VII on the Rorschach. This card, he felt, was the "mother card" in which the lower centre detail was the "vaginal area". The case histories of 28 psychiatric in-patients (mainly schizophrenics) who had responded to the detail in card VII were compared with the histories of 28 patients who had not utilized the detail in their Rorschach protocols. The patients were matched for age, sex, number of Rorschach responses and diagnosis. The case histories were examined for evidence of suicidal ideation or behaviour using the following definition, "A patient was considered to have been suicidally ideated if he had been hospitalised because of suicidal threat or attempt, or if during his stay there was at least one mention of suicidal thought or actual attempt". Using this blanket criterion Sapolsky found that there were significantly more suicidal histories in the records of those who had responded to the "vaginal area" than in the records of those who had not so responded. Cooper, Bernstein and Hart (1965) attempted to replicate Sapolsky's study. Fifty-three psychiatric in-patients who had responded to the detail on card VII were matched with 53 patients who had not responded to the detail. Using Sapolsky's criteria the hospital records were scrutinised for evidence of "suicidal ideation". No significant differences were found between the two groups.

Costello (1958) utilised the comparative matching technique devised by Raven (1948) to investigate differences in Rorschach responses between 30

psychiatric in-patients who had attempted suicide shortly before admission to hospital and 30 non-suicidal patients matched for age, sex, intelligence and diagnosis. A scale based on the occurrence of "common" and "typical" suicidal and non-suicidal responses was created. Using Raven's (1948) criteria a response was considered "common" for a group if it occurred in at least 25 per cent of the protocols of that group. For a response to be considered "typical" of a group it had to occur in at least 25 per cent of that group's protocols and also occur with a frequency at least twice that of the other group. Most of the responses which differentiated the groups showed a combination of location and content features. The scale thus devised correctly classified 80 per cent of the subjects in both groups. Cross-validation on the Rorschach records of 28 attempted suicides and 100 non-suicidal patients showed that 78 per cent of the attempted suicides and 70 per cent of the non-suicides were correctly classified. Costello concluded that the comparative matching technique was a useful method of Rorschach analysis.

Neuringer (1965) in an excellent summary of the work on suicide carried out with the Rorschach, pointed out that contradictory and equivocal results had frequently been due to methodological inadequacies and poor designs. He concluded that there were no specific signs of suicide on the Rorschach but that Martin's check-list (1952) had shown some consistency in identifying suicidal persons over varying conditions. Almost all of the studies surveyed by Neuringer had been retrospective, utilising protocols culled from files and case records. The time lag between testing and suicide, in the cases where patients had killed themselves, was often one of years rather than months or days. The use of such varied data, especially when coupled

with the omnibus definitions of suicidal behaviour used by many researchers, mitigated against the Rorschach producing useful results.

Neuringer's paper makes a case for suspending judgement on the value of the Rorschach in identifying suicidal behaviour. Certainly its exponents, by their failure to use adequate designs and definitions, have not presented it in a good light. Indeed their ignorance of the psychiatric literature on attempted suicide and suicide is appalling. Even if these deficiencies were not present it seems very likely, from Jensen's (1964) review, that the contradictory and equivocal results would have remained.

The Thematic Apperception Test or TAT was devised by Murray (1943) to provide a means of assessing the needs and influences, or presses, which determine an individual's behaviour. Since the psycho-social aspects of suicidal behaviour have been widely recognised, it is surprising that the TAT has been used so infrequently. If the Rorschach has been over-popular then certainly the TAT has been neglected.

Shneidman and Farberow (1958) attempted to relate the characteristics of the heroes of TAT stories narrated by patients with the suicidal and non-suicidal behaviour of the latter. TAT protocols were gathered from several groups of subjects; normal men, neurotic non-suicidal men, psychotic non-suicidal men, neurotic men who had attempted suicide, neurotic women who had attempted suicide, and neurotic men who had committed suicide within one year of completing the TAT. The attributes of the heroes of the TAT stories were rated on an 80 item, nine point Q-sort by a judge whose knowledge of the subjects was limited to the TAT protocols alone. On these blind ratings the judge was able to differentiate male and female subjects and also between normal and disturbed individuals. He was unable to distinguish suicidal

and non-suicidal records at a level better than chance. These results led Farberow (1959) to put forward some very interesting methodological suggestions. He considered that it would be possible to devise special TAT cards which formed a continuum of stimuli to evoke suicidal fantasies. These cards would range from one which, for almost all normal subjects, had no suicidal content, to a card which would elicit suicidal responses from almost all subjects. Farberow's suggestion was an important step forward in projective test methodology but, to date, has remained a suggestion.

Two previously cited studies made use of the TAT. Fisher and Hinds (1951) in their study of hostility in normals, non-suicidal and suicidal in-patients found that the TAT did not reveal differences in hostility controls in these subjects. Broida (1954) used one TAT card in his study, in which he predicted that suicidal individuals would produce more stories with suicidal themes than would non-suicidal subjects. His prediction was not substantiated, no differences between the groups being detected.

A techniquewhich has some similarity to the TAT is the MAPS or Make-A-Picture-Story test devised by Shneidman (1949). The MAPS is more flexible than the TAT since the subject has greater scope in determining the initial stimuli, being allowed to populate a background scene with cut-out figures of people and animals which he himself selects. He then makes up a story for each situation thus created. In what remains one of the best psychological studies in the field of suicide research, Farberow (1950) used the MAPS along with other test instruments. In his study Farberow compared a group of 32 male, non-suicidal, psychiatric in-patients with 64 suicidal in-patients. The latter group were considered in two ways; those who had attempted suicide were compared with those who had threatened suicide, and

those considered to be serious suicide risks were compared with those not considered to be serious risks. From their responses to the MAPS test, patients who had threatened suicide appeared to be more pessimistic than the controls and were more hostile, guilt-ridden and less depressed than patients who had attempted suicide. Patients considered to be serious suicidal risks produced themes marked by intense hostility with frequent references to suicide and death. They were less plagued with doubts and conflicts than the non-serious risk group, in whom agitation was common.

Many researchers have considered suicidal behaviour to be a hostile act and it is not surprising that use has been made of the Rosensweig Picture Frustration Study (Rosensweig, 1948). In this test a series of cartoon-like line drawings, which depict frustrating or annoying situations, are presented to the subject who supplies the verbal reply of the person frustrated in the drawing. Winfield and Sparer (1953) administered the test to 26 male psychiatric in-patients who had a history of attempted suicide. They compared their results with the test norms and found that their subjects were less extrapunitive and more impunitive than normals. Preston (1964) found that her group of 58 attempted suicides scored lower on extrapunitiveness than her group of 30 motor car accident victims. Mencini, Reda, Schiavi and Alliani (1953) reported no significant differences on the Rosensweig between their 30 attempted suicide patients and the test norms. In the study reported by Fisher and Hinds (1951), the Rosensweig proved no more successful than the Rorschach or TAT in differentiating their groups. Farberow (1950) found that his normals and suicidal groups did not differ in any important way in their reaction to frustration on the Rosensweig. The group who had threatened suicide tended to be more extrapunitive and had greater difficulty

in handling minor situations than those who had attempted suicide. They also demonstrated more object-directed hostility. Non-serious risk patients were more hostile, less sociable and less mature than patients considered to be serious suicidal risks.

Questionnaires and inventories

The Minnesota Multiphasic Personality Inventory or MMPI (Hathaway and McKinley, 1943) enjoys high status in the field of self-administered tests, this status being comparable with that of the Rorschach among projective techniques. Many American hospitals and clinics administer the MMPI to every patient, a state of affairs which has facilitated retrospective studies using this test. Simon and Hales (1949) studied the MMPI profiles of 50 psychiatric in-patients who had established suicidal preoccupation, but various diagnostic classifications. The group profile was of a depressive type with high scores on depression and psychasthenia. Despite not having tested anyone who had actually behaved in a suicidal manner, these authors concluded that, "suicide, like alcoholism, should be considered a symptom which, although often associated with depression, cuts across personality and diagnostic types".

In the previously cited study by Farberow (1950), patients who had threatened suicide produced much more disturbed MMPI records than the attempted suicide group or the non-suicidal patients. Those who threatened suicide were more hyperactive, hostile, anxious, less realistic and more eager for help than the others. The patients who had attempted suicide, although less active and less hostile than those who had threatened suicide, were more anxious and depressed than the non-suicidal patients. Patients who were

considered serious risks appeared to be more hostile than those who were not considered to be serious suicidal risks. On the basis of his test findings Farberow considered that the accomplishment of an act intended as a means of self-destruction acted in an abreactive, apparently therapeutic manner upon the seriousness of the disturbance of personality. Rosen, Hales and Simon (1954) used the MMPI in a replication of Farberow's study. They used MMPI and case note information on 50 patients who had made a suicidal attempt prior to hospital admission, 100 patients who had expressed suicidal thoughts while in hospital and 250 in-patients representative of the whole patient population. Their criteria for each group of patients was the same as Farberow's (1950). They found that, as a group, patients with thoughts of suicide were much more severely disturbed than either patients who had attempted suicide or patients in general. They concluded that in investigating suicidal phenomenon meaningful results could be obtained only if more homogeneous groups of subjects were used.

Broida (1954) used the MMPI Depression scale in his previously cited study. He hypothesized that his suicidal patients would score higher on the MMPI Depression scale than his non-suicidal subjects. His suicidal patients scored significantly higher on the Depression scale than his control group.

Farberow and Devries (1967) attempted to differentiate suicidal and non-suicidal patients by using their responses to individual MMPI items. They obtained MMPI protocols from a number of sources, including those MMPI's used in the study of Rosen, Hales and Simon (1954). On comparing the item responses of non-suicidal, threatened suicide, attempted suicide and completed suicide patients they found that only the patients who had threatened suicide

stood out as a group. Farberow and Devries constructed a "threat suicide" scale of 52 items in which the scales of Psychasthenia, Schizophrenia and Depression were heavily represented. Over one third of the items in the Psychasthenia scale and one quarter of the items in the Schizophrenia and Depression scales were included in the "threat suicide" scale. A new group of patients who had threatened suicide were compared with a group of non-suicidal patients on the "threat suicide" scale; it was found that 72 per cent of the former and 42 per cent of the latter patients were correctly identified. Devries and Farberow (1967), using a sample of MMPI protocols which overlapped with those used by Farberow and Devries (1967), tried to differentiate non-suicidal, threatened suicide, attempted suicide and completed suicide patients by applying a discriminant function analysis. Farberow (1950) had suggested that six MMPI scales, Paranoia, Schizophrenia, Psychasthenia, Mania, Psychopathic Deviate and Depression were of promise in differentiating suicidal and non-suicidal patients. Devries and Farberow found that, using discriminant functions, patients were correctly classified with 43 per cent accuracy for non-suicidal controls, 46 per cent accuracy for threat suicides, 41 per cent accuracy for attempted suicides and 25 per cent accuracy for completed suicides. While the degree of accuracy of classification was not very high it was better than chance and the authors concluded that all three suicidal groups could be classified more accurately on the basis of the MMPI than without the use of the test. They further considered that their findings supported the value of considering threatened suicide, attempted suicide and completed suicide as meaningful classification of suicidal behaviour.

Devries (1966b) considered that the results obtained by Farberow and Devries (1967), detailed above, were in part due to the definitions of threatened and attempted suicide. He attempted to refine his definitions by comparing a group of patients who had made suicidal threats only, a group who had attempted suicide only and a group who had manifested both forms of behaviour. A non-suicidal group of patients provided control MMPI data. Each group was compared with every other group on each MMPI item using 2 x 2 chi square analyses. In contrast to the findings of Farberow and Devries (1967) this study produced items which differentiated the various suicidal groups from the non-suicidal controls. Differentiation between the suicide groups was not possible. Devries concluded that these results supported his contention that finer categories of suicidal behaviour were needed. He thought that an analysis of item patterns could be of use in elaborating such categories. In a later paper (Devries, 1967) he demonstrated that when certain control variables such as age, diagnosis, education, occupation, marital state and number of V.A. hospital admissions were held constant, the number of MMPI items which differentiated suicidal and non-suicidal patients was three times the number found (Devries, 1966b) when no control over these variables was exercised.

With the exception of the study by Broida (1954) all the reports on the use of the MMPI in suicidal behaviour have used Farberow's (1950) division of such behaviour into threats, attempts and committed suicide. Rosen, Hales and Simon (1954) and Devries (1966b) made it clear that finer divisions were required but apart from the latter's "threats and attempts" group, no refinements have taken place. None of these researchers has put forward any clear statement about the relationship between making threats about suicide,

actually attempting suicide and dying by suicide. The impression given is that these three kinds of behaviour form a continuum of "suicidal behaviour". To add to this confused state of affairs all the patients whose MMPI protocols were used in the studies were psychiatric in-patients in V.A. hospitals. The patients in the attempted suicide groups had all made their attempt prior to their hospital admission, the patients forming the threat suicide groups had made such threats after having been admitted. Cohen, Motto and Seiden (1966) have indicated that in San Francisco persons who have attempted suicide are briefly observed in psychiatric admitting wards; the majority of such patients are discharged without further treatment or follow-up, only the psychiatric and the acutely suicidal remain as in-patients. If such hospital practice, which appears to be very similar to British procedure, applies to V.A. establishments then the "attempted suicides" available for testing are a very selected group indeed.

Vinoda (1966) used two inventories, the Hysteroid Obsessoid Questionnaire, or HOQ (Caine and Hope, 1967) and the Hostility and Direction of Hostility Questionnaire, or HDHQ (Caine, Foulds and Hope, 1967), in her study which was the first British report on the psychological test characteristics of persons who attempt suicide. She studied three groups of women who were matched for age, education, occupation and mental status. The first group was one of 50 in-patients who had been admitted to hospital following a suicidal attempt; these were compared with 50 psychiatric in-patients and 50 convalescent medical and surgical in-patients from the same hospital. The attempted suicide patients did not differ from the other two groups on the HOQ; their mean score was almost exactly the same as that of the psychiatric controls. Both component scores of the HDHQ, total hostility and direction of hostility,

showed differences between the groups. On the former component the three groups were significantly differentiated from each other with the attempted suicides scoring very high, almost two standard deviations above the mean for normals. The psychiatric patients scored mid-way between the normals and the attempted suicides. On direction of hostility, attempted suicides and psychiatric patients were significantly more intropunitive than normals but were not themselves significantly different, although the mean score for the psychiatric group was more intropunitive than that of the attempted suicide group. Vinoda considered that, in general, her group of attempted suicides were more like her psychiatric controls than her general medical and surgical controls.

Philip and McCulloch (1968) administered Cattell's Neuroticism Scale Questionnaire or NSQ (Scheier and Cattell, 1961) to 84 patients admitted to Ward 3 of the Royal Infirmary of Edinburgh. Compared with a group of normals these attempted suicide patients were more anxious, desurgent and scored higher on overall neuroticism. Philip and McCulloch emphasised the high anxiety scores obtained by their attempted suicide patients since in Cattell's (1964) view people who score high on anxiety are characterised by, "a lack of confidence, a sense of guilt and worthlessness, an unwillingness to venture, a dependency, readiness to become fatigued, irritable and discouraged, uncertainty about one's self, suspicion of others, and a general tenseness".

Both Vinoda (1966) and Philip and McCulloch (1968) used parts of the Symptom Sign Inventory, or SSI (Foulds and Hope, 1968) as indices of psychiatric symptomatology in their subjects. Using the Personal Illness (PI) scale of the SSI, Vinoda (1966) found that her attempted suicides were very

similar to her psychiatric patients in the amount of symptomatology produced. Foulds (1967) re-analysed Vinoda's SSI data using his scale of Character Disorder (CD); he found that 39 per cent of her attempted suicides were character disorders, 52 per cent were personally ill and 9 per cent were normal. For the psychiatrically ill group the respective percentages were 24 per cent CD, 55 per cent PI and 21 per cent normal. None of the medical and surgical patients were character disorders but 22 per cent were personally ill. Using the same scales Philip and McCulloch (1968) found that 59 per cent of their women were character disorders, 33 per cent were personally ill and 8 per cent were normal. They suggested that these differences in the proportion of character disorders could be due to the fact that, while Vinoda's attempted suicides were psychiatric in-patients, their own group of patients had been tested before psychiatric screening had been carried out; such an unscreened group could have been expected to contain a high proportion of character disordered patients who would not have been offered or would not have accepted psychiatric in-patient treatment. Clearly both studies showed that a fair proportion of attempted suicide patients were character disorders in whom chronic interpersonal difficulties, plaintiveness and self-pity were common. Using a scale derived from social variables shown to be related to attempted suicide (Philip and McCulloch, 1966; McCulloch and Philip, 1967b), the Edinburgh workers demonstrated that those patients with very high social pathology scored significantly higher than the rest on the Character Disorder scale but not on personal illness or the NSQ (Philip and McCulloch, 1967b).

Devries (1966a) devised a suicide personality inventory by studying the suicide literature for incidents thought to be characteristic of suicidal

individuals. He administered his 50 item inventory to 83 non-suicidal psychiatric in-patients, 55 patients who had threatened suicide, 33 who had attempted suicide and 42 who had at various times both threatened and attempted suicide. The inventory discriminated the non-suicidal patient group from all the suicide groups but did not discriminate between the latter. Lester (1967) administered Devries' suicide potential scale to a group of 43 students. Five of these had attempted suicide, 5 had made suicidal threats, 19 admitted to having "considered" suicide and the remaining 14 had never considered suicide. After combining the "attempt" and "threat" groups Lester performed an analysis of variance and found that the three groups were significantly different on their mean suicide potential scores. From his report it is clear that he compared his threat suicide and attempted suicide groups before combining them for his analysis of variance. His methodology is rather suspect since, having defined his groups, an analysis of variance comparing four groups would have been more appropriate than the procedure he actually followed. His definition of suicide is also unsatisfactory so that his findings, such as they are, have little worth.

Semantic measures

Despite possessing flexibility and the backing of well-elaborated theoretical positions (Osgood, Suci and Tannenbaum, 1957; Kelly, 1955), semantic differentials and repertory grids have been used infrequently in studying persons who have behaved in a life-endangering manner. Neuringer (1961, 1967) tested Shneidman's (1960) notion that neurotic-suicidal individuals

tended to think in terms of dichotomies. Such thinking, in which there were only blacks and whites, never any greys, trapped the individual in his own system by allowing very few alternatives to be seen in any situation. Neuringer investigated the possibility that suicidal individuals could be differentiated from normals or from other emotionally disturbed persons. He reported his findings on the evaluative scales (1961) and the potency and activity scales (1967) in separate articles but it is more convenient to treat the results together. Three groups of male, V.A. hospital in-patients completed an 18 concept, 9 scale semantic differential in which the concepts were chosen on their assumed ability to elicit strong reactions in most people. The first group of patients consisted of 15 individuals who had made a serious suicidal attempt, the second comprised 15 patients who were suffering from debilitating psychosomatic complaints and the third group was formed by 15 patients who were being treated for minor medical problems. These latter patients showed no evidence of emotional disturbance as measured by items selected from the Cornell Medical Index. Neuringer found that both the suicidal and the psychosomatic groups of patients used extreme rating categories on evaluative scales to a significantly greater extent than did the normal group. It appeared that dichotomous evaluative thinking was a characteristic common to many emotionally disturbed persons and was not a form of thinking exclusive to suicidal individuals. On the potency and activity factors the suicide group was differentiated from the other two, showing significantly more dichotomous thinking. Neuringer (1967) made little of his findings although he did speculate about suicide becoming a solution to a situation in which the individual's dichotomous thinking had removed all other alternatives.

Tatossian and Blumen (1965) compared the semantic differentials of 67 normal French adolescents with the differentials of 27 adolescents who had made a suicidal attempt. The attempted suicides differed from normals only insofar as they used the scales in an all-or-nothing manner reminiscent of Neuringer's subjects. The authors concluded that adolescents who attempted suicide demonstrated in an accentuated fashion traits present in normal adolescents.

Kamano and Crawford (1966) used a semantic differential of 16 scales to test the hypothesis that low self-regard was a cardinal characteristic of the suicidal individual. They compared the self-regard scores of three groups of female psychiatric in-patients. A group of 18 patients who had made serious suicidal attempts, and one of 28 patients who had made attempts which were regarded as non-serious gestures, were compared with a group of 56 non-suicidal patients. These groups showed no differences on the amount of self-regard they had, and the authors' hypothesis was not substantiated.

Kelly's theory of personal constructs (Kelly, 1955) has been popularized in Britain by Bannister (1965). It is essentially an idiographic technique and its use in the study of a suicidal individual has been demonstrated by Ryle (1967). It is difficult to summarize a single case study and generalisation presents even greater problems. Suffice it to say that Ryle was able to use the results of repertory grid testing to provide some intrapsychic and interpersonal relationships which had value in explaining his patient's suicidal behaviour.

Performance tests

Vinoda (1966) and Neuringer (1964) used performance tests as measures of rigidity in their studies. The former used Himmelweit's tapping test (Himmelweit, 1945) as a measure of rigidity and found that her attempted suicides were significantly less flexible than her two control groups. Neuringer (1964) used the Rokeach Map Test (Rokeach, 1948) and the California F scale (Adorno, Frenkel-Brunswick, Levinson and Sanford, 1950) to test his hypothesis that suicidal individuals had a disposition to think in a rigid and inflexible manner. On both tests the attempted suicides were differentiated from the psychosomatic and normal groups and Neuringer concluded that suicidal individuals did show a disposition towards rigid thinking. It seems likely that rigidity, as measured in these studies, has some relationship with the dichotomous thinking patterns reported by Neuringer (1961, 1967), but the extent of such a relationship cannot be determined at present.

Summary

Although less copious than the cognate body of psychiatric studies, the literature dealing with the psychological assessment of attempted suicide is quite extensive. All the major tests in the psychological armamentarium have been used, with varying degrees of sophistication, in the quest for the "suicidal personality". Such a quest has been unsuccessful, the results from projective techniques and questionnaire methods alike being equivocal in many instances and contradictory in others. Most of the reports reviewed in this chapter are American and reflect clearly a predelictien towards viewing suicidal threats, suicidal attempts and completed suicides as phenomena

differing in degree rather than in kind. While some workers, notably Farberow, Shneidman and Neuringer, have tackled many of the theoretical and methodological problems besetting research in suicidal behaviour, most psychological researchers in this area display a remarkable indifference to the need for adequate definitions of various suicidal behaviours.

In general the methodology of recent papers is better than that of earlier publications but there is still plenty of room for improvement. It is doubtful whether men who are in-patients in Veterans Administration psychiatric hospitals and who at some time have threatened or attempted suicide, or who on some subsequent occasion commit suicide, are representative of the threatened suicide, attempted suicide or committed suicide populations of the United States. Nonetheless, such men have formed the majority of persons tested.

A consequence of the "continuum" orientation of American workers has been that while persons who threaten, attempt or commit suicide are sometimes considered as separate subgroups, their personality characteristics and dynamics are assumed to have common "suicidal" elements. Theoretical formulations about suicide are applied without modification to groups of persons who have threatened or attempted suicide, a procedure which facilitates confused thinking and obfuscatory results. Even the Los Angeles workers, whose research efforts have been better than most, fail to make an adequate conceptual distinction between threatened suicide, attempted suicide and committed suicide.

These failings in methodology and theory are serious and it must be concluded that the American psychological literature offers little to the British researcher investigating the personality characteristics of people

who have made a suicidal attempt. The British contribution to this literature has been tiny, four short papers in all, so that the need for a study which will present an overall picture of the personality variables characteristics of people who attempt suicide is very real.

CHAPTER 4

THEORETICAL AND METHODOLOGICAL ASPECTS OF THE TESTS USED IN THE PRESENT STUDY

The tests used in this study were chosen because they fulfilled the following criteria: they were objective, standardised instruments which were developed within the framework of formal theories of personality, namely those of Foulds (1965a) and Cattell (1965); a substantial body of data relating to normal and psychiatric patients was available for all three instruments thus facilitating comparisons between persons who attempted suicide and other populations, and they had been used extensively in both clinical work and research by the present author who was in consequence familiar with their administration as well as their strengths and weaknesses. The Sixteen Personality Factor Questionnaire, or 16PF, (Cattell and Eber, 1965) attempts to cover a wide range of personality traits while the Symptom Sign Inventory, or SSI, (Foulds and Hope, 1968) and the Hostility and Direction of Hostility Questionnaire, or HDHQ, (Caine, Foulds and Hope, 1967) are intended to measure psychiatric symptoms in the case of the former and punitive attitudes in the case of the latter. These tests not only provide a broad range of personality, symptom and attitudinal measures but also facilitate comparisons with the scores of attempted suicide populations studied by Vinoda (1966), who used the SSI and HDHQ, and by Philip and McCulloch (1967b, 1968), who used part of the SSI and Cattell's MSQ.

Both the 16PF and the HDHQ are, in Campbell's (1957) typology, "voluntary, direct, structured" tests whose purpose is not concealed from the patient or subject. Self-report questionnaires are open to motivated distortion and also to biases due to response sets. Cronbach (1946, 1950) recognised the importance of response sets and styles in relation to achievement tests. He stressed the importance of scoring items in a balanced manner so as to reduce the chances of high scores being obtained by persons who consistently guessed "true" or "false" to items, irrespective of the latter's content. Cronbach's findings were carried over into the field of personality testing and innumerable studies have been based on his results. The response sets which have been most frequently studied and debated are those of acquiescence and social desirability. Some researchers have claimed that response sets account for almost all the measured variance in questionnaires while others consider them to be of trifling importance. It is little wonder that Klein, Barr and Wolitsky (1967) conclude that research in this area has not been very illuminating. Since much of the debate revolves round issues of methodology and psychometric procedure, perennial sources of disagreement, there is little hope of an early resolution of opinions on the matter.

Social desirability, the tendency of questionnaire respondents to endorse items which have been independently rated as being socially desirable, was first presented as a response variable by Edwards (1953) who found that the proportion of subjects endorsing an item correlated 0.87 with that item's rated social desirability. He then constructed an SD or Social Desirability scale by scoring MMPI items having socially desirable scale values "true" and those having socially undesirable scale values "false". Correlations between this SD scale and other personality measures devised from the MMPI and similar

questionnaires were often found to be quite large, sometimes as large as the test-retest coefficients of the scales (Edwards, 1957). Various studies have been reviewed by Edwards to support his contention that social desirability accounts for most of the variance in the scales of questionnaires and inventories and it is implied that scores on such scales are dependent on the person's score on the SD scale. The interpretation of scores on the SD scale is not a simple matter but three aspects can be considered; a) desirable traits and characteristics are common, especially in normal populations, b) a respondent may score high on SD because he is attempting, consciously or otherwise, to create a favourable impression, and c) a person's self-report may be inaccurate. The second of these aspects has been eagerly accepted by critics of self-report methods although Edwards himself claims that he does not mean to imply that socially desirable responses are untruthful but posits that social desirability is a personality trait.

Several writers have criticised Edwards' approach on a number of counts. Block (1965) has suggested that the results found by Edwards and others are due to the characteristics of the items forming the MMPI. These items are aimed at classifying persons with psychopathology and mostly reflect socially undesirable traits and characteristics. If a normal person denies a pathological trait he perforce gives a socially desirable response. Block argues that it is reasonable to assume that most respondents tell the truth and it is not very surprising to find that most normal subjects, usually undergraduate students, deny pathological traits and so achieve high scores on social desirability scales. Knowles (1963) and Rorer (1965) conclude that the case for considering social desirability as an important response variable is not proven; in Rorer's view it should never have been brought to court.

Scott (1963) demonstrated that social desirability had little common meaning among his subjects; each individual believed that his own notions of desirable traits were absolute and would be recognized as such by others. In fact this was not the case. Scott concluded that social desirability was a product of the interaction between an individual and the test administered and as such would show wide inter-individual differences.

Acquiescent set, the tendency to indicate agreement with an item irrespective of that item's content, was put forward by Jackson and Messick (1958) as a major dimension of many tests, including the MMPI and the California F scale (Adorno, Frenkel-Brunswick, Levenson and Sanford, 1950). Couch and Keniston (1960) elaborated on this theme and produced the concept of the "yeasayer". As with social desirability, the debate as to whether or not acquiescent sets are relevant or important in questionnaires has been long and inconclusive. Much data have been worked and reworked with acquiescent sets being present or absent, according to the orientation of the worker. Once again Block (1965) and Rorer (1965) are the main debunkers of response set. Rorer's conclusion, based on an extensive review of the data available on agreement set in the MMPI and other questionnaires, was that this particular response set was a myth. Rorer and Goldberg (1965a, b) demonstrated that MMPI item test-retest correlations were in close agreement with the correlations obtained between items presented in the standard form and these items presented in reversed forms. They concluded that, in the light of these results, acquiescence was not an important dimension in the MMPI. Jackson and Messick (1965) re-analysed the data presented by Rorer and Goldberg and found a large acquiescent factor. The debate continues but it must again be concluded that those who stress the importance of response sets have yet to present a watertight case.

Most of the studies relating to response styles have used undergraduate students as subjects. The extent to which results from this much-investigated group can be generalised to the population at large is not known, certainly they differ in many respects from people seen in clinical situations. In the absence of strong evidence to the contrary there is no reason to doubt that the majority of patients are well motivated to be cooperative and truthful in their response to questionnaires and inventories.

The Symptom Sign Inventory

The Symptom Sign Inventory, or SSI, (Foulds and Hope, 1968) is an orally administered instrument whose purpose is to elicit information about psychiatric signs and symptoms. Its development as a diagnostic measure has been well documented (Foulds, 1962, 1965a, b, 1966, 1967) and it is closely bound up with Foulds' theory of personality dysfunction (Foulds, 1964, 1965a). Foulds has been concerned to develop measures of traits and attitudes on the one hand, and signs and symptoms on the other; these measures to be independent of each other whenever possible. He considers that traits and attitudes can be distinguished from symptoms and signs in three ways. Traits and attitudes are very common while symptoms and signs are not; the former are essentially egosyntonic while the latter are distressing, either to the patient or his intimates and lastly traits, and to a lesser extent attitudes, are relatively enduring while symptoms and signs are somewhat transient.

The Manual of the Symptom Sign Inventory (SSI) (Foulds and Hope, 1968) provides all the necessary information on the derivation of items for each of the *a priori* psychiatric scales, the administration of the inventory and the use of the various scoring keys. In the present study all 80 items of

the SSI were administered but only two scales, those for Personal Disturbance (PD) and Character Disorder (CD), were used. The PD scale comprises 20 items, each of which distinguishes at least seven male and seven female diagnostic classes from a sample of normal females (the manual has no data on normal men). The following 20 items when answered in the affirmative characterise the person who is personally disturbed (the letters and numbers denote item position in the SSI).

A9 Are you afraid of going out alone?

B2 Have you lost interest in almost everything?

B4 Is the simplest task too much of an effort?

B6 Have you found it difficult to concentrate recently?

B7 Does the future seem pointless?

B9 Are you slower recently in everything you do than you used to be?

D1 Are people talking about you and criticising you through no fault of your own?

E1 Are you <u>distressed</u> by silly, pointless thoughts that keep coming into your mind against your will?

E3 Are you <u>unnecessarily</u> careful in carrying out even simple everyday tasks, like folding up clothes, reading notices, etc?

E6 Do distressing thoughts about sex or religion come into your mind against your will?

E7 Do you feel you just have to check things again and again - like turning off taps or lights, shutting windows at night, etc. - although you know there is really no need to?

E8 Have you an <u>unreasonable</u> fear that some careless act of yours might have very serious consequences?

E10 Do you have an uneasy feeling that if you don't do something in a certain order, or a certain number of times, something might go wrong?

F1 Do you feel that there is some sort of barrier between you and other people so that you can't really understand them?

F5 Do you think other people regard you as very odd?

F6 Do you feel that you cannot communicate with other people because you don't seem to be on the same wave-length?

F9 Do you have very strange and peculiar thoughts at times?

G4 Do you ever lose all feeling in any part of your skin, so that you would not be able to feel a pin-prick, or do you ever have burning or tingling sensations under your skin?

H7 Are you ever so low in spirits that you just sit for hours on end?

The PD scale is an improved version of the Personal Illness scale described by Foulds (1965a) and used by many researchers to identify individuals who were experiencing difficulty in mutual personal relationships. The item content of the new scale differs from that of its predecessor in that it contains fewer items from the a priori anxiety scale and more from the neurotic depression and obsessional scales. Mayo (1967b) demonstrated the existence of a population of normals who had many symptoms of Personal Illness but had not sought psychiatric aid; this finding led to the dropping of the term "Personal Illness" from the SSI Manual since it could be seen that although almost all Personally Ill individuals obtained high scores on the PI scale, some persons scoring high on the scale were not Personally Ill. The Manual provides no adequate definition of what the PD scale measures. In this study it will be assumed that the scale distinguishes people who experience, or are observed to manifest, difficulty in mutual personal relationships, this difficulty being so distressing to many of them or to their intimates that help is sought to alleviate their problems.

The distribution of PD scores obtained by normal women and psychiatric patients of both sexes is shown in Table 4.1.

TABLE 4.1

DISTRIBUTION OF SCORES ON PERSONAL DISTURBANCE SCALE

PD Score	Normal Women	Psychiatric Patients
20		
19		1
18		2
17		4
16		8
15		8
14		8
13		24
12		31
11		34
10		23
9		41
8		45
7		50
6		41
5		42
4	1	56
3	1	26
2	5	62
1	10	34
0	52	22
	n = 69	n = 562

Many research reports including those by Foulds and Mayo (1967), Mayo (1967a), Philip and McCulloch (1967b, 1968) and Vinoda (1966) have compared the mean PI scores of various groups and the Manual provides means and standard deviations for various groups on the PD scale. The use of such

statistics can be criticised on two points. The first is that the distribution of scores on the PD scale is markedly skewed, especially in the case of normals, thus making mean scores rather meaningless. The second point is that the scale attempts to place individuals into categories which carry with them clinical implications. If, say, scores of 5 and above are taken to denote Personal Disturbance then a person with a score of 5 is considered Personally Disturbed, as is a person scoring 10 on the scale. The latter cannot be considered to be twice as disturbed as the former; all we can say is that he displays twice as many signs and symptoms of disturbance and that the probability of his being correctly allocated to the Personally Disturbed category is greater than if he displayed fewer symptoms. Mean scores for groups carry little meaning. In Table 11 of the Manual manic women are seen to have a mean PD score of 3.50 while psychotically depressed women have a mean score of 7.78; surely no-one would seriously argue that psychotic depressives are twice as disturbed as manics.

Based on the frequency distributions in Table 4.1 three categories of Personal Disturbance were set up. Scores of 0 and 1 were considered Normal, scores of 2, 3 and 4 considered Borderline, while scores of 5 and above reflected Personal Disturbance. Table 4.2 shows the number and rounded percentages of normals and psychiatric patients falling in each of the categories.

TABLE 4.2

CATEGORIES OF PERSONAL DISTURBANCE

	Normals		Psychiatric Patients	
	n	(%)	n	(%)
Normal (PD scores of 0 and 1)	62	(90%)	56	(10%)
Borderline (PD scores of 2, 3 and 4)	7	(10%)	144	(26%)
Personally Disturbed (PD scores of 5+)	0	(0%)	362	(64%)
	n = 69	(100%)	n = 562	(100%)

Using these three categories the PD scale would not classify any normals as being Personally Disturbed although 10 per cent of a normal group would fall within the Borderline category. Only 10 per cent of a psychiatric population would be classed as Normal and a further 26 per cent would be in the Borderline category. In this study it was felt that a Borderline category would be meaningful since it has been pointed out (Kessel, 1965) that patients passing through the Poisoning Treatment Centre frequently have little or no formal psychiatric symptomatology.

The Character Disorder scale (Foulds, 1967) attempts to identify persons having longstanding neurotic conditions marked by chronic interpersonal difficulties, plaintiveness and the arousal of antipathy in those who treat them. Eight SSI items were found which differentiated clinically diagnosed character disordered women from women with other psychiatric diagnosis; these items were:-

A1 Does your hand often shake when you try to do something?

B5 Are you depressed because of some particular loss or disappointment?

E5 Are you afraid you might do something seriously wrong against your will?

E8 Have you an <u>unreasonable</u> fear that some careless act of yours might have very serious consequences?

H1 Are you worried about having said things that have injured others?

H6 Because of things you have done wrong, are people talking about you and criticising you?

H8 Do you cause harm to people because of what you are?

H10 Do you ever go to bed feeling you wouldn't care if you never woke up again?

For women, using a cutting score between 3 and 4 with high scores being indicative of character disorder, good discrimination between character

disorders and other psychiatric states was achieved. Foulds found that for men better results were forthcoming when item H10 was omitted, items A1, H6 and H8 were given double weighting and a cutting score between 4 and 5 was used. Foulds commented that when the CD scale was not used in the SSI the group of character disordered patients tended to be given SSI diagnoses of psychotic depression. He suggested that the use of the CD scale would reduce misclassification errors in the SSI. The PD and CD scales have been used to provide criterion diagnostic groups in a number of studies (Foulds, 1967, 1968). Philip and McCulloch (1968) found that CD correlated 0.56 with the PI scale and this relationship poses methodological problems in analysing data when combined PD-CD categories are used.

The SSI was administered according to the method set out in the Manual and no unusual problems presented themselves.

The Hostility and Direction of Hostility Questionnaire

The Hostility and Direction of Hostility Questionnaire, or HDHQ, (Caine, Foulds and Hope, 1967) is designed to measure a wide range of possible manifestations of aggression, hostility or punitiveness. The development of this questionnaire has been described in detail by Foulds (1965a). He assumed that hostility was a unitary entity which could be directed inward on the self or outwards against other people or objects. The terms intropunitiveness and extrapunitiveness, first used by Rosensweig (1934), were employed to denote these directions. Five subscales were devised of which three, acting out hostility (AH), criticism of others (CO) and delusional hostility (DH) were measures of extrapunitiveness, while the remaining two, self-criticism (SC) and delusional guilt (DG) measured intropunitiveness. In constructing the

subscales for the extrapunitive part of the test battery it was assumed (Foulds, 1965a) that psychopaths would score high on items related to acting out of aggression, that paranoids would be high on extrapunitive delusional items and that hysteroid personalities would show a tendency to be critical of others. On the intropunitive side of the battery the items were allocated to two scales depending on whether they manifested delusional or non-delusional self-criticism. It was hypothesised that melancholics would score high on items of delusional guilt while obsessoid personalities would endorse many self-critical items. Foulds, Caine and Creasy (1960) found that all the correlations between the subscales were positive, allowing them to postulate a factor of general punitiveness. The patterns of correlations confirmed the hypothesis that the extrapunitive subscales were measuring something different from the intropunitive. Hope (1963) tested these assumptions regarding the unitary nature of hostility and its direction inward or outward by calculating the principal components of subtest correlation matrices. His results showed a similar component structure for both normals and neurotics, the first component being unipolar with all five subtests represented, while the second component contrasted the intropunitive scales SC and DG with AH, CO and DH, the extrapunitive measures. An exception to the predicted findings was that in the normal sample AH had a very small loading on the second component. In the light of this finding Hope reinterpreted AH as "urge to act out hostility".

Philip (1968) tested the constancy of these components by comparing Hope's results, obtained in South-East England, with data from similar populations of normals and neurotics in North-East Scotland. The results obtained led Philip to conclude that Hope's components of General Punitiveness and

Direction of Hostility could be applied to normal and neurotic groups. Hope (1963) set out formulae for calculating scores which would approximate to the full component scores while being easy to calculate. For General Hostility the formula was AH + CO + DH + SC + DG; for Direction of Hostility the formula was (2SC + DG) - (AH + CO + DH), positive scores indicating intropunitiveness. Philip's normals scored higher on General Hostility and were more Intropunitive than English normals. No obvious explanation for these differences could be found but the need for caution in the use of norms was expressed.

The Manual of the Hostility and Direction of Hostility Questionnaire (HDHQ) (Caine, Foulds and Hope, 1967) leans heavily on the results and theoretical formulations of Hope (1963). As a measure of the validity of the components Hope plotted the mean scores of a number of criterion groups. He predicted that psychotics should be higher on General Punitiveness than neurotics, who in turn would score higher than normals. It was further predicted that paranoids would be extrapunitive and melancholics intropunitive; selected paranoids (those with no depressive features) and selected melancholics (those with no paranoid features) were predicted to be at the extremes of the continuum. These predictions were borne out with the exception that unselected paranoids were no more extrapunitive than normals.

Reliability estimates on the scales were based on test-retest correlation coefficients obtained on a sample of 30 normals who were retested one year after initial testing. The reliability of General Hostility was found to be 0.75 while the reliability of Direction of Hostility was 0.51. Philip (unpublished data) found that for a group of 48 normals, re-tested three to twelve months after initial testing, the coefficients were 0.64 for General

Hostility and 0.69 for Direction of Hostility. Compared with the reliability coefficients of personality tests in general these test-retest figures are adequate.

Salmon (1965) attempted to show that test-taking attitudes affected scores on the HDHQ scales as they appear in the MMPI. She concluded that of the MMPI validation scales, F tended to increase HDHQ scores while L and K reduced them. She calculated associations between the HDHQ subscales and the validation scales by means of chi square and so was not justified in her conclusions - to demonstrate an association between two scales does not demonstrate a causal relationship.

Research with psychiatric patients has shown that neurotics (Caine, 1965) and depressives (Foulds, 1965a; Mayo, 1966) show a reduction in General Hostility and a decrease in Intropunitiveness as their psychiatric state improves. Foulds (1966) has demonstrated that when psychiatric patients were classed as "psychic" or "somatic" on the SSI, "somatic" patients of almost all diagnostic groups scored lower on General Hostility and were less Intropunitive than "psychic" patients. He suggested that somatization of symptoms could be a substitute form of intropunitiveness.

Using the SSI Character Disorder scale previously described, Foulds (1967) showed that SSI-diagnosed character disordered patients scored about two standard deviations higher than neurotics on General Hostility although they were not significantly different on Direction of Hostility. Again using the SSI to provide criterion diagnostic groups Foulds (1968), comparing two groups of men, prisoners and non-psychotic psychiatric patients, found that on General Hostility prison normals and neurotics scored higher than their hospital counterparts while the two character disorder groups were almost identical.

Vinoda (1966) used the HDHQ as one of the tests in her battery. Her findings were reported in Chapter 3. It is interesting to note that while her attempted suicide group scored higher than her psychiatric group on General Hostility they were not significantly more Intropunitive.

The administration of the HDHQ is simple; the psychologist reads the instructions with the patient and makes sure that these are understood. Where the patient cannot say either "True" or "False" to an item he is asked to say whether it is "on the whole" true or false for him. Scores for the subscales are calculated using a keyed set of stencils. The formulae given by Hope (1963) are used to obtain scores for General Hostility and Direction of Hostility.

The present author has felt that while the principal components solution has established the structure of the HDHQ, the earlier work of Foulds, Caine and Creasy (1960) suggests an alternative solution which has the merit of remaining closer to the origins of the HDHQ. Foulds, Caine and Creasy noted that the extrapunitive subtests were measuring something different from the intropunitive tests. Clinical experience with the test suggested that the intropunitive measures SC and DG varied over time more than the three extrapunitive measures, and it was considered that it might be profitable to measure extrapunitiveness and intropunitiveness independently rather than combining them in a Direction of Hostility score. Accordingly, two further scores are used in this study; these are:-

Sum E (extrapunitiveness) = AH + CO + DH

Sum I (intropunitiveness) = SC + DG

The Sixteen Personality Factor Questionnaire

The Sixteen Personality Factor Questionnaire, or 16PF (Cattell and Eber, 1965) aims to provide a wide coverage of personality traits. Its theoretical basis lies in the many publications of Cattell, the simplest account of whose position is to be found in "The Scientific Analysis of Personality" (Cattell, 1965). Cattell, more than any other personality theorist, has insisted on the need for the multivariate analysis of personality and the 16PF is the major product of his factor analytic research. His considerable sophistication in the use of factor analysis, combined with an unfortunate predeliction for coining neologisms when naming factors, has reduced the impact of his work but recent reviews (Holtzman, 1965; Klein, Barr and Wolitsky, 1967) have shown a growing appreciation of his contribution to personality assessment.

The 16PF test assesses personality in terms of sixteen first-order, obliquely related factors and four second-order factors. Of the latter only two, Anxiety and Introversion-Extraversion, have been shown to be easily matched over various studies (Horn, 1963). Brief descriptions of the bi-polar first-order factors are as follows:-

Factor	Low score	High score
A	Aloof	Warm, outgoing
B	Unintelligent	Intelligent
C	Emotionally unstable	Mature, stable
E	Submissive	Dominant
F	Reticent	Enthusiastic
G	Expedient	Conscientious
H	Shy	Venturesome
I	Tough-minded	Sensitive
L	Trustful	Suspecting

Factor	Low score	High score
M	Practical	Self-absorbed
N	Simple	Sophisticated
O	Confident	Apprehensive
Q1	Conservative	Radical
Q2	Group dependent	Self-sufficient
Q3	Uncontrolled	Self-controlled
Q4	Relaxed	Tense

The second order factors of Anxiety and Introversion-Extraversion are obtained by applying the formulae set out in the Handbook for the Sixteen Personality Factor Questionnaire (Cattell and Eber, 1965). These formulae are as follows:-

$$\text{Anxiety} = 3.7 - 0.2C - 0.2H + 0.2L + 0.3O - 0.2Q3 + 0.4Q4$$

$$\text{Introversion-Extraversion} = 0.2A + 0.2E + 0.4F + 0.5H - 0.2Q2 - 1.1$$

The products of these formulae are rounded to the nearest whole number, the constants in the equation ensuring that the scores are sten scores. These scores are used so as to be able to compare a person's score on one factor with his score on any other factor, irrespective of the means and variances of the raw scores of these factors. The standard ten point scale (or sten scale) uses ten points to cover the population range. To transform a distribution of scores into stens the raw score mean is fixed at 5.5 stens and points which are one half of a standard deviation above and below the mean translate to stens of 6 and 5 respectively. Thus stens of 5 and 6 are average, 4 and 7 are slightly deviant, 2, 3, 8 and 9 are markedly deviant, while stens of 1 and 10 indicate scores which are more than two standard

deviations from the mean. The use of sten scores permits the ready comparison of factor scores based on different forms of the same test or on factors which appear in more than one test. In this study all 16PF scores referred to are sten scores.

The Handbook gives a detailed account of the design and rationale of the 16PF in its various forms and provides bipolar descriptions of the factors measured as well as other necessary information. The reliability of the factors in Form A of the test (the form used in this study) vary from 0.83 to 0.61, values which are typical of personality measures. The validity of the scales is assessed by construct validity, that is they are valid if they correlate well with the statistical factors they represent. Several reports, the most recent being that of Tsujioka and Cattell (1965), have demonstrated that the factors appear repeatedly across cultures. The average construct validity coefficient is 0.85 which is an acceptable figure.

Information about the use of the 16PF in clinical and research settings is collated and issued by the Institute of Personality and Ability Testing in its series of Information Bulletins. A study by McAllister (1968) and unpublished data by Philip provide normative Scottish data for normals and psychiatric patients. McAllister's study attempted to relate Foulds' (1965a) proposition that incapacity for mutual personal relations increased along a continuum from normality, through personality disorder, neurosis, integrated psychosis to non-integrated psychosis, to Cattell's (1965) observation that there was a functional imbalance in the personality processes of the mentally ill. McAllister analysed the 16PF profiles of normals and psychiatric groups classified according to Foulds' continuum and concluded that his results, which showed that the non-integrated psychotics differed from normals on nine factors

while personality disorders differed only on four, confirmed Foulds' formulation. When all the psychiatric groups were compared with normals on the first order factors the following results were obtained. Personality disorders were more dominant (E+), more happy-go-lucky (F+), more expedient (G-) and more shrewed and cunning (N+). Neurotics were more unstable (C-), more expedient (G-), more apprehensive (O+), more group dependent (Q2-), less integrated (Q3-) and more tense (Q4+). Integrated psychotics were less intelligent (B-), more unstable (C-), more reticent (F-), more sensitive (I+), more self-concerned (M+) and more apprehensive (O+). Non-integrated psychotics were more reserved (A-), less intelligent (B-), more unstable (C-), more reticent (F-), more self-concerned (M+), more simple (N-), more apprehensive (O+) and more tense (Q4+).

The 16PF form A was administered in much the same way as the HDHQ. Care was taken to point out that each question was to be answered on a 3 point format as opposed to the true-false format of the HDHQ. The items comprising form A of the 16PF appear in Appendix A, along with the items of the SSI and HDHQ.

CHAPTER 5

GENERAL METHODOLOGY OF THE STUDY

The Poisoning Treatment Centre of the Royal Infirmary of Edinburgh, situated in Ward 3 of that hospital, is organised as an acute medical ward with special psychiatric facilities which have been described in detail by Kessel, McCulloch and Simpson (1963). All cases of suspected attempted suicide are seen by a psychiatrist who completes a schedule which provides a source of basic data about ward admissions. Information from these schedules was used to complete a protocol for each patient seen in this study (see Appendix B). In addition, psychiatrists were asked to complete a number of rating scales and were requested to ascertain whether the patient in question had ever been in trouble with the law, and whether in the case of married patients there was any evidence of inter-spouse violence, infidelity or alcoholism. This information was added to the patient's protocol. Patients were tested individually by the author, who identified himself as a psychologist who was giving certain tests to patients in order to find out more about the factors which led people to behave as they had done. In general the tests were given in the order SSI, HDHQ and 16PF, but pressure of work frequently occasioned changes in the order so that, while patient A was being asked the items of the SSI in one part of the ward, patient B was answering the questions of the 16PF or HDHQ. Testing was carried out in the ward itself or in a side-room when the latter was available. Although such conditions were less than perfect they did not appear to bother the patients as much as they did the tester.

Selection of patients

It had been intended that every man and every second woman admitted to the ward following a suicidal attempt would be tested until fifty patients of each sex had been gathered. McCulloch and Philip (1967b) interviewed close on 100 patients in a six-week period and found, as had Kessel (1965), that women formed nearly two thirds of all admissions following a suicidal attempt. By testing alternate female admissions it was hoped that sex differences attributable to seasonal fluctuations could be avoided. In practice this intention was not fulfilled; while most cases were interviewed and completed the battery of psychological tests, some patients were interviewed and either did not complete all the tests or were considered untestable. A number of patients were not interviewed or tested at all. Thus psychological data were gathered on fifty men and fifty women over the period 1st February to 30th June, 1967 in which time 329 patients (132 men, 197 women) were admitted to the ward one or more times following a suicidal attempt. Failure to complete the test battery was due to a number of reasons. The most frequent were lack of understanding due to low intelligence, poor eyesight, illiteracy, impairment of function due to psychiatric state, refusing to complete the test battery and leaving the ward before all the testing had been completed. In the last category were patients who agreed to complete the inventories at home and return them to the ward but did not in fact carry out their promise, despite being sent reminder letters. The patients who were not interviewed or tested at all fell into two categories; those who stayed in the ward for less than 24 hours and those who were discharged much earlier than expected. It had been foreseen that the former group would prove difficult to run to ground short of working on a 24 hour

basis; such patients proved to be elusive in McCulloch and Philip's (1967b) study where the manpower available was double that in the present case. Failure to contact the latter group was primarily a function of patient turnover in the ward. Ward 3 has a very high turnover of patients and admissions follow an irregular pattern; several days may pass without any patients being admitted; these lulls are often followed by spells of intense activity when the pressure on staff leads to the early discharge of patients who in other circumstances would have remained in hospital for much longer periods.

Kessel (1965) and McCulloch (1965) achieved 100 per cent cover of a year's intake to the ward and it might be thought that the present study shows up rather poorly in comparison. The number of patients passing through Ward 3 has increased markedly since 1962-1963 when the Kessel and McCulloch survey was carried out, and so it has become correspondingly more difficult to achieve complete cover. More important is the fact that McCulloch's information about patients was obtained primarily from relatives or other informants. Information of an interview nature can be elicited from drowsy patients with patience and good technique but such patients cannot cope with the more exacting task of completing personality questionnaires until they are much more alert. By the time they have reached this stage of recovery they are usually ready for discharge and are much less willing to remain in the ward.

Because of this failure to sample the ward population according to the original plan it was felt that the patients who completed the test battery might be different in some aspects from those who did not complete the battery. No check on psychological differences could be made but a check on the medical,

social and demographic data available from the routine data coding sheets and used in the survey protocols of the tested patients was possible. It was hypothesized that the patients who were tested formed an unbiassed sample of the Ward 3 population in regard to these coded variables and could be regarded as having been drawn at random from that population. If this hypothesis were true then the tested patients would not differ significantly on such variables from another random sample drawn from the same population. Such a sample, comprising fifty men and fifty women, was constituted by selecting the names of patients from the ward admission book with the aid of a table of random numbers. The parent population of this sample comprised all those patients admitted between February 1st and June 30th, 1967 who were deemed to have made a suicidal attempt.

Data relating to age, civil state, length of stay in the ward, method of suicidal attempt, level of consciousness on admission (Matthew and Lawson, 1966), psychiatrist's estimate of degree of premeditation, occurrence of suicidal threats, motivating factors, history of previous attempts by the patient or a relative, history of psychiatric or chronic physical illness, abuse of alcohol or drugs and psychiatric diagnosis were tabulated for men and women separately. Differences between the sexes on these items were tested by the appropriate statistical methods, usually X^2; the results of these tests and the tables of scores on which they were calculated are given in Appendix C. Of all these comparisons only three yielded significant sex differences. Men had a greater incidence of chronic physical illness ($X^2 = 6.77$, d.f. = 1, $p < .01$) and more frequently had histories of problem drinking ($X^2 = 29.33$, d.f. = 1, $p < .0005$) while women were more often given diagnoses other than affective disorder or personality disorder ($X^2 = 9.66$,

d.f. = 1, p <.01). Appendix C also contains tables showing the distribution of the above items and the statistical tests between the sexes for those patients who completed psychological testing. Only one sex difference emerged; more men had histories of problem drinking (X^2 = 10.18, d.f. = 1, p <.005). Lastly, Appendix C shows the comparisons made between the tested patients and the random controls, the sexes having been considered separately. There is only one significant difference between the two groups of women, the random group having been given more diagnoses other than affective disorder or personality disorder (X^2 = 11.33, d.f. = 2, p <.005). For men four significant differences emerge; the tested patients are younger (t = 2.70, d.f. = 98, p <.01), have fewer of their number who stay one day or less in hospital (X^2 = 10.42, d.f. = 2, p <.01), use aspirin as a method of self-poisoning more often (X^2 = 8.16, d.f. = 2, p <.025) and have fewer cases of problem drinking (X^2 = 5.80, d.f. = 1, p <.025). It has already been said that it had been anticipated that patients who stayed only briefly in the ward would be difficult to test and comparison of the male tested group and male random group bears this out. Although the two groups of women do not differ significantly on this item, they do show a difference which is in the same direction as that for men. Younger patients are more likely to use aspirin in a suicidal attempt (Kessel, 1965) and medical management of acute salicylate poisoning (Beveridge, Forshall, Munro, Owen and Weston, 1964; Matthew, Mackintosh, Tompsett and Cameron, 1966) usually ensures that the patient remains in the ward for more than 24 hours. Problem drinkers coming to the ward tend to be older men and seldom stay for any length of time.

On the whole it seems that the patients who were interviewed and completed psychological testing do not differ greatly from random controls in regard to

a variety of social and clinical factors. Indeed there is only one significant difference between the women who were tested and those who comprised the random group. Since it has been shown that they are fairly representative of the population from which they came, their psychological test results can be generalised to the Ward 3 population as a whole with some degree of confidence.

The psychiatric rating scales

In the study reported by McCulloch and Philip (1967b) it was noted that most of the clinical diagnoses were based not only on signs and symptoms of illness but also on the personality characteristics of patients. Philip and McCulloch (1967b) suggested that a measure of social pathology would be of use as an aid to the more accurate diagnosis of patients seen in the Poisoning Treatment Centre. As a first step towards a procedure where a diagnosis could be made in terms of symptoms, personality abnormality and social disorder or deviance with these three dimensions assessed independently, three rating scales were devised. It has been shown (Osgood, Suci and Tannenbaum, 1957) that most people can use a rating scale which has seven choice points without much difficulty and so seven point scales were used in the present study. In the first scale the psychiatrist was asked to rate the presence of symptoms and signs of <u>any</u> psychiatric illness. A rating of 7 indicated the presence of symptoms and signs which allowed a formal diagnosis to be made with certainty, a rating of 1 denoted the clear absence of psychiatric signs and symptoms. The psychiatrist was urged to use the diagnostic approach of Mayer-Gross, Slater and Roth (1960). The second scale provided a measure of personality abnormality, a rating of 7 denoting that in

the psychiatrist's opinion the patient manifested clear indications of personality abnormality. The third scale attempted to measure the presence of social disorder and deviance, a rating of 7 denoting that the psychiatrist was of the opinion that the patient's history showed evidence of social disorder. For the second and third scales it was suggested to the psychiatrist that the range of behaviour commonly seen in general medical and surgical patients should be used as a baseline against which to rate the patients seen in the Poisoning Treatment Centre.

Two further rating scales were completed by the psychiatrists. One was a rating of life endangerment, the other a rating of precautions taken to avoid or ensure discovery. On the life endangerment scale a rating of 7 indicated that in the psychiatrist's opinion the patient would have been certain to die if he or she had not been discovered. A rating of 7 on the precautions scale indicated that the patient was considered to have taken definite precautions to <u>avoid</u> discovery while a rating of 1 indicated that a patient was thought to have taken definite precautions to <u>ensure</u> discovery.

All these scales are open to criticism on the grounds that they lack objectivity. However they are no more subjective than ordinary clinical diagnoses or the kinds of life endangerment categories used by Kessel (1965) and Stengel and Cook (1958).

<u>The Social Prognosis Index</u>

The results of a one year follow-up study of patients admitted to the Poisoning Treatment Centre (McCulloch, 1965) have been discussed in Chapter 2. A Social Prognosis Index (SPI) based on McCulloch's findings was devised so as to facilitate the comparison of the personality characteristics of

patients having a good predicted social prognosis with those of patients having a poor predicted social prognosis. McCulloch's thesis was carefully examined for items which he had found to be related to social improvement. Following this examination lists of important factors for men and women respectively were devised. For women 16 items were used while for men the number was 15; the overlap between the two sets of items being large. For women the following items, if present, carried good prognostic implications (the numbers refer to position of the items on the SPI).

1. Patient unmarried, aged under 34 years.
3. Extant marriage, patient aged 35 years or more, or married for 5 years or more.
8. Patient living in own home (if married) or with parents (if single).
11. Use of aspirin as method of self-poisoning.
14. Primary diagnosis of "nil psychiatric".

The following 11 items, if present, carried poor prognostic implications.

2. Patient unmarried, aged 34 years or more.
4. Extant marriage with violence, infidelity, alcoholism in spouse or with marital disharmony as a precipitant.
5. Patient separated or divorced.
6. Patient's work record one of frequent job changes (3+ in year), unemployment or casual labour.
7. Patient's social class IV or V.
9. Drinking or drug taking seen to be a problem (by patient, informant or psychiatrist).
10. Trouble with the law (any one of these:- warned by police, approved school, probation, fines, jail).
12. Use of "cutting" and "other" methods.
13. Rating of 1 or 2 on life endangerment scale.

15. Primary diagnosis of personality disorder.

16. Previous suicidal attempt.

For men the following items carried good implications for social improvement.

1. Patient unmarried, aged under 20 years.

2. Extant marriage, patient aged 35 years or more, or married for 5 or more years.

7. Patient living in own home (if married) or with parents (if single).

10. Use of aspirin as method of self-poisoning.

13. Primary diagnosis of neurosis or depression.

The presence of the remaining items implied poor social improvement.

2. Patient unmarried, aged 20 years or more.

4. Extant marriage with violence, infidelity, alcoholism in spouse or with marital disharmony as a precipitant.

5. Patient separated or divorced.

6. Patient's work record one of frequent job changes (3+ in year), unemployment or casual labour.

8. Drinking or drug taking seen to be a problem (by patient, informant or psychiatrist).

9. Trouble with the law (any one of these:- warned by police, approved school, probation, fines, jail).

11. Use of "cutting" and "other" methods.

12. Rating of 1 or 2 on life endangerment scale.

14. Primary diagnosis of "nil psychiatric" or personality disorder.

15. Previous suicidal attempt.

For both sexes the SPI score was obtained by totalling the number of "good" items and "bad" items and applying the following formula:-

SPI score = 10 + (Sum "Good" - Sum "Bad").

For men the range of possible scores is 2 - 14 while for women it is 1 - 14. The validity of this SPI scale depends on its close adherence to McCulloch's (1965) work. Because of differences in data collection (there was no full-time psychiatric social worker in the ward at the time of this study) some of McCulloch's items could not be used but most of his factors are included in the scale.

Treatment of results

The evidence presented in Chapters 2 and 3 makes it clear that there is no "suicidal personality". Accordingly, most of the interest in the results of this study stems from the possibility of discovering significant within-group differences, using a variety of measures to divide the population. However, comparison of the scores obtained on the SSI, HDHQ and 16PF by this attempted suicide population with the scores of various normal and psychiatric groups is also important since it establishes points of similarity and difference in the personalities of attempted suicides and other populations.

The first part of the results chapter will present an overall description of the group in terms of the SSI, HDHQ and 16PF. This will be succeeded by the following within-group comparisons, in which the HDHQ and 16PF scores of men and women will be treated separately.

1. Using the Social Prognosis Index a comparison will be made between those patients having a good predicted social prognosis and those having a poor predicted prognosis.

2. The scales rating life endangerment and precautions regarding discovery will be used to compare patients whose lives were endangered with those whose lives were not endangered and similarly to compare those who had taken precautions to ensure discovery with those who had taken precautions to avoid discovery.
3. The scores obtained by individuals in different diagnostic categories, using clinical diagnoses and SSI categories, will be compared.
4. The psychiatric ratings of symptoms, personality abnormality and social disorder will be used to divide the population and comparisons will be made between patients rated high and low on these scales.
5. Comparisons will be made between patients who have never made a previous suicidal attempt with those who have made a previous attempt.

Finally, the relationships between some of these variables will be considered.

Statistical methods

In comparisons where only two groups of patients are involved, the significance of the differences in their mean scores on variables will be tested by the familiar t-test (Guildford, 1965). Where more than two groups are involved a one-way analysis of variance (Guildford, 1965) will be carried out to test whether there is an overall difference between the groups. In cases where the F ratio is significant the Studentized range statistic "q" will be used to test differences between the means. The procedure devised by Tukey

and recommended by Winer (1962, p. 89) will be used in all such cases. This procedure is a conservative one, reducing to a minimum the possibility of producing falsely significant results and has been termed "the honestly significant difference procedure" (Winer, 1962, p. 87). For any two means to be significantly different the difference between them must be greater than the critical value produced by the following formula.

$$\text{Critical value} = q\,(k,\, df)\sqrt{\frac{MSw}{n}}$$

where q = the Studentized range statistic

k = the number of groups in the analysis

df = the degrees of freedom for the within group sum of squares (from the analysis of variance)

MSw = the within groups mean square (from the analysis of variance)

n = the number of cases in each group

In the present study the number of cases varies from group to group so that n is replaced by the harmonic mean $\hat{n}$.

$$\hat{n} = \frac{k}{1/n_1 + 1/n_2 + \ldots\ldots 1/n_k}$$

where k = number of groups

and n_1 = the number of cases in group 1,

n_2 = the number of cases in group 2, etc.

Some of the data are unsuitable for treatment by parametric techniques; in such cases chi square and other appropriate techniques (Siegel, 1956) will be used. Tests of association between variables such as product-moment correlations and tau correlations will be applied where the conditions for the use of such measures are appropriate (Guildford, 1965; Kendall, 1948).

CHAPTER 6

RESULTS

Characteristics of the group as a whole

a) **The Symptom Sign Inventory**

Tables 6.1, 6.2 and 6.3 show the distributions of men and women on the SSI scales of Personal Disturbance and Character Disorder, these scales being considered both singly and together. No significant sex differences appear, although the group of women contains slightly more character disordered

TABLE 6.1

DISTRIBUTION OF MEN AND WOMEN ON SSI PERSONAL DISTURBANCE

	Men	Women	Total
Normal	6	6	12
Borderline Disturbed	16	14	30
Personally Disturbed	28	30	58
Total	50	50	100

X^2 (Sex difference) = 0.20, d.f. = 2, n.s.

TABLE 6.2

DISTRIBUTION OF MEN AND WOMEN ON SSI CHARACTER DISORDER

	Men	Women	Total
Not Character Disordered	29	23	52
Character Disordered	21	27	48
Total	50	50	100

X^2 (Sex difference) = 1.00, d.f. = 1, n.s.

individuals than the male group. It can be seen from Table 6.3 that 12 per cent of the population show no signs of personal disturbance, 40 per cent are personally disturbed, half of these to a borderline degree only, while the remaining 48 per cent of the sample are character disordered.

TABLE 6.3

DISTRIBUTION OF MEN AND WOMEN ON THE SSI SCALES OF PERSONAL DISTURBANCE AND CHARACTER DISORDER TAKEN TOGETHER

	Men	Women	Total
Normal	6	6	12
Borderline Disturbed	11	9	20
Personally Disturbed	12	8	20
Character Disordered	21	27	48
Total	50	50	100

X^2 (Sex difference) = 1.75, d.f. = 3, n.s.

b) The Hostility and Direction of Hostility Questionnaire

Table 6.4 shows the mean scores obtained by men and women on the HDHQ. Two sex differences emerge, men scoring higher on Delusional Hostility ($t = 2.61$, d.f. = 98, $p<.02$) and on Sum E, the sum of the extrapunitive scales AH, CO and DH, ($t = 2.16$, d.f. = 98, $p<.05$).

TABLE 6.4

SCORES OF THE GROUP ON THE HDHQ

	Men		Women		Total	
	Mean	(SD)	Mean	(SD)	Mean	(SD)
Acting out Hostility	6.52	(3.20)	6.00	(2.91)	6.26	(3.05)
Criticism of Others	6.78	(2.76)	5.64	(3.05)	6.21	(2.95)
Delusional Hostility	2.90	(1.80)	2.06	(1.43)	2.48	(1.67)
Self Criticism	6.60	(2.68)	7.46	(2.71)	7.03	(2.72)
Delusional Guilt	3.90	(1.67)	3.96	(2.19)	3.93	(1.94)
General Hostility	26.78	(8.62)	25.08	(9.37)	25.93	(8.99)
Direction of Hostility	100.52	(8.19)	105.18	(6.92)	102.85	(7.90)
Sum E	16.28	(6.69)	13.66	(6.25)	14.97	(6.59)
Sum I	10.50	(4.06)	11.42	(4.42)	10.96	(4.25)

In Table 6.5 the component scores are compared with the scores obtained by the Scottish normal and neurotic groups tested by Philip (1968). The present population of attempted suicide patients score higher on General Hostility than either normals or neurotics (Normals v. AS, $t = 10.74$, d.f. = 338, $p<.001$; Neurotics v. AS, $t = 6.59$, d.f. = 201, $p<.001$).

TABLE 6.5

HIMQ COMPONENT SCORES FOR NORMALS, NEUROTICS AND ATTEMPTED SUICIDES

General Hostility		Mean	(SD)	
Normals	(n=240)	15.17	(6.91)	Normals v. AS, t = 10.74, d.f. = 338, p<.001.
Neurotics	(n=103)	18.04	(8.05)	
Attempted Suicides	(n=100)	25.93	(8.99)	Neurotics v. AS, t = 6.59, d.f. = 201, p<.001.

Direction of Hostility		Mean	(SD)	
Normals	(n=240)	103.13	(5.70)	Normals v. AS, t = 0.32, d.f. = 338, n.s.
Neurotics	(n=103)	106.08	(5.88)	
Attempted Suicides	(n=100)	102.85	(7.90)	Neurotics v. AS, t = 3.30, d.f. = 201, p<.005.

They do not differ from normals in Direction of Hostility (t = 0.32, d.f. = 338, n.s.) and like the latter they are less intropunitive than neurotics (t = 3.30, d.f. = 201, p<.005). Since Philip did not calculate Sum E and Sum I in his study no tests of significance can be carried out on these scores.

c) The Sixteen Personality Factor Questionnaire

The mean scores obtained by the group on the sixteen primary factors and two second-order factors of the 16PF are shown in Table 6.6. Three of the first-order factors reveal significant sex differences; men are more outgoing, A + (t = 4.47, d.f. = 98, p<.001), more sensitive, I + (t = 3.30, d.f. = 98, p<.005) and more conservative, Q1 - (t = 3.50, d.f. = 98, p<.001).

TABLE 6.6

SCORES OF THE GROUP ON THE 16PF

Primary factors (high score description)	Men Mean	(SD)	Women Mean	(SD)	Total Mean	(SD)
A (outgoing)	6.50	(1.64)	5.06	(1.60)	5.78	(1.77)
B (intelligent)	6.64	(1.89)	6.18	(1.84)	6.41	(1.87)
C (stable)	3.90	(2.31)	3.38	(1.94)	3.64	(2.14)
E (dominant)	5.16	(1.87)	5.62	(1.68)	5.39	(1.78)
F (enthusiastic)	5.26	(1.78)	5.04	(2.00)	5.15	(1.89)
G (conscientious)	4.18	(1.89)	4.24	(1.79)	4.21	(1.83)
H (venturesome)	4.10	(1.87)	4.26	(1.76)	4.18	(1.81)
I (sensitive)	6.30	(1.61)	5.18	(1.80)	5.71	(1.79)
L (suspecting)	6.54	(1.97)	6.66	(2.13)	6.60	(2.04)
M (self-absorbed)	6.36	(1.54)	6.12	(1.78)	6.24	(1.66)
N (sophisticated)	4.76	(1.95)	5.56	(2.16)	5.16	(2.09)
O (apprehensive)	7.70	(1.71)	7.36	(2.25)	7.53	(1.99)
Q1 (radical)	4.66	(1.72)	5.92	(1.89)	5.29	(1.91)
Q2 (self-sufficient)	6.34	(1.99)	6.76	(1.66)	6.55	(1.83)
Q3 (self-controlled)	4.84	(1.92)	4.38	(2.45)	4.61	(2.22)
Q4 (tense)	7.14	(2.03)	7.02	(2.13)	7.08	(2.07)
Second-order factors						
Anxiety	7.56	(2.01)	7.64	(2.35)	7.60	(2.17)
Introversion-Extraversion	4.18	(1.89)	3.96	(1.70)	4.07	(1.79)

In Chapter 4 it was pointed out that sten scores of 5 and 6 were average, with stens from 4 to 1 and 7 to 10 respectively indicating increasing departure from the mean. When dealing with group means it is convenient to regard all scores from 4.5 to 6.5 as average. Using these guidelines to normal scores it is seen that the present group is emotionally unstable (C-), lacking in conscientiousness (G-), shy (H-), suspicious (L_+), apprehensive (O_+), self-sufficient ($Q2_+$) and tense ($Q4$). The second-order factors summarise these departures from normality, the group is somewhat introverted and is very anxious.

Comparisons with the groups studied by McAllister (1968), using the profile similarity coefficient r_p (Cattell, 1949) show that the attempted suicide group have a mean personality profile which is very similar to that obtained by neurotics ($r_p = 0.79$) and has almost as strong a resemblance to the profiles of integrated and non-integrated psychotics ($r_p = 0.78$ in both cases).

d) The rating scales

The distributions of scores on the rating scales used to assess the presence of symptoms, personality abnormality and social disorder or deviance are seen in Table 6.7. The scales do not show any significant sex differences in the

TABLE 6.7

CUMULATIVE DISTRIBUTIONS OF SCORES ON RATING SCALES OF SYMPTOMS, PERSONALITY ABNORMALITY AND SOCIAL DISORDER

A. Symptoms and Signs

	Rating						
	1	2	3	4	5	6	7
Men	6	12	14	20	28	40	50
Women	6	13	15	25	35	41	50
Total	12	25	29	45	63	81	100

Kolmogorov-Smirnov D = 0.14, n.s.

TABLE 6.7 (continued)

B. Personality Abnormality

	Rating						
	1	2	3	4	5	6	7
Men	10	13	14	18	33	45	50
Women	8	12	15	20	33	41	50
Total	18	25	29	38	66	86	100

Kolmogorov-Smirnov D = 0.08, N.S.

C. Social Disorder

	Rating						
	1	2	3	4	5	6	7
Men	16	21	23	27	36	40	50
Women	17	21	27	28	32	37	50
Total	33	42	50	55	68	77	100

Kolmogorov-Smirnov D = 0.08, N.S.

distribution of rating scores on the three scales. The distributions are distinctly non-normal, the social disorder scale in particular showing a preponderance of extreme ratings.

The scales rating degree of life endangerment and precautions taken to avoid or ensure discovery are also non-normal in their score distribution (Table 6.8). On the life endangerment scale over one third of all patients were given a rating of 1; they were considered certain to live.

TABLE 6.8

CUMULATIVE DISTRIBUTIONS OF SCORES ON RATING SCALES OF LIFE ENDANGERMENT AND PRECAUTIONS TAKEN TO AVOID OR ENSURE DISCOVERY

A. Life Endangerment

	Rating						
	1	2	3	4	5	6	7
Men	19	27	32	38	45	47	50
Women	16	25	29	37	44	48	50
Total	35	52	61	75	89	95	100

Kolmogorov-Smirnov D = 0.06, n.s.

B. Precautions taken to avoid or ensure discovery

	Rating						
	1	2	3	4	5	6	7
Men	11	21	22	45	46	48	50
Women	13	20	27	45	47	49	50
Total	24	41	49	90	93	97	100

Kolmogorov-Smirnov D = 0.10, n.s.

Only 5 patients were considered to have avoided certain death by being discovered. Forty-one per cent of patients were considered to have taken precautions to ensure discovery while a further 41 were rated 4, suggesting

that the psychiatrist did not consider that precautions of any kind were taken.

e) **The Social Prognosis Index**

The distribution of scores for men and women on the SPI appears in Table 6.9.

TABLE 6.9

DISTRIBUTION OF SCORES FOR MEN AND WOMEN ON THE SOCIAL PROGNOSIS INDEX

Score	Men	Women
14	0	0
13	0	0
12	3	8
11	3	4
10	7	10
9	6	2
8	6	10
7	6	6
6	6	5
5	7	2
4	4	2
3	1	0
2	0	1
1	0	0
	n = 50	n = 50
Mean	= 7.60	Mean = 8.60
SD	= 2.38	SD = 2.45

For men the possible range of scores is 2 to 14, for women it is 1 to 14; it can be seen from the table that the scores for both sexes are well distributed over their respective ranges. Because the content of the SPI is not the same for men and women a comparison of their scores is not appropriate.

Within group comparisons

Detailed tables showing the means and standard deviations of each sub-group used in the within group comparisons are to be found in Appendix D. Tables in the text relate to variables where significant differences between sub-groups were found. In these tables a single asterisk indicates a difference which is significant at the .05 level while double asterisks denote differences which reach the .01 level of significance.

a) The Social Prognosis Index

For men and women four categories of social prognosis were devised and an attempt was made to keep the numbers in each categories as equal as the distribution of scores on the SPI would allow. Patients in group 1 had the poorest prognosis, group 2 the next poorest, group 3 the second best and group 4 the best prognosis. For men group 1 comprised of 12 patients whose scores on the SPI were 5 or less, group 2 comprised of 13 patients who scored 6 or 7, group 3 consisted of 12 patients having scores of 8 or 9 and group 4 was made up of the remaining 13 patients who scored 10 or more. Ten women who had scored 6 or less comprised group 1, 16 who scored 7 or 8 formed group 2, 12 having scores of 9 or 10 made up group 3 and group 4 contained the remaining 12 patients who had scores of 11 and above.

For each personality variable of the HDHQ and 16PF a one-way analysis of variance was carried out to ascertain whether the groups differed to a significant degree. The men differed only on one variable, factor F of the 16PF ($F_{(3,46)} = 3.10$, $p<.05$). Table 6.10 shows that none of the differences

TABLE 6.10

DIFFERENCES BETWEEN SPI (MEN) GROUPS ON FACTOR F (ENTHUSIASM)

	Mean	Differences between means		
Group 1	5.83	- 0.02	0.50	1.75
Group 2	5.85	-	0.52	1.77
Group 3	5.33		-	1.25
Group 4	4.08			-

Critical values for an honestly significant difference;
.05 level, 1.80; .01 level, 2.25.

between the group means are greater than the critical values needed for an honestly significant difference to appear. Women differed on three variables, factor C ($F_{(3,46)} = 3.97$, $p<.025$), factor O ($F_{(3,46)} = 2.96$, $p<.05$) and Acting out Hostility ($F_{(3,46)} = 3.13$, $p<.05$). On factor C (Table 6.11)

TABLE 6.11

DIFFERENCES BETWEEN SPI GROUPS (WOMEN) ON FACTOR C (EMOTIONAL MATURITY)

	Mean	Differences between means		
Group 1	2.70	- 0.11	0.47	2.22*
Group 2	2.81	-	0.35	2.11*
Group 3	3.17		-	1.75
Group 4	4.92			-

Critical values for an honestly significant difference;
.05 level, 1.95; .01 level, 2.41.

groups 1 and 2 are differentiated from group 4, the former groups manifesting marked emotional instability and being easily upset. On factor O (Table 6.12) groups 1 and 4 are again significantly different, those with a good prognosis

TABLE 6.12

DIFFERENCES BETWEEN SPI GROUPS (WOMEN) ON FACTOR O (APPREHENSIVENESS)

	Mean	Differences between means		
Group 1	8.30	- 0.80	0.38	2.47*
Group 2	7.50	-	0.42	1.67
Group 3	7.92		-	2.09
Group 4	5.83			-

Critical values for an honestly significant difference;
.05 level, 2.32; .01 level, 2.87.

being average on the factor while the poor prognosis group is very apprehensive and troubled. The Acting out Hostility scale of the MDHQ also differentiates the extreme groups (Table 6.13), the group with poor prognosis showing a very

TABLE 6.13

DIFFERENCES BETWEEN SPI GROUPS (WOMEN) ON ACTING OUT HOSTILITY

	Mean	Differences between means		
Group 1	7.60	- 1.41	1.27	3.52*
Group 2	6.19	-	0.14	2.11
Group 3	6.33		-	2.25
Group 4	4.08			-

Critical values for an honestly significant difference;
.05 level, 2.99; .01 level, 3.70.

marked urge to act out their aggressive impulses, some of these urges being manifested in their behaviour.

When men are considered in terms of good or bad social prognosis categories they differ on only one of 27 variables, this difference being of marginal significance. Women show differences on 3 variables on each of which could be differentiated the groups with the best and worst prognoses.

b) The Life Endangerment Scale

The ratings were reduced to three categories as follows: category 1 comprised those patients given ratings of 1 or 2 (27 M, 25 F) indicating that their lives had not been in danger, category 2 contained those given ratings of 3 and 4 (11 M, 12 F) indicating some risk to life, while category 3 comprised those rated 5, 6 or 7 (12 M, 13 F) whose lives had been in danger. Using these categories of endangerment, analysis of variance was carried out on each personality variable. For women there were no significant personality differences between the life endangerment categories while for men one difference emerged. Table 6.14 shows that men in the high risk of death category scored higher on Sum E than those men in the low endangerment

TABLE 6.14

DIFFERENCES BETWEEN LIFE ENDANGERMENT CATEGORIES (MEN) ON SUM E

	Mean	Differences between means	
Category 1 (low risk)	14.74	- 2.74	6.01*
Category 2 (intermediate)	16.00	-	4.75
Category 3 (high risk)	20.75		-

Critical values for an honestly significant difference;
.05 level, 5.80; .01 level, 7.36.

category ($F_{(2,47)} = 3.68$, $p<.05$). Thus male patients who had been rated as having seriously endangered their lives had more extrapunitive responses on the HDHQ. The detailed scores in Appendix D show that men and women scored differently on several of the variables, for example, on Sum E men in category 3 scored higher than men in category 1 while for women low scores were in category 3 and high scores in category 1. The lack of significant results for women means that these findings are interesting but of doubtful significance.

c) The Precautions Taken to Avoid or Ensure Discovery Scale

As with the life endangerment scale the ratings on this scale were reduced to three categories. Patients rated 1, 2 or 3 (22 M, 27 F) who were considered to have taken precautions to ensure discovery formed category 1. Those rated 4 (23 M, 18 F) where no evidence regarding precautions could be found formed category 2 and those rated 5, 6 or 7 (5 M, 5 F) who were considered to have tried to avoid discovery formed category 3. The three categories of women did not differ on any of the personality measures when analyses of variance were carried out. For men, three variables yielded significant variance ratios; these were factor Q4 ($F_{(2,47)} = 3.31$, $p<.05$), Delusional Guilt ($F_{(2,47)} = 3.55$, $p<.05$) and General Hostility ($F_{(2,47)} = 3.46$, $p<.05$). Table 6.15

TABLE 6.15

DIFFERENCES BETWEEN PRECAUTIONS TAKEN CATEGORIES (MEN) ON FACTOR Q4 (TENSENESS)

	Mean	Differences between means	
Category 1 (ensure)	7.36	- 0.03	2.36*
Category 2 (intermediate)	7.39	-	2.39*
Category 3 (avoid)	5.00		-

Critical values for an honestly significant difference;
.05 level, 2.07; .01 level, 2.63.

shows that men who had taken precautions to avoid discovery had an average mean score on Q4 (tenseness) while those who had taken precautions to ensure discovery, or who were in the intermediate category, scored high. On Delusional Guilt (Table 6.16) the mean score for those whose precautions

TABLE 6.16

DIFFERENCES BETWEEN PRECAUTIONS TAKEN CATEGORIES (MEN) ON DELUSIONAL GUILT

	Mean	Differences between means		
Category 1 (ensure)	4.32	-	0.45	1.87*
Category 2 (intermediate)	3.87		-	1.67
Category 3 (avoid)	2.20			-

Critical values for an honestly significant difference;
.05 level, 1.70; .01 level, 2.15.

were aimed at ensuring discovery is higher than that for those whose aim was to avoid discovery. The scores on General Hostility (Table 6.17) follow the same trend although the means are not sufficiently far apart to produce an honestly significant difference.

TABLE 6.17

DIFFERENCES BETWEEN PRECAUTIONS TAKEN CATEGORIES (MEN) ON GENERAL HOSTILITY

	Mean	Differences between means		
Category 1 (ensure)	30.18	-	5.66	7.98
Category 2 (intermediate)	24.52		-	2.32
Category 3 (avoid)	22.20			-

Critical values for an honestly significant difference;
.05 level, 8.79; .01 level, 11.15.

While women show no personality traits associated with avoiding or ensuring discovery it appears that men who take precautions to avoid discovery are less tense and have fewer delusions of guilt than those who attempt to ensure discovery.

d) Psychiatric status

i) Major clinical diagnostic categories

The most frequently used diagnoses were those of affective disorder (13 M, 22 F) and personality disorder (27 M, 24 F). Table 6.18 shows those personality measures on which men diagnosed as suffering from affective disorder differed from those diagnosed as personality disorder. Affective

TABLE 6.18

DIFFERENCES BETWEEN MEN DIAGNOSED AS AFFECTIVE DISORDER AND PERSONALITY DISORDER

	Affective Disorder (n = 13)		Personality Disorder (n = 27)		t (d.f. = 38 in each case)
	Mean	(SD)	Mean	(SD)	
Factor G (conscientious)	5.15	(1.28)	3.52	(2.03)	3.09, p<.005
Acting out Hostility	5.15	(3.05)	7.33	(2.96)	2.14, p<.05
Direction of Hostility	104.46	(6.53)	98.63	(9.39)	2.28, p<.05
Sum E	13.46	(6.20)	18.70	(6.21)	2.50, p<.02

disordered men have a mean score on factor G which is average; in contrast the personality disordered men are very expedient and insensitive to group influences. The three HDHQ measures all indicate that the personality

disordered patients are characterized by their extrapunitiveness, especially in their tendency to act out their impulses. This outward expression of hostility is also characteristic of women personality disorders as is seen in Table 6.19. Not only are they more likely to act out, to criticise others

TABLE 6.19

DIFFERENCES BETWEEN WOMEN DIAGNOSED AS AFFECTIVE DISORDER AND PERSONALITY DISORDER

	Affective Disorder (n = 22)		Personality Disorder (n = 24)		t (d.f. = 44 in each case)
	Mean	(SD)	Mean	(SD)	
Anxiety	6.59	(2.44)	8.58	(1.69)	3.19, p<.005
Factor C (emotional stability)	4.27	(1.86)	2.67	(1.69)	3.01, p<.005
Factor L (suspecting)	5.82	(2.04)	7.46	(1.82)	2.87, p<.01
Factor N (sophisticated)	6.36	(1.79)	5.04	(2.24)	2.22, p<.05
Factor O (apprehensive)	6.41	(2.38)	8.25	(1.75)	2.97, p<.005
Factor Q4 (tense)	6.00	(2.02)	7.92	(1.77)	3.42, p<.005
Acting out Hostility	4.91	(2.74)	6.83	(2.63)	2.42, p<.025
Criticism of Others	4.41	(3.28)	6.67	(2.33)	2.67, p<.025
Delusional Hostility	1.59	(1.10)	2.42	(1.53)	2.13, p<.05
Delusional Guilt	3.14	(2.34)	4.67	(1.66)	2.55, p<.02
General Hostility	21.14	(10.27)	28.42	(6.16)	2.88, p<.01
Sum E	10.91	(6.16)	15.83	(4.82)	3.00, p<.005

and to feel somewhat paranoid than patients diagnosed as affective disorders but they also claim to be more guilt ridden. On the 16PF these personality

disordered women are extremely anxious, factors C, L, O and Q4 all contributing to the very high score of 8.58 sten on the Anxiety factor. Women diagnosed as suffering from affective disorder are only slightly more anxious than normal and tend to be somewhat more shrewd (N_+) than those diagnosed as personality disorders.

For both sexes patients suffering from personality disorders are predominantly extrapunitive in disposition. Female personality disorders are further characterized by very high levels of anxiety.

ii) SSI diagnostic categories.

The number of men and women falling in each of the categories, normal, borderline disturbed, personally disturbed and character disordered has been shown in Table 6.3. For men these categories differed on the following personality variables: Anxiety ($F_{(3,46)} = 4.73$, $p<.01$), M ($F_{(3,46)} = 4.47$, $p<.01$), O ($F_{(3,46)} = 3.67$, $p<.025$), Q4 ($F_{(3,46)} = 5.73$, $p<.01$), Delusional Hostility ($F_{(3,46)} = 4.31$, $p<.01$), Delusional Guilt ($F_{(3,46)} = 3.73$, $p<.025$), General Hostility ($F_{(3,46)} = 4.76$, $p<.01$), Sum E ($F_{(3,46)} = 2.93$, $p<.05$) and Sum I ($F_{(3,46)} = 3.31$, $p<.05$). On the second-order factor of Anxiety (Table 6.20) normals are clearly distinguished from character disorders, the latter having very high anxiety. Two of the primary factors contributing to Anxiety,

TABLE 6.20

DIFFERENCES BETWEEN SSI DIAGNOSTIC CATEGORIES (MEN) ON THE SECOND-ORDER FACTOR OF ANXIETY

	Mean	Differences between means		
Normal	6.00	- 0.36	1.92	2.43*
Borderline Disturbed	6.36	-	1.56	2.07
Personally Disturbed	7.92		-	0.51
Character Disorder	8.43			-

Critical values for an honestly significant difference;

.05 level, 2.15; .01 level, 2.66.

TABLE 6.21

DIFFERENCES BETWEEN SSI DIAGNOSTIC CATEGORIES (MEN) ON FACTOR O

	Mean	Differences between means		
Normal	6.33	- 0.76	1.25	2.15*
Borderline Disturbed	7.09	-	0.49	1.39
Personally Disturbed	7.58		-	0.90
Character Disorder	8.48			-

Critical values for an honestly significant difference;
.05 level, 1.87; .01 level, 2.32.

factor O (Table 6.21) and factor Q4 (Table 6.22) show character disordered men to be more apprehensive, guilt-prone and tense than normals. On the latter factor the borderline disturbed group have a mean score which is significantly more normal than that of the character disorders. Table 6.23 shows that on factor M the personally disturbed and character disordered groups tend to be inner-directed and unrealistic when compared with normals.

TABLE 6.22

DIFFERENCES BETWEEN SSI DIAGNOSTIC CATEGORIES (MEN) ON FACTOR Q4

	Mean	Differences between means		
Normal	5.50	- 0.32	2.00	2.50*
Borderline Disturbed	5.82	-	1.68	2.18*
Personally Disturbed	7.50		-	0.60
Character Disorder	8.10			-

Critical values for an honestly significant difference;
.05 level, 2.12; .01 level, 2.62.

TABLE 6.23

DIFFERENCES BETWEEN SSI DIAGNOSTIC CATEGORIES (MEN) ON FACTOR M

	Mean	Differences between means		
Normal	4.67	- 1.24	2.25**	2.09**
Borderline Disturbed	5.91	-	1.01	0.85
Personally Disturbed	6.92		-	0.16
Character Disorder	6.76			-

Critical values for an honestly significant difference;
.05 level, 1.65; .01 level, 2.05.

The personally disturbed group of patients show more Delusional Hostility (Table 6.24) than either the normal or borderline disturbed patients. Although significant variance ratios were found for Delusional Guilt (Table 6.25), Sum E (Table 6.26), and Sum I (Table 6.27), in none of these instances could an honestly significant difference be found.

TABLE 6.24

DIFFERENCES BETWEEN SSI DIAGNOSTIC CATEGORIES (MEN) ON DELUSIONAL HOSTILITY

	Mean	Differences between means		
Normal	1.83	- 0.01	2.17*	1.31
Borderline Disturbed	1.82	-	2.18*	1.32
Personally Disturbed	4.00		-	0.86
Character Disorder	3.14			-

Critical values for an honestly significant difference;
.05 level, 1.94; .01 level, 2.41.

TABLE 6.25

DIFFERENCES BETWEEN SSI DIAGNOSTIC CATEGORIES (MEN) ON DELUSIONAL GUILT

	Mean	Differences between means		
Normal	3.33	- 0.42	0.34	1.38
Borderline Disturbed	2.91	-	0.76	1.80
Personally Disturbed	3.67		-	1.04
Character Disorder	4.71			-

Critical values for an honestly significant difference;
.05 level, 1.83; .01 level, 2.27.

TABLE 6.26

DIFFERENCES BETWEEN SSI DIAGNOSTIC CATEGORIES (MEN) ON SUM E

	Mean	Differences between means		
Normal	12.83	- 0.01	4.50	6.08
Borderline Disturbed	12.82	-	4.51	6.09
Personally Disturbed	17.33		-	1.58
Character Disorder	18.91			-

Critical values for an honestly significant difference;
.05 level, 7.50; .01 level, 9.29.

TABLE 6.27

DIFFERENCES BETWEEN SSI DIAGNOSTIC CATEGORIES (MEN) ON SUM I

	Mean	Differences between means		
Normal	8.67	- 0.49	1.75	3.62
Borderline Disturbed	8.18	-	2.24	4.11
Personally Disturbed	10.42		-	1.87
Character Disorder	12.29			-

Critical values for an honestly significant difference;
.05 level, 4.51; .01 level, 5.58.

On General Hostility, however, it was found (Table 6.28) that character disordered patients scored much higher than those categorised as normal or borderline disturbed.

TABLE 6.28

DIFFERENCES BETWEEN SSI DIAGNOSTIC CATEGORIES (MEN) ON GENERAL HOSTILITY

	Mean	Differences between means		
Normal	21.50	- 0.50	6.25	9.26*
Borderline Disturbed	21.00	-	6.75	9.76*
Personally Disturbed	27.75		-	3.01
Character Disorder	30.76			-

Critical values for an honestly significant difference;
.05 level, 9.22; .01 level, 11.41.

Women show even more differences between SSI diagnostic categories. The second-order factor of Anxiety yields a significant variance ratio ($F_{(3,46)}$ = 16.21, p<.001) as do all the primary factors contributing to it. These are factor C ($F_{(3,46)}$ = 6.19, p<.01), factor H ($F_{(3,46)}$ = 3.37, p<.05), factor L ($F_{(3,46)}$ = 4.75, p<.01), factor O ($F_{(3,46)}$ = 15.30, p<.001), factor Q3 ($F_{(3,46)}$ = 4.66, p<.01) and factor Q4 ($F_{(3,46)}$ = 9.88, p<.001). Factors O and Q4, which showed differences between men, have the highest variance ratios. Table 6.29 indicates that the normal and borderline

TABLE 6.29

DIFFERENCES BETWEEN SSI DIAGNOSTIC CATEGORIES (WOMEN) ON SECOND FACTOR ANXIETY

	Mean	Differences between means		
Normal	4.17	- 1.72	3.96**	4.68**
Borderline Disturbed	5.89	-	2.24*	2.96**
Personally Disturbed	8.13		-	0.72
Character Disorder	8.85			-

Critical values for an honestly significant difference;
.05 level, 2.14; .01 level, 2.64.

disturbed groups are averagely anxious while the personally disturbed and character disorder groups have very high mean scores. This differentiation of the categories also occurs on factor O (Table 6.30) where the personally

TABLE 6.30

DIFFERENCES BETWEEN SSI DIAGNOSTIC CATEGORIES (WOMEN) ON FACTOR O

	Mean	Differences between means		
Normal	4.67	- 0.55	2.96**	3.92**
Borderline Disturbed	5.22	-	2.41*	3.37**
Personally Disturbed	7.63		-	0.96
Character Disorder	8.59			-

Critical values for an honestly significant difference;
.05 level, 2.08; .01 level, 2.57.

disturbed and character disorder groups show marked signs of apprehensiveness and are easily worried when difficulties arise. Factor Q4 shows a similar picture although in this instance (Table 6.31) the borderline disturbed are

TABLE 6.31

DIFFERENCES BETWEEN SSI DIAGNOSTIC CATEGORIES (WOMEN) ON FACTOR Q4

	Mean	Differences between means		
Normal	4.67	- 0.66	2.46*	3.40**
Borderline Disturbed	5.33	-	1.80	2.74**
Personally Disturbed	7.13		-	0.94
Character Disorder	8.07			-

Critical values for an honestly significant difference;
.05 level, 2.17; .01 level, 2.68.

not differentiated from the personally disturbed. On this factor patients who fall in the personally disturbed and character disorder groups show clear signs of being tense, restless and impatient, while normals and borderline disturbed patients have average scores. Normals are distinguished from the personally disturbed and character disordered on factors C (Table 6.32),

TABLE 6.32

DIFFERENCES BETWEEN SSI DIAGNOSTIC CATEGORIES (WOMEN) ON FACTOR C

	Mean	Differences between means		
Normal	5.50	- 1.06	2.25*	2.91**
Borderline Disturbed	4.44	-	1.19	1.85
Personally Disturbed	3.25		-	0.66
Character Disorder	2.59			-

Critical values for an honestly significant difference;
.05 level, 2.14; .01 level, 2.64.

L (Table 6.33) and Q3 (Table 6.34). Low scores on factor C are common in all psychiatric populations and the character disorder group in particular show themselves to be low in frustration tolerance, changeable, evasive and emotionally unstable in general. The normal group have a mean score of 5.5 which is at the mid-point of the sten scale. The personally disturbed score rather close to the character disorder group while the borderline disturbed have a mean score which could be termed "low-average". The two disturbed groups show a slight tendency to be mistrusting (L_4), the personally disturbed being differentiated from normals whose mean score suggests that they are reasonably concerned about other people and are free from jealousy.

TABLE 6.33

DIFFERENCES BETWEEN SSI DIAGNOSTIC CATEGORIES (WOMEN) ON FACTOR L

	Mean	Differences between means		
Normal	4.17	- 1.94	2.58*	3.20**
Borderline Disturbed	6.11	-	0.64	1.26
Personally Disturbed	6.75		-	0.62
Character Disorder	7.37			-

Critical values for an honestly significant difference;
.05 level, 2.43; .01 level, 3.01.

The most suspicious, self-opinionated group are the character disorders. Normals have a score on factor Q3 which indicates that their degree of self-control is quite high; in contrast the character disordered and

TABLE 6.34

DIFFERENCES BETWEEN SSI DIAGNOSTIC CATEGORIES (WOMEN) ON FACTOR Q3

	Mean	Differences between means		
Normal	7.17	- 1.95	3.54**	3.47**
Borderline Disturbed	5.22	-	1.59	1.52
Personally Disturbed	3.63		-	0.07
Character Disorder	3.70			-

Critical values for an honestly significant difference;
.05 level, 2.80; .01 level, 3.46.

personally disturbed groups show a marked lack of self-control and awareness of social demands. On factor H, (Table 6.35) normals are fairly average in the degree to which they are socially bold and uninhibited. The other groups

TABLE 6.35

DIFFERENCES BETWEEN SSI DIAGNOSTIC CATEGORIES (WOMEN) ON FACTOR H

	Mean	Differences between means		
Normal	6.17	2.17*	2.67**	2.01
Borderline Disturbed	4.00	-	0.50	0.15
Personally Disturbed	3.50		-	0.65
Character Disorder	4.15			-

Critical values for an honestly significant difference;
.05 level, 2.08; .01 level, 2.58.

TABLE 6.36

DIFFERENCES BETWEEN SSI DIAGNOSTIC CATEGORIES (WOMEN) ON FACTOR G

	Mean	Differences between means		
Normal	5.67	- 0.56	1.67	1.97
Borderline Disturbed	5.11	-	1.11	1.41
Personally Disturbed	4.00		-	0.30
Character Disorder	3.70			-

Critical values for an honestly significant difference;
.05 level, 2.13; .01 level, 2.63.

are all rather shy and tend to feel somewhat inferior in the presence of other people. This is the only variable on which women who are borderline disturbed are distinguished from women categorized as normal. Two 16PF factors, G and N not related to second-order Anxiety showed significant variance ratios. Tables 6.36 and 6.37 show that in both cases the means are not differentiated to an honestly significant degree.

TABLE 6.37

DIFFERENCES BETWEEN SSI DIAGNOSTIC CATEGORIES (WOMEN) ON FACTOR N

	Mean	Differences between means		
Normal	7.17	- 0.50	2.29	2.13
Borderline Disturbed	6.67	-	1.79	1.63
Personally Disturbed	4.88		-	0.16
Character Disorder	5.04			-

Critical values for an honestly significant difference;
.05 level, 2.57; .01 level, 3.19.

The tendency shown on second-order Anxiety and on Factor O for the normal and borderline disturbed groups to be differentiated from the personally disturbed and character disorder groups is also evident on the HDHQ. On General Hostility ($F_{(3,46)} = 9.04$, $p<.001$) both normal and borderline disordered groups score much lower than the group of character disordered patients whose score of 29.33 is very high indeed. The normal group are also differentiated from the personally disturbed group.

TABLE 6.38

DIFFERENCES BETWEEN SSI DIAGNOSTIC CATEGORIES (WOMEN) ON GENERAL HOSTILITY

	Mean	Differences between means		
Normal	14.17	- 4.61	11.83*	15.16**
Borderline Disturbed	18.78	-	7.22	10.55*
Personally Disturbed	26.00		-	3.33
Character Disorder	29.33			-

Critical values for an honestly significant difference;
.05 level, 9.70; .01 level, 12.00.

TABLE 6.39

DIFFERENCES BETWEEN SSI DIAGNOSTIC CATEGORIES (WOMEN) ON SUM I

	Mean	Differences between means		
Normal	5.00	- 3.22	7.50**	8.59**
Borderline Disturbed	8.22	-	4.28*	5.37**
Personally Disturbed	12.50		-	1.09
Character Disorder	13.59			-

Critical values for an honestly significant difference;
.05 level, 4.12; .01 level, 5.11.

Tables 6.39, 6.40 and 6.41 show that on intropunitiveness, measured by Sum I ($F_{(3,46)} = 14.63$, $p<.001$) Self Criticism ($F_{(3,46)} = 15.45$, $p<.001$) and Delusional Guilt ($F_{(3,46)} = 7.02$, $p<.001$), character disorders emerge as the most intropunitive group with normals being very average on all three measures. On Sum I there is a distinction between normals and the borderline disturbed on the one hand, and the personally disturbed and character disordered on the other, the latter groups having mean scores twice the

TABLE 6.40

DIFFERENCES BETWEEN SSI DIAGNOSTIC CATEGORIES (WOMEN) ON SELF CRITICISM

	Mean	Differences between means		
Normal	3.00	- 3.00*	5.38**	5.67**
Borderline Disturbed	6.00	-	2.38	2.67*
Personally Disturbed	8.38		-	0.29
Character Disorder	8.67			-

Critical values for an honestly significant difference;
.05 level, 2.49; .01 level, 3.09.

size of the normal group. Normals are in fact less self critical than all the other groups, of whom the borderline disturbed are significantly less self critical than the group of character disorders. On Delusional Guilt a not dissimilar pattern emerges, the character disorders scoring much higher than either the normal or borderline disturbed groups. Two other variables, Acting out Hostility and Sum E, yielded variance ratios which just achieved significance; Tables 6.42 and 6.43 show that in both cases the means were not differentiated.

TABLE 6.41

DIFFERENCES BETWEEN SSI DIAGNOSTIC CATEGORIES (WOMEN) ON DELUSIONAL GUILT

	Mean	Differences between means		
Normal	2.00	- 0.22	2.13	2.93**
Borderline Disturbed	2.22	-	1.91	2.71*
Personally Disturbed	4.13		-	0.80
Character Disorder	4.93			-

Critical values for an honestly significant difference;
.05 level, 2.37; .01 level, 2.93.

TABLE 6.42

DIFFERENCES BETWEEN SSI DIAGNOSTIC CATEGORIES (WOMEN) ON ACTING OUT HOSTILITY

	Mean	Differences between means		
Normal	4.00	- 0.41	2.38	2.85
Borderline Disturbed	4.44	-	0.94	2.41
Personally Disturbed	6.38		-	0.47
Character Disorder	6.85			-

Critical values for an honestly significant difference;
.05 level, 3.48; .01 level, 4.31.

TABLE 6.43

DIFFERENCES BETWEEN SSI DIAGNOSTIC CATEGORIES (WOMEN) ON SUM E

	Mean	Differences between means		
Normal	9.17	- 1.39	4.33	6.57
Borderline Disturbed	10.56	-	2.94	5.18
Personally Disturbed	13.50		-	2.24
Character Disorder	15.74			-

Critical values for an honestly significant difference;
.05 level, 7.45; .01 level, 9.22.

On the SSI normal men are distinguished from those with character disorder by being less anxious, less generally hostile and less self-absorbed. The scores of borderline disturbed and personally disturbed patients tend to fall between those of the former groups. For women, normals are differentiated from the personally disturbed and character disordered on almost all aspects of anxiety and hostility. The borderline disturbed patients resemble normals in most respects and are frequently differentiated from character disorders.

iii) Ratings of psychiatric signs and symptoms

From the seven point rating scale three categories of patients were formed. Those patients rated 1 or 2 on the scale (12 M, 13 F) formed the symptoms absent category, those given ratings of 3, 4 or 5 (16 M, 22 F) formed the moderate symptoms group while those with ratings of 6 or 7 (22 M, 15 F) fell within the symptoms present category. For men none of the analyses of variance carried out on the variables of the 16PF and MMQ produced significant variance ratios. Women differed on one variable,

factor C of the 16PF ($F_{(2,47)} = 3.85$, $p<.05$). Table 6.44 shows that the group with moderate symptomatology scored lower than the group in which symptoms and signs were clearly present, being more easily upset, changeable and low in frustration tolerance.

TABLE 6.44

DIFFERENCES BETWEEN SYMPTOM RATING CATEGORIES (WOMEN) ON FACTOR C

	Mean	Differences between means	
Symptoms Absent	3.15	- 0.38	1.32
Moderate Symptoms	2.77	-	1.70*
Symptoms Present	4.47		-

Critical values for an honestly significant difference;
.05 level, 1.60; .01 level, 2.03.

iv) Ratings of personality abnormality

Again three categories of patients were formed on the basis of ratings of personality abnormality. Patients rated 1 or 2 (13 M, 12 F) were considered to show no abnormality, those with ratings of 3, 4 and 5 (20 M, 21 F) formed a middle, indeterminate group and those rated 6 or 7 (17 M, 17 F) were

TABLE 6.45

DIFFERENCES BETWEEN CATEGORIES OF PERSONALITY ABNORMALITY (MEN) ON GENERAL HOSTILITY

	Mean	Differences between means	
Not abnormal	21.62	- 4.28	10.14**
Indeterminate	25.90	-	5.86
Abnormal personality	31.76		-

Critical values for an honestly significant difference;
.05 level, 6.68; .01 level, 8.48.

deemed to show personality abnormality. The women in these three categories did not differ on any of the personality measures. Men differed on various aspects of hostility, Acting out Hostility ($F_{(2,47)} = 5.81$, $p<.01$), Criticism of Others ($F_{(2,47)} = 5.79$, $p<.01$), General Hostility ($F_{(2,47)} = 6.29$, $p<.01$) and Sum E ($F_{(2,47)} = 7.68$, $p<.01$).

TABLE 6.46

DIFFERENCES BETWEEN CATEGORIES OF PERSONALITY ABNORMALITY (MEN) ON ACTING OUT HOSTILITY

	Mean	Differences between means	
Not abnormal	4.54	- 1.81	3.70**
Indeterminate	6.35	-	1.89
Abnormal personality	8.24		-

Critical values for an honestly significant difference;
.05 level, 2.50; .01 level, 3.18.

TABLE 6.47

DIFFERENCES BETWEEN CATEGORIES OF PERSONALITY ABNORMALITY (MEN) ON CRITICISM OF OTHERS

	Mean	Differences between means	
Not abnormal	5.23	- 1.22	3.12**
Indeterminate	6.45	-	1.90
Abnormal personality	8.35		-

Critical values for an honestly significant difference;
.05 level, 2.16; .01 level, 2.74.

Table 6.45 shows that men rated as having abnormal personalities are much more generally hostile than men not so rated. These groups are differentiated on both Acting out Hostility (Table 6.46) and Criticism of Others (Table 6.47), and since those with abnormal personalities are higher on Sum E than both the other categories (Table 6.48), it can be safely concluded that male patients rated as having abnormal personalities are more likely to be extrapunitive in word and deed than other male patients.

TABLE 6.48

DIFFERENCES BETWEEN CATEGORIES OF PERSONALITY ABNORMALITY (MEN) ON SUM E

	Mean	Differences between means	
Not abnormal	12.38	- 3.07	8.38**
Indeterminate	15.45	-	5.31*
Abnormal personality	20.76		-

Critical values for an honestly significant difference;
.05 level, 5.07; .01 level, 6.44.

v) Ratings of social disorder and deviance

From the ratings made by the psychiatrists on this scale three categories were formed as before, ratings of 1 and 2 (21 M, 21 F) indicating no social disorder, ratings of 3, 4 or 5 (15 M, 11 F) being an indeterminate category and ratings of 6 or 7 (14 M, 18 F) reflecting the clear presence of social disorder or deviance. For men both second-order factors of the 16PF, along with some of their manifestations at the primary level, show differences

TABLE 6.49

DIFFERENCES BETWEEN CATEGORIES OF SOCIAL DISORDER (MEN) ON FACTOR C

	Mean	Differences between means	
No social disorder	4.24	- 0.89	2.17*
Indeterminate	5.13	-	3.06**
Social disorder	2.07		-

Critical values for an honestly significant difference;
.05 level, 1.73; .01 level, 2.19.

TABLE 6.50

DIFFERENCES BETWEEN CATEGORIES OF SOCIAL DISORDER (MEN) ON FACTOR Q3

	Mean	Differences between means	
No social disorder	5.43	- 0.23	1.86*
Indeterminate	5.20	-	1.63*
Social disorder	3.57		-

Critical values for an honestly significant difference;
.05 level, 1.58; .01 level, 2.00.

between the groups. Anxiety ($F_{(2,47)} = 3.40$, $p<.05$), factor C ($F_{(2,47)} = 8.65$, $p<.001$), factor O ($F_{(2,47)} = 3.85$, $p<.05$) and factor Q3 ($F_{(2,47)} = 4.57$, $p<.025$) all tend to differentiate the group with no social disorder from the group with obvious deviance, the middle category varying somewhat. Tables 6.49 and 6.50 show that on factors C and Q3 the group with marked social disorder is characterised by low emotional stability, is unrealistic with no regard for social demands. The other groups are average on these traits. On factor O (Table 6.51) both the indeterminate and

TABLE 6.51

DIFFERENCES BETWEEN CATEGORIES OF SOCIAL DISORDER (MEN) ON FACTOR O

	Mean	Differences between means		
No social disorder	6.95	-	1.38*	1.19
Indeterminate	8.33		-	0.19
Social disorder	8.14			-

Critical values for an honestly significant difference;
.05 level, 1.38; .01 level, 1.75.

socially deviant groups are prone to feelings of guilt and apprehensiveness, although only the indeterminate group differ significantly from the patients with no social disorder. The overall effect of these differences is seen in Table 6.52 where those with no social disorder are seen to be slightly more anxious than average, while those who show disorder and deviance are markedly anxious.

TABLE 6.52

DIFFERENCES BETWEEN CATEGORIES OF SOCIAL DISORDER (MEN) ON SECOND-ORDER ANXIETY

	Mean	Differences between means		
No social disorder	6.90	-	0.57	1.74*
Indeterminate	7.47		-	1.17
Social disorder	8.64			-

Critical values for an honestly significant difference;
.05 level, 1.64; .01 level, 2.08.

TABLE 6.53

DIFFERENCES BETWEEN CATEGORIES OF SOCIAL DISORDER (MEN) ON FACTOR A

	Mean	Differences between means	
No social disorder	6.57	- 0.90	1.21
Indeterminate	7.47	-	2.11**
Social disorder	5.36		-

Critical values for an honestly significant difference;
.05 level, 1.25; .01 level, 1.59.

On second-order factor Introversion ($F_{(2,47)} = 6.38$, $p<.01$), factor A ($F_{(2,47)} = 7.39$, $p<.01$), factor F ($F_{(2,47)} = 5.15$, $p<.01$) and factor Q2 ($F_{(2,47)} = 6.77$, $p<.01$) the socially deviant group are differentiated from the indeterminate group with the group without disorder tending to be most like the latter. Tables 6.53 and 6.54 show that on factor A

TABLE 6.54

DIFFERENCES BETWEEN CATEGORIES OF SOCIAL DISORDER (MEN) ON FACTOR Q2

	Mean	Differences between means	
No social disorder	6.19	- 0.42	1.52
Indeterminate	5.27	-	2.44**
Social disorder	7.71		-

Critical values for an honestly significant difference;
.05 level, 1.53; .01 level, 1.94.

the indeterminate group are more sociable and able to relate warmly to people than are those with a great deal of social disorder; while the latter, on factor Q2, are more likely to ignore other people's opinions and are temperamentally

independent. On factor F (Table 6.55) the indeterminate group and those without disorder have average scores, high average in the case of the former, compared with the socially disordered group's low score, indicative of a dependent personality. Table 6.56 summarizes the position in which those with much social pathology are seen to be considerably more self-sufficient, shy and inhibited in their interpersonal relations than the other groups, especially those with a middling amount of social malaise.

TABLE 6.55

DIFFERENCES BETWEEN CATEGORIES OF SOCIAL DISORDER (MEN) ON FACTOR F

	Mean	Differences between means	
No social disorder	5.29	- 0.91	1.08
Indeterminate	6.20	-	1.99**
Social disorder	4.21		-

Critical values for an honestly significant difference;
.05 level, 1.41; .01 level, 1.79.

TABLE 6.56

DIFFERENCES BETWEEN CATEGORIES OF SOCIAL DISORDER (MEN) ON SECOND-ORDER INTROVERSION-EXTRAVERSION

	Mean	Differences between means	
No social disorder	4.00	- 1.40	0.86
Indeterminate	5.40	-	2.26**
Social disorder	3.14		-

Critical values for an honestly significant difference;
.05 level, 1.46; .01 level, 1.85.

TABLE 6.57

DIFFERENCES BETWEEN CATEGORIES OF SOCIAL DISORDER (MEN) ON FACTOR G

	Mean	Differences between means	
No social disorder	4.76	- 0.43	1.62*
Indeterminate	4.33	-	1.19
Social disorder	3.14		-

Critical values for an honestly significant difference;
.05 level, 1.54; .01 level, 1.96.

From Table 6.57 it can be seen that the significant variance ratio for Factor G ($F_{(2,47)} = 3.39$, $p<.05$) allows us to differentiate the two extreme groups, those with social disorder being expedient and lacking in response to group demands.

TABLE 6.58

DIFFERENCES BETWEEN CATEGORIES OF SOCIAL DISORDER (MEN) ON ACTING OUT HOSTILITY

	Mean	Differences between means	
No social disorder	5.29	- 0.84	3.50**
Indeterminate	6.13	-	2.66*
Social disorder	8.79		-

Critical values for an honestly significant difference;
.05 level, 2.49; .01 level, 3.16.

TABLE 6.59

DIFFERENCES BETWEEN CATEGORIES OF SOCIAL DISORDER (MEN) ON CRITICISM OF OTHERS

	Mean	Differences between means	
No social disorder	5.67	- 1.27	2.62*
Indeterminate	6.93	-	1.36
Social disorder	8.29		-

Critical values for an honestly significant difference;
.05 level, 2.22; .01 level, 2.82.

Four of the HDHQ scales yielded significant variance ratios. These were Acting out Hostility ($F_{(2,47)} = 6.13$, $p<.01$), Criticism of Others ($F_{(2,47)} = 4.22$, $p<.025$), Direction of Hostility ($F_{(2,47)} = 4.12$, $p<.025$) and Sum E ($F_{(2,47)} = 6.04$, $p<.01$). From Table 6.58 it can be seen that patients with much social disorder scored higher than other patients on Acting out Hostility. They also scored more on Criticism of Others than patients without social pathology (Table 6.59).

TABLE 6.60

DIFFERENCES BETWEEN CATEGORIES OF SOCIAL DISORDER (MEN) ON DIRECTION OF HOSTILITY

	Mean	Differences between means	
No social disorder	103.29	- 2.09	6.65*
Indeterminate	101.20	-	5.58
Social disorder	95.64		-

Critical values for an honestly significant difference;
.05 level, 6.60; .01 level, 8.38.

TABLE 6.61

DIFFERENCES BETWEEN CATEGORIES OF SOCIAL DISORDER (MEN) ON SUM E

	Mean	Differences between means	
No social disorder	13.48	- 3.05	7.38**
Indeterminate	16.53	-	4.33
Social disorder	20.86		-

Critical values for an honestly significant difference;
.05 level, 5.21; .01 level, 6.61.

The extent to which men rated as having much social disorder are extrapunitive is shown in Tables 6.60 and 6.61 in which they are seen to be differentiated from non-socially disordered patients on both Direction of Hostility and Sum E.

TABLE 6.62

DIFFERENCES BETWEEN CATEGORIES OF SOCIAL DISORDER (WOMEN) ON FACTOR F

	Mean	Differences between means	
No social disorder	4.62	- 0.62	1.55
Indeterminate	4.00	-	2.17**
Social disorder	6.17		-

Critical values for an honestly significant difference;
.05 level, 1.60; .01 level, 2.03.

Like men, the women show differences along the introversion-extraversion dimension, second-order Introversion-Extraversion ($F_{(2,47)} = 6.31$, $p<.01$), factor F ($F_{(2,47)} = 5.61$, $p<.01$), factor H ($F_{(2,47)} = 3.47$, $p<.05$) and

factor Q1 ($F_{(2,47)} = 5.72$, $p<.01$) all differentiate between the groups.

TABLE 6.63

DIFFERENCES BETWEEN CATEGORIES OF SOCIAL DISORDER (WOMEN) ON FACTOR H

	Mean	Differences between means	
No social disorder	4.29	- 1.11	0.60
Indeterminate	3.18	-	1.71**
Social disorder	4.89		-

Critical values for an honestly significant difference;
.05 level, 1.46; .01 level, 1.56.

Women with a great deal of social deviance are more cheerful, lively and impulsive than the other two groups (Table 6.62), especially the indeterminate group whose mean score shows them to be reticent and serious. Table 6.63 shows that on factor H a somewhat similar position occurs with the middle group being less free in social, interpersonal affairs than the disordered group. The group with no social disorder are similar to the markedly deviant group on factor H, but are more like the middle group on factor F and on factor Q1 (Table 6.64).

TABLE 6.64

DIFFERENCES BETWEEN CATEGORIES OF SOCIAL DISORDER (WOMEN) ON FACTOR Q1

	Mean	Differences between means	
No social disorder	5.00	- 1.09	1.89*
Indeterminate	6.09	-	0.80
Social disorder	6.89		-

Critical values for an honestly significant difference;
.05 level, 1.51; .01 level, 1.92.

TABLE 6.65

DIFFERENCES BETWEEN CATEGORIES OF SOCIAL DISORDER (WOMEN) ON SECOND-ORDER INTROVERSION-EXTRAVERSION

	Mean	Differences between means	
No social disorder	3.86	- 1.13	0.97
Indeterminate	2.73	-	2.10**
Social disorder	4.83		-

Critical values for an honestly significant difference;
.05 level, 1.35; .01 level, 1.71

On this factor women without social deviance are average, being neither conservative nor change-seeking. The socially disordered women tend to be less likely to follow accepted paths and established ideas. These differences are summed up in Table 6.65 where it can be seen that women with a high rating of social disorder are just below average on the Introversion-Extraversion dimension, while those with no social deviance and those in the indeterminate group, especially the latter, are markedly introverted. The direction of these differences is the opposite of what was found for men.

TABLE 6.66

DIFFERENCES BETWEEN CATEGORIES OF SOCIAL DISORDER (WOMEN) ON SELF CRITICISM

	Mean	Differences between means	
No social disorder	8.19	- 0.08	2.08
Indeterminate	8.27	-	2.16
Social disorder	6.11		-

Critical values for an honestly significant difference;
.05 level, 2.24; .01 level, 2.85.

TABLE 6.67

DIFFERENCES BETWEEN CATEGORIES OF SOCIAL DISORDER (WOMEN) ON DIRECTION OF HOSTILITY

	Mean	Differences between means	
No social disorder	108.71	- 2.16	8.49**
Indeterminate	106.55	-	6.33**
Social disorder	100.22		-

Critical values for an honestly significant difference;
.05 level, 4.84; .01 level, 6.14.

Analysis of variance yielded two significant variance ratios on the HDHQ, Self Criticism ($F_{(2,47)} = 3.81$, $p<.05$) and Direction of Hostility ($F_{(2,47)} = 14.80$, $p<.001$). Table 6.66 shows that on the former scale the means cannot be differentiated, while Table 6.67 indicates clearly that women with little or no social deviance express their hostility in a predominantly intropunitive manner.

vi) Patients with a history of previous suicidal attempts

Of the patients tested, 20 men and 16 women had made a suicidal attempt at some time in the past. Men who had such a history differed on one variable only; they scored higher on factor A of the 16PF (Repeaters, mean 7.10 ± 1.71; non-repeaters, mean 6.10 ± 1.49; $t = 2.13$, $p<.05$) and appear to be more outgoing and emotionally expansive than non-repeaters. Women repeaters differed in several respects from women without a previous history of suicidal behaviour. Table 6.68 shows that repeaters scored higher on second-order Anxiety, this difference reflecting their scores on the primary factors C and O. On the 16PF, repeaters are emotionally immature and unstable,

TABLE 6.68

DIFFERENCES BETWEEN REPEATERS AND NON-REPEATERS (WOMEN)

	Repeaters (n = 16) Mean (SD)	Non-repeaters (n = 34) Mean (SD)	t (d.f. = 48 in each case)
Anxiety	8.50 (1.59)	7.24 (2.55)	2.14, p<.05
Factor C (emotional stability)	2.56 (1.26)	3.76 (2.09)	2.52, p<.025
Factor O (apprehensive)	8.38 (1.86)	6.88 (2.28)	2.48, p<.025
Delusional Guilt	5.13 (1.59)	3.41 (2.24)	3.12, p<.01
Sum I	13.31 (3.70)	10.53 (4.49)	2.31, p<.025

as well as being apprehensive and prone to feelings of guilt. Those latter are also reflected in their high scores on Delusional Guilt and their tendency to be more intropunitive than non-repeaters.

Relationships between measures used for within-group comparisons

Before any attempt can be made to summarise the results obtained from the various within-group comparisons, the degree to which the measures used to form these groups relate to each other must be assessed. Table 6.69 shows the tau correlations between the measures, using the categories and groupings employed in the within-group comparisons. For men, 9 of the 36 correlations are significant, 7 of these at the .01 level of significance. Women have twice as many significant correlations, 11 of these exceeding the .01 significance level. For men, the Social Prognosis Index has high correlations with a history of a previous suicidal attempt

TABLE 6.69

TAU CORRELATIONS BETWEEN MEASURES USED FOR WITHIN-GROUP COMPARISONS

		1	2	3	4	5	6	7	8	9
Social Prognosis Index	1		.237	.159	-.517	-.209	.417	-.265	-.430	-.422
Life Endangerment	2	.160		.102	-.284	.087	.232	-.090	-.233	-.140
Precautions Taken	3	.253	.047		-.082	.089	.198	-.230	-.242	.048
Clinical Diagnosis	4	-.254	.048	-.082		.222	.501	.270	.431	.202
SSI categories	5	-.111	-.047	-.019	-.027		-.089	.167	-.144	.240
Symptoms and Signs	6	.167	.136	-.012	-.118	.306		-.133	-.240	-.253
Personality Abnormality	7	.184	.284	-.218	.231	.201	.167		.423	.138
Social Disorder and Deviance	8	.056	.011	-.050	.188	.244	.184	.648		.181
Previous Suicidal Attempt	9	-.568	.030	-.194	.207	.325	.128	.272	.115	

Correlations for <u>women</u> are in the upper right of the matrix;
those for <u>men</u> are in the bottom left.

5% and 1% levels of significant for tau when N = 50 are 0.222 and 0.250

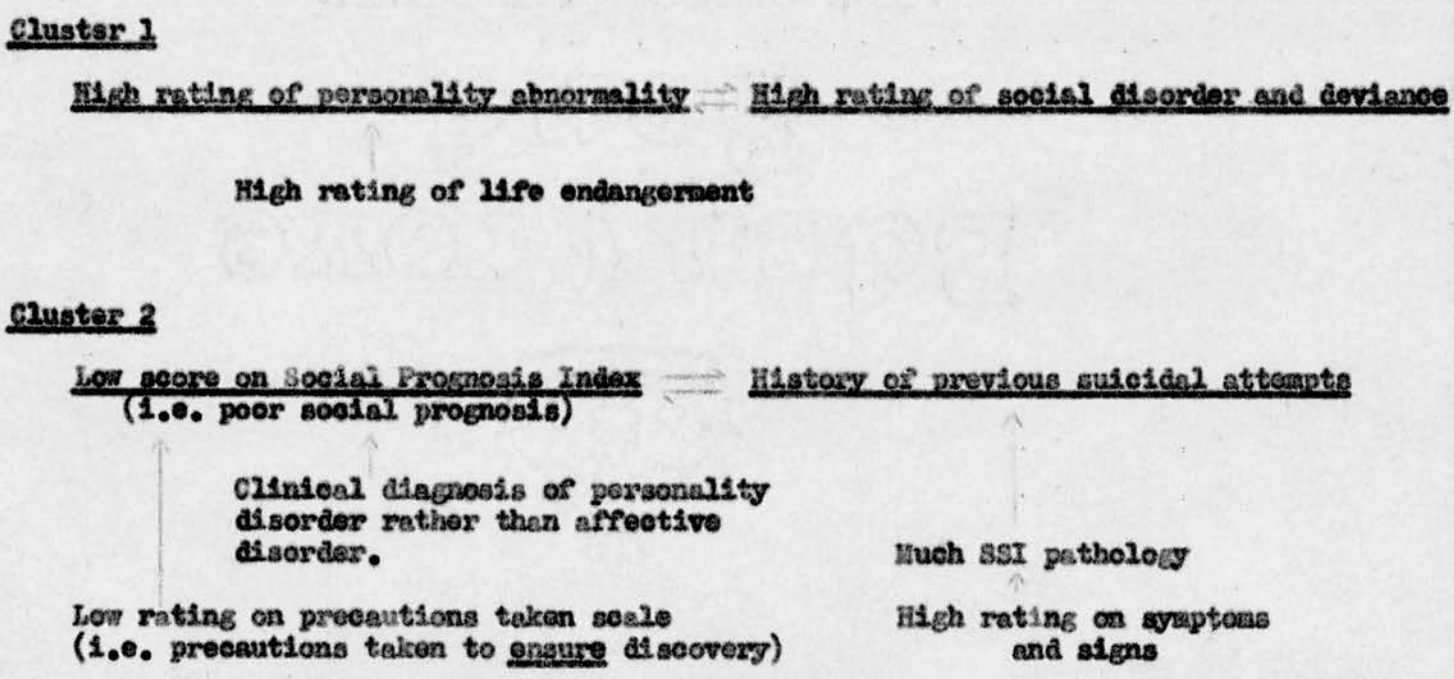
For women on variable 4 N = 46 and significant tau values are 0.234 and 0.263
For men on variable 4 N = 40 and significant tau values are 0.252 and 0.284

(tau = -0.568), the rating scale for precautions taken to avoid or ensure discovery (tau = 0.253) and clinical diagnosis (tau = 0.254). Previous suicidal attempt is related to having much SSI pathology (tau = 0.325) and to the rating scale of personality abnormality (tau = 0.272). The highest correlation is that between the rating scales of personality abnormality

and social disorder (tau = 0.648), while the former scale is also related to the scale of life endangerment (tau = 0.284). An elementary linkage analysis of the data (McQuitty, 1957) produced two clusters which are shown in Figure 6.1. The results of the linkage analysis suggest that for men the measures fall into two broad categories, one related to deviant personal and social characteristics, the other relating symptomatology and behavioural data connected with social prognosis.

FIGURE 6.1

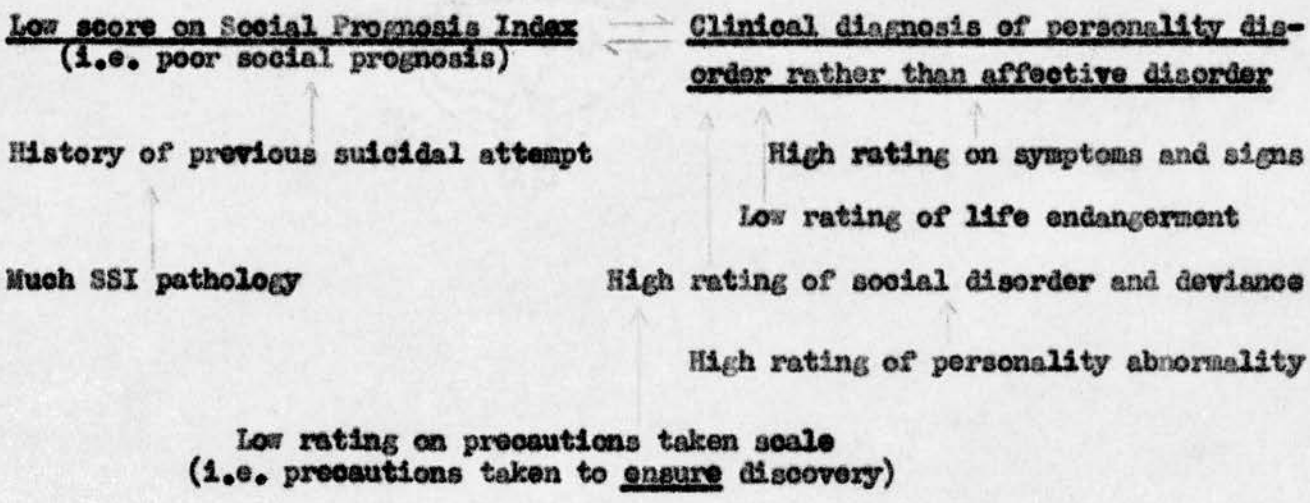
ELEMENTARY LINKAGE ANALYSIS OF MEASURES (MEN)



For women the Social Prognosis Index correlates significantly with all the measures except the rating of precautions taken and SSI pathology. The highest correlation is between the Social Prognosis Index and clinical diagnosis (tau = -0.517) and the latter scale correlates significantly with all but three of the measures, these exceptions being the rating of precautions taken, SSI pathology, and a history of a previous suicidal attempt. Figure 6.2 shows the results of elementary linkage analysis applied to the correlations for women. One large cluster emerged in which clinical diagnosis is the most prominent measure. Within the cluster can be seen the relationships between the Social Prognosis Index and history of previous suicidal attempt on the one hand, and the ratings of personality abnormality and social deviance on the other, which were evident in the analysis of correlations for men.

FIGURE 6.2

ELEMENTARY LINKAGE ANALYSIS OF MEASURES (WOMEN)



Summary

The large number of significant differences within groups, and the degree to which many of the measures are inter-related, make it essential to condense the findings in a way which facilitates their assimilation. In Tables 6.70 and 6.71 an attempt has been made to present in summary fashion the significant results of each within-group comparison for men and women. For each comparison a personality variable is marked by an asterisk if a significant difference between groups was found on that variable. Variables marked by two asterisks not only showed an overall difference but also manifested honestly significant differences between the group means. For men, the personality variables which most frequently differentiate groups are all from the HDHQ; these are Sum E, General Hostility and Acting out Hostility. It would appear that hostility, especially when directed in an extrapunitive manner, is the dimension along which men are differentiated. In the case of women the variables which most frequently differentiate within-groups are primary factors C and O of the 16PF, second-order Anxiety and two HDHQ measures, Acting out Hostility and Delusional Guilt. The dimensions along which women are most commonly differentiated are those of general emotional upset, immaturity and guilt proneness.

TABLE 6.70

SUMMARY OF RESULTS FOR WITHIN-GROUP COMPARISONS (MEN)

	Social Prognosis Index	Life Endangerment	Precautions Taken	Clinical Diagnosis	SSI categories	Symptoms and Signs	Personality Abnormality	Social Deviance	Previous Attempt
Anxiety					**			**	
I - E								**	
A								**	**
B									
C								**	
E									
F	*							**	
G				**				**	
H									
I									
L									
M					**				
N									
O					**			**	
Q1									
Q2								**	
Q3								**	
Q4			**		**				
AH				**			**	**	
CO							**	**	
DH					**				
SC									
DG			**		*				
Hostility			*		**		**		
Direction				**				**	
Sum E		**		**	*		**	**	
Sum I					*				

TABLE 6.71

SUMMARY OF RESULTS FOR WITHIN-GROUP COMPARISONS (WOMEN)

	Social Prognosis Index	Life Endangerment	Precautions Taken	Clinical Diagnosis	SSI categories	Symptoms and Signs	Personality Abnormality	Social Deviance	Previous Attempt
Anxiety				**	**				**
I - E								**	
A									
B									
C	**			**	**	**			**
E									
F								**	
G					*				
H					**			**	
I									
L				**	**				
M									
N				**	*				
O	**			**	**				**
Q1								**	
Q2									
Q3					**				
Q4				**	**				
AH	**			**	*				
CO				**					
DH				**					
SC					**			*	
DG				**	**				**
Hostility				**	**				
Direction								**	
Sum E				*	*				
Sum I					**				**

CHAPTER 7

DISCUSSION AND CONCLUSIONS

Characteristics of the group as a whole

a) The Symptom Sign Inventory

Almost half of the patients are diagnosed as character disorders on the SSI, a finding which is in accord with the number of character disorders reported by Philip and McCulloch (1967b, 1968) on their group of attempted suicides. In both studies more women than men fall within the character disorder category but when the cutting score for men is made the same as that for women, cutting between scores of 3 and 4 rather than between 4 and 5, this difference disappears. In the present instance the number of character disordered men rises from 21 to 28. It has been pointed out that the Personal Disturbance scale differs in item content from the Personal Illness scale although its purpose is essentially the same. From Table 6.3 it can be seen that 12 per cent of the group emerge as normal, while 40 per cent are personally disturbed. In Philip and McCulloch's study the comparable figures were 12 per cent and 32 per cent respectively. Foulds (1967) found that 39 per cent of Vinoda's (1966) female attempted suicides were character disordered, 52 per cent were personally ill and 9 per cent were normal. Philip and McCulloch (1968) considered that the difference in the proportions of character disorders was due to the composition of the groups sampled. Vinoda's attempted suicides were all psychiatric in-patients while the group seen by Philip and McCulloch had been tested in the Poisoning Treatment Centre before psychiatric disposal had been arranged. The same state

of affairs was extant in the present study and it seems likely that the two Edinburgh groups contain a number of personality disordered patients who would not be offered or would not accept psychiatric in-patient treatment. Foulds (1967) found that only 24 per cent of Vinoda's psychiatric controls were character disordered, a figure which accords well with Philip's finding that of 32 psychiatric patients tested on the SSI only 7 (22%) were character disordered (Philip, unpublished data). Thus an SSI diagnosis of character disorder is given twice as frequently in a population of attempted suicides as it is in a psychiatric population. This is not surprising when it is recalled that the purpose of the CD scale is to identify persons in whom chronic interpersonal difficulties, plaintiveness and self-pity are common.

b) <u>The Hostility and Direction of Hostility Questionnaire</u>

Philip (1968) found that while the component structure of the HDHQ was essentially the same for Aberdeen normals and neurotics as for Hope's (1963) groups, the mean scores on the components for the normal groups, but not the neurotic groups, were rather different. Since Edinburgh is geographically and culturally closer to Aberdeen than to Essex, and since Hassall (1967) found that her normal group (40 men of mean age 25.9 years) scored 17.38 on General Hostility and 105.07 on Direction of Hostility, the normative data provided by Philip (1968) was preferred to the norms in the <u>Manual</u>. On the HDHQ component scores of General Hostility and Direction of Hostility attempted suicides as a group are more hostile than either normals or neurotics, scoring on average 11 points higher than the former and 8 points higher than the latter. In Vinoda's (1966) study her group of female attempted suicides scored some 8 points higher than normals and 4 points

higher than her psychiatric controls, both differences being highly significant. Compared with their normal controls, Hassall's (1967) young alcoholics achieved mean component scores very similar to the men in the present study, scoring 27.65 on General Hostility and 101.43 on Direction of Hostility. Many authors including Kessel (1965) have commented on the relationship between alcoholism and suicidal behaviour and the HDHQ appears to reflect some of the similarities between the two groups.

In devising the composite scores Sum E and Sum I as measures of extrapunitiveness and intropunitiveness it was asserted that these measures were closer to the original formulations of hostility made by Foulds, Caine and Creasy (1960) than were the component scores proposed by Hope (1963). For most of the studies already quoted in this section mean scores for Sum E and Sum I can be calculated and, although it is not possible to derive the standard deviations, some indication as to the relative amount of intropunitiveness and extrapunitiveness displayed by attempted suicides and others is possible.

TABLE 7.1

ROUNDED MEAN SCORES ON SUM E AND SUM I FOR VARIOUS GROUPS

	Sum E	Sum I
Philip (1968) Normals, both sexes (n=240)	8	7
Vinoda (1966) Normal women (n= 50)	8	5
Hassall (1967) Normal men (n= 40)	11	6
Philip (1968) Neurotics, both sexes (n=103)	9	9
Vinoda (1966) Psychiatrically ill women (n= 50)	9	8
Hassall (1967) Alcoholics (n=40)	17	11
Present study male AS (n=50)	16	11
Present study female AS (n=50)	14	11
Vinoda (1966) female AS (n=50)	11	10

Table 7.1 shows the rounded mean values for Sum E and Sum I for various groups. In normals Sum I tends to be somewhat lower than Sum E while in the psychiatrically ill the two measures are equal, indicating a rise in the amount of intropunitiveness displayed by ill persons. Hassall's alcoholics, Vinoda's attempted suicides, and the present study's attempted suicides show a similar increase of about 5 points on Sum I over their respective normal groups. However, while the alcoholics and Edinburgh attempted suicides have mean Sum E scores which are 6 or more points higher than normals, Vinoda's attempted suicides are only 3 points higher than their normal controls.

The present group of attempted suicide patients are much more hostile than normals and neurotics, being higher on both the extrapunitive and intropunitive dimensions of the HDHQ. Thus while prone to act out and to be critical of other people to the point of being deluded, they also display excessive self criticism and guilt.

c) <u>The Sixteen Personality Factor Questionnaire</u>

It has been shown that when compared with the test norms the attempted suicide group are very anxious, somewhat introverted and rather lacking in social conscience. The high level of anxiety found in this group was also found in the attempted suicide patients tested by Philip and McCulloch (1968) and reported in Chapter 3. Cattell (1964) conceives of anxiety as a disorganising force or symptom of disorganization rather than a drive or motivating force and such a formulation is meaningful in the light of what is known clinically and socially about groups who score high on anxiety. Adcock (1965) has made a good case for the view that Cattell's anxiety factor

and Eysenck's neuroticism factor are both measuring the same broad area of behaviour which can be called "emotional upset". From Cattell's (1964) description of the anxious person; showing on the one hand irritability, suspicion of others and tenseness, and on the other lack of confidence, dependency and a sense of guilt and worthlessness, it seems likely that the broad term "emotional upset" can include the behaviour shown by people scoring high on General Hostility. The correlation between Anxiety and General Hostility for this group is 0.615 for men and 0.827 for women, figures which are high enough to indicate that they are measuring similar aspects of behaviour without being exactly equivalent.

At first sight the results of calculating profile similarity coefficients between the attempted suicides and McAllister's (1968) groups are puzzling; the attempted suicides resemble McAllister's psychotic groups almost as much as they do his neurotics. However, this finding becomes less of a puzzle when it is remembered that Foulds (1965a) hypothesised that a continuum existed, running from normality through the personality disorders, neuroses, integrated psychoses to the non-integrated psychoses, which was characterized by increasing degrees of failure to maintain or establish mutual personal relationships. Using the General Hostility component of the HDHQ as a measure of this continuum it was found (Foulds, 1965a, p. 94) that psychopaths displayed as much failure in mutual personal relationships as did the psychotic groups. In the present instance it is known that one half of the attempted suicide group are character disordered and thus have chronic interpersonal difficulties; at the clinical level also their poor personal relationships are well known, so it is not surprising that their 16PF profile resembles those of McAllister's psychotic groups.

The attempted suicides display much more anxiety, whether as a second-order factor or as a pattern of primary factors, than any of McAllister's clinical groups. Poor frustration tolerance, tenseness and apprehensiveness are clearly present in the group profile as well as being very evident in their clinical and social histories. The tendency shown by the group to be introverted relative to normals is due to their being temperamentally independent, aloof and even somewhat suspicious of people. Most psychiatrically ill groups, especially neurotics, are more introverted than normals because they are more submissive and desurgent, indeed these two factors are used in Cattell's Neuroticism Scale Questionnaire because they discriminate neurotics from normals. The present population does not show these aspects of introversion, nor did they appear in the MSQ results of the attempted suicides studied by Philip and McCulloch (1968). To some extent the disregard for group mores and conventional standards which the attempted suicides display is another manifestation of their withdrawal from society.

d) <u>The rating scales</u>

The distributions of scores on all five rating scales all point to the conclusion that in the present psychiatric setting scales with fewer choice points would have been of more value. Such a reduction was made before carrying out the within-group comparisons but it is doubtful whether any future ratings of this nature should extend beyond the "present, absent, query" format.

e) <u>The Social Prognosis Index</u>

Until a follow-up study of the patients tested is carried out the reliability and validity of the SPI depends on its close dependence on the

follow-up study carried out by McCulloch (1965). Since the population of patients passing through the Poisoning Treatment Centre has not changed very much since the time of McCulloch's study it seems reasonable to assume that the SPI measures what it was intended to measure.

Within-group comparisons

The measures used for the within-group comparisons are not unrelated; Table 6.69 and Figures 6.1 and 6.2 show how they relate to each other. In discussing the results of the within-group comparisons the procedure adopted here is one in which each psychological variable is considered in turn to see which of the measures produced differences on that variable. The psychological variables are considered under four headings, second-order Anxiety and its associated primary factors, second-order Introversion-Extraversion and its associated primary factors, other 16PF primary factors and the MDHQ. It should be remembered that men showed no differences when rated for symptoms and signs and produced one difference of doubtful significance on the Social Prognosis Index. No differences were found for women on the rating scales of life endangerment, precautions taken or personality abnormality.

a) Second-order Anxiety and its associated primary factors

(The primary factors contributing to anxiety are C-, H-, L+, O+, Q3- and Q4+)

Considering the comparisons made for men it is seen from Table 6.70 that differences on anxiety were found between SSI categories and on the rating of social deviance. On the former, character disordered patients are much more anxious than normals, their anxiety being characterized by

apprehensiveness, guilt proneness, excitability and tenseness. Men rated as socially disordered are also characterized by apprehensiveness and guilt proneness but are in addition low in frustration tolerance, tend to be unrealistic in their thinking and are prone to follow their own whims and fancies. Thus while anxiety is present in both the character disordered person and in the patient rated as socially disordered it is manifested in rather different ways in these two categories. The excitability and tenseness (Q4+) shown by character disorders is also shown by those patients rated as having taken precautions to ensure their discovery. Indeed both these patients and the intermediate group are differentiated from the group of patients whose precautions were aimed at avoiding discovery.

Women, as is seen in Table 6.71, show differences in anxiety when considered according to clinical diagnosis, SSI categories and history of previous suicidal behaviour. Clinically diagnosed personality disorders are more anxious than affective disorders, manifesting such traits as immaturity and emotional instability, mistrusting, easily made apprehensive and restless. Only factors H and Q3 of the primary factors associated with anxiety fail to show differences between the groups who are therefore not different on what might be termed the "social withdrawal" aspect of anxiety. The clinical picture here is of an overabundance of motor energy which has no adequate mode of discharge and the potential for impulsive behaviour in such persons must be considerable. Women categorised as normal or borderline disturbed on the SSI are much less anxious than those deemed to be personally disturbed or character disordered. The borderline disturbed group are very like normals on factors O (apprehensiveness) and Q4 (tenseness) but differ from them on factor H, appearing to be socially withdrawing. Normals are distinguished from the personally

disturbed and character disorders on all the primary anxiety factors and the latter present as the most emotionally disturbed, anxious group. Women who have made a suicidal attempt at some time in the past are more anxious than non-repeaters, being very easily upset and emotionally unstable (C-) as well as displaying a tendency to worry and brood about the future (O_4). The important role of a history of previous suicidal attempt in the Social Prognosis Index probably accounts for factors C and O manifesting differences on the SPI. The traits associated with emotional instability (C-) are marked in those women rated as having much symptomatology.

Anxiety, or some of the primary factors which contribute to it, is clearly an important personality dimension in the women tested although it discriminates men less well. Primary factors C and O show differences on most of the comparisons made and a more detailed account of them seems to be in order. Factor C according to Cattell (1957) is essentially a trait of emotional integration, a measure of the extent to which impulses are controlled and expressed in the pursuit of long-term goals. Cattell suggests that this trait is largely determined by early environmental factors and reports that background variables associated with low C include parental disharmony, either conflict or actual separation, emotional, over-protective mothering and histories of truancy or delinquency. Persons low in C are dissatisfied, tend to be excessively emotional when frustrated and constantly complain about illhealth and lack of energy. Factor O is considered by Cattell to be a dispositional trait, found in most psychiatric groups, and best characterised by guilt proneness. The combination of these two factors gives us a picture of a woman who is a chronic complainer, dissatisfied with her lot and while prone to be extremely emotional is also full of guilt and

apprehension. Such a woman has a poor social prognosis, tends to be a repeater and while producing a wealth of symptomatology is most likely to be diagnosed a personality disorder.

b) Second-order Introversion-Extraversion and its associated primary factors

(The primary factors contributing to introversion-extraversion are A+, E+, F+, H+ and Q2-)

For both men and women second-order introversion-extraversion yields differences between those patients rated as socially deviant and those rated as being indeterminate but the direction of the differences differs in the sexes. Men rated as having no social disorder score fairly average on Introversion-Extraversion, A, F and Q2; the middle group tend to be somewhat extraverted, sociable and clearly able to relate to people while those considered to be socially disordered or deviant manifest their introverted nature by being rather detached from people, taciturn and temperamentally independent of people. Those aspects of Introversion-Extraversion which do not differentiate the groups are those relating to dominance and shyness as measured by factors E and H.

Women rated as having no social disorder are unexceptional on Introversion-Extraversion, F and H, although they are rather introverted compared with McAllister's (1968) normals, the middle group are very introverted, fairly reticent and taciturn, and very shy and timid. Those women rated as being socially disordered are average on Introversion-Extraversion and shyness but are more dominant and aggressive than the others.

For men the rating of social disorder and deviance produces differences on both second-order dimensions of the 16PF. Men with no social disorder

are average on both factors, men who are clearly socially deviant are both anxious and introverted in a way which suggests that they are "loners", paying little heed to the needs and expectations of other people. The middle group, who have some degree of deviance show some of the apprehensiveness and guilt proneness associated with high anxiety but are temperamentally more stable and appear to be able to relate well to people. Women who are socially deviant are more dominant and aggressive than non-deviant women so that if the men in this category are "loners" the women appear to be "harridans".

c) Other 16PF primary factors

Of the remaining factors, B, G, I, M, N and Q1, only G (conscientiousness) yields more than one honestly significant difference within groups, both differences occurring among men. Clinically diagnosed personality disorders are less conscientious and imbued with a sense of duty than affective disorders while men rated as socially disordered are similarly differentiated from those not so rated. For men, Table 6.69 shows that there is no significant correlation between clinical diagnosis and rating of social disorder. Cattell (1957) is not very explicit about the meaning of this factor but assigns to it some of the characteristics of super-ego. It seems to measure, at its low end, a disregard for conventional morality and an unwillingness to accede to cultural demands, traits which add to the picture of the socially deviant male as a loner. G is the only 16PF factor which shows differences between the major diagnostic categories of men; this is an unexceptionable finding.

d) The HDHQ

There are differences for men within SSI categories and ratings of personality abnormality on General Hostility. On the SSI, Character Disorders in particular score very high, both intropunitive and extrapunitive dimensions being used. It is likely that this amount of emotional upset reflected in the HDHQ is related to the high scores on second-order anxiety shown by these same patients. Men rated as having abnormal personalities are not different from the rest on the 16PF but they do have very high scores on General Hostility and differ from those rated as not abnormal and indeterminate on Sum E, indicating a marked bias towards extrapunitive modes of expression. The significant differences on Acting out Hostility and Criticism of Others indicate that this extrapunitiveness carries possible physical as well as verbal connotations.

Like men, women vary on General Hostility when viewed in terms of the SSI categories but they tend to express such hostility in a more intropunitive, self-critical and guilt-ridden manner. Women with personality disorders score much higher on hostility than women suffering from affective disorder; there are differences on all the subscales except Self Criticism. In both these instances, SSI categories and clinical diagnosis, second-order anxiety and its associated first-order factors of the 16PF have been prominent.

For men, most measures display differences on extrapunitiveness as measured primarily by Sum E. Very extrapunitive men tend to be rated high on personality abnormality and social disorder, tend to score at the "high risk of death" end of the life endangerment scale and are more likely to be diagnosed as personality disorders rather than affective disorders. The first three of these measures form the first linkage analysis cluster seen

in Figure 6.1 and it is of some interest that considerable extrapunitiveness is present in all three measures.

Women tend to differ on Sum I. As already stated character disorders and personally disturbed women are more intropunitive than SSI normals or the borderline disturbed. Women with a history of a previous suicidal attempt are also more intropunitive than non-repeaters.

In general the HIMQ results tie in with the 16PF, especially where Anxiety and General Hostility are found together. An interesting sex difference is that men tend to vary in the amount of extrapunitiveness they display while women tend to vary most on intropunitiveness.

One male personality type suggested by the results of the within-group comparisons is characterized by emotional instability, apprehensiveness and poor self-control, a marked tendency to be self-sufficient and a poorly developed social conscience. Since men as a group are high on General Hostility and Sum E it is probable that this type is extrapunitive in relation to normal men. A synthesis of these trait descriptions indicates that this type of person is a "loner" who pays little heed to the needs and expectations of society, experiences little desire for close personal contacts, is emotionally volatile and prone to be extrapunitive. Such a synthesis has a striking resemblance to the McCords' criteria of psychopathy as described by Foulds (1967, 1968).

The second-order factor of anxiety which distinguishes women who have attempted suicide from other groups of women also distinguishes within the group. One type which emerges is that of a woman who is emotionally labile and impulsive, complains about lack of energy, is dissatisfied with life and tends to be apprehensive and guilt prone. Despite producing a wealth of

symptomatology she tends to be diagnosed a personality disorder and has a poor social prognosis. This type of woman is close to Foulds' concept of the character disordered individual (Foulds, 1967).

For both sexes it would appear that an important sub-group can be identified on the basis of certain personality traits. These sub-groups are clearly forms of personality disorder which in men takes the form of psychopathy and in women takes the shape of character disorder, using both these terms in the manner described by Foulds (1967). In a sense patients scoring like these types are those of the population studied who are most unlike normals; the men are the most anxious, most introverted and most lacking in social conscience, while the women are the most anxious, apprehensive and guilt prone. Other types are almost certainly present; there is evidence for a type of male patient who is very character disordered, with little control over his impulses and who shows a great deal of tenseness and energy potential. This type is rather similar to the character disordered type of woman. Similarly, some women, described as "harridans", seem to have a close resemblance to the male psychopathic type. A factor analysis of persons (O-technique) rather than the usual factor analysis of tests (R-technique), or a typal analysis of persons using one or other of the techniques devised by McQuitty (1957, 1961, 1966) could be employed to produce sub-groups of patients but more test data would be necessary before any of these procedures could profitably be carried out.

Conclusions and future research lines

Kessel (1965), McCulloch (1965) and Kessel and McCulloch (1966) showed that patients varied not only in their characteristics at the time of admission

to hospital but also in their subsequent behaviour. Thus while the prime aim of this study has been to provide a broadbased, descriptive account of the personality features of a group of attempted suicides, the various within-group comparisons carried out have facilitated the search for personality dimensions which differentiate within the group. The search for such dimensions is an important step in the investigation of the clinical and social prognosis of sub-groups of the attempted suicide population.

One valuable result of the within-group comparisons has been to show that while men and women are not very different on the personality variables used they differ considerably in the personality dimensions which show within-group differences. If the sexes had not been treated separately many of these differences would not have emerged. By treating the sexes independently, apart from the comparisons with normals and other groups, the size of the sample was reduced by half, so that many of the within-group comparisons had to be made on groups with small numbers of patients. Any future study should aim at investigating a larger number of patients either by studying one sex only or by mounting a group project; the number of admissions to the ward is now so great that it is very difficult for one individual to cope with a large scale study. A reduction in the size of the test battery would be possible, but unless some single specific hypothesis were to be tested, such a reduction would be inadvisable.

It could be argued that many of the variables measured, particularly anxiety, reflected the patient's state of mind at the time of testing rather than any stable behavioural trait. Cattell (1965) conceives of anxiety as being a trait or a state but in practice has been unable to tease out these factors. A postal retest of the patients tested by Philip and McCulloch (1968)

showed that there was no significant decrease on anxiety or any other test variable after an interval of some five weeks had elapsed since admission to the Poisoning Treatment Centre (Philip, unpublished data). There is no doubt, however, that the incorporation of psychological measures in a follow-up study of attempted suicide would be of great interest.

Low factor C (emotional maturity) on the 16PF is an integral part of the anxiety factor which appears to be so important in the attempted suicide population. Cattell's (1957) finding that truancy and poor home backgrounds were associated with low scores on factor C suggest that the study of social variables by McCulloch and Philip (1967b) could have been enhanced by the use of the 16PF rather than the NSQ in their test battery. Certainly the exploration of the relationships between social variables and personality in attempted suicide and other populations would be a worthwhile field of research.

APPENDIX A

The items of the Symptom Sign Inventory.

The items of the Hostility and Direction of Hostility Questionnaire.

The items of the Sixteen Personality Factor Questionnaire.

THE SYMPTOM SIGN INVENTORY

SET A

1. Does your hand often shake when you try to do something?
2. Do you sweat very easily even on cool days?
3. Do you suffer from palpitations or breathlessness?
4. Are there times when you feel anxious without knowing the reason?
5. Are you afraid of being in a wide-open space or in an enclosed place?
6. Are you afraid that you might be going insane?
7. Have you a pain, or feeling of tension, in the back of your neck?
8. Have you difficulty in getting off to sleep (without sleeping pills)?
9. Are you afraid of going out alone?
10. Have you any particular fear not mentioned so far?

SET B

1. Do you cry rather easily?
2. Have you lost interest in almost everything?
3. Have you ever attempted to do away with yourself?
4. Is the simplest task too much of an effort?
5. Are you depressed because of some particular loss or disappointment?
6. Have you found it difficult to concentrate recently?
7. Does the future seem pointless?
8. Are you more absent-minded recently than you used to be?
9. Are you slower recently in everything you do than you used to be?
10. Do you ever seriously think of doing away with yourself because you can no longer cope with your difficulties?

SET C

1. Do you ever feel so confident and successful that there is nothing you can't achieve?

2. Do you ever become very excitedly happy at times for no special reason?

3. Are you ever so cheerful that you want to laugh and joke with everyone?

4. Are there times when exciting new ideas and schemes occur to you one after the other?

5. Are you ever so full of pep and energy that you carry on doing things indefinitely?

6. Do you ever become so excited that your thoughts race ahead faster than you can express them?

7. Are you ever so cheerful that you want to wear lots of gay things, like button-holes, flowers, bright ties, jewellery, etc?

8. When you get bored, do you like to stir up some excitement?

9. Do you ever feel so full of energy and ideas that you don't want to go to bed?

10. Are you a much more important person than most people seem to think?

SET D

1. Are people talking about you and criticizing you through no fault of your own?

2. Have you an important mission to carry out?

3. Are there people who are trying to harm you through no fault of your own?

4. Is someone trying to poison you, or make you ill in some way?

5. Have you some special power, ability or influence which is not recognised by other people?

6. Is someone, other than yourself, deliberately causing most of your troubles?

7. Are people plotting against you through no fault of your own?

8. Do you ever take strong action against an evil person for the sake of a principle?

9. Do you ever see someone do or say something which most people don't take much notice of, but which you know has a special meaning?

10. Can people read your thoughts and make you do things against your will by a sort of hypnotism?

SET E

1. Are you distressed by silly, pointless thoughts that keep coming into your mind against your will?

2. Are you compelled to think over abstract problems again and again until you can't leave them alone?

3. Are you unnecessarily careful in carrying out even simple everyday tasks like folding clothes, reading notices, etc?

4. Are you unable to prevent yourself from doing pointless things - like tapping lamp-posts, touching things, counting windows, uttering phrases, etc?

5. Are you afraid you might do something seriously wrong against your will?

6. Do distressing thoughts about sex or religion come into your mind against your will?

7. Do you feel you just have to check things again and again, like turning off taps or lights, shutting windows at night, etc. - although you know there is really no need?

8. Have you an unreasonable fear that some careless act of yours might have very serious consequences?

9. Are you excessively concerned about cleanliness?

10. Do you have an uneasy feeling that if you don't do something in a certain order, or a certain number of times, something might go wrong?

SET F

1. Do you feel that there is some sort of barrier between you and other people so that you can't really understand them?

2. Do you ever see visions, or people, animals or things around you that other people don't seem to see?

3. Do you often wonder who you really are?

4. Do you ever have very strange and peculiar experiences?

5. Do you think other people regard you as very odd?

6. Do you often feel puzzled, as if something has gone wrong either with you or with the world, without knowing just what it is?

7. Do you ever hear voices without knowing where they come from?

8. Do you feel that you cannot communicate with other people because you don't seem to be on the same "wave-length"?

9. Do you ever have very strange and peculiar thoughts?

10. Is there something unusual about your body, like one side being different from the other and meaning something different?

SET G

1. Do you ever lose the use of an arm or leg or face muscle?

2. Do you ever have fits, or have difficulty in keeping your balance?

3. Do you ever completely lose your voice (except from a cold)?

4. Do you ever lose all feeling in any part of your skin, so that you wouldn't be able to feel a pin prick; or do you ever have burning or tingling sensations?

5. Do you ever have "black outs", dizzy spells or faints?

6. Have you been in poor health during most of the past few years?

7. Do you often suffer from blurring of vision, or any other difficulty with your sight which no one seems able to put right?

8. Are you often bothered with pains over your heart or in your chest or in your back?

9. Do you ever do things in a dream-like state without remembering afterwards what you have been doing?

10. Are you worried about your physical health?

SET H

1. Are you worried about having said things that have injured others?
2. Are you an unworthy person in your own eyes?
3. Have you some bodily condition which you find disgusting?
4. Are you a condemned person because of your sins?
5. Are you troubled by waking in the early hours and being able to get off to sleep again (without sleeping pills)?
6. Because of things you have done wrong, are people talking about you and criticising you?
7. Are you ever so low in spirits that you just sit for hours on end?
8. Do you cause harm to people because of what you are?
9. Are you ever so "worked up" that you pace about wringing your hands?
10. Do you ever go to bed feeling you wouldn't care if you never woke up again?

PERSONALITY QUESTIONNAIRE (MPIQ)

1.	Most people make friends because friends are likely to be useful to them.	True	False
2.	I do not blame a person for taking advantage of someone who lays himself open to it.	True	False
3.	I usually expect to succeed in things I do.	True	False
4.	I have no enemies who really wish to harm me.	True	False
5.	I wish I could get over worrying about things I have said that may have injured other people's feelings.	True	False
6.	I think nearly anyone would tell a lie to keep out of trouble.	True	False
7.	I don't blame anyone for trying to grab everything he can get in this world.	True	False
8.	My hardest battles are with myself.	True	False
9.	I know who, apart from myself, is responsible for most of my troubles.	True	False
10.	Some people are so bossy that I feel like doing the opposite of what they request, even though I know they are right.	True	False
11.	Some of my family have habits that bother and annoy me very much.	True	False
12.	I believe my sins are unpardonable.	True	False
13.	I have very few quarrels with members of my family.	True	False
14.	I have often lost out on things because I couldn't make up my mind soon enough.	True	False
15.	I can easily make other people afraid of me, and sometimes do for the fun of it.	True	False
16.	I believe I am a condemned person.	True	False
17.	In school I was sometimes sent to the principal for misbehaving.	True	False

18.	I have at times stood in the way of people who were trying to do something, not because it amounted to much but because of the principle of the thing.	True	False
19.	Most people are honest chiefly through fear of being caught.	True	False
20.	Sometimes I enjoy hurting persons I love.	True	False
21.	I have not lived the right kind of life.	True	False
22.	Sometimes I feel as if I must injure either myself or someone else.	True	False
23.	I seem to be about as capable and clever as most others around me.	True	False
24.	I sometimes tease animals.	True	False
25.	I get angry sometimes.	True	False
26.	I am entirely self-confident.	True	False
27.	Often I can't understand why I have been so cross and grouchy.	True	False
28.	I shrink from facing a crisis or difficulty.	True	False
29.	I think most people would lie to get ahead.	True	False
30.	I have sometimes felt that difficulties were piling up so high that I could not overcome them.	True	False
31.	If people had not had it in for me I would have been much more successful.	True	False
32.	I have often found people jealous of my good ideas, just because they had not thought of them first.	True	False
33.	Much of the time I feel as if I have done something wrong or evil.	True	False
34.	I have several times given up doing a thing because I thought too little of my ability.	True	False
35.	Someone has it in for me.	True	False
36.	When someone does me a wrong I feel I should pay him back if I can, just for the principle of the thing.	True	False
37.	I am sure I get a raw deal from life.	True	False

38.	I believe I am being followed.	True	False
39.	At times I have a strong urge to do something harmful or shocking.	True	False
40.	I am easily downed in an argument.	True	False
41.	It is safer to trust nobody.	True	False
42.	I easily become impatient with people.	True	False
43.	At times I think I am no good at all.	True	False
44.	I commonly wonder what hidden reason another person may have for doing something nice for me.	True	False
45.	I get angry easily and then get over it soon.	True	False
46.	At times I feel like smashing things.	True	False
47.	I believe I am being plotted against.	True	False
48.	I certainly feel useless at times.	True	False
49.	At times I feel like picking a fist fight with someone.	True	False
50.	Someone has been trying to rob me.	True	False
51.	I am certainly lacking in self-confidence.	True	False

IPAT 16 P. F.

FORM A
1962 Edition

WHAT TO DO: Inside this booklet are some questions to see what attitudes and interests you have. There are no "right" and "wrong" answers because everyone has the right to his own views. To be able to get the best advice from your results, you will want to answer them exactly and truly.

If a separate "Answer Sheet" has not been given to you, turn this booklet over and tear off the Answer Sheet on the back page.

Write your name and other particulars at the top of the Answer Sheet.

First, you should answer the four sample questions below so that you can see whether you need to ask anything before starting. Although you are to read the questions in this booklet, you must record your answers on the answer sheet (alongside the same number as in the booklet).

There are three possible answers to each question. Read the following examples and mark your answers at the top of your answer sheet where it says "Examples." Put a mark, x, in the left-hand box if your answer choice is the "a" answer, in the middle box if your answer choice is the "b" answer, and in the right-hand box if you choose the "c" answer.

EXAMPLES:

1. I like to watch team games. **(a) yes, (b) occasionally, (c) no.**
2. I prefer people who:
   (a) are reserved, (b) (are) in between, (c) make friends quickly.
3. Money cannot bring happiness. **(a) yes (true), (b) in between, (c) no (false).**
4. Woman is to child as cat is to: **(a) kitten, (b) dog, (c) boy.**

In the last example there *is* a right answer—kitten. But there are very few such reasoning items among the questions.

Ask *now* if anything is not clear. The examiner will tell you in a moment to turn the page and start.

When you answer, keep these four points in mind:

1. You are asked not to spend time pondering. **Give the first, natural answer as it comes to you.** Of course, the questions are too short to give you all the particulars you would sometimes like to have. For instance, the above question asks you about "team games" and you might be fonder of football than basketball. But you are to reply "for the average game," or to strike an average in situations of the kind stated. Give the best answer you can at a rate not slower than five or six a minute. You should finish in a little more than half an hour.
2. Try **not** to fall back on the middle, "uncertain" answers except when the answer at either end is really **impossible** for you—perhaps once every two or three questions.
3. Be sure not to skip anything, **but answer every question, somehow.** Some may not apply to you very well, but give your best guess. Some may seem personal; but remember that the answer sheets are kept confidential and cannot be scored without a special stencil key. Answers to particular questions are not inspected.
4. Answer as honestly as possible what is true of **you.** Do not merely mark what seems "the right thing to say" to impress the examiner.

DO NOT TURN PAGE UNTIL TOLD TO DO SO

Copyright © by The Institute for Personality & Ability Testing, 1956, 1962. International copyright in all countries under the Berne Union, Buenos Aires, Bilateral, and Universal Copyright Conventions. All property rights reserved by The Institute for Personality & Ability Testing, 1602-04 Coronado Drive, Champaign, Illinois, U.S.A. Printed in U.S.A.

1. I have the instructions for this test clearly in mind. **(a) yes, (b) uncertain, (c) no.**

2. I am ready to answer each question as truthfully as possible. **(a) yes, (b) uncertain, (c) no.**

3. It would be good for everyone if vacations (holidays) were longer and everyone *had* to take them. **(a) agree, (b) uncertain, (c) disagree.**

4. I can find enough energy to face my difficulties. **(a) always, (b) generally, (c) seldom.**

5. I feel a bit nervous of wild animals even when they are in strong cages. **(a) yes (true), (b) uncertain, (c) no (false).**

6. I hold back from criticizing people and their ideas. **(a) yes, (b) sometimes, (c) no.**

7. I make smart, sarcastic remarks to people if I think they deserve it. **(a) generally, (b) sometimes, (c) never.**

8. I prefer semiclassical music to popular tunes. **(a) true, (b) uncertain, (c) false.**

9. If I saw two neighbors' children fighting, I would: **(a) leave them to settle it, (b) uncertain, (c) reason with them.**

10. On social occasions I: **(a) readily come forward, (b) respond in between, (c) prefer to stay quietly in the background.**

11. I would rather be: **(a) a construction engineer, (b) uncertain, (c) a teacher of social studies.**

12. I would rather spend a free evening: **(a) with a good book, (b) uncertain, (c) working on a hobby with friends.**

13. I can generally put up with conceited people, even though they brag or show they think too well of themselves. **(a) yes, (b) in between, (c) no.**

14. I'd rather that the person I marry be socially admired than gifted in art or literature. **(a) true, (b) uncertain, (c) false.**

15. I sometimes get an unreasonable dislike for a person: **(a) but it is so slight I can hide it easily, (b) in between, (c) which is so definite that I tend to express it.**

16. In a situation which may become dangerous I believe in making a fuss and speaking up even if calmness and politeness are lost. **(a) yes, (b) in between, (c) no.**

17. I am always keenly aware of attempts at propaganda in things I read. **(a) yes, (b) uncertain, (c) no.**

18. I wake up in the night and, through worry, have difficulty in sleeping again. **(a) often, (b) sometimes, (c) never.**

19. I don't feel guilty if scolded for something I did not do. **(a) true, (b) uncertain, (c) false.**

20. I am considered a liberal "dreamer" of new ways rather than a practical follower of well-tried ways. **(a) true, (b) uncertain, (c) false.**

21. I find that my interests in people and amusement tend to change fairly rapidly. **(a) yes, (b) in between, (c) no.**

22. In constructing something I would rather work: **(a) with a committee, (b) uncertain, (c) on my own.**

23. I find myself counting things, for no particular purpose. **(a) often, (b) occasionally, (c) never.**

24. When talking I like: **(a) to say things, just as they occur to me, (b) in between, (c) to get my thoughts well organized first.**

25. I never feel the urge to doodle and fidget when kept sitting still at a meeting. **(a) true, (b) uncertain, (c) false.**

(End of first column on answer sheet.)

26. With the same hours and pay, I would prefer the life of: **(a) a carpenter or cook, (b) uncertain, (c) a waiter in a good restaurant.**

27. With acquaintances I prefer: **(a) to keep to matter-of-fact impersonal things, (b) in between, (c) to chat about people and their feelings.**

28. "Spade" is to "dig" as "knife" is to: **(a) sharp, (b) cut, (c) shovel.**

29. I sometimes can't get to sleep because an idea keeps running through my mind. **(a) true, (b) uncertain, (c) false.**

30. In my personal life I reach the goals I set, almost all the time. **(a) true, (b) uncertain, (c) false.**

31. When telling a person a deliberate lie I have to look away, being ashamed to look him in the eye. **(a) true, (b) uncertain, (c) false.**

32. I am uncomfortable when I work on a project requiring quick action affecting others. **(a) true, (b) in between, (c) false.**

33. Most of the people I know would rate me as an amusing talker. **(a) yes, (b) uncertain, (c) no.**

34. Many ordinary people would be shocked if they knew my inner personal opinions. **(a) yes, (b) uncertain, (c) no.**

35. I get slightly embarrassed if I suddenly become the focus of attention in a social group. **(a) yes, (b) in between, (c) no.**

36. I am always glad to join a large gathering, for example, a party, dance, or public meeting. **(a) yes, (b) in between, (c) no.**

37. In school I preferred (or prefer): **(a) music, (b) uncertain, (c) handwork and crafts.**

38. I believe most people are a little "queer" mentally though they do not like to admit it. **(a) yes, (b) in between, (c) no.**

39. I like a friend (of my sex) who: **(a) seriously thinks out his attitudes to life, (b) in between, (c) is efficient and practical in his interests.**

40. "If at first you don't succeed, try, try, again," is a motto completely forgotten in the modern world. **(a) yes, (b) uncertain, (c) no.**

41. I feel a need every now and then to engage in a tough physical activity. **(a) yes, (b) in between, (c) no.**

42. I would rather mix with polite people than rough, rebellious individuals. **(a) yes, (b) in between, (c) no.**

43. In intellectual interests, my parents are (were): **(a) a bit below average, (b) average, (c) above average.**

44. When I am called in by my boss (or teacher), I: **(a) see a chance to put in a good word for things I am concerned about, (b) in between, (c) fear something has gone wrong.**

45. I feel a strong need for someone to lean on in times of sadness. **(a) yes, (b) in between, (c) no.**

46. I occasionally get puzzled when looking in a mirror, as to the meaning of right and left. **(a) true, (b) uncertain, (c) false.**

47. As a teenager, I joined in school sports: **(a) occasionally, (b) fairly often, (c) a great deal.**

48. I would rather stop in the street to watch an artist painting than listen to some people having a quarrel. **(a) true, (b) uncertain, (c) false.**

49. I sometimes get in a state of tension and turmoil as I think of the day's happenings. **(a) yes, (b) in between, (c) no.**

50. I sometimes doubt whether people I am talking to are really interested in what I am saying. **(a) yes, (b) in between, (c) no.**

(End of second column on answer sheet.)

51. I would like to be: **(a) a forester, (b) uncertain, (c) a grammar or high school teacher.**

52. For special holidays and birthdays, I: **(a) like to give personal presents, (b) uncertain, (c) feel that buying presents is a bit of a nuisance.**

53. "Tired" is to "work" as "proud" is to: **(a) rest, (b) success, (c) exercise.**

54. Which of the following items is different in kind from the others? **(a) candle, (b) moon, (c) electric light.**

55. I admire my parents in all important matters. **(a) yes, (b) uncertain, (c) no.**

56. I have some characteristics in which I feel definitely superior to most people. **(a) yes, (b) uncertain, (c) no.**

57. If it is useful to others, I don't mind taking a dirty job that others look down on. **(a) true, (b) uncertain, (c) false.**

58. I like to go out to a show or entertainment: **(a) more than once a week (more than average), (b) about once a week (average), (c) less than once a week (less than average).**

59. I think that plenty of freedom is more important than good manners and respect for the law. **(a) true, (b) uncertain, (c) false.**

60. I tend to keep quiet in the presence of senior persons (people of greater experience, age, or rank). **(a) yes, (b) in between, (c) no.**

61. I find it hard to address or recite to a large group. **(a) yes, (b) in between, (c) no.**

62. I would rather live in a town: **(a) which is rough, prosperous, and booming, (b) uncertain, (c) artistically laid out, but relatively poor.**

63. If I make an awkward social mistake, I can soon forget it. **(a) yes, (b) in between, (c) no.**

64. When I read an unfair magazine article, I am more inclined to forget it than to feel like "hitting back." **(a) true, (b) uncertain, (c) false.**

65. My memory tends to drop a lot of unimportant trivial things, for example, names of streets or stores in town. **(a) yes, (b) in between, (c) no.**

66. I am considered a person easily swayed by appeals to my feelings. **(a) yes, (b) in between, (c) no.**

67. I eat my food with gusto, not always so carefully and properly as some people. **(a) true, (b) uncertain, (c) false.**

68. I generally keep up hope in ordinary difficulties. **(a) yes, (b) uncertain, (c) no.**

69. People sometimes warn me that I show my excitement in voice and manner too obviously. **(a) yes, (b) in between, (c) no.**

70. As a teenager, if I differed in opinion from my parents, I usually: **(a) kept my own opinion, (b) in between, (c) accepted their authority.**

71. I prefer to marry someone who can: **(a) keep the family interested in its own activities, (b) in between, (c) make the family a part of the social life of the neighborhood.**

72. I would rather enjoy life quietly in my own way than be admired for my achievements. **(a) true, (b) uncertain, (c) false.**

73. I can work carefully on most things without being bothered by people making a lot of noise around me. **(a) yes, (b) in between, (c) no.**

74. I feel that on one or two occasions recently I have been blamed more than I really deserve. **(a) yes, (b) in between, (c) no.**

75. I am always able to keep the expressions of my feelings under exact control. **(a) yes, (b) in between, (c) no.**

(End of third column on answer sheet.)

76. In starting a useful invention, I would prefer: **(a) working on it in the laboratory, (b) uncertain, (c) selling it to people.**

77. "Surprise" is to "strange" as "fear" is to: **(a) brave, (b) anxious, (c) terrible.**

78. Which of the following fractions is not in the same class as the others? **(a) 3/7, (b) 3/9, (c) 3/11.**

79. Some people seem to ignore or avoid me, although I don't know why. **(a) true, (b) uncertain, (c) false.**

80. People treat me less reasonably than my good intentions deserve. **(a) often, (b) occasionally, (c) never.**

81. The use of foul language, even when it is not in a mixed group of men and women, still disgusts me. **(a) yes, (b) in between, (c) no.**

82. I have decidedly fewer friends than most people. **(a) yes, (b) in between, (c) no.**

83. I would hate to be where there wouldn't be a lot of people to talk to. **(a) true, (b) uncertain, (c) false.**

84. People sometimes call me careless, even though they think me an attractive person. **(a) yes, (b) in between, (c) no.**

85. My reserve always stands in the way when I want to speak to an attractive stranger of the opposite sex. **(a) yes, (b) in between, (c) no.**

86. I would rather have a job with: **(a) a fixed, certain salary, (b) in between, (c) a larger salary, but depending on my constantly persuading people I am worth it.**

87. I prefer reading: **(a) a realistic account of military or political battles, (b) uncertain, (c) a sensitive, imaginative novel.**

88. When bossy people try to "push me around," I do just the opposite of what they wish. **(a) yes, (b) in between, (c) no.**

89. Most people would be "better off" if given more praise instead of more criticism. **(a) true, (b) uncertain, (c) false.**

90. In discussing art, religion, or politics, I seldom get so involved or excited I forget politeness and human relations. **(a) true, (b) uncertain, (c) false.**

91. If someone got mad at me, I would: **(a) try to calm him down, (b) uncertain, (c) get irritated.**

92. I would like to see a move toward: **(a) eating more vegetable foods, to avoid killing so many animals, (b) uncertain, (c) getting better poisons to kill the animals which ruin farmers' crops (such as squirrels, rabbits, and some kinds of birds).**

93. If acquaintances treat me badly and show they dislike me: **(a) it does not upset me a bit, (b) in between, (c) I tend to get downhearted.**

94. Careless folks who say "the best things in life are free" usually haven't worked to get much. **(a) true, (b) in between, (c) false.**

95. Because it is not always possible to get things done by gradual, reasonable methods, it is sometimes necessary to use force. **(a) true, (b) in between, (c) false.**

96. At fifteen or sixteen I went about with the opposite sex: **(a) a lot, (b) as much as most people, (c) less than most people.**

97. I like to take an active part in social affairs, committee work, etc. **(a) yes, (b) in between, (c) no.**

98. The idea that sickness comes as much from mental as physical causes is much exaggerated. **(a) yes, (b) in between, (c) no.**

99. Quite small setbacks occasionally irritate me too much. **(a) yes, (b) in between, (c) no.**

100. I very rarely blurt out annoying remarks that hurt people's feelings. **(a) true, (b) uncertain, (c) false.**

(End of fourth column on answer sheet.)

101. I would prefer to work in a business: **(a) talking to customers, (b) in between, (c) keeping office accounts and records.**

102. "Size" is to "length" as "dishonest" is to: **(a) prison, (b) sin, (c) stealing.**

103. AB is to dc as SR is to: **(a) qp, (b) pq, (c) tu.**

104. When people are unreasonable, I just: **(a) keep quiet, (b) in between, (c) despise them.**

105. If people talk loudly while I am listening to music, I: **(a) can keep my mind on the music and not be bothered, (b) in between, (c) find it spoils my enjoyment and annoys me.**

106. I think I am better described as: **(a) polite and quiet, (b) in between, (c) forceful.**

107. I attend social functions only when I have to, and stay away any other time. **(a) yes, (b) uncertain, (c) no.**

108. To be cautious and expect little is better than to be happy at heart, always expecting success. **(a) true, (b) uncertain, (c) false.**

109. In thinking of difficulties in my work, I: **(a) try to plan ahead, before I meet them, (b) in between, (c) assume I can handle them when they come.**

110. I have at least as many friends of the opposite sex as of my own. **(a) yes, (b) in between, (c) no.**

111. Even in an important game I am more concerned to enjoy it than to win. **(a) always, (b) generally, (c) occasionally.**

112. I would rather be: **(a) a guidance worker with young people seeking careers, (b) uncertain, (c) a manager in a technical manufacturing concern.**

113. If I am quite sure that a person is unjust or behaving selfishly, I show him up, even if it takes some trouble. **(a) yes, (b) in between, (c) no.**

114. Some people criticize my sense of responsibility. **(a) yes, (b) uncertain, (c) no.**

115. I would enjoy being a newspaper writer on drama, concerts, opera, etc. **(a) yes, (b) uncertain, (c) no.**

116. I find it embarrassing to have praise or compliments bestowed on me. **(a) yes, (b) in between, (c) no.**

117. I think it is more important in the modern world to solve: **(a) the political difficulties, (b) uncertain, (c) the question of moral purpose.**

118. I occasionally have a sense of vague danger or sudden dread for no sufficient reason. **(a) yes, (b) in between, (c) no.**

119. As a child I feared the dark. **(a) often, (b) sometimes, (c) never.**

120. On a free evening I like to: **(a) see an historical film about past adventures, (b) uncertain, (c) read science fiction or an essay on "The Future of Science."**

121. It bothers me if people think I am being too unconventional or odd. **(a) a lot, (b) somewhat, (c) not at all.**

122. Most people would be happier if they lived more with their fellows and did the same things as others. **(a) yes, (b) in between, (c) no.**

123. I like to go my own way instead of acting on approved rules. **(a) true, (b) uncertain, (c) false.**

124. Often I get angry with people too quickly. **(a) yes, (b) in between, (c) no.**

125. When something really upsets me, I generally calm down again quite quickly. **(a) yes, (b) in between, (c) no.**

(End of fifth column on answer sheet.)

126. If the earnings were the same, I would rather be: (a) a lawyer, (b) uncertain, (c) a navigator or pilot.

127. "Better" is to "worst" as "slower" is to: (a) fast, (b) best, (c) quickest.

128. Which of the following should come next at the end of this row of letters: xooooxxoooxxx? (a) xox, (b) oox, (c) oxx.

129. When the time comes for something I have planned and looked forward to, I occasionally do not feel up to going. (a) true, (b) in between, (c) false.

130. I could enjoy the life of an animal doctor, handling disease and surgery of animals. (a) yes, (b) in between, (c) no.

131. I occasionally tell strangers things that seem to me important, regardless of whether they ask about them. (a) yes, (b) in between, (c) no.

132. I spend much of my spare time talking with friends over social events enjoyed in the past. (a) yes, (b) in between, (c) no.

133. I enjoy doing "daring," foolhardy things "just for fun." (a) yes, (b) in between, (c) no.

134. I think the police can be trusted not to ill-treat innocent people. (a) yes, (b) in between, (c) no.

135. I consider myself a very sociable, outgoing person. (a) yes, (b) in between, (c) no.

136. In social contacts I: (a) show my emotions as I wish, (b) in between, (c) keep my emotions to myself.

137. I enjoy music that is: (a) light, dry, and brisk, (b) in between, (c) emotional and sentimental.

138. I try to make my laughter at jokes quieter than most people's. (a) yes, (b) in between, (c) no.

139. I admire the beauty of a fairy tale more than that of a well-made gun. (a) yes, (b) uncertain, (c) no.

140. Hearing different beliefs about right and wrong is: (a) always interesting, (b) something we cannot avoid, (c) bad for most people.

141. I am always interested in mechanical matters, for example, in cars and airplanes. (a) yes, (b) in between, (c) no.

142. I like to tackle problems that other people have made a mess of. (a) yes, (b) in between, (c) no.

143. I am properly regarded as only a plodding, half-successful person. (a) yes, (b) uncertain, (c) no.

144. If people take advantage of my friendliness, I do not resent it and I soon forget. (a) true, (b) uncertain, (c) false.

145. I think the spread of birth control is essential to solving the world's economic and peace problems. (a) yes, (b) uncertain, (c) no.

146. I like to do my planning alone, without interruptions and suggestions from others. (a) yes, (b) in between, (c) no.

147. I sometimes let my actions get swayed by feelings of jealousy. (a) yes, (b) in between, (c) no.

148. I believe firmly "the boss may not always be right, but he always has the right to be boss." (a) yes, (b) uncertain, (c) no.

149. I tend to tremble or perspire when I think of a difficult task ahead. (a) generally, (b) occasionally, (c) never.

150. If people shout suggestions when I'm playing a game, it does not upset me. (a) true, (b) uncertain, (c) false.

(End of sixth column on answer sheet.)

151. I would prefer the life of: **(a) an artist, (b) uncertain, (c) a secretary running a social club.**

152. Which of the following words does not properly belong with the others? **(a) any, (b) some, (c) most.**

153. "Flame" is to "heat" as "rose" is to: **(a) thorn, (b) red petals, (c) scent.**

154. I have vivid dreams, disturbing my sleep. **(a) often, (b) occasionally, (c) practically never.**

155. If the odds are really against something's being a success, I still believe in taking the risk. **(a) yes, (b) in between, (c) no.**

156. I like it when I know so well what the group has to do that I naturally become the one in command. **(a) yes, (b) in between, (c) no.**

157. I would rather dress with quiet correctness than with eye-catching personal style. **(a) true, (b) uncertain, (c) false.**

158. An evening with a quiet hobby appeals to me more than a lively party. **(a) true, (b) uncertain, (c) false.**

159. I close my mind to well-meant suggestions of others, even though I know I shouldn't. **(a) occasionally, (b) hardly ever, (c) never.**

160. I always make a point, in deciding anything, to refer to basic rules of right and wrong. **(a) yes, (b) in between, (c) no.**

161. I somewhat dislike having a group watch me at work. **(a) yes, (b) in between, (c) no.**

162. I keep my room smartly organized, with things in known places almost all the time. **(a) yes, (b) in between, (c) no.**

163. In school I preferred: **(a) English, (b) uncertain, (c) mathematics or arithmetic.**

164. I have sometimes been troubled by people's saying bad things about me behind my back, with no grounds at all. **(a) yes, (b) uncertain, (c) no.**

165. Talk with ordinary, habit-bound, conventional people: **(a) is often quite interesting and has a lot to it, (b) in between, (c) annoys me because it deals with trifles and lacks depth.**

166. I like to: **(a) have a circle of warm friendships, even if they are demanding, (b) in between, (c) be free of personal entanglements.**

167. I think it is wiser to keep the nation's military forces strong than just to depend on international goodwill. **(a) yes, (b) in between, (c) no.**

168. People regard me as a solid, undisturbed person, unmoved by ups and downs in circumstances. **(a) yes, (b) in between, (c) no.**

169. I think society should let reason lead it to new customs and throw aside old habits or mere traditions. **(a) yes, (b) in between, (c) no.**

170. My viewpoints change in an uncertain way because I trust my feelings more than logical reasoning. **(a) true, (b) to some extent, (c) false.**

171. I learn better by: **(a) reading a well-written book, (b) in between, (c) joining a group discussion.**

172. I have periods when it's hard to stop a mood of self-pity. **(a) often, (b) occasionally, (c) never.**

173. I like to wait till I am sure that what I am saying is correct, before I put forth an argument. **(a) always, (b) generally, (c) only if it's practicable.**

174. Small things sometimes "get on my nerves" unbearably though I realize them to be trivial. **(a) yes, (b) in between, (c) no.**

175. I don't often say things on the spur of the moment that I greatly regret. **(a) true, (b) uncertain, (c) false.**

(End of seventh column on answer sheet.)

176. If asked to work with a charity drive, I would: **(a) accept, (b) uncertain, (c) politely say I'm too busy.**

177. Which of the following words does not belong with the others? **(a) wide, (b) zigzag, (c) regular.**

178. "Soon" is to "never" as "near" is to: **(a) nowhere, (b) far, (c) next.**

179. I have a good sense of direction (find it easy to tell which is North, South, East, or West) when in a strange place. **(a) yes, (b) in between, (c) no.**

180. I am known as an "idea man" who almost always puts forward some ideas on a problem. **(a) yes, (b) in between, (c) no.**

181. I think I am better at showing: **(a) nerve in meeting challenges, (b) uncertain, (c) tolerance of other people's wishes.**

182. I am considered a very enthusiastic person. **(a) yes, (b) in between, (c) no.**

183. I like a job that offers change, variety, and travel, even if it involves some danger. **(a) yes, (b) in between, (c) no.**

184. I am a fairly strict person, insisting on always doing things as correctly as possible. **(a) true, (b) in between, (c) false.**

185. I enjoy work that requires conscientious, exacting skills. **(a) yes, (b) in between, (c) no.**

186. I'm the energetic type who keeps busy. **(a) yes, (b) uncertain, (c) no.**

187. I am sure there are no questions that I have skipped or failed to answer properly. **(a) yes, (b) uncertain, (c) no.**

(Do not tear off this sheet unless told to do so.)

IPAT

ANSWER SHEET: THE 16 P. F. TEST, FORM A

NAME _____ SEX _____ AGE _____ DATE _____

First Middle Last (Write M or F) (Nearest Year) ★

EXAMPLES: 1 ☐ ☐ ☐ 2 ☐ ☐ ☐ 3 ☐ ☐ ☐ 4 ☐ ☐ ☐

1 ☐ ☐ ☐	26 ☐ ☐ ☐	51 ☐ ☐ ☐	76 ☐ ☐ ☐	101 ☐ ☐ ☐	126 ☐ ☐ ☐	151 ☐ ☐ ☐	176 ☐ ☐ ☐
2 ☐ ☐ ☐	27 ☐ ☐ ☐	52 ☐ ☐ ☐	77 ☐ ☐ ☐	102 ☐ ☐ ☐	127 ☐ ☐ ☐	152 ☐ ☐ ☐	177 ☐ ☐ ☐
3 ☐ ☐ ☐	28 ☐ ☐ ☐	53 ☐ ☐ ☐	78 ☐ ☐ ☐	103 ☐ ☐ ☐	128 ☐ ☐ ☐	153 ☐ ☐ ☐	178 ☐ ☐ ☐
4 ☐ ☐ ☐	29 ☐ ☐ ☐	54 ☐ ☐ ☐	79 ☐ ☐ ☐	104 ☐ ☐ ☐	129 ☐ ☐ ☐	154 ☐ ☐ ☐	179 ☐ ☐ ☐
5 ☐ ☐ ☐	30 ☐ ☐ ☐	55 ☐ ☐ ☐	80 ☐ ☐ ☐	105 ☐ ☐ ☐	130 ☐ ☐ ☐	155 ☐ ☐ ☐	180 ☐ ☐ ☐
6 ☐ ☐ ☐	31 ☐ ☐ ☐	56 ☐ ☐ ☐	81 ☐ ☐ ☐	106 ☐ ☐ ☐	131 ☐ ☐ ☐	156 ☐ ☐ ☐	181 ☐ ☐ ☐
7 ☐ ☐ ☐	32 ☐ ☐ ☐	57 ☐ ☐ ☐	82 ☐ ☐ ☐	107 ☐ ☐ ☐	132 ☐ ☐ ☐	157 ☐ ☐ ☐	182 ☐ ☐ ☐
8 ☐ ☐ ☐	33 ☐ ☐ ☐	58 ☐ ☐ ☐	83 ☐ ☐ ☐	108 ☐ ☐ ☐	133 ☐ ☐ ☐	158 ☐ ☐ ☐	183 ☐ ☐ ☐
9 ☐ ☐ ☐	34 ☐ ☐ ☐	59 ☐ ☐ ☐	84 ☐ ☐ ☐	109 ☐ ☐ ☐	134 ☐ ☐ ☐	159 ☐ ☐ ☐	184 ☐ ☐ ☐
10 ☐ ☐ ☐	35 ☐ ☐ ☐	60 ☐ ☐ ☐	85 ☐ ☐ ☐	110 ☐ ☐ ☐	135 ☐ ☐ ☐	160 ☐ ☐ ☐	185 ☐ ☐ ☐

BE SURE YOUR MARKS ARE HEAVY. ERASE COMPLETELY ANY ANSWER YOU WISH TO CHANGE.

11 ☐ ☐ ☐	36 ☐ ☐ ☐	61 ☐ ☐ ☐	86 ☐ ☐ ☐	111 ☐ ☐ ☐	136 ☐ ☐ ☐	161 ☐ ☐ ☐	186 ☐ ☐ ☐
12 ☐ ☐ ☐	37 ☐ ☐ ☐	62 ☐ ☐ ☐	87 ☐ ☐ ☐	112 ☐ ☐ ☐	137 ☐ ☐ ☐	162 ☐ ☐ ☐	187 ☐ ☐ ☐
13 ☐ ☐ ☐	38 ☐ ☐ ☐	63 ☐ ☐ ☐	88 ☐ ☐ ☐	113 ☐ ☐ ☐	138 ☐ ☐ ☐	163 ☐ ☐ ☐	END OF TEST
14 ☐ ☐ ☐	39 ☐ ☐ ☐	64 ☐ ☐ ☐	89 ☐ ☐ ☐	114 ☐ ☐ ☐	139 ☐ ☐ ☐	164 ☐ ☐ ☐	
15 ☐ ☐ ☐	40 ☐ ☐ ☐	65 ☐ ☐ ☐	90 ☐ ☐ ☐	115 ☐ ☐ ☐	140 ☐ ☐ ☐	165 ☐ ☐ ☐	
16 ☐ ☐ ☐	41 ☐ ☐ ☐	66 ☐ ☐ ☐	91 ☐ ☐ ☐	116 ☐ ☐ ☐	141 ☐ ☐ ☐	166 ☐ ☐ ☐	
17 ☐ ☐ ☐	42 ☐ ☐ ☐	67 ☐ ☐ ☐	92 ☐ ☐ ☐	117 ☐ ☐ ☐	142 ☐ ☐ ☐	167 ☐ ☐ ☐	
18 ☐ ☐ ☐	43 ☐ ☐ ☐	68 ☐ ☐ ☐	93 ☐ ☐ ☐	118 ☐ ☐ ☐	143 ☐ ☐ ☐	168 ☐ ☐ ☐	
19 ☐ ☐ ☐	44 ☐ ☐ ☐	69 ☐ ☐ ☐	94 ☐ ☐ ☐	119 ☐ ☐ ☐	144 ☐ ☐ ☐	169 ☐ ☐ ☐	
20 ☐ ☐ ☐	45 ☐ ☐ ☐	70 ☐ ☐ ☐	95 ☐ ☐ ☐	120 ☐ ☐ ☐	145 ☐ ☐ ☐	170 ☐ ☐ ☐	
21 ☐ ☐ ☐	46 ☐ ☐ ☐	71 ☐ ☐ ☐	96 ☐ ☐ ☐	121 ☐ ☐ ☐	146 ☐ ☐ ☐	171 ☐ ☐ ☐	
22 ☐ ☐ ☐	47 ☐ ☐ ☐	72 ☐ ☐ ☐	97 ☐ ☐ ☐	122 ☐ ☐ ☐	147 ☐ ☐ ☐	172 ☐ ☐ ☐	
23 ☐ ☐ ☐	48 ☐ ☐ ☐	73 ☐ ☐ ☐	98 ☐ ☐ ☐	123 ☐ ☐ ☐	148 ☐ ☐ ☐	173 ☐ ☐ ☐	
24 ☐ ☐ ☐	49 ☐ ☐ ☐	74 ☐ ☐ ☐	99 ☐ ☐ ☐	124 ☐ ☐ ☐	149 ☐ ☐ ☐	174 ☐ ☐ ☐	

RAW SCORE

A B C E F G H I L M N O Q Q Q

APPENDIX B

Schedules used in the study

Name _____ Case No. _____

Sex M F Age _____

Address _____ Civil State S M Co W Sep D

_____ Married 5 + years Yes : No

Ward No. _____

Date of Admission __/__/__

Date of Testing __/__/__ Time lag to testing _____

Date of Discharge __/__/__ Time lag to discharge _____

Method used _____

Gas, drugs, aspirin, cutting, "other", alcohol at time

Level of Consciousness Conscious; grade 1; 2; 3; 4.

Premeditation

Spur of the moment; premeditated; denial of intent.

Suicidal Threats

None; recent only; frequent threats; warned doctor.

Assessment of Motive (Psychiatrist)

1. Interpersonal spouse; other
2. Material circumstances
3. Referred to self

Combinations of above _____

Previous Attempts

1. Patient; no. of occasions _____ most recent last 3/12; 3/12-12/12; more

2. Relations; yes; no; who : _____

Psychiatric Consultations

1. Patient; N/K; None; OP; IP.
2. Relatives; who: _____ OP; IP.

Physical Illness

Any long standing illness or disability?

Any recent severe (acute) illness?

History of Drinking N/K; no problem; problem drinking.

History of Drugs N/K; no abuse; sedatives; stimulants; both.

History of Crime N/K; none; police warning; app. school; probation; fines; jail.

Psychiatric diagnosis a) Principal _____ (Code)

b) Accessory _____ (Code)

Psychiatric Symptoms and Signs Rating _____

Personality Abnormality Rating _____

Social Disorder and Deviance Rating _____

Life Endangerment Rating _____

Precautions Taken Rating _____

Social Prognosis Index a) Score _____

b) Rating 1 2 3 4

Psychological Results

Anxiety sten ___ Introversion - Extraversion sten ___

16PF

Scale	Raw	Stens	Scale	Raw	Stens
A	___	___	L	___	___
B	___	___	M	___	___
C	___	___	N	___	___
E	___	___	O	___	___
F	___	___	Q_1	___	___
G	___	___	Q_2	___	___
H	___	___	Q_3	___	___
I	___	___	Q_4	___	___

Hostility

AH	___	H	___
CO	___	100+D	___
DH	___		
SC	___	Sum E	___
DG	___	Sum I	___

S.S.I.

PI	___	___
CD	___	___
Neu vs Ps	___	___
Psychic/Somatic	___	___

S.S.I. diagnosis _____

"Personality variables involved in suicidal behaviour"

Questions in addition to routine schedule.

A. If the patient is married, is there, in either spouse any evidence of

a) inter spouse violence Yes ____ No ____

b) infidelity Yes ____ No ____

c) alcoholism Yes ____ No ____

B. Has the patient ever been in trouble with the law? Yes ____ No ____

Use the following categories to specify the trouble:

a) Warned by police ____

b) Prosecuted ____

c) Convicted a) Fine ____

b) Jail ____

d) Convicted more than once ____

"Personality variables involved in suicidal behaviour"

Information required from the psychiatrist.

1. Recommended psychiatric disposal

a) no psychiatric treatment
b) G.P. treatment
c) Psychiatric OP
d) " DP
e) Psychiatric IP
f) referred to Social Worker
g) patient left AMA

2. Presence of Psychiatric Symptoms and Signs*

Symptoms and signs clearly present	7	6	5	4	3	2	1	Symptoms and signs clearly absent

3. Presence of Personality Abnormality ✓

Clear indications of personality abnormality	7	6	5	4	3	2	1	No evidence of personality abnormality

4. Presence of Social Disorder and Deviance ✓

Social disorder clearly in evidence	7	6	5	4	3	2	1	No social disorder

5. If the patient had not been discovered, to what degree was his/her life endangered?

Certain to die	7	6	5	4	3	2	1	Certain to live

6. To what extent were precautions taken to avoid or ensure discovery?

Definite precautions to avoid discovery.	7	6	5	4	3	2	1	Definite precautions to ensure discovery.

* Symptoms and signs of any psychiatric illness, using Mayer-Gross et al type of diagnosis. Score of 7 would indicate presence of symptoms allowing a formal diagnosis to be made with certainty.

✓ In both cases to be assessed "in the psychiatrist's opinion". The norm suggested is the range of behaviour seen in general medical and surgical patients.

SOCIAL PROGNOSIS INDEX - WOMEN

Name _____ No. _____

		Good	Bad
1.	Patient unmarried, aged under 34 years.	☐	
2.	Patient unmarried, aged 34 years or more.		☐
3.	Extant marriage, patient aged 35 years or more, or married for 5 years or more.	☐	
4.	Extant marriage with violence, infidelity, alcoholism in spouse or with marital disharmony as a precipitant.		☐
5.	Patient separated or divorced.		☐
6.	Patient's work record one of frequent job changes (3+ in year), unemployment or casual labour.		☐
7.	Patient's social class IV or V.		☐
8.	Patient living in own home (if married) or with parents (if single).	☐	
9.	Drinking or drug taking seen to be a problem (by patient, informant or psychiatrist).		☐
10.	Trouble with the law (any one of these:- warned by police, app. school, probation, fines, jail).		☐
11.	Use of aspirin as method of self-poisoning.	☐	
12.	Use of "cutting" and "other" methods.		☐
13.	Rating of 1 or 2 on life endangerment scale.		☐
14.	Primary diagnosis of "nil psychiatric".	☐	
15.	Primary diagnosis of personality disorder.		☐
16.	Previous suicidal attempt.		☐

Scoring: 10+ (Sum "Good" - Sum "Bad")

Sum Good ___ Sum Bad ___

Score ___

Rating ___

SOCIAL PROGNOSIS INDEX - MEN

Name _____ No. _____

		Good	Bad
1.	Patient unmarried, aged under 20 years.	☐	
2.	Patient unmarried, aged 20 years or more.		☐
3.	Extant marriage, patient aged 35 years or more, or married for 5 or more years.	☐	
4.	Extant marriage with violence, infidelity, alcoholism in spouse or with marital disharmony as a precipitant.		☐
5.	Patient separated or divorced.		☐
6.	Patient's work record one of frequent job changes (3+ in year), unemployment or casual labour.		☐
7.	Patient living in own home (if married) or with parents (if single).	☐	
8.	Drinking or drug taking seen to be a problem (by patient, informant or psychiatrist).		☐
9.	Trouble with the law (any one of these:- warned by police, app. school, probation, fines, jail).		☐
10.	Use of aspirin as method of self-poisoning.	☐	
11.	Use of "cutting" and "other" methods.		☐
12.	Rating of 1 or 2 on life endangerment scale.		☐
13.	Primary diagnosis of neurosis or depression.	☐	
14.	Primary diagnosis of "nil psychiatric" or personality disorder.		☐
15.	Previous suicidal attempt.		☐

Scoring: 10+ (Sum "Good" - Sum "Bad")

Sum Good ____ Sum Bad ____

Score ____

Rating ____

APPENDIX C

Sex differences and group differences
on social and demographic variables
for tested and random control patients.

1. AGE

		N	Mean	SD
Men	Tested group	50	30.30	12.30
	Random group	50	37.30	13.61
Women	Tested group	50	28.10	12.00
	Random group	50	31.90	16.19
Sex differences	Tested group	t=0.91,	d.f.=98,	n.s.
	Random group	t=1.81,	d.f.=98,	n.s.
Group differences	Men	t=2.70,	d.f.=98,	p<.01
	Women	t=1.33,	d.f.=98,	n.s.

2. **CIVIL STATE**

	Men		Women	
	Tested group	Random group	Tested group	Random group
Single	26	22	21	19
Married	15 } 15	16 } 16	16 } 19	15 } 18
Cohabiting	0 }	0 }	3 }	3 }
Widowed	0 }	4 }	0 }	3 }
Separated	4 } 9	5 } 12	7 } 10	6 } 13
Divorced	5 }	3 }	3 }	4 }

Sex differences

Tested group, X^2 (Single v. Married and Cohabiting v. Others) = 1.05, d.f. = 2, n.s.

Random group, X^2 (Single v. Married and Cohabiting v. Others) = 0.38, d.f. = 2, n.s.

Group differences

Men, X^2 (Single v. Married and Cohabiting v. Others) = 0.79, d.f. = 2, n.s.

Women, X^2 (Single v. Married and Cohabiting v. Others) = 0.52, d.f. = 2, n.s.

3. LENGTH OF STAY IN THE WARD

	Men		Women	
	Tested group	Random group	Tested group	Random group
1 day or less	6	20	9	17
2 and 3 days	26	16	24	22
4 or more days	18	14	17	11

Sex differences

Tested group $X^2 = 0.71$, d.f. = 2, n.s.
Random group $X^2 = 1.55$, d.f. = 2, n.s.

Group differences

Men $X^2 = 10.42$, d.f. = 2, $p<.01$
Women $X^2 = 3.83$, d.f. = 2, n.s.

4. METHOD OF ATTEMPT

	Men				Women			
	Tested group		Random group		Tested group		Random group	
Drugs	31		43		34		39	
Aspirin	12		3		8		7	
Gas	3		2		4		2	
Cutting	2	7	0	4	3	8	2	4
Other methods	2		2		1		0	

Sex differences

Tested group X^2 = (Drugs v. Aspirin v. All others) = 1.00, d.f.=2, n.s.
Random group X^2 = (Drugs v. Rest) = 0.61, d.f.=1, n.s.

Group differences

Men X^2 = (Drugs v. Aspirin v. All others) = 8.16, d.f.=2, $p<.025$
Women X^2 = (Drugs v. Aspirin v. All others) = 1.74, d.f.=2, n.s.

5. LEVEL OF CONSCIOUSNESS

	Men		Women	
	Tested group	Random group	Tested group	Random group
Conscious	40	35	37	33
Unconscious grade I	1	3	3	2
" grade II	3	6	7	7
" grade III	4 (10)	5 (15)	1 (13)	7 (17)
" grade IV	2	1	2	1

Sex differences

Tested group X^2 (Conscious v. Unconscious) = 0.23, d.f. = 1, n.s.

Random group X^2 (Conscious v. Unconscious) = 0.05, d.f. = 1, n.s.

Group differences

Men X^2 (Conscious v. Unconscious) = 0.85, d.f. = 1, n.s.

Women X^2 (Conscious v. Unconscious) = 0.32, d.f. = 1, n.s.

6. PREMEDITATION

	Men		Women	
	Tested group	Random group	Tested group	Random group
Acted on spur of the moment	32	35	35	33
Act premeditated	12	8	12	13
Denial of suicidal intent	6	7	3	4

Sex differences

Tested group X^2 (Spur of moment v. Premeditated) = 0.00, d.f. = 1, n.s.
Random group X^2 = 2.04, d.f. = 2, n.s.

Group differences

Men X^2 = 1.01, d.f. = 2, n.s.
Women X^2 (Spur of moment v. Premeditated) = 0.00, d.f. = 1, n.s.

7. SUICIDAL THREATS

	Men		Women	
	Tested group	Random group	Tested group	Random group
No suicidal threats	43	39	45	44
Recent threats	4	5	1	3
Frequent threats	3	6	4	3
	7	11	5	6

Sex differences

Tested group X^2 (No threats v. threats) = 0.09, d.f. = 1, n.s.
Random group X^2 (No threats v. threats) = 1.13, d.f. = 1, n.s.

Group differences

Men X^2 (No threats v. threats) = 0.61, d.f. = 1, n.s.
Women X^2 (No threats v. threats) = 0.00, d.f. = 1, n.s.

8. MOTIVATING FACTORS

	Men		Women	
	Tested group	Random group	Tested group	Random group
Uncertain	2	7	3	6
Interpersonal	20	17	22	15
Interpersonal and environmental or internal factors	12	14	14	13
Environmental	7	4	1	0
Internal, referred to self	9	8	10	16

Sex differences

Tested group X^2 (Interpersonal v. Interpersonal, etc. and Environmental v. Internal) = 0.59, d.f. = 2, n.s.

Random group X^2 (Uncertain v. Interpersonal v. Internal v. Others) = 3.67, d.f. = 3, n.s.

Group differences

Men X^2 = 4.05, d.f. = 4, n.s.

Women X^2 (Uncertain v. Interpersonal v. Internal v. Others) = 3.85, d.f. = 3, n.s.

9. HISTORY OF PREVIOUS SUICIDAL ATTEMPT

	Men		Women	
	Tested group	Random group	Tested group	Random group
Previous attempt	20	18	16	20
No previous attempt	30	32	34	30

Sex differences

Tested group $X^2 = 0.39$, d.f. = 1, n.s.
Random group $X^2 = 0.04$, d.f. = 1, n.s.

Group differences

Men $X^2 = 0.04$, d.f. = 1, n.s.
Women $X^2 = 0.39$, d.f. = 1, n.s.

10. HISTORY OF SUICIDAL ATTEMPT BY A RELATIVE

	Men		Women	
	Tested group	Random group	Tested group	Random group
Attempt by relative	4	5	3	7
No attempt by relative	46	45	47	43

Sex differences

Tested group $X^2 = 0.00$, d.f. = 1, n.s.
Random group $X^2 = 0.09$, d.f. = 1, n.s.

Group differences

Men $X^2 = 0.00$, d.f. = 1, n.s.
Women $X^2 = 1.00$, d.f. = 1, n.s.

11. HISTORY OF PSYCHIATRIC CONTACT

	Men		Women	
	Tested group	Random group	Tested group	Random group
History of psychiatric contact	23	23	19	21
No history of contact	27	26	31	29

Sex differences

Tested group $X^2 = 0.37$, d.f. = 1, n.s.
Random group $X^2 = 0.16$, d.f. = 1, n.s.

Group differences

Men $X^2 = 0.00$, d.f. = 1, n.s.
Women $X^2 = 0.04$, d.f. = 1, n.s.

12. PRESENCE OF CHRONIC PHYSICAL ILLNESS

	Men		Women	
	Tested group	Random group	Tested group	Random group
Chronic Illness present	10	14	5	4
Chronic Illness absent	40	36	45	46

Sex differences

Tested group $X^2 = 1.96$, d.f. = 1, n.s.
Random group $X^2 = 6.77$, d.f. = 1, $p<.01$

Group differences

Men $X^2 = 0.49$, d.f. = 1, n.s.
Women $X^2 = 0.00$, d.f. = 1, n.s.

13. HISTORY OF PROBLEM DRINKING

	Men		Women	
	Tested group	Random group	Tested group	Random group
No problem drinking	26	13	41	39
Problem drinking	24	36	9	9
Not known	0	1	0	2

Sex differences

Tested group X^2 (Problem v. No problem) = 10.18, d.f. = 1, $p<.005$
Random group X^2 (Problem v. No problem) = 29.33, d.f. = 1, $p<.0005$

Group differences

Men X^2 (Problem v. No problem) = 5.80, d.f. = 1, $p<.025$
Women X^2 (Problem v. No problem) = 0.03, d.f. = 1, n.s.

14. ABUSE OF DRUGS

	Men		Women	
	Tested group	Random group	Tested group	Random group
No abuse of drugs	43	35	43	39
Abuse of sedatives	3	9	6	6
Abuse of stimulants	2 (7)	0 (14)	1 (7)	1 (9)
Abuse of both varieties	2	5	0	2
Not known	0	1	0	2

Sex differences

Tested group X^2 (Abuse v. No abuse) = 0.00, d.f. = 1, n.s.
Random group X^2 (Abuse v. No abuse) = 1.31, d.f. = 1, n.s.

Group differences

Men X^2 (Abuse v. No abuse) = 3.00, d.f. = 1, n.s.
Women X^2 (Abuse v. No abuse) = 0.13, d.f. = 1, n.s.

15. PSYCHIATRIC DIAGNOSIS

	Men		Women	
	Tested group	Random group	Tested group	Random group
Nil psychiatric	7	4	2	8
Schizophrenia	0	0	0	2
Affective disorder	13	14	22	15
Neurosis	1	0	1	1
Personality disorder	27	29	24	20
Other diagnoses	2	3	1	4

Sex differences

Tested group X^2 (Affective disorder v. Personality disorder v. All Others) = 5.06, d.f. = 2, n.s.

Random group X^2 (Affective disorder v. Personality disorder v. All Others) = 9.66, d.f. = 2, $p<.01$

Group differences

Men X^2 (Affective disorder v. Personality disorder v. All Others) = 0.64, d.f. = 2, n.s.

Women X^2 (Affective disorder v. Personality disorder v. All Others) = 11.33, d.f. = 2, $p<.005$

APPENDIX D

Detailed results of within-group comparisons

PERSONALITY VARIABLES CONSIDERED BY SOCIAL PROGNOSIS INDEX GROUPINGS

Numbers in each group

	Men	Women
Group 1	12	10
Group 2	13	16
Group 3	12	12
Group 4	13	12

	Men		Women	
Anxiety	Mean	(SD)	Mean	(SD)
Group 1	7.67	(1.72)	8.30	(2.21)
Group 2	8.54	(1.66)	7.88	(2.31)
Group 3	6.75	(2.45)	8.33	(2.27)
Group 4	7.23	(1.92)	6.08	(2.11)
I - E	Mean	(SD)	Mean	(SD)
Group 1	4.25	(1.36)	4.50	(1.78)
Group 2	4.46	(2.18)	3.75	(1.84)
Group 3	4.42	(1.93)	4.25	(1.96)
Group 4	3.62	(2.06)	3.50	(1.09)
A (outgoing)	Mean	(SD)	Mean	(SD)
Group 1	6.50	(1.24)	5.00	(1.41)
Group 2	6.77	(2.05)	5.19	(1.64)
Group 3	6.75	(1.48)	4.75	(2.14)
Group 4	6.00	(1.73)	5.25	(1.14)

	Men		Women	
B (intelligent)	Mean	(SD)	Mean	(SD)
Group 1	6.50	(2.32)	5.90	(1.91)
Group 2	6.69	(0.85)	6.38	(1.82)
Group 3	6.08	(2.15)	6.25	(2.22)
Group 4	7.23	(2.01)	6.08	(1.56)
C (stable)	Mean	(SD)	Mean	(SD)
Group 1	3.83	(2.62)	2.70	(1.95)
Group 2	3.46	(2.11)	2.81	(1.68)
Group 3	4.50	(2.50)	3.17	(1.95)
Group 4	3.85	(2.19)	4.92	(1.56)
E (dominant)	Mean	(SD)	Mean	(SD)
Group 1	5.50	(1.88)	6.00	(1.41)
Group 2	5.54	(1.56)	5.38	(1.71)
Group 3	4.67	(1.82)	6.17	(1.90)
Group 4	4.92	(2.22)	5.08	(1.56)
F (enthusiastic)	Mean	(SD)	Mean	(SD)
Group 1	5.83	(1.70)	5.60	(1.43)
Group 2	5.85	(1.72)	4.63	(2.00)
Group 3	5.33	(1.61)	5.33	(2.64)
Group 4	4.08	(1.66)	4.83	(1.75)
G (conscientious)	Mean	(SD)	Mean	(SD)
Group 1	3.33	(1.78)	4.40	(1.51)
Group 2	4.15	(1.72)	3.75	(1.88)
Group 3	4.75	(2.22)	3.92	(2.15)
Group 4	4.46	(1.76)	5.08	(1.31)

	Men		Women	
H (venturesome)	**Mean**	**(SD)**	**Mean**	**(SD)**
Group 1	3.67	(1.15)	4.90	(1.73)
Group 2	4.08	(2.55)	4.19	(1.91)
Group 3	4.42	(1.62)	4.25	(2.01)
Group 4	4.23	(1.96)	3.83	(1.34)
I (sensitive)	**Mean**	**(SD)**	**Mean**	**(SD)**
Group 1	6.50	(1.88)	6.10	(1.97)
Group 2	6.54	(1.05)	4.56	(1.63)
Group 3	5.75	(1.42)	5.75	(1.22)
Group 4	6.38	(1.98)	4.67	(2.06)
L (suspecting)	**Mean**	**(SD)**	**Mean**	**(SD)**
Group 1	6.33	(1.61)	7.50	(1.96)
Group 2	7.54	(1.66)	6.56	(2.25)
Group 3	5.83	(2.21)	7.00	(1.81)
Group 4	6.38	(2.14)	5.75	(2.30)
M (self-absorbed)	**Mean**	**(SD)**	**Mean**	**(SD)**
Group 1	6.92	(1.56)	6.10	(0.74)
Group 2	6.54	(0.78)	6.56	(1.90)
Group 3	5.50	(1.45)	5.58	(2.27)
Group 4	6.46	(1.94)	6.08	(1.73)
N (sophisticated)	**Mean**	**(SD)**	**Mean**	**(SD)**
Group 1	5.25	(1.71)	4.70	(2.00)
Group 2	4.54	(2.26)	6.13	(2.22)
Group 3	3.92	(1.44)	4.92	(2.19)
Group 4	5.31	(2.14)	6.17	(1.99)

	Men		Women	
O (apprehensive)	Mean	(SD)	Mean	(SD)
Group 1	7.75	(1.54)	8.30	(2.31)
Group 2	8.69	(1.25)	7.50	(1.90)
Group 3	7.33	(1.67)	7.92	(2.23)
Group 4	7.00	(1.96)	5.83	(2.21)
Q1 (radical)	Mean	(SD)	Mean	(SD)
Group 1	4.08	(1.78)	6.70	(1.49)
Group 2	4.46	(1.39)	5.69	(1.62)
Group 3	4.67	(1.78)	5.67	(2.46)
Group 4	5.38	(1.85)	5.83	(1.95)
Q2 (self-sufficient)	Mean	(SD)	Mean	(SD)
Group 1	6.50	(2.07)	6.80	(1.23)
Group 2	6.38	(1.94)	6.69	(1.66)
Group 3	5.75	(1.71)	6.58	(2.19)
Group 4	6.69	(2.29)	7.00	(1.54)
Q3 (self-controlled)	Mean	(SD)	Mean	(SD)
Group 1	4.67	(1.78)	3.60	(2.32)
Group 2	4.23	(1.92)	4.63	(2.50)
Group 3	5.58	(2.19)	4.00	(2.63)
Group 4	4.92	(1.98)	5.08	(2.35)
Q4 (tense)	Mean	(SD)	Mean	(SD)
Group 1	6.92	(1.73)	7.30	(2.21)
Group 2	8.08	(1.93)	7.50	(2.28)
Group 3	6.50	(1.93)	7.50	(1.83)
Group 4	7.00	(2.35)	5.67	(1.78)

	Men		Women	
Acting out Hostility	**Mean**	**(SD)**	**Mean**	**(SD)**
Group 1	6.92	(2.61)	7.60	(2.88)
Group 2	7.69	(2.75)	6.19	(2.64)
Group 3	5.58	(2.81)	6.33	(2.77)
Group 4	5.85	(4.22)	4.08	(2.68)
Criticism of Others	**Mean**	**(SD)**	**Mean**	**(SD)**
Group 1	7.25	(2.34)	5.90	(1.79)
Group 2	7.23	(2.20)	6.00	(3.25)
Group 3	6.58	(2.57)	6.25	(2.93)
Group 4	6.08	(3.77)	4.33	(3.65)
Delusional Hostility	**Mean**	**(SD)**	**Mean**	**(SD)**
Group 1	2.58	(1.73)	2.70	(1.70)
Group 2	3.08	(1.66)	2.13	(1.67)
Group 3	2.50	(1.17)	2.33	(0.89)
Group 4	3.38	(2.43)	1.17	(0.94)
Self Criticism	**Mean**	**(SD)**	**Mean**	**(SD)**
Group 1	6.58	(2.57)	7.30	(2.58)
Group 2	7.00	(2.38)	7.44	(2.87)
Group 3	7.17	(1.90)	7.92	(2.71)
Group 4	5.69	(3.59)	7.17	(2.89)
Delusional Guilt	**Mean**	**(SD)**	**Mean**	**(SD)**
Group 1	4.42	(1.31)	5.00	(1.76)
Group 2	4.08	(1.89)	4.31	(2.12)
Group 3	3.75	(1.22)	3.92	(2.50)
Group 4	3.38	(2.06)	2.67	(1.87)

	Men		Women	
General Hostility	Mean	(SD)	Mean	(SD)
Group 1	28.08	(6.79)	28.50	(7.85)
Group 2	29.08	(8.45)	25.94	(9.57)
Group 3	25.58	(5.84)	26.75	(9.17)
Group 4	24.38	(11.97)	19.42	(9.01)

Direction of Hostility	Mean	(SD)	Mean	(SD)
Group 1	99.75	(7.85)	103.40	(7.21)
Group 2	100.08	(6.56)	105.00	(7.32)
Group 3	102.92	(5.87)	104.83	(6.52)
Group 4	99.46	(11.62)	107.25	(6.89)

Sum E	Mean	(SD)	Mean	(SD)
Group 1	17.08	(5.73)	16.20	(5.37)
Group 2	18.69	(5.60)	14.19	(6.43)
Group 3	14.67	(4.77)	14.92	(5.78)
Group 4	15.31	(9.48)	9.58	(5.88)

Sum I	Mean	(SD)	Mean	(SD)
Group 1	11.00	(3.59)	12.30	(4.19)
Group 2	11.08	(4.09)	11.75	(4.52)
Group 3	10.92	(2.84)	11.83	(4.57)
Group 4	9.08	(5.33)	9.83	(4.47)

PERSONALITY VARIABLES CONSIDERED BY CATEGORIES ON THE LIFE ENDANGERMENT SCALE

Numbers in each group

	Men	Women
Low risk	27	25
Intermediate	11	12
High risk	12	13

	Men		Women	
Anxiety	Mean	(SD)	Mean	(SD)
Low risk	7.37	(2.36)	7.80	(2.72)
Intermediate	7.64	(1.57)	7.50	(2.20)
High risk	7.92	(1.56)	7.46	(1.76)
I - E	Mean	(SD)	Mean	(SD)
Low risk	4.00	(2.04)	4.40	(1.85)
Intermediate	4.45	(1.29)	3.50	(1.62)
High risk	4.33	(2.10)	3.54	(1.33)
A (outgoing)	Mean	(SD)	Mean	(SD)
Low risk	6.33	(1.54)	5.40	(1.73)
Intermediate	6.82	(1.54)	4.67	(1.50)
High risk	6.58	(2.02)	4.77	(1.36)
B(intelligent)	Mean	(SD)	Mean	(SD)
Low risk	7.19	(1.88)	6.08	(1.93)
Intermediate	5.73	(1.90)	5.92	(1.56)
High risk	6.25	(1.60)	6.62	(1.94)

	Men		Women	
C (stable)	Mean	(SD)	Mean	(SD)
Low risk	4.33	(2.45)	3.12	(2.05)
Intermediate	3.18	(1.54)	3.58	(1.93)
High risk	3.58	(2.54)	3.69	(1.80)
E (dominant)	Mean	(SD)	Mean	(SD)
Low risk	5.04	(1.76)	5.68	(1.65)
Intermediate	5.09	(1.38)	5.25	(1.60)
High risk	5.50	(2.50)	5.85	(1.86)
F (enthusiastic)	Mean	(SD)	Mean	(SD)
Low risk	5.37	(1.92)	5.60	(1.91)
Intermediate	5.45	(1.13)	4.83	(2.08)
High risk	4.83	(1.99)	4.15	(1.86)
G (conscientious)	Mean	(SD)	Mean	(SD)
Low risk	4.63	(2.08)	3.96	(2.03)
Intermediate	3.64	(1.50)	4.50	(1.45)
High risk	3.67	(1.61)	4.54	(1.61)
H (venturesome)	Mean	(SD)	Mean	(SD)
Low risk	3.93	(2.04)	4.48	(1.96)
Intermediate	3.91	(1.70)	3.67	(1.83)
High risk	4.67	(1.61)	4.38	(1.19)

	Men		Women	
I (sensitive)	Mean	(SD)	Mean	(SD)
Low risk	5.93	(1.73)	5.00	(1.68)
Intermediate	6.55	(1.37)	6.17	(1.85)
High risk	6.92	(1.38)	4.62	(1.76)
L (suspecting)	Mean	(SD)	Mean	(SD)
Low risk	6.33	(2.09)	6.72	(2.42)
Intermediate	6.36	(2.20)	6.92	(2.02)
High risk	7.17	(1.40)	6.31	(1.70)
M (self-absorbed)	Mean	(SD)	Mean	(SD)
Low risk	6.22	(1.60)	6.00	(1.73)
Intermediate	6.09	(1.58	7.00	(1.86)
High risk	6.92	(1.31)	5.54	(1.61)
N (sophisticated)	Mean	(SD)	Mean	(SD)
Low risk	4.78	(1.89)	5.32	(2.30)
Intermediate	4.64	(1.91)	5.83	(2.33)
High risk	4.83	(2.29)	5.77	(1.79)
O (apprehensive)	Mean	(SD)	Mean	(SD)
Low risk	7.67	(1.80)	7.76	(2.38)
Intermediate	8.09	(1.51)	7.08	(2.15)
High risk	7.42	(1.73)	6.85	(2.08)
Q1 (radical)	Mean	(SD)	Mean	(SD)
Low risk	5.11	(1.80)	5.88	(1.86)
Intermediate	4.09	(1.64)	6.08	(1.16)
High risk	4.17	(1.40)	5.85	(2.54)

	Men		Women	
Q2 (self-sufficient)	Mean	(SD)	Mean	(SD)
Low risk	6.44	(1.89)	6.52	(1.53)
Intermediate	5.64	(1.91)	6.83	(1.90)
High risk	6.75	(2.26)	7.15	(1.72)
Q3 (self-controlled)	Mean	(SD)	Mean	(SD)
Low risk	4.89	(2.21)	4.28	(2.59)
Intermediate	5.27	(1.56)	5.08	(2.35)
High risk	4.33	(1.78)	3.92	(2.29)
Q4 (tense)	Mean	(SD)	Mean	(SD)
Low risk	7.11	(2.22)	7.20	(2.43)
Intermediate	6.82	(1.94)	6.67	(2.14)
High risk	7.50	(1.73)	7.00	(1.53)
Acting out Hostility	Mean	(SD)	Mean	(SD)
Low risk	5.81	(2.86)	6.48	(2.83)
Intermediate	6.27	(3.00)	5.17	(2.72)
High risk	8.33	(3.65)	5.85	(3.24)
Criticism of Others	Mean	(SD)	Mean	(SD)
Low risk	6.41	(2.59)	6.28	(2.70)
Intermediate	6.64	(2.66)	5.25	(3.93)
High risk	7.75	(3.22)	4.77	(2.71)
Delusional Hostility	Mean	(SD)	Mean	(SD)
Low risk	2.52	(1.42)	2.32	(1.65)
Intermediate	2.73	(1.85)	1.75	(1.06)
High risk	3.92	(2.23)	1.85	(1.28)

	Men		Women	
Self Criticism	**Mean**	**(SD)**	**Mean**	**(SD)**
Low risk	6.59	(2.64)	7.16	(3.08)
Intermediate	6.36	(2.06)	7.42	(2.35)
High risk	6.83	(3.41)	8.08	(2.33)
Delusional Guilt	**Mean**	**(SD)**	**Mean**	**(SD)**
Low risk	3.89	(1.74)	4.04	(2.35)
Intermediate	3.73	(1.49)	4.42	(1.93)
High risk	4.08	(1.78)	3.38	(2.14)
General Hostility	**Mean**	**(SD)**	**Mean**	**(SD)**
Low risk	25.22	(8.15)	26.20	(10.10)
Intermediate	26.09	(7.42)	24.00	(9.56)
High risk	30.92	(9.92)	23.92	(8.07)
Direction of Hostility	**Mean**	**(SD)**	**Mean**	**(SD)**
Low risk	101.78	(6.43)	103.28	(7.22)
Intermediate	100.45	(8.12)	107.08	(5.87)
High risk	97.75	(11.36)	107.08	(6.69)
Sum E	**Mean**	**(SD)**	**Mean**	**(SD)**
Low risk	14.74	(5.57)	15.00	(6.32)
Intermediate	16.00	(6.48)	12.17	(6.59)
High risk	20.75	(7.76)	12.46	(5.68)
Sum I	**Mean**	**(SD)**	**Mean**	**(SD)**
Low risk	10.48	(3.99)	11.20	(5.03)
Intermediate	10.09	(3.33)	11.83	(3.83)
High risk	10.92	(5.04)	11.46	(3.91)

PERSONALITY VARIABLES CONSIDERED BY CATEGORIES ON THE PRECAUTIONS TAKEN SCALE

Numbers in each group

	Men	Women
Ensure	22	27
Intermediate	23	18
Avoid	5	5

	Men		Women	
Anxiety	**Mean**	**(SD)**	**Mean**	**(SD)**
Ensure	7.68	(2.12)	7.48	(2.38)
Intermediate	7.70	(1.89)	7.72	(2.56)
Avoid	6.40	(2.07)	8.20	(1.48)
I - E	**Mean**	**(SD)**	**Mean**	**(SD)**
Ensure	3.91	(1.74)	3.93	(1.75)
Intermediate	4.48	(2.17)	4.28	(1.67)
Avoid	4.00	(1.00)	3.00	(1.41)
A (outgoing)	**Mean**	**(SD)**	**Mean**	**(SD)**
Ensure	6.14	(1.39)	5.15	(1.79)
Intermediate	7.04	(1.87)	5.00	(1.14)
Avoid	5.60	(0.55)	4.80	(2.17)
B (intelligent)	**Mean**	**(SD)**	**Mean**	**(SD)**
Ensure	6.73	(2.00)	5.93	(1.69)
Intermediate	6.39	(1.88)	6.61	(1.88)
Avoid	7.40	(1.52)	6.00	(2.55)

	Men		Women	
C (stable)	Mean	(SD)	Mean	(SD)
Ensure	3.59	(2.63)	3.30	(2.03)
Intermediate	4.17	(2.27)	3.50	(2.04)
Avoid	4.00	(0.00)	3.40	(1.14)
E (dominant)	Mean	(SD)	Mean	(SD)
Ensure	4.91	(1.87)	5.52	(1.34)
Intermediate	5.52	(1.83)	5.89	(2.11)
Avoid	4.60	(2.07)	5.20	(1.79)
F (enthusiastic)	Mean	(SD)	Mean	(SD)
Ensure	5.14	(1.46)	5.00	(1.92)
Intermediate	5.35	(2.19)	5.61	(1.94)
Avoid	5.40	(1.14)	3.20	(1.79)
G (conscientious)	Mean	(SD)	Mean	(SD)
Ensure	4.14	(2.03)	4.52	(1.89)
Intermediate	4.09	(1.90)	4.11	(1.64)
Avoid	4.80	(1.30)	3.20	(1.64)
H (venturesome)	Mean	(SD)	Mean	(SD)
Ensure	3.77	(1.69)	4.22	(1.80)
Intermediate	4.30	(2.18)	4.50	(1.79)
Avoid	4.60	(0.55)	3.60	(1.52)
I (sensitive)	Mean	(SD)	Mean	(SD)
Ensure	6.32	(1.67)	5.11	(1.76)
Intermediate	6.48	(1.53)	5.56	(1.72)
Avoid	5.40	(1.67)	4.20	(2.28)

	Men		Women	
L (suspecting)	Mean	(SD)	Mean	(SD)
Ensure	6.41	(1.65)	6.30	(2.15)
Intermediate	6.74	(2.20)	7.11	(2.21)
Avoid	6.20	(2.49)	7.00	(2.55)
M (self-absorbed)	Mean	(SD)	Mean	(SD)
Ensure	6.18	(1.65)	6.52	(1.72)
Intermediate	6.74	(1.36)	5.67	(1.68)
Avoid	5.40	(1.52)	5.60	(2.30)
N (sophisticated)	Mean	(SD)	Mean	(SD)
Ensure	4.64	(1.81)	5.85	(2.21)
Intermediate	5.17	(1.99)	5.28	(2.32)
Avoid	3.40	(2.07)	5.00	(1.00)
O (apprehensive)	Mean	(SD)	Mean	(SD)
Ensure	7.59	(1.59)	7.41	(2.04)
Intermediate	7.96	(1.72)	7.17	(2.64)
Avoid	7.00	(2.24)	7.80	(2.17)
Q1 (radical)	Mean	(SD)	Mean	(SD)
Ensure	4.50	(1.95)	6.11	(2.12)
Intermediate	4.74	(1.45)	5.67	(1.65)
Avoid	5.00	(2.12)	5.80	(1.64)
Q2 (self-sufficient)	Mean	(SD)	Mean	(SD)
Ensure	6.27	(2.10)	7.00	(1.57)
Intermediate	6.35	(2.08)	6.56	(1.79)
Avoid	6.60	(1.14)	6.20	(1.79)

	Men		Women	
Q3 (self-controlled)	Mean	(SD)	Mean	(SD)
Ensure	4.50	(2.02)	5.00	(2.45)
Intermediate	4.96	(2.08)	3.72	(2.35)
Avoid	5.80	(0.84)	3.40	(2.30)
Q4 (tense)	Mean	(SD)	Mean	(SD)
Ensure	7.36	(2.06)	6.78	(2.24)
Intermediate	7.39	(1.80)	7.33	(2.28)
Avoid	5.00	(2.00)	7.20	(0.45)
Acting out Hostility	Mean	(SD)	Mean	(SD)
Ensure	7.27	(2.29)	5.37	(2.73)
Intermediate	5.91	(3.75)	6.72	(3.16)
Avoid	6.00	(3.87	6.80	(2.59)
Criticism of Others	Mean	(SD)	Mean	(SD)
Ensure	7.73	(2.45)	5.41	(2.72)
Intermediate	6.00	(2.83)	6.11	(3.55)
Avoid	6.20	(3.03)	5.20	(3.27)
Delusional Hostility	Mean	(SD)	Mean	(SD)
Ensure	3.45	(1.71)	1.89	(1.34)
Intermediate	2.57	(1.85)	2.22	(1.40)
Avoid	2.00	(1.41)	2.40	(2.19)
Self Criticism	Mean	(SD)	Mean	(SD)
Ensure	7.41	(2.22)	6.93	(3.02)
Intermediate	6.00	(2.76)	7.72	(2.19)
Avoid	5.80	(3.70)	9.40	(1.82)

	Men		Women	
Delusional Guilt	**Mean**	**(SD)**	**Mean**	**(SD)**
Ensure	4.32	(1.39)	3.59	(2.19)
Intermediate	3.87	(1.79)	4.28	(2.30)
Avoid	2.20	(1.30)	4.80	(1.79)
General Hostility	**Mean**	**(SD)**	**Mean**	**(SD)**
Ensure	30.18	(6.37)	25.11	(8.58)
Intermediate	24.52	(9.45)	27.06	(10.52)
Avoid	22.20	(9.26)	28.60	(8.14)
Direction of Hostility	**Mean**	**(SD)**	**Mean**	**(SD)**
Ensure	100.68	(7.66)	104.78	(7.24)
Intermediate	100.57	(8.87)	104.67	(6.47)
Avoid	99.60	(8.96)	109.20	(6.72)
Sum E	**Mean**	**(SD)**	**Mean**	**(SD)**
Ensure	18.45	(5.38)	12.59	(5.24)
Intermediate	15.04	(7.55)	15.06	(7.52)
Avoid	14.20	(6.53)	14.40	(6.54)
Sum I	**Mean**	**(SD)**	**Mean**	**(SD)**
Ensure	11.73	(3.38)	10.52	(4.74)
Intermediate	9.87	(4.31)	12.00	(4.01)
Avoid	8.00	(4.64)	14.20	(2.77)

PERSONALITY VARIABLES CONSIDERED BY MAJOR CLINICAL DIAGNOSES

Numbers in each group

	Men	Women
Affective disorder	13	22
Personality disorder	27	24

	Men		Women	
Anxiety	**Mean**	**(SD)**	**Mean**	**(SD)**
Affective disorder	7.08	(1.98)	6.59	(2.44)
Personality disorder	7.89	(2.15)	8.58	(1.69)
I - E	**Mean**	**(SD)**	**Mean**	**(SD)**
Affective disorder	3.69	(1.55)	3.68	(1.62)
Personality disorder	4.22	(1.80)	4.20	(1.74)
A (outgoing)	**Mean**	**(SD)**	**Mean**	**(SD)**
Affective disorder	6.46	(1.39)	4.77	(1.38)
Personality disorder	6.33	(1.66)	5.25	(1.87)
B (intelligent)	**Mean**	**(SD)**	**Mean**	**(SD)**
Affective disorder	6.92	(2.22)	6.73	(2.03)
Personality disorder	6.44	(1.95)	5.92	(1.61)

	Men		Women	
C (stable)	**Mean**	**(SD)**	**Mean**	**(SD)**
Affective Disorder	4.00	(2.24)	4.27	(1.86)
Personality Disorder	3.67	(2.53)	2.67	(1.69)
E (dominant)	**Mean**	**(SD)**	**Mean**	**(SD)**
Affective Disorder	4.00	(1.53)	5.36	(1.94)
Personality Disorder	5.63	(1.71)	5.83	(1.46)
F (enthusiastic)	**Mean**	**(SD)**	**Mean**	**(SD)**
Affective Disorder	4.77	(1.42)	4.64	(2.11)
Personality Disorder	5.30	(1.84)	5.46	(1.79)
G (conscientious)	**Mean**	**(SD)**	**Mean**	**(SD)**
Affective Disorder	5.15	(1.28)	4.68	(1.96)
Personality Disorder	3.52	(2.03)	3.92	(1.64)
H (venturesome)	**Mean**	**(SD)**	**Mean**	**(SD)**
Affective Disorder	4.31	(1.44)	4.27	(1.86)
Personality Disorder	3.89	(1.80)	4.25	(1.57)
I (sensitive)	**Mean**	**(SD)**	**Mean**	**(SD)**
Affective Disorder	6.23	(1.88)	5.00	(1.90)
Personality Disorder	6.37	(1.71)	5.50	(1.77)

	Men		Women	
L (suspecting)	Mean	(SD)	Mean	(SD)
Affective Disorder	6.08	(1.55)	5.82	(2.04)
Personality Disorder	6.67	(2.02)	7.46	(1.82)
M (self-absorbed)	Mean	(SD)	Mean	(SD)
Affective Disorder	6.00	(2.20)	5.86	(1.96)
Personality Disorder	6.52	(1.42)	6.54	(1.64)
N (sophisticated)	Mean	(SD)	Mean	(SD)
Affective Disorder	5.00	(1.41)	6.36	(1.79)
Personality Disorder	4.70	(2.16)	5.04	(2.24)
O (apprehensive)	Mean	(SD)	Mean	(SD)
Affective Disorder	7.23	(1.79)	6.41	(2.38)
Personality Disorder	8.04	(1.65)	8.25	(1.75)
Q1 (radical)	Mean	(SD)	Mean	(SD)
Affective Disorder	4.92	(1.98)	6.09	(1.95)
Personality Disorder	4.67	(1.59)	6.00	(1.82)
Q2 (self-sufficient)	Mean	(SD)	Mean	(SD)
Affective Disorder	6.92	(1.26)	6.86	(1.32)
Personality Disorder	6.11	(2.28)	6.67	(1.86)

	Men		Women	
93 (self-controlled)	Mean	(SD)	Mean	(SD)
Affective Disorder	5.00	(1.58)	4.73	(2.62)
Personality Disorder	4.52	(2.24)	4.17	(2.28)
94 (tense)	Mean	(SD)	Mean	(SD)
Affective Disorder	6.62	(1.80)	6.00	(2.02)
Personality Disorder	7.41	(2.17)	7.92	(1.77)
Acting out Hostility	Mean	(SD)	Mean	(SD)
Affective Disorder	5.15	(3.05)	4.91	(2.74)
Personality Disorder	7.33	(2.96)	6.83	(2.63)
Criticism of Others	Mean	(SD)	Mean	(SD)
Affective Disorder	5.62	(3.33)	4.41	(3.28)
Personality Disorder	7.59	(2.17)	6.67	(2.33)
Delusional Hostility	Mean	(SD)	Mean	(SD)
Affective Disorder	2.69	(1.65)	1.59	(1.10)
Personality Disorder	3.30	(2.02)	2.42	(1.53)
Self Criticism	Mean	(SD)	Mean	(SD)
Affective Disorder	7.31	(3.45)	7.09	(3.31)
Personality Disorder	6.59	(2.53)	7.92	(2.19)

	Men		Women	
Delusional Guilt	**Mean**	**(SD)**	**Mean**	**(SD)**
Affective Disorder	3.77	(1.92)	3.14	(2.34)
Personality Disorder	4.15	(1.54)	4.67	(1.66)
General Hostility	**Mean**	**(SD)**	**Mean**	**(SD)**
Affective Disorder	24.54	(10.05)	21.14	(10.27)
Personality Disorder	29.11	(6.97)	28.42	(6.16)
Direction of Hostility	**Mean**	**(SD)**	**Mean**	**(SD)**
Affective Disorder	104.46	(6.53)	106.32	(7.07)
Personality Disorder	98.63	(9.39)	104.67	(7.09)
Sum E	**Mean**	**(SD)**	**Mean**	**(SD)**
Affective Disorder	13.46	(6.20)	10.91	(6.16)
Personality Disorder	18.70	(6.21)	15.83	(4.82)
Sum I	**Mean**	**(SD)**	**Mean**	**(SD)**
Affective Disorder	11.08	(4.96)	10.23	(5.22)
Personality Disorder	10.74	(3.88)	12.58	(3.40)

PERSONALITY VARIABLES CONSIDERED BY SSI DIAGNOSTIC GROUPINGS

Numbers in each group

	Men	Women
Normal	6	6
Borderline Disturbed	11	9
Personally Disturbed	12	8
Character Disorder	21	27

	Men		Women	
Anxiety	Mean	(SD)	Mean	(SD)
Normal	6.00	(2.76)	4.17	(2.48)
Borderline Disturbed	6.36	(1.91)	5.89	(2.03)
Personally Disturbed	7.92	(1.51)	8.13	(1.46)
Character Disorder	8.43	(1.60)	8.85	(1.38)

I - E	Mean	(SD)	Mean	(SD)
Normal	4.00	(2.00)	5.50	(1.52)
Borderline Disturbed	4.55	(1.04)	3.56	(1.59)
Personally Disturbed	4.33	(2.31)	3.25	(1.28)
Character Disorder	3.95	(2.04)	3.96	(1.74)

A (outgoing)	Mean	(SD)	Mean	(SD)
Normal	5.50	(0.84)	5.50	(1.76)
Borderline Disturbed	6.55	(1.04)	5.33	(1.12)
Personally Disturbed	6.50	(1.68)	5.63	(1.19)
Character Disorder	6.76	(2.00)	4.70	(1.77)

	Men		Women	
B (intelligent)	Mean	(SD)	Mean	(SD)
Normal	8.00	(0.89)	6.50	(1.38)
Borderline Disturbed	7.00	(1.90)	6.11	(2.03)
Personally Disturbed	6.17	(2.52)	6.25	(2.31)
Character Disorder	6.33	(1.56)	6.11	(1.80)
C (stable)	Mean	(SD)	Mean	(SD)
Normal	5.00	(2.53)	5.50	(1.87)
Borderline Disturbed	5.09	(2.63)	4.44	(2.13)
Personally Disturbed	3.25	(1.91)	3.25	(1.49)
Character Disorder	3.33	(2.08)	2.59	(1.53)
E (dominant)	Mean	(SD)	Mean	(SD)
Normal	6.17	(0.75)	5.67	(1.63)
Borderline Disturbed	4.55	(1.75)	4.89	(2.20)
Personally Disturbed	4.67	(2.57	5.88	(1.13)
Character Disorder	5.48	(1.57)	5.78	(1.65)
F (enthusiastic)	Mean	(SD)	Mean	(SD)
Normal	5.33	(1.75)	6.00	(1.90)
Borderline Disturbed	5.64	(1.29)	5.22	(2.05)
Personally Disturbed	5.08	(1.78)	4.13	(1.73)
Character Disorder	5.14	(2.08)	5.04	(2.07)
G (conscientious)	Mean	(SD)	Mean	(SD)
Normal	5.50	(2.26)	5.67	(2.42)
Borderline Disturbed	4.91	(1.76)	5.11	(1.36)
Personally Disturbed	4.00	(1.81)	4.00	(1.60)
Character Disorder	3.52	(1.69)	3.70	(1.61)

	Men		Women	
H (venturesome)	Mean	(SD)	Mean	(SD)
Normal	3.67	(2.34)	6.17	(1.47)
Borderline Disturbed	4.73	(1.42)	4.00	(1.66)
Personally Disturbed	4.50	(2.58)	3.50	(1.31)
Character Disorder	3.67	(1.39)	4.15	(1.75)
I (sensitive)	Mean	(SD)	Mean	(SD)
Normal	5.17	(1.47)	3.67	(1.03)
Borderline Disturbed	6.18	(1.89)	5.78	(2.17)
Personally Disturbed	6.83	(1.47)	4.75	(1.39)
Character Disorder	6.38	(1.50)	5.44	(1.78)
L (suspecting)	Mean	(SD)	Mean	(SD)
Normal	5.67	(2.58)	4.17	(1.47)
Borderline Disturbed	6.36	(1.74)	6.11	(1.83)
Personally Disturbed	6.75	(1.76)	6.75	(2.31)
Character Disorder	6.76	(2.07)	7.37	(1.90)
M (self-absorbed)	Mean	(SD)	Mean	(SD)
Normal	4.67	(1.21)	6.33	(2.07)
Borderline Disturbed	5.91	(1.70)	6.00	(1.50)
Personally Disturbed	6.92	(1.24)	6.00	(1.51)
Character Disorder	6.76	(1.34)	6.15	(1.96)
N (sophisticated)	Mean	(SD)	Mean	(SD)
Normal	4.00	(1.55)	7.17	(1.60)
Borderline Disturbed	4.55	(1.69)	6.67	(2.55)
Personally Disturbed	5.33	(2.10)	4.88	(1.55)
Character Disorder	4.76	(2.12)	5.04	(2.05)

	Men		Women	
O (apprehensive)	**Mean**	**(SD)**	**Mean**	**(SD)**
Normal	6.33	(2.07)	4.67	(2.25)
Borderline Disturbed	7.09	(1.14)	5.22	(1.79)
Personally Disturbed	7.58	(1.62)	7.63	(1.41)
Character Disorder	8.48	(1.60)	8.59	(1.47)
Q1 (radical)	**Mean**	**(SD)**	**Mean**	**(SD)**
Normal	5.00	(2.45)	7.17	(0.41)
Borderline Disturbed	4.18	(1.33)	5.44	(2.35)
Personally Disturbed	4.92	(1.44)	5.13	(1.46)
Character Disorder	4.67	(1.88)	6.04	(1.95)
Q2 (self-sufficient)	**Mean**	**(SD)**	**Mean**	**(SD)**
Normal	6.17	(1.17)	6.33	(0.52)
Borderline Disturbed	6.27	(1.74)	7.67	(0.87)
Personally Disturbed	5.92	(2.11)	7.38	(2.07)
Character Disorder	6.67	(2.27)	6.37	(1.78)
Q3 (self-controlled)	**Mean**	**(SD)**	**Mean**	**(SD)**
Normal	5.67	(1.86)	7.17	(2.04)
Borderline Disturbed	5.73	(2.15)	5.22	(1.92)
Personally Disturbed	4.25	(2.05)	3.63	(2.45)
Character Disorder	4.48	(1.75)	3.70	(2.25)
Q4 (tense)	**Mean**	**(SD)**	**Mean**	**(SD)**
Normal	5.50	(2.81)	4.67	(2.73)
Borderline Disturbed	5.81	(1.60)	5.33	(1.80)
Personally Disturbed	7.50	(1.62)	7.13	(0.83)
Character Disorder	8.10	(1.61)	8.07	(1.59)

	Men		Women	
Acting out Hostility	**Mean**	**(SD)**	**Mean**	**(SD)**
Normal	5.33	(2.73)	4.00	(2.37)
Borderline Disturbed	5.18	(2.75)	4.44	(3.28)
Personally Disturbed	6.83	(3.97)	6.38	(2.45)
Character Disorder	7.38	(2.93)	6.85	(2.71)
Criticism of Others	**Mean**	**(SD)**	**Mean**	**(SD)**
Normal	5.67	(2.80)	3.83	(2.71)
Borderline Disturbed	5.82	(2.93)	4.44	(3.84)
Personally Disturbed	6.50	(3.21)	5.13	(3.14)
Character Disorder	7.76	(2.21)	6.59	(2.58)
Delusional Hostility	**Mean**	**(SD)**	**Mean**	**(SD)**
Normal	1.83	(1.83)	1.67	(2.34)
Borderline Disturbed	1.82	(0.87)	1.67	(0.87)
Personally Disturbed	4.00	(1.81)	2.00	(1.85)
Character Disorder	3.14	(1.77)	2.30	(1.23)
Self Criticism	**Mean**	**(SD)**	**Mean**	**(SD)**
Normal	5.33	(2.73)	3.00	(1.55)
Borderline Disturbed	5.27	(2.80)	6.00	(2.00)
Personally Disturbed	6.75	(3.47)	8.38	(1.77)
Character Disorder	7.57	(1.66)	8.67	(2.06)
Delusional Guilt	**Mean**	**(SD)**	**Mean**	**(SD)**
Normal	3.33	(1.37)	2.00	(1.67)
Borderline Disturbed	2.91	(1.45)	2.22	(2.22)
Personally Disturbed	3.67	(2.02)	4.13	(1.46)
Character Disorder	4.71	(1.31)	4.93	(1.88)

	Men		Women	
General Hostility	**Mean**	**(SD)**	**Mean**	**(SD)**
Normal	21.50	(9.77)	14.17	(8.64)
Borderline Disturbed	21.00	(7.59)	18.78	(9.56)
Personally Disturbed	27.75	(8.72)	26.00	(6.30)
Character Disorder	30.76	(6.59)	29.33	(7.20)
Direction of Hostility	**Mean**	**(SD)**	**Mean**	**(SD)**
Normal	101.17	(5.19)	98.83	(5.81)
Borderline Disturbed	99.82	(6.11)	103.44	(7.42)
Personally Disturbed	99.83	(13.37)	107.38	(7.01)
Character Disorder	101.10	(6.29)	106.52	(6.32)
Sum E	**Mean**	**(SD)**	**Mean**	**(SD)**
Normal	12.83	(6.52)	9.17	(6.49)
Borderline Disturbed	12.82	(5.04)	10.56	(7.23)
Personally Disturbed	17.33	(8.27)	13.50	(5.53)
Character Disorder	18.90	(5.54)	15.74	(5.36)
Sum I	**Mean**	**(SD)**	**Mean**	**(SD)**
Normal	8.67	(4.08)	5.00	(3.10)
Borderline Disturbed	8.18	(3.89)	8.22	(3.73)
Personally Disturbed	10.42	(5.11)	12.50	(2.39)
Character Disorder	12.29	(2.65)	13.59	(3.28)

PERSONALITY VARIABLES CONSIDERED BY RATINGS OF PSYCHIATRIC SIGNS AND SYMPTOMS

Numbers in each group

	Men	Women
Symptoms absent	12	13
Moderate symptoms	16	22
Symptoms present	22	15

	Men		Women	
Anxiety	Mean	(SD)	Mean	(SD)
Symptoms absent	7.00	(1.60)	8.08	(2.06)
Moderate symptoms	7.25	(2.29)	7.82	(2.46)
Symptoms present	8.09	(1.95)	7.00	(2.42)
I - E	Mean	(SD)	Mean	(SD)
Symptoms absent	4.25	(1.48)	4.62	(1.45)
Moderate symptoms	4.63	(1.54)	3.91	(1.72)
Symptoms present	3.82	(2.28)	3.47	(1.81)
A (outgoing)	Mean	(SD)	Mean	(SD)
Symptoms absent	6.33	(1.23)	5.85	(0.80)
Moderate symptoms	6.19	(1.33)	5.05	(1.68)
Symptoms present	6.82	(2.02)	4.40	(1.76)

	Men		Women	
B (intelligent)	**Mean**	**(SD)**	**Mean**	**(SD)**
Symptoms absent	7.17	(1.34)	5.38	(1.76)
Moderate symptoms	6.81	(1.72)	6.27	(1.45)
Symptoms present	6.23	(2.22)	6.73	(2.25)
C (stable)	**Mean**	**(SD)**	**Mean**	**(SD)**
Symptoms absent	5.00	(2.76)	3.15	(1.77)
Moderate symptoms	4.06	(2.05)	2.77	(1.74)
Symptoms present	3.18	(2.06)	4.47	(1.10)
E (dominant)	**Mean**	**(SD)**	**Mean**	**(SD)**
Symptoms absent	5.00	(1.76)	6.15	(1.34)
Moderate symptoms	5.38	(1.93)	5.41	(1.62)
Symptoms present	5.09	(1.95)	5.47	(1.10)
F (enthusiastic)	**Mean**	**(SD)**	**Mean**	**(SD)**
Symptoms absent	5.83	(2.08)	5.85	(1.21)
Moderate symptoms	5.69	(0.95)	4.95	(2.08)
Symptoms present	4.64	(1.94)	4.47	(2.29)
G (conscientious)	**Mean**	**(SD)**	**Mean**	**(SD)**
Symptoms absent	4.83	(1.59)	3.38	(1.71)
Moderate symptoms	4.50	(2.16)	4.41	(1.59)
Symptoms present	3.59	(1.74)	4.73	(1.98)

	Men		Women	
H (venturesome)	**Mean**	**(SD)**	**Mean**	**(SD)**
Symptoms absent	3.75	(1.60)	4.85	(1.68)
Moderate symptoms	4.50	(1.67)	4.23	(1.72)
Symptoms present	4.00	(2.14)	3.80	(1.86)
I (sensitive)	**Mean**	**(SD)**	**Mean**	**(SD)**
Symptoms absent	6.58	(0.90)	5.46	(2.03)
Moderate symptoms	5.81	(2.17)	5.09	(1.82)
Symptoms present	6.50	(1.41)	5.07	(1.67)
L (suspecting)	**Mean**	**(SD)**	**Mean**	**(SD)**
Symptoms absent	6.33	(1.97)	7.54	(1.76)
Moderate symptoms	6.06	(2.35)	6.32	(2.34)
Symptoms present	7.00	(1.63)	6.40	(2.03)
M (self-absorbed)	**Mean**	**(SD)**	**Mean**	**(SD)**
Symptoms absent	6.58	(1.38)	6.15	(1.46)
Moderate symptoms	6.25	(2.18)	6.23	(1.60)
Symptoms present	6.32	(1.04)	5.93	(2.31)
N (sophisticated)	**Mean**	**(SD)**	**Mean**	**(SD)**
Symptoms absent	4.25	(2.05)	4.69	(2.32)
Moderate symptoms	4.81	(2.26)	5.86	(2.32)
Symptoms present	5.00	(1.69)	5.87	(1.64)

	Men		Women	
O (apprehensive)	Mean	(SD)	Mean	(SD)
Symptoms absent	7.33	(1.56)	7.77	(2.05)
Moderate symptoms	7.38	(1.67)	7.64	(2.13)
Symptoms present	8.14	(1.78)	6.60	(2.53)
Q1 (radical)	Mean	(SD)	Mean	(SD)
Symptoms absent	4.67	(1.61)	5.46	(1.61)
Moderate symptoms	5.25	(1.84)	6.05	(2.10)
Symptoms present	4.23	(1.63)	6.13	(1.85)
Q2 (self-sufficient)	Mean	(SD)	Mean	(SD)
Symptoms absent	5.83	(1.75)	7.08	(1.61)
Moderate symptoms	6.13	(2.31)	6.73	(1.70)
Symptoms present	6.77	(1.85)	6.53	(1.73)
Q3 (self-controlled)	Mean	(SD)	Mean	(SD)
Symptoms absent	5.42	(1.56)	4.62	(2.10)
Moderate symptoms	4.75	(2.14)	4.18	(2.50)
Symptoms present	4.59	(2.06)	4.47	(2.77)
Q4 (tense)	Mean	(SD)	Mean	(SD)
Symptoms absent	6.58	(1.83)	7.38	(2.02)
Moderate symptoms	7.00	(2.22)	7.14	(2.32)
Symptoms present	7.55	(1.99)	6.53	(1.10)

	Men		Women	
Acting out Hostility	**Mean**	**(SD)**	**Mean**	**(SD)**
Symptoms absent	5.75	(3.14)	6.92	(2.60)
Moderate symptoms	6.98	(2.95)	5.86	(3.11)
Symptoms present	6.64	(3.47)	5.40	(2.85)
Criticism of Others	**Mean**	**(SD)**	**Mean**	**(SD)**
Symptoms absent	5.33	(3.14)	6.62	(2.33)
Moderate symptoms	7.56	(2.34)	5.50	(2.99)
Symptoms present	7.00	(2.65)	5.00	(3.63)
Delusional Hostility	**Mean**	**(SD)**	**Mean**	**(SD)**
Symptoms absent	2.08	(1.51)	2.69	(1.49)
Moderate symptoms	3.00	(2.00)	2.09	(1.60)
Symptoms present	3.27	(1.72)	1.47	(0.83)
Self Criticism	**Mean**	**(SD)**	**Mean**	**(SD)**
Symptoms absent	5.75	(3.19)	7.30	(2.25)
Moderate symptoms	5.94	(2.65)	7.23	(2.78)
Symptoms present	7.55	(2.18)	7.93	(3.08)
Delusional Guilt	**Mean**	**(SD)**	**Mean**	**(SD)**
Symptoms absent	3.33	(1.72)	5.00	(1.68)
Moderate symptoms	3.56	(1.63)	3.77	(2.31)
Symptoms present	4.45	(1.57)	3.33	(2.23)

	Men		Women	
General Hostility	Mean	(SD)	Mean	(SD)
Symptoms absent	22.25	(10.21)	28.54	(7.45)
Moderate symptoms	27.00	(6.88)	24.36	(9.72)
Symptoms present	29.09	(8.21)	23.13	(10.09)
Direction of Hostility	Mean	(SD)	Mean	(SD)
Symptoms absent	101.17	(7.22)	103.38	(6.86)
Moderate symptoms	97.75	(10.00)	104.77	(7.10)
Symptoms present	102.18	(6.99)	107.33	(6.60)
Sum E	Mean	(SD)	Mean	(SD)
Symptoms absent	13.17	(7.16)	16.23	(5.43)
Moderate symptoms	17.50	(6.32)	13.36	(6.47)
Symptoms present	17.50	(6.39)	11.87	(6.24)
Sum I	Mean	(SD)	Mean	(SD)
Symptoms absent	9.08	(4.70)	12.31	(3.54)
Moderate symptoms	9.50	(3.97)	11.00	(4.58)
Symptoms present	12.00	(3.38)	11.27	(5.01)

PERSONALITY VARIABLES CONSIDERED BY RATINGS OF PERSONALITY ABNORMALITY

Numbers in each group

	Men	Women
Not abnormal	13	12
Indeterminate	20	21
Abnormal personality	17	17

	Men		Women	
Anxiety	Mean	(SD)	Mean	(SD)
Not abnormal	6.85	(1.68)	6.92	(2.31)
Indeterminate	7.45	(2.19)	8.00	(1.97)
Abnormal personality	8.24	(1.92)	7.71	(2.78)
I - E	Mean	(SD)	Mean	(SD)
Not abnormal	4.23	(2.28)	4.00	(1.48)
Indeterminate	4.35	(1.76)	3.67	(1.74)
Abnormal personality	3.94	(1.82)	4.29	(1.83)
A (outgoing)	Mean	(SD)	Mean	(SD)
Not abnormal	6.77	(1.69)	5.17	(1.53)
Indeterminate	6.70	(1.53)	5.10	(1.73)
Abnormal personality	6.06	(1.75)	4.94	(1.56)
B (intelligent)	Mean	(SD)	Mean	(SD)
Not abnormal	7.08	(1.93)	6.08	(1.68)
Indeterminate	6.25	(2.17)	5.76	(1.87)
Abnormal personality	6.76	(1.48)	6.76	(1.86)

	Men		Women	
C (stable)	Mean	(SD)	Mean	(SD)
Not abnormal	4.54	(2.18)	4.08	(1.62)
Indeterminate	4.00	(2.10)	3.14	(2.15)
Abnormal personality	3.29	(2.62)	3.18	(1.85)
E (dominant)	Mean	(SD)	Mean	(SD)
Not abnormal	4.85	(1.72)	5.92	(1.51)
Indeterminate	5.35	(1.46)	5.57	(1.86)
Abnormal personality	5.18	(2.40)	5.47	(1.62)
F (enthusiastic)	Mean	(SD)	Mean	(SD)
Not abnormal	5.15	(1.95)	4.67	(2.02)
Indeterminate	5.50	(1.28)	4.86	(2.10)
Abnormal personality	5.06	(2.19)	5.53	(1.87)
G (conscientious)	Mean	(SD)	Mean	(SD)
Not abnormal	5.15	(1.28)	4.33	(2.06)
Indeterminate	4.10	(2.17)	3.90	(1.58)
Abnormal personality	3.53	(1.70)	4.59	(1.87)
H (venturesome)	Mean	(SD)	Mean	(SD)
Not abnormal	4.38	(2.60)	4.42	(1.31)
Indeterminate	4.05	(1.70)	3.90	(1.79)
Abnormal personality	3.94	(1.43)	4.59	(2.00)

	Men		Women	
I (sensitive)	Mean	(SD)	Mean	(SD)
Not abnormal	6.77	(1.64)	5.00	(2.00)
Indeterminate	5.95	(1.61)	5.38	(1.75)
Abnormal personality	6.35	(1.58)	5.06	(1.82)
L (suspecting)	Mean	(SD)	Mean	(SD)
Not abnormal	6.30	(1.60)	6.50	(2.32)
Indeterminate	6.15	(2.23)	6.71	(1.82)
Abnormal personality	7.18	(1.85)	6.71	(2.47)
M (self-absorbed)	Mean	(SD)	Mean	(SD)
Not abnormal	6.23	(1.36)	5.75	(1.60)
Indeterminate	5.85	(1.69)	6.24	(1.81)
Abnormal personality	7.06	(1.25)	6.24	(1.92)
N (sophisticated)	Mean	(SD)	Mean	(SD)
Not abnormal	5.00	(1.47)	6.25	(1.76)
Indeterminate	4.15	(1.95)	5.38	(1.99)
Abnormal personality	5.29	(2.17)	5.29	(2.59)
O (apprehensive)	Mean	(SD)	Mean	(SD)
Not abnormal	6.77	(1.48)	6.17	(2.52)
Indeterminate	7.95	(1.79)	7.52	(1.81)
Abnormal personality	8.12	(1.58)	8.00	(2.35)

	Men		Women	
Q1 (radical)	Mean	(SD)	Mean	(SD)
Not abnormal	4.92	(2.02)	5.83	(1.90)
Indeterminate	4.45	(1.93)	5.62	(1.80)
Abnormal personality	4.71	(1.21)	6.35	(2.03)
Q2 (self-sufficient)	Mean	(SD)	Mean	(SD)
Not abnormal	6.23	(2.17)	6.42	(1.31)
Indeterminate	5.95	(1.93)	6.90	(1.95)
Abnormal personality	6.88	(1.90)	6.82	(1.55)
Q3 (self-controlled)	Mean	(SD)	Mean	(SD)
Not abnormal	5.54	(1.81)	4.67	(2.19)
Indeterminate	4.95	(1.79)	3.90	(2.57)
Abnormal personality	4.18	(2.19)	4.76	(2.51)
Q4 (tense)	Mean	(SD)	Mean	(SD)
Not abnormal	6.77	(1.77)	6.92	(1.98)
Indeterminate	6.85	(2.18)	7.14	(1.90)
Abnormal personality	7.76	(1.99)	6.94	(2.59)
Acting out Hostility	Mean	(SD)	Mean	(SD)
Not abnormal	4.54	(2.93)	5.83	(3.33)
Indeterminate	6.35	(2.91)	6.33	(2.69)
Abnormal personality	8.24	(2.93)	5.71	(2.10)

	Men		Women	
Criticism of Others	**Mean**	**(SD)**	**Mean**	**(SD)**
Not abnormal	5.23	(3.32)	5.50	(3.78)
Indeterminate	6.45	(2.26)	6.14	(3.10)
Abnormal personality	8.35	(2.09)	5.12	(2.45)
Delusional Hostility	**Mean**	**(SD)**	**Mean**	**(SD)**
Not abnormal	2.62	(1.50)	2.17	(2.08)
Indeterminate	2.45	(1.64)	2.10	(0.94)
Abnormal personality	3.65	(2.03)	1.94	(1.48)
Self Criticism	**Mean**	**(SD)**	**Mean**	**(SD)**
Not abnormal	5.77	(2.45)	7.33	(2.31)
Indeterminate	6.55	(2.61)	7.76	(2.17)
Abnormal personality	7.29	(2.89)	7.18	(3.57)
Delusional Guilt	**Mean**	**(SD)**	**Mean**	**(SD)**
Not abnormal	3.46	(1.56)	4.33	(2.10)
Indeterminate	3.90	(1.80)	3.71	(1.93)
Abnormal personality	4.24	(1.60)	4.00	(2.62)
General Hostility	**Mean**	**(SD)**	**Mean**	**(SD)**
Not abnormal	21.62	(9.54)	25.00	(11.24)
Indeterminate	25.90	(7.46)	26.05	(7.11)
Abnormal personality	31.76	(6.64)	23.94	(10.77)

	Men		Women	
Direction of Hostility	Mean	(SD)	Mean	(SD)
Not abnormal	102.15	(4.47)	105.67	(7.22)
Indeterminate	101.55	(7.97)	104.67	(6.30)
Abnormal personality	98.06	(10.26)	105.47	(7.79)

Sum E	Mean	(SD)	Mean	(SD)
Not abnormal	12.38	(6.44)	13.33	(8.44)
Indeterminate	15.45	(5.61)	14.57	(5.19)
Abnormal personality	20.76	(5.85)	12.76	(5.92)

Sum I	Mean	(SD)	Mean	(SD)
Not abnormal	9.23	(3.81)	11.67	(3.75)
Indeterminate	10.45	(4.03)	11.48	(3.36)
Abnormal personality	11.53	(4.23)	11.18	(5.99)

PERSONALITY VARIABLES CONSIDERED BY RATINGS OF SOCIAL DISORDER AND DEVIANCE

Numbers in each group

	Men	Women
No social disorder	21	21
Indeterminate	15	11
Social disorder	14	18

	Men		Women	
Anxiety	**Mean**	**(SD)**	**Mean**	**(SD)**
No social disorder	6.90	(1.87)	7.48	(2.27)
Indeterminate	7.47	(1.88)	8.27	(2.00)
Social disorder	8.64	(2.02)	7.44	(2.66)
I - E	**Mean**	**(SD)**	**Mean**	**(SD)**
No social disorder	4.00	(1.82)	3.86	(1.31)
Indeterminate	5.40	(1.55)	2.73	(1.62)
Social disorder	3.14	(1.70)	4.83	(1.72)
A (outgoing)	**Mean**	**(SD)**	**Mean**	**(SD)**
No social disorder	6.57	(1.47)	5.33	(1.39)
Indeterminate	7.47	(1.60)	4.18	(1.94)
Social disorder	5.36	(1.28)	5.28	(1.49)

	Men		Women	
B (intelligent)	**Mean**	**(SD)**	**Mean**	**(SD)**
No social disorder	7.33	(1.74)	6.62	(1.96)
Indeterminate	6.00	(1.60)	6.18	(1.78)
Social disorder	6.29	(2.16)	5.67	(1.68)
C (stable)	**Mean**	**(SD)**	**Mean**	**(SD)**
No social disorder	4.24	(2.30)	3.71	(1.62)
Indeterminate	5.13	(2.07)	2.73	(2.24)
Social disorder	2.07	(1.38)	3.39	(2.09)
E (dominant)	**Mean**	**(SD)**	**Mean**	**(SD)**
No social disorder	4.81	(1.69)	5.52	(1.50)
Indeterminate	5.47	(1.30)	5.18	(2.09)
Social disorder	5.36	(2.56)	6.00	(1.61)
F (enthusiastic)	**Mean**	**(SD)**	**Mean**	**(SD)**
No social disorder	5.29	(1.59)	4.62	(1.94)
Indeterminate	6.20	(1.66)	4.00	(2.14)
Social disorder	4.21	(1.72)	6.17	(1.47)
G (conscientious)	**Mean**	**(SD)**	**Mean**	**(SD)**
No social disorder	4.76	(1.64)	4.57	(1.50)
Indeterminate	4.33	(2.02)	3.91	(1.97)
Social disorder	3.14	(1.79)	4.06	(2.01)

	Men		Women	
H (venturesome)	Mean	(SD)	Mean	(SD)
No social disorder	3.81	(1.86)	4.29	(1.45)
Indeterminate	4.93	(1.91)	3.18	(1.72)
Social disorder	3.64	(1.65)	4.89	(1.88)
I (sensitive)	Mean	(SD)	Mean	(SD)
No social disorder	6.31	(1.63)	5.00	(1.92)
Indeterminate	5.30	(1.15)	5.36	(1.57)
Social disorder	6.07	(1.86)	5.28	(1.87)
L (suspecting)	Mean	(SD)	Mean	(SD)
No social disorder	6.43	(1.66)	6.62	(2.18)
Indeterminate	6.20	(2.24)	6.73	(1.74)
Social disorder	7.07	(2.13)	6.67	(2.40)
M (self-absorbed)	Mean	(SD)	Mean	(SD)
No social disorder	6.19	(1.54)	5.67	(1.71)
Indeterminate	6.13	(1.30)	6.73	(1.62)
Social disorder	6.86	(1.75)	6.28	(1.90)
N (sophisticated)	Mean	(SD)	Mean	(SD)
No social disorder	4.52	(1.69)	6.10	(2.02)
Indeterminate	4.53	(1.92)	5.45	(2.30)
Social disorder	5.36	(2.34)	5.00	(2.20)

	Men		Women	
O (apprehensive)	**Mean**	**(SD)**	**Mean**	**(SD)**
No social disorder	6.95	(1.69)	6.95	(2.52)
Indeterminate	8.33	(1.35)	7.73	(1.74)
Social disorder	8.14	(1.75)	7.61	(2.23)
Q1 (radical)	**Mean**	**(SD)**	**Mean**	**(SD)**
No social disorder	4.57	(1.99)	5.00	(1.82)
Indeterminate	4.67	(1.80)	6.09	(1.81)
Social disorder	4.79	(1.25)	6.89	(1.57)
Q2 (self-sufficient)	**Mean**	**(SD)**	**Mean**	**(SD)**
No social disorder	6.19	(1.91)	6.57	(1.75)
Indeterminate	5.27	(1.58)	7.82	(1.17)
Social disorder	7.71	(1.77)	6.33	(1.61)
Q3 (self-controlled)	**Mean**	**(SD)**	**Mean**	**(SD)**
No social disorder	5.43	(1.80)	4.52	(2.25)
Indeterminate	5.20	(2.14)	3.82	(2.44)
Social disorder	3.57	(1.50)	4.56	(2.75)
Q4 (tense)	**Mean**	**(SD)**	**Mean**	**(SD)**
No social disorder	6.38	(1.86)	7.05	(1.75)
Indeterminate	7.53	(1.68)	6.91	(1.92)
Social disorder	7.86	(2.35)	7.06	(2.71)

	Men		Women	
Acting out Hostility	**Mean**	**(SD)**	**Mean**	**(SD)**
No social disorder	5.29	(3.05)	5.38	(2.60)
Indeterminate	6.13	(2.47)	5.91	(2.70)
Social disorder	8.79	(3.09)	6.78	(3.32)
Criticism of Others	**Mean**	**(SD)**	**Mean**	**(SD)**
No social disorder	5.67	(3.01)	4.52	(3.08)
Indeterminate	6.93	(2.25)	6.18	(2.82)
Social disorder	8.29	(2.23)	6.61	(2.87)
Delusional Hostility	**Mean**	**(SD)**	**Mean**	**(SD)**
No social disorder	2.52	(1.44)	1.76	(1.41)
Indeterminate	2.60	(1.50)	1.73	(0.65)
Social disorder	3.79	(2.33)	2.61	(1.69)
Self Criticism	**Mean**	**(SD)**	**Mean**	**(SD)**
No social disorder	6.62	(2.62)	8.19	(2.23)
Indeterminate	6.73	(2.31)	8.27	(2.28)
Social disorder	6.43	(3.27)	6.11	(3.05)
Delusional Guilt	**Mean**	**(SD)**	**Mean**	**(SD)**
No social disorder	3.81	(1.63)	4.00	(2.00)
Indeterminate	4.07	(1.79)	3.82	(2.40)
Social disorder	3.86	(1.70)	4.00	(2.40)

	Men		Women	
General Hostility	**Mean**	**(SD)**	**Mean**	**(SD)**
No social disorder	23.90	(9.13)	23.86	(8.95)
Indeterminate	26.73	(6.35)	25.91	(7.42)
Social disorder	31.14	(8.63)	26.00	(11.09)
Direction of Hostility	**Mean**	**(SD)**	**Mean**	**(SD)**
No social disorder	103.29	(5.61)	108.71	(6.16)
Indeterminate	101.20	(7.53)	106.55	(5.68)
Social disorder	95.64	(10.24)	100.22	(5.64)
Sum E	**Mean**	**(SD)**	**Mean**	**(SD)**
No social disorder	13.48	(6.14)	11.67	(6.42)
Indeterminate	16.53	(5.11)	13.82	(4.26)
Social disorder	20.86	(6.88)	15.89	(6.58)
Sum I	**Mean**	**(SD)**	**Mean**	**(SD)**
No social disorder	10.43	(3.97)	12.19	(3.60)
Indeterminate	10.80	(3.80)	12.09	(4.28)
Social disorder	10.29	(4.71)	10.11	(5.23)

PERSONALITY VARIABLES CONSIDERED BY PRESENCE OF A HISTORY OF A PREVIOUS SUICIDAL ATTEMPT

Numbers in each group

	Men	Women
Non-repeaters	30	34
Repeaters	20	16

	Men		Women	
Anxiety	**Mean**	**(SD)**	**Mean**	**(SD)**
Non-repeaters	7.53	(2.21)	7.24	(2.55)
Repeaters	7.60	(1.73)	8.50	(1.59)
I - E	**Mean**	**(SD)**	**Mean**	**(SD)**
Non-repeaters	3.83	(1.74)	4.06	(1.63)
Repeaters	4.70	(2.03)	3.75	(1.88)
A (outgoing)	**Mean**	**(SD)**	**Mean**	**(SD)**
Non-repeaters	6.10	(1.49)	5.26	(1.58)
Repeaters	7.10	(1.71)	4.63	(1.59)
B (intelligent)	**Mean**	**(SD)**	**Mean**	**(SD)**
Non-repeaters	7.00	(1.97)	6.06	(1.84)
Repeaters	6.10	(1.68)	6.44	(1.86)

	Men		Women	
C (stable)	Mean	(SD)	Mean	(SD)
Non-repeaters	3.80	(2.30)	3.76	(2.09)
Repeaters	4.05	(2.39)	2.56	(1.26)
E (dominant)	Mean	(SD)	Mean	(SD)
Non-repeaters	5.07	(1.82)	5.68	(1.75)
Repeaters	5.30	(1.98)	5.50	(1.55)
F (enthusiastic)	Mean	(SD)	Mean	(SD)
Non-repeaters	4.90	(1.71)	5.15	(2.03)
Repeaters	5.80	(1.79)	4.81	(1.97)
G (conscientious)	Mean	(SD)	Mean	(SD)
Non-repeaters	4.40	(2.04)	4.15	(1.97)
Repeaters	3.85	(1.63)	4.44	(1.36)
H (venturesome)	Mean	(SD)	Mean	(SD)
Non-repeaters	3.93	(1.82)	4.21	(1.75)
Repeaters	4.35	(1.95)	4.38	(1.82)
I (sensitive)	Mean	(SD)	Mean	(SD)
Non-repeaters	6.03	(1.73)	4.77	(1.75)
Repeaters	6.70	(1.34)	5.81	(1.80)

	Men		Women	
L (suspecting)	Mean	(SD)	Mean	(SD)
Non-repeaters	6.63	(1.97)	6.41	(2.19)
Repeaters	6.40	(2.01)	7.19	(1.97)
M (self-absorbed)	Mean	(SD)	Mean	(SD)
Non-repeaters	6.13	(1.66)	5.94	(1.79)
Repeaters	6.70	(1.30)	6.50	(1.75)
N (sophisticated)	Mean	(SD)	Mean	(SD)
Non-repeaters	4.50	(2.05)	5.91	(2.18)
Repeaters	5.15	(1.79)	4.81	(1.97)
O (apprehensive)	Mean	(SD)	Mean	(SD)
Non-repeaters	7.50	(1.74)	6.88	(2.28)
Repeaters	8.00	(1.65)	8.38	(1.86)
Q1 (radical)	Mean	(SD)	Mean	(SD)
Non-repeaters	4.93	(1.80)	5.91	(1.82)
Repeaters	4.25	(1.55)	5.94	(2.11)
Q2 (self-sufficient)	Mean	(SD)	Mean	(SD)
Non-repeaters	6.60	(2.03)	6.74	(1.69)
Repeaters	5.95	(1.91)	6.81	(1.64)

	Men		Women	
Q3 (self-controlled)	**Mean**	**(SD)**	**Mean**	**(SD)**
Non-repeaters	4.80	(2.16)	4.62	(2.59)
Repeaters	4.90	(1.71)	3.88	(2.09)
Q4 (tense)	**Mean**	**(SD)**	**Mean**	**(SD)**
Non-repeaters	7.13	(2.16)	6.68	(2.29)
Repeaters	7.15	(1.87)	7.75	(1.57)
Acting out Hostility	**Mean**	**(SD)**	**Mean**	**(SD)**
Non-repeaters	6.40	(3.61)	5.77	(3.20)
Repeaters	6.70	(2.56)	6.25	(2.24)
Criticism of Others	**Mean**	**(SD)**	**Mean**	**(SD)**
Non-repeaters	6.63	(2.98)	5.38	(3.09)
Repeaters	7.00	(2.47)	6.19	(2.97)
Delusional Hostility	**Mean**	**(SD)**	**Mean**	**(SD)**
Non-repeaters	3.00	(1.95)	1.97	(1.55)
Repeaters	2.75	(1.59)	2.25	(1.18)
Self Criticism	**Mean**	**(SD)**	**Mean**	**(SD)**
Non-repeaters	6.27	(2.77)	7.12	(2.77)
Repeaters	7.10	(2.53)	8.19	(2.51)

	Men		Women	
Delusional Guilt	**Mean**	**(SD)**	**Mean**	**(SD)**
Non-repeaters	3.53	(1.63)	3.41	(2.24)
Repeaters	4.45	(1.60)	5.13	(1.59)
General Hostility	**Mean**	**(SD)**	**Mean**	**(SD)**
Non-repeaters	25.83	(9.42)	23.71	(9.93)
Repeaters	28.20	(7.25)	28.00	(7.49)
Direction of Hostility	**Mean**	**(SD)**	**Mean**	**(SD)**
Non-repeaters	99.73	(8.59)	104.41	(6.92)
Repeaters	101.70	(7.62)	106.81	(6.85)
Sum E	**Mean**	**(SD)**	**Mean**	**(SD)**
Non-repeaters	16.03	(7.41)	13.18	(6.67)
Repeaters	17.10	(5.56)	14.69	(5.30)
Sum I	**Mean**	**(SD)**	**Mean**	**(SD)**
Non-repeaters	9.80	(4.08)	10.53	(4.49)
Repeaters	11.55	(3.90)	13.31	(3.70)

REFERENCES

ADCOCK, C.J. (1965). A comparison of the concepts of Cattell and Eysenck. Brit. J. educ. Psychol., 35, 90-97.

ADORNO, T.W., FRENKEL-BRUNSWICK, Else, LEVINSON, D.J. and SANFORD, R.N. (1950). The Authoritarian Personality. New York: Harper.

ANON, (1965). Self-poisoning. Brit. med. J., 2, 1323.

BANNISTER, D. (1965). The rationale and clinical relevance of repertory grid technique. Brit. J. Psychiat., 111, 977-982.

BATCHELOR, I.R.C. (1954a). Alcoholism and attempted suicide. J. ment. Sci., 100, 451-461.

BATCHELOR, I.R.C. (1954b). Repeated suicidal attempts. Brit. J. med. Psychol., 27, 158-163.

BATCHELOR, I.R.C. (1954c). Psychopathic states and attempted suicide. Brit. med. J., 1, 1342-1347.

BATCHELOR, I.R.C. and NAPIER, M.B. (1953a). Attempted suicide in old age. Brit. med. J., 2, 1186-1190.

BATCHELOR, I.R.C. and NAPIER, M.B. (1953b). Broken homes and attempted suicide. Brit. J. Delinq., 4, 99-108.

BATCHELOR, I.R.C. and NAPIER, M.B. (1954). The sequelae and short-term prognosis of attempted suicide. J. neurol. neurosurg. Psychiat., 17, 261-266.

BATCHELOR, I.R.C. (1955). Attempted suicide. Brit. med. J., 1, 595-597.

BEVERIDGE, G.W., FORSHALL, W., MUNRO, J.F., OWEN, J.A. and WESTON, I.A.G. (1964). Acute salicylate poisoning in adults. Lancet, i, 1406-1409.

BLOCK, J. (1965). The Challenge of Response Sets : Unconfounding Meaning, Acquiescence and Social Desirability in the M.M.P.I. New York: Appleton - Century - Crofts.

BRIDGES, P.K. and KOLLER, K.M. (1966). Attempted suicide : a comparative study. Comp. Psychiat., 7, 240-247.

BROIDA, D.C. (1954). An investigation of certain psychodiagnostic indications of suicidal tendencies and depression in mental hospital patients. Psychiat. Quart., 28, 453-464.

BRUHN, J.G. (1962). Broken homes among attempted suicides and psychiatric out-patients: a comparative study. J. ment. Sci., 108, 772-779.

BRUHN, J.G. (1963). Comparative study of attempted suicides and psychiatric out-patients. Brit. J. prev. soc. Med., 17, 197-201.

BRUHN, J.G. and McCULLOCH, J.W. (1962). Paternal deprivation among attempted suicides. Brit. J. psychiat. soc. Wk., 6, 186-191.

CAINE, T.M. (1965). Changes in symptom, attitude, and trait measures among chronic neurotics in a therapeutic community. in FOULDS, G.A., Personality and Personal Illness. London: Tavistock.

CAINE, T.M. and HOPE, K. (1967). Manual of the Hysteroid-Obsessoid Questionnaire (HOQ). London: Univ. London Press.

CAINE, T.M., FOULDS, G.A. and HOPE, K. (1967). Manual of the Hostility and Direction of Hostility Questionnaire (HDHQ). London: Univ. London Press.

CAMPBELL, D.T. (1957). A typology of tests, projective and otherwise. J. consult. Psychol., 21, 207-210.

CARSTAIRS, G.M. (1964). Editorial foreword to STENGEL, E. (1964) Suicide and Attempted Suicide. Harmondsworth: Penguin Books.

CARSTAIRS, G.M. and BROWN, G.W. (1958). A census of psychiatric cases in two contrasting communities. J. ment. Sci., 104, 72-81.

CATTELL, R.B. (1949). r_p and other coefficients of pattern similarity. Psychometrika, 14, 279-298.

CATTELL, R.B. (1957). Personality and Motivation Structure and Measurement. London: Harrap.

CATTELL, R.B. (1964). Psychological definition and measurement of anxiety. J. Neuropsychiat., 5, 396-402.

CATTELL, R.B. (1965). The Scientific Analysis of Personality. Harmondsworth: Penguin Books.

CATTELL, R.B. and EBER, H.W. (1965). The 16 Personality Factor Questionnaire, 3rd Edition. Champaign, Ill.: I.P.A.T.

COHEN, E., MOTTO, J.A. and SEIDEN, R.D. (1966). An instrument for evaluating suicide potential: a preliminary study. Amer. J. Psychiat., 122, 886-891.

COOPER, G.W., BERNSTEIN, L. and HART, Cynthia (1965). Predicting suicidal ideation from the Rorschach: An attempt to cross-validate. J. proj. tech. pers. Ass., 29, 168-170.

COSTELLO, C.G. (1958). The Rorschach records of suicidal patients - an application of a comparative matching technique. J. proj. Tech., 22, 272-275.

COUCH, A. and KENISTON, K. (1960). Yeasayers and naysayers; Agreeing response set as a personality variable. J. abn. soc. Psychol., 60, 151-174.

CRONBACH, L.J. (1946). Response sets and test validity. Educ. psychol. Measmt., 6, 475-494.

CRONBACH, L.J. (1950). Further evidence on response sets and test design. Educ. psychol. Measmt., 10, 3-31.

DASTON, P.G. and SAKHEIM, G.A. (1960). Prediction of successful suicide from the Rorschach test using a sign approach. J. proj. Tech., 24, 335-361.

DEVRIES, A.G. (1966a). A potential suicide personality inventory. Psychol. Rep., 18, 731-738.

DEVRIES, A.G. (1966b). Identification of suicidal behaviour by means of the M.M.P.I. Psychol. Rep., 19, 415-419.

DEVRIES, A.G. (1967). Control variables in the identification of suicidal behaviour. Psychol. Rep., 20, 1131-1135.

DEVRIES, A.G. and FARBEROW, N.L. (1967). A multivariate profile analysis of M.M.P.I.s of suicidal and non-suicidal neuropsychiatric hospital patients. J. proj. tech. pers. Ass., 31, 81-84.

DUBLIN, L.I. (1963). Suicide, a Sociological and Statistical Study. New York: Ronald Press.

EAST, W.N. (1913). On attempted suicide with an analysis of 1,000 consecutive cases. J. ment. Sci., 59, 428-478.

EDWARDS, A.L. (1953). The relationship between the judged desirability of a trait and the probability that the trait will be endorsed. J. appl. Psychol., 37, 90-93.

EDWARDS, A.L. (1957). The Social Desirability Variable in Personality Assessment and Research. New York: Dryden.

ELLIS, G.G., COMISH, K.A. and HEWER, R.L. (1966). Attempted suicide in Leicester. Practitioner, 196, 557-561.

EVANS, J.G. (1967). Deliberate self-poisoning in the Oxford area. Brit. J. prev. soc. Med., 21, 97-107.

FARBEROW, N.L. (1950). Personality patterns of suicidal mental hospital patients. Genet. psychol. Monogr., 42, 3-79.

FARBEROW, N.L. (1959). Validity and methodology in projective tests. J. proj. Tech., 23, 282-286.

FARBEROW, N.L. and DEVRIES, A.G. (1967). An item differentiation analysis of M.M.P.I.s of suicidal neuropsychiatric hospital patients. Psychol. Rep., 20, 607-617.

FARBEROW, N.L. and SHNEIDMAN, E.S. (1961). The Cry for Help. New York: McGraw-Hill.

FISHER, S. (1951). The value of the Rorschach for detecting suicidal trends. J. proj. Tech., 15, 250-254.

FISHER, S. and HINDS, Edith (1951). The organisation of hostility controls in various personality structures. Genet. psychol. Monogr., 44, 3-68.

FOULDS, G.A. (1962). A quantification of diagnostic differentiae. J. ment. Sci., 108, 389-405.

FOULDS, G.A. (1964). Personal continuity and psychopathological disruption. Brit. J. Psychol., 55, 269-276.

FOULDS, G.A. (1965a). Personality and Personal Illness. London: Tavistock.

FOULDS, G.A. (1965b). The significance of intra-individual diagnostic levels. Brit. J. Psychiat., 111, 761-768.

FOULDS, G.A. (1966). 'Psychic : somatic' symptoms and hostility. Brit. J. soc. clin. Psychol., 5, 185-189.

FOULDS, G.A. (1967). Some differences between neurotics and character disorders. Brit. J. soc. clin. Psychol., 6, 52-59.

FOULDS, G.A. (1968). Neurosis and character disorder in hospital and in prison. Brit. J. Crim., 8, 46-49.

FOULDS, G.A., CAINE, T.M. and CREASY, M.A. (1960). Aspects of extra- and intro-punitive expression in mental illness. J. ment. Sci., 106, 599-610.

FOULDS, G.A. and HOPE, K. (1968). Manual of the Symptom Sign Inventory. London: Univ. London Press.

FOULDS, G.A. and MAYO, P.R. (1967). 'Neurotic' symptoms, intropunitiveness and psychiatric referral. Brit. J. med. Psychol., 40, 151-152.

GRAHAM, J.D.P. and HITCHENS, R.A.N. (1967). Acute poisoning and its prevention. Brit. J. prev. soc. Med., 21, 108-114.

GREER, S. and GUNN, J.C. (1966). Attempted suicide from intact and broken parental homes. Brit. med. J., 2, 1355-1357.

GREER, S., GUNN, J.C. and KOLLER, K.M. (1966). Aetiological factors in attempted suicide. Brit. med. J., 2, 1352-1355.

GUILFORD, J.P. (1965). Fundamental Statistics in Psychology and Education. New York: McGraw-Hill.

HARRINGTON, J.A. and CROSS, K.W. (1959). Cases of attempted suicide admitted to a general hospital. Brit. med. J., 2, 463-467.

HASSALL, Christine (1967). Young alcoholics; personal and social characteristics compared with those of older alcoholics. Unpublished M.Sc. dissertation: University of Edinburgh Library.

HATHAWAY, S.R. and McKINLEY, J.C. (1943). The Minnesota Multiphasic Personality Inventory. Minneapolis: Univ. Minn. Press.

HERTZ, Marguerite R. (1948). Suicidal configurations in Rorschach records. Rorschach Res. Exch., 12, 1-56.

HERTZ, Marguerite R. (1949). Further study of "suicidal" configurations in Rorschach records. Rorschach Res. Exch., 13, 44-73.

HIMMELWEIT, Hilde (1945). A study of temperament of neurotic persons by means of level of aspiration tests. Unpublished Ph.D. thesis: University of London Library.

HOLTZMAN, W.H. (1965). Personality structure. in Farnsworth, P.R. (ed.) Annual Review of Psychology, 1965. Palo Alto: Annual Reviews Inc.

HOPE, K. (1963). The structure of hostility among normal and neurotic persons. Unpublished Ph.D. thesis: University of London Library.

HOPKINS, F. (1937). Attempted suicide: an investigation. J. ment. Sci., 83, 71-94.

HORN, J.L. (1963). Second-order factors in questionnaire data. Educ. psychol. Measmt., 23, 117-134.

JACKSON, D.N. and MESSICK, S. (1958). Content and style in personality assessment. Psychol. Bull., 55, 243-252.

JACKSON, D.N. and MESSICK, S. (1965). Acquiescence: the non-vanishing variance component. Amer. Psychologist, 20, 498.

JENSEN, A.R. (1964). The Rorschach technique: a re-evaluation. Acta Psychol., 22, 60-77.

KAMANO, D.K. and CRAWFORD, Carole S. (1966). Self-evaluations of suicidal mental hospital patients. J. clin. Psychol., 22, 278-279.

KELLY, G.A. (1955). The Psychology of Personal Constructs. New York: Norton and Co.

KENDALL, M.G. (1948). Rank Correlation Methods. London: Griffin.

KESSEL, N. (1965). Self-poisoning. Brit. med. J., 2, 1265-1270; 1336-1340.

KESSEL, N. (1966). The respectability of self-poisoning and the fashion of survival. J. Psychosom. Res., 10, 29-36.

KESSEL, N. and LEE, Elizabeth McC. (1962). Attempted suicide in Edinburgh. Scot. med. J., 7, 130-135.

KESSEL, N. and McCULLOCH, J.W. (1966). Repeated acts of self-poisoning and self-injury. Proc. Roy. soc. Med., 59, 89-92.

KESSEL, N., McCULLOCH, J.W. and SIMPSON, Esme (1963). Psychiatric service in a centre for the treatment of poisoning. Brit. med. J., 2, 985-988.

KESSEL, N., McCULLOCH, J.W., HENDRY, Joyce, LESLIE, Dorothy, WALLACE, I. and WEBSTER, R. (1964). Hospital management of attempted suicide in Edinburgh. Scot. med. J., 9, 333-334.

KIDD, C.B. and MACKIE, R.E. (1967). The psychiatrist factor in case register data interpretation. Soc. Psychiat., 2, 168-173.

KLEIN, G.S., BARR, Harriet L. and WOLITZKY, D.L. (1967). Personality. in Farnsworth, P.R. (ed.) Annual Review of Psychology, 1967. Palo Alto: Annual Reviews Inc.

KNOWLES, J.B. (1963). Techniques of assessment, response sets and the questionnaire. in The Psychological Assment of Personality. Mimeo: British Psychological Society.

LENNARD-JONES, J.E. and ASHER, R. (1959). Why do they do it? A study of pseudocide. Lancet, 1, 1138-1140.

LESTER, D. (1967). Suicide as an aggressive act. J. Psychol., 66, 47-50.

LININER, R.M. (1946). Content analysis in Rorschach work. Rorschach Res. Exch., 10, 212-129.

MARTIN, H. (1952). A Rorschach study of suicide. Unpublished doctoral dissertation. University of Kentucky.

MATTHEW, H. and LAWSON, A.A.H. (1966). Acute barbiturate poisoning - a review of two years' experience. Quart. J. Med., 35, 539-552.

MATTHEW, H., MACKINTOSH, T.F., TOMPSETT, S.L. and CAMERON, Jean C. (1966). Gastric aspiration and lavage in acute poisoning. Brit. med. J., 1, 1333-1337.

MAYER-GROSS, W., SLATER, E. and ROTH, M. (1960). Clinical Psychiatry. London: Cassell.

MAYO, P.R. (1967a). Some psychological changes associated with improvement in depression. Brit. J. soc. clin. Psychol., 6, 63-68.

MAYO, P.R. (1967b). A comparative study of people with psychoneurotic symptoms who seek treatment and those who do not seek treatment. Unpublished Ph.D. thesis: University of Edinburgh Library.

MENNINGER, K. (1938). Man against Himself. New York: Harcourt, Brace and World.

MIDDLETON, G.D., ASHBY, D.W. and CLARK, F. (1961). An analysis of attempted suicide in an urban industrial district. Practitioner, 187, 776-782.

MURRAY, H.A. (1943). Thematic Apperception Test manual. Cambridge, Mass.; Harvard Univ. Press.

McALLISTER, J. (1968). Foulds' "continuum of personal illness" and the 16PF. Brit. J. Psychiat., 114, 53-56.

McCULLOCH, J.W. (1965). The social consequences of acts of deliberate self-poisoning or self-injury. Unpublished M.Sc. dissertation. University of Edinburgh Library.

McCULLOCH, J.W. and PHILIP, A.E. (1967a). Social factors associated with attempted suicide: a review of the literature. Brit. J. psychiat. soc. Wk., 9, 30-36.

McCULLOCH, J.W. and PHILIP, A.E. (1967b). Social variables in attempted suicide. Acta psychiat. Scand., 13, 341-346.

McCULLOCH, J.W., PHILIP, A.E. and CARSTAIRS, G.M. (1967). The ecology of suicidal behaviour. Brit. J. Psychiat., 113, 313-319.

McQUITTY, L.L. (1957). Elementary linkage analysis for isolating orthogonal and oblique types and typal relevancies. Educ. psychol. Measmt., 17, 207-229.

McQUITTY, L.L. (1961). Typal analysis. Educ. psychol. Measmt., 21, 677-696.

McQUITTY, L.L. (1966). Improved hierarchial syndrome analysis of discrete and continuous data. Educ. psychol. Measmt., 26, 577-582.

MENCINI, R., REDA, G.C., SCHIAVI, F. and ALLIANI, E. (1953). Symposium di psicologia clinica; il P.F. test di Rosenzweig in trenta tentativi di suicidio. Arch. Psicol. Neur. Psich., 14, 289-306.

NEURINGER, C. (1961). Dichotomous evaluations in suicidal individuals. J. consult. Psychol., 25, 445-449.

NEURINGER, C. (1964). Rigid thinking in suicidal individuals. J. consult. Psychol., 28, 54-58.

NEURINGER, C. (1965). The Rorschach test as a research device for the identification prediction and understanding of suicidal ideation and behaviour. J. proj. tech. pers. Ass., 29, 71-82.

NEURINGER, C. (1967). The cognitive organization of meaning in suicidal individuals. J. gen. Psychol., 76, 93-100.

NEURINGER, C., McEVOY, T.L. and SCHLESINGER, R.J. (1965). The identification of suicidal behaviour in females by the use of Rorschach. J. gen. Psychol., 72, 127-133.

NICHOLSON, W.A. (1963). Self-inflicted and accidental poisoning in adults admitted to a general hospital. Practitioner, 190, 230-237.

OSGOOD, C.E., SUCI, G.J. and TANNENBAUM, P.H. (1957). The Measurement of Meaning. Urbana, Ill.; Univ. Illinois Press.

PARKIN, D. and STENGEL, E. (1965). Incidence of suicidal attempts in an urban community. Brit. med. J., 2, 133-138.

PHILIP, A.E. (1968). The constancy of structure of a hostility questionnaire. Brit. J. soc. clin. Psychol., 7, 16-18.

PHILIP, A.E. and McCULLOCH, J.W. (1966). Use of social indices in psychiatric epidemiology. Brit. J. prev. soc. Med., 20, 122-126.

PHILIP, A.E. and McCULLOCH, J.W. (1967a). Ecological correlates of attempted suicide. Bull. Brit. Psychol. Soc., 20, 67, 23A-24A.

PHILIP, A.E. and McCULLOCH, J.W. (1967b). Social pathology and personality in attempted suicide. Brit. J. Psychiat., 113, 1405-1406.

PHILIP, A.E. and McCULLOCH, J.W. (1968). Some psychological features of persons who have attempted suicide. Brit. J. Psychiat., In press.

PRESTON, Caroline E. (1964). Accident proneness in attempted suicide and in automobile accident victims. J. consult. Psychol., 28, 79-82.

RAVEN, J.C. (1948). A method for determining the typicality of personality descriptions. J. ment. Sci., 94, 114-117.

ROKEACH, M. (1948). Generalised mental rigidity as a factor in ethnocentrism. J. abn. soc. Psychol., 43, 259-278.

RORER, L.G. (1965). The great response-style myth. Psychol. Bull., 63, 129-156.

RORER, L.G. and GOLDBERG, L.R. (1965a). Acquiescence in the M.M.P.I.? Educ. psychol. Measmt., 25, 801-817.

RORER, L.G. and GOLDBERG, L.R. (1965b). Acquiescence and the vanishing variance component. J. appl. Psychol., 49, 422-430.

RORSCHACH, H. (1921). Psychodiagnostik. Bern: Hans Huber.

ROSEN, A., HALES, W.M. and SIMON, W. (1954). Classification of suicidal patients. J. consult. Psychol., 18, 359-362.

ROSENZWEIG, S. (1934). Types of reaction to frustration. J. abn. soc. Psychol., 29, 298-300.

ROSENZWEIG, S. (1948). Rosenzweig Picture-Frustration Study. London: National Foundation for Educ. Res. in England and Wales.

RYLE, A. (1967). A repertory grid study of the meaning and consequences of a suicidal act. Brit. J. Psychiat., 113, 1393-1403.

SAINSBURY, P. (1955). Suicide in London: an Ecological Study. London: Chapman and Hall.

SAKHEIM, G.A. (1955). Suicidal responses on the Rorschach test: A validation study. Protocols of suicidal mental hospital patients compared with those of non-suicidal patients. J. nerv. ment. Dis., 122, 332-344.

SALMON, Phillida (1965). Foulds' punitiveness scales in relation to M.M.P.I. validation and diagnostic scales. Brit. J. soc. clin. Psychol., 4, 207-213.

SAPOLSKY, A. (1963). An indicator of suicidal ideation on the Rorschach test. J. proj. tech. pers. Ass., 27, 332-335.

SCHACHTER, M. (1957). Conduites ou nevroses suicidaires, et test de Rorschach. Encephale, 46, 146-165.

SCHEIER, I.H. and CATTELL, R.B. (1961). Handbook for the Neuroticism Scale Questionnaire. Champaign, Ill.; I.P.A.T.

SCLARE, A.B. and HAMILTON, C.M. (1963). Attempted suicide in Glasgow. Brit. J. Psychiat., 109, 609-615.

SCOTT, W.A. (1963). Social desirability and individual conceptions of the desirable. J. abn. soc. Psychol., 67, 574-585.

SHNEIDMAN, E.S. (1949). The Make-A-Picture-Story Test. New York: Psychological Corporation.

SHNEIDMAN, E.S. (1960). Psycho-logic: A personality approach to patterns of thinking. in Kogen, J. and Lesser, G. (ed.) Contemporary Issues in Apperceptive Fantasy. Springfield Ill.; Thomas.

SHNEIDMAN, E.S. and FARBEROW, N.L. (1958). TAT heroes of suicidal and non-suicidal subjects. J. proj. Tech., 22, 211-228.

SIEGEL, S. (1956). Non-parametric Statistics for the Behavioural Sciences. New York: McGraw-Hill.

SIMON, W. and HALES, W.M. (1949). Note on a suicide key in the Minnesota Multiphasic Personality Inventory. Amer. J. Psychiat., 106, 222-223.

STENGEL, E. (1960a). The complexity of motivation to suicidal attempts. J. ment. Sci., 106, 1388-1393.

STENGEL, E. (1960b). Some unexplored aspects of suicide and attempted suicide. Comp. Psychiat., 1, 71-79.

STENGEL, E. (1964). Suicide and Attempted Suicide. Harmondsworth: Penguin Books.

STENGEL, E. and COOK, Nancy G. (1958). Attempted Suicide. London: Chapman and Hall.

SUNDBERG, N.D. (1961). The practice of psychological testing in clinical services in the United States. Amer. Psychol., 16, 79-83.

TATOSSIAN, A. and BLUMEN, G. (1965). Essai d'application du differentiateur semantique d'Osgood a la comprehension de la tentative de suicide du sujet jeune. Cah. Psychol., 8, 189-198.

TAYLOR, D.J.E., HART, F.D. and BURLEY, D. (1964). Suicide in South London. Practitioner, 192, 215-256.

TSUJIOKA, B. and CATTELL, R.B. (1965). Constancy and difference in personality structure and mean profile, in the questionnaire medium, from applying the 16PF test in America and Japan. Brit. J. soc. clin. Psychol., 4, 287-297.

VINODA, K.S. (1964). A study of personality characteristics of attempted suicides. Unpublished Ph.D. thesis. University of London Library.

VINODA, K.S. (1966). Personality characteristics of attempted suicides. Brit. J. Psychiat., 112, 1143-1150.

WALTON, H.J. (1958). Suicidal behaviour in depressive illness: a study of aetiological factors in suicide. J. ment. Sci., 104, 884-891.

WEINER, I.B. (1961). Cross validation of a Rorschach check list associated with suicidal tendencies. J. consult. Psychol., 25, 312-315.

WHITE, Mary A. and SCHREIBER, Hanna (1952). Diagnosing "suicidal risks" on the Rorschach. Psychiat. Quart. Suppl., 26, 161-189.

WHITLOCK, F.A. and SCHAPIRA, K. (1967). Attempted suicide in Newcastle Upon Tyne. Brit. J. Psychiat., 113, 423-434.

WINER, B.J. (1962). Statistical Principles in Experimental Design. New York: McGraw-Hill.

WINFIELD, D.L. and SPARER, P.J. (1953). Preliminary report of the Rosenzweig P - F Study in attempted suicides. J. clin. Psychol., 9, 379-381.

WOODSIDE, Moya (1958). Attempted suicide arriving at a general hospital. Brit. med. J., 2, 411-414.