

ATTEMPTED SUICIDE: CORRELATES OF LETHALITY



A study of young women
who have attempted suicide by drug overdose

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SUMMARY

This thesis reports a study of women aged 18 to 30 following attempted suicide by drug overdose, and compares three groups of differing medical lethality. These patients have also been contrasted with women of similar age attending a community health centre.

Basic demographic and descriptive clinical data have been compared, and a more detailed examination has been made of reported childhood stress factors, suicidal intent, depression, hopelessness, death anxiety and the hysteroid/obsessoid and locus of control dimensions of personality.

There were a number of significant differences between the groups of differing lethality. More of the low lethality group were married (or in a de facto relationship), and had consulted a medical practitioner in the forty-eight hours immediately before their suicide attempt. However, more of the high lethality group had had a psychiatric consultation as their last medical contact.

The high lethality group took significantly more tablets/capsules, but were less likely to take alcohol, both with the overdose and in general. The scores on the Suicidal Intent Scale demonstrated a significant positive relationship between suicidal intent and medical lethality, suggesting that the lethality of an attempt is a guide to the assessment of suicidal intent. Subjects of high lethality also scored as significantly

more hopeless on the Hopelessness Scale, and more in an internal manner on a locus of control scale, indicating that they perceived themselves to be more in control of their situation, and less reliant on outside factors. There were no significant differences between the groups on scores obtained by the Death Anxiety Scale and the Hysteroid-Obsessoid Questionnaire.

In addition to general demographic and descriptive differences between the attempters and the comparison group, which were consistent with the literature, attempters scored significantly more in an external manner on a locus of control scale, denoting that they viewed themselves and their actions as being more influenced by outside factors. This suggests that a sense of responsibility for one's own actions may have relevance in both reducing the predisposition to suicidal behaviour, and in the treatment of such patients. There were marked differences in the reports of childhood stress between the attempters and the comparison group, whereas the differences between the groups of differing lethality were no greater than might have been expected by chance alone. There was also a trend, which approached significance, for attempters to be more obsessoid than the comparison group, a finding contrary to that anticipated.

The results of the Levine-Pilowsky Depression (LPD) Questionnaire demonstrated that the attempters were significantly depressed in contrast to the comparison group, but there was no association between the degree of depression and lethality.

Furthermore, approximately one-third of the patients of each lethality group were allocated to the endogenous class of depression by the LPD Questionnaire, indicating that certain patients have symptoms which have been attributed to a 'functional shift'. This finding suggests that the precise nature of depression in young women who attempt suicide is by no means clear.

These results may have relevance in the clinical situation. Thus for young women between the ages of 18 and 30 years, those most at risk for making suicide attempts of high lethality appear to be those who are not married (or in a de facto relationship); use alcohol less often; have had recent contact with a psychiatrist; and have a greater degree of suicidal intent and hopelessness. Furthermore, there are trends for them to be those of higher socio-economic status; to have less history of violence, both used and sustained; to more often demonstrate schizoid personality traits and to be closer to the obsessoid pole of the hysteroid-obsessoid personality continuum; and to be more likely to have had previous psychiatric consultation, and to have made a previous suicide attempt.

Thus the findings of this study may provide indices, not only for assessing a patient's potential for attempting suicide, but also for assessing whether such an attempt would be of high or low lethality.

This thesis contains no material which has been accepted for the award of any degree or diploma in any university, and to the best of my belief, contains no material previously published or written by another person, except where due reference is made in the text.

Signed

Robert D. Goldney

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The assistance I have enjoyed with computing has been invaluable. I sincerely appreciate the patience and tact which Messrs. P. Tilsley, R. O'Kearney and C. Persoglia, have employed in acceding to my requests.

In studying a restricted area of any topic, one runs the risk of isolation from colleagues with similar interests, and I have thus been fortunate in having had stimulating discussions with two experienced researchers in this field, each at a critical time in the progress of this thesis. The visit of Dr. S. Henderson in 1976 facilitated the formulation of initial hypotheses, and led to the inclusion of a comparison group; and discussions with Dr. N. Kreitman in 1978, at a time when the data appeared overwhelming, provided the spur to the completion of this thesis.

A special debt is owed to Professor I. Pilowsky, who has been my supervisor for this thesis. His patience in accepting one's vacillations and uncertainties has been admirable, and without being intrusive, he has had a strong influence on this work.

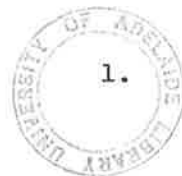
My final acknowledgement is the debt I owe to my family. A medical graduate, with postgraduate clinical qualifications, often approaches such a thesis with added family responsibilities. There is an optimal level of involvement in both family life and one's profession, and there have been times when the wisdom of pursuing such a thesis has been seriously questioned. However, thanks to my wife Helen, and children, Kate, Jane and Tim, this study has come to fruition.

CHAPTER 1

NATURE OF THE PROBLEM

"If lethality as expressed in self-destructive behaviour is viewed on a continuum, then we can identify those elements which increase as one moves up that continuum, in order to make better clinical interventions which will help reduce lethality and perturbation as well as to help us better understand the factors associated with self-destruction."

(Worden, 1976)



I. INTRODUCTION

"Was it a serious suicidal attempt?" This is a question immediately asked in every case by everybody who gets to know about the attempt." Thus wrote Stengel (1969) in introducing a discussion of the complexities of meaning of the term 'serious', when used in relation to attempted suicide¹. To Stengel there appeared to be three criteria by which the seriousness of attempt could be judged. There was first, the degree of actual physical threat to life; second, the strength of conscious suicidal intent; and third, the possibility of intervention by others in the patient's social environment.

These criteria clearly do not operate in isolation, and the relative importance of each has been the subject of considerable research in the last twenty-five years. This will be reviewed in some detail later in this thesis, but it is pertinent to note at this point, that it appears reasonable to examine each of these criteria separately in an endeavour to more clearly understand suicidal behaviour. Thus this thesis will examine the first of these criteria, that of the medical lethality of the suicide attempt.

That it is desirable to comprehend suicidal behaviour in as much detail as possible can be more fully appreciated when the frequency of attempted suicide is reviewed. Furthermore, such a review of

¹The nosological debate regarding the appropriateness of the term 'attempted suicide' will not be pursued in this thesis. Nomenclature preferred by other authors will be employed in the review, but overall, the term 'attempted suicide' will be used.

epidemiological data provides a guide to the most appropriate population of attempters in which to examine aspects of lethality.

II. THE INCREASING RATE OF ATTEMPTED SUICIDE

Attempted suicide has become a major psychiatric problem throughout the World (Weissman, 1974). Epidemiological studies have shown a consistent increase in the last two decades, such that in Britain, as an example, admissions for suicidal behaviour to medical wards of general hospitals have become second in frequency only to those for coronary heart disease (Hetzl, 1974). Indeed, if patients over the age of 50 are excluded, it is the most common diagnosis (Lancet, 1974). Weissman (1974) has reviewed "*The epidemiology of suicide attempts, 1960 to 1971*" and noted a wide variation in the increase, from only a 4% increase reported by Jacobson and Tribe (1972) in mid-Sussex, England, between 1963 and 1967; to the thirty-fold increase noted by Stanley (1969) between 1947 and 1968, in Ashton-under-Lyne in England, and the twenty-fold increase in two decades in Sheffield, England (Jones, 1977). These extremes are related partly to the time span of reporting, and to case-finding techniques, but are still consistent with the uniform increase found elsewhere. Thus, in the United States, Weissman et al (1973a) reported an eleven-fold increase between 1955 and 1970 in New Haven, while Aitken et al (1969) found a 36% increase from 1962 to 1967 in Edinburgh, Scotland.

Weissman and her colleagues (Wexler et al, 1978) have recently reviewed further studies and observed: "*When the international*

literature was brought up to date, no substantial changes in the trends observed in 1970 were noted....the high rates reported previously have been maintained". In fact, there are several studies which suggest that the rate may still be increasing, and these and other recent surveys are presented in Table 1.1.

It is of note that Australia has not been spared this world-wide trend. Thus, Mills et al (1974) reported a 58% increase of hospital-treated cases of attempted suicide between 1968 and 1972 in Hobart, and Burvill (1975) noted an increase of approximately 100% in the number of attempted suicides admitted to hospital in Perth over the 10-11 year period of 1961-1971-1972. It is of interest that these figures are of the same order as the 40% increase between 1963 and 1970 noted by Oliver et al (1971) in Melbourne, and the 70% increase between 1959 and 1964 noted by Linnane et al (1966), in the same city.

A recent paper by Koller and Slaghuis (1978) from Hobart is noteworthy as they reported "*an unmistakable decline followed by a levelling out*" of attempted suicide rates, both for men and women. Holding et al (1977) had earlier reported from Edinburgh that the attempted suicide rate for men had fallen, and that the rate for women, although still increasing, was levelling off. Thus, the report of Koller and Slaghuis (1978) is the first of a decline in the rates of attempted suicide for both men and women. It is possible that this report may herald others, but it would seem premature to conclude that the attempted suicide rate had peaked.

TABLE 1.1.

RECENT STUDIES OF AGE/SEX CHARACTERISTICS OF SUICIDE ATTEMPTS

IN DIFFERENT COUNTRIES

Table 1.1.

RECENT STUDIES OF AGE/SEX CHARACTERISTICS OF SUICIDE ATTEMPTS IN DIFFERENT COUNTRIES

Authors	Place	Source of Data	Sex Ratio of Total F:M	Major Age Group	Sex Ratio of Major Age Group F:M
<u>Great Britain</u>					
Smith (1972)	Sheffield, England	250 admissions to a dept. of Pharmacology and Therapeutics 1966-71.	1.6:1	56% <30	2.2:1
Bean (1974)	Chichester, England	935 admissions to three general hospitals, 1967-71.	1.9:1	35% 20-29	1.9:1
Kennedy et al (1974)	Edinburgh, Scotland	Admissions to Edinburgh Regional Poisoning Treatment Centre and survey of General Practices in 1970	1.4:1	"In both sexes the peak rates of para-suicide are among teenagers and young adults"	Not available
Morgan et al (1975a, 1975b)	Bristol, England	1569 patients who presented to the Bristol Royal Infirmary, 1972-73.	2.0:1	Peak incidence of females 15-29	15-20 F:M = 4.0:1 20-25 F:M = 2.2:1 25-30 F:M = 2.0:1
Bancroft et al (1975)	Oxford, England	General hospital admissions 1969 - 444 patients 1972-73 - 585 patients	1.8:1 1969 2.1:1 1972-73	74% of men and 67% of women 16-35 years. "The rates are exceptionally high for teenage wives and single, widowed and divorced women aged between 24-35 years."	"The increase is more marked in women than in men."

Jones (1977)	Sheffield, England	3566 admissions to four Sheffield hospitals 1972-1974.	1.6:1	49% 15-34	1.8:1
Holdings et al (1977)	Edinburgh, Scotland	Seven year review of admissions to Regional Poisoning Treatment Centre. Total of 7414 patients 1968 - 772 patients 1974 - 1238 patients	1.2:1 1968 1.6:1 1974	Single women aged 15-34 years. "It is the young who have the highest rates and have shown the greatest increase."	"The rates for women were consistently higher than those for men and the gap has steadily increased."
<u>Sweden</u>					
Linne (1974)	Malmo, Sweden	2002 subjects with drug overdose. Data from records of the one general hospital for the years 1968, 1969, 1970.	1.1:1 1968 1.0:1 1969 1.0:1 1970	"Attempts were more frequent in the younger age groups."	"In the 15-19 age group there were twice as many girls as boys."
<u>U.S.A.</u>					
Monk & Warshauer (1974)	East Harlem, New York	359 persons in the one year 1971-72; data from emergency room records of hospitals in East Harlem health district.	1.9:1	70% of men and 75% women aged 18-34	1.6:1 for ages 25-34 2.9:1 for ages 18-24
Peterson & Chambers (1975)	Florida, U.S.A.	506 persons with drug overdose admitted for emergency care to a general hospital in Miami, Florida, Jan-June 1972	1.4:1	61% aged 14-24	Not available

Table 1.1. (contd.)

RECENT STUDIES OF AGE/SEX CHARACTERISTICS OF SUICIDE ATTEMPTS IN DIFFERENT COUNTRIES

Authors	Place	Source of Data	Sex Ratio of Total F:M	Major Age Group	Sex Ratio of Major Age Group F:M
O'Brien (1977)	Boston, U.S.A.	Emergency room drug over-doses at the Massachusetts General Hospital, Jan-March 1964, 1972, 1974.	2:1 1964 1:1 1972 1.1:1 1974	49% of cases 20-29 years in 1974.	Fewer women in the major age group. F:M = 0.78:1
Wexler et al (1978)	New Haven, U.S.A.	122 subjects (a 1 in 3 sample) of admission to the Yale-New Haven Emergency Room - Records from July 1974 - June 1975. Compared to 1970 figures.	2.1:1 1970 3:1 1975	70% <31	Not available. "The percentage of female attempters is even higher in 1975."
<u>Canada</u>					
Termansen et al (1973)	Vancouver, Canada	760 admissions to two city General Hospitals in 1969-70.	1.4:1	33% <30	1.6:1
Kehoe & Abbott (1975)	Yukon, Canada	56 subjects in the period 1970-71, based on General Hospital and medical practitioner records.	3.7:1	63% aged 10-29	Not available.
<u>Colombia</u>					
Leon et al (1972)	Cali, Colombia	197 patients in the emergency room of the University Hospital in 1 year, 1966-1967.	1.8:1	80% <30	Not available.

New Zealand

Werry and Pedder (1976)	Auckland, New Zealand	597 patients who presented to the Accident and Emergency department of the Auckland Hospital in fifteen months in 1971-1972.	2.1:1	59% 15-29	2.1:1
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Australia

Mills et al (1974)	Hobart, Australia	Admissions to the Royal Hobart Hospital 1968 - 191 patients 1972 - 320 patients	2.2:1 1968 2.4:1 1972	70% <40	"The rise was particularly notable in secondary school-girls."
Kessell et al (1975)	Outer Metropolitan region Melbourne, and a provincial region Victoria, Australia.	All attempts within these designated areas in a 2 year period. Metropolitan 371 patients Provincial 231 patients	Outer Metropolitan 2.4:1 Provincial 2.2:1	Metropolitan peak 15-19 Provincial peak 20-24	Not available.
Burvill (1975)	Perth, Australia	a. Hospital Morbidity data for the Perth Statistical Division, 2036 patients in 1971-1972. b. Data for Royal Perth Hospital 1968-1972, 3343 patients	2.4:1 1.7:1 1968 2.5:1 1972	Not available	Not available.
Koller and Slaghuis (1978)	Hobart, Australia	Admissions to the Royal Hobart Hospital 1973 - 299 patients 1975 - 268 patients 1977 - 281 patients	2.44 1973 2.94 1975 2.80 1977	Under 35	Decline for both men and women compared to figures of Mills et al (1974).

In any event, the rate at which the Hobart figures have levelled out, certainly does not give grounds for complacency.

III. THE PREPONDERANCE OF YOUNG WOMEN

It has long been recognised that the highest rates for attempted suicide are found in younger women (Stengel et al, 1958), and this was conclusively substantiated in the epidemiological review of Weissman (1974). She noted that the most common finding was that about 50% of attempters were under 30 years of age, and that the female to male sex ratio varied from 1.3:1 to 3:1 for all series except one from India, where males predominated. Earlier Australian surveys were consistent with world trends, with 55% under 35 and a 2:1 female to male ratio reported in Western Australia (James et al, 1963a); 50% under 30 and a 2.5:1 female to male ratio in Brisbane (Edwards and Whitlock, 1968); and a *"high incidence of females in the 15 to 30 years age group"* and a female to male ratio of 2.5:1 in Southern Tasmania (Freeman et al, 1970b). Oliver et al (1971) noted an overall figure of 34% of attempters being less than 30 years of age, for the years 1963-1970, but this had risen to 60% in 1970, with an overall female to male ratio of 2.4:1 in Melbourne.

A number of studies have addressed the question of whether or not the rate for women is changing in relation to that for men. Aitken et al (1969) noted that the sex differential was decreasing in their Edinburgh unit, and a similar trend was noted by Smith and Davison (1971) in Newcastle-upon-Tyne, and Petersen and Brosstad

(1974) in Norway. It is also of note that the Boston study of O'Brien (1977) reported more men than women in the major age group, 20-29 years. However, these reports appear to be in the minority. Thus, Wexler et al (1978) in their New Haven sample noted that *"the percentage of female attempters is even higher in 1975 (than 1970)"*, while Holding et al (1977), reporting from the same Edinburgh unit from which Aitken et al (1969) published, noted a continued increase for women, especially in the 15-19 age group. Furthermore, while the rate of increase for women had levelled out, an actual fall in the rates for men allowed the sex ratio to increase from 1.22:1 to 1.62:1 female to male from 1968-1974. Bancroft et al (1975) in Oxford noted an increase in female to male ratio from 1.8:1 in 1969 to 2.1:1 in 1972-73, while in Australia, Burvill (1975) reported an increase from 1.7:1 in 1968 to 2.5:1 in 1972 in Perth, and Mills et al (1974) in Hobart found an increase from 2.2:1 in 1968 to 2.4:1 in 1972. The increase in the sex ratio for younger women was also clearly demonstrated by Morgan et al (1975a, 1975b), whose figures gave a female to male ratio of 2.0:1 for the 25-30 age group, 2.2:1 for those 20-25, and no less than 4.0:1 for those 15-20.

Although these reports leave little doubt that young women comprise a major proportion of those who attempt suicide, few studies appear to have been directed specifically at the elucidation of the characteristics which distinguish this group.

Patricia: 2/11/78

IV. COMMENT

The study of young women whose suicide attempts have been of differing lethality may shed light on certain other aspects related to suicidal behaviour. Thus there appears to be an increase in the rate of suicide in younger age groups (Waldron and Eyer, 1975), particularly in young women (Burvill, 1970, 1973a; Kreitman, 1976a), and there is now a body of evidence (Tuckman and Youngman, 1968; Lester, 1970a; Lester et al, 1975; Pallis and Sainsbury, 1976) which suggests that *"there is some justification for making extrapolations regarding suicides from studies of serious suicide attempters"* (Pallis and Birtchnell, 1977).

Furthermore, there is a preponderance of women among those who suffer from depression (Weissman and Klerman, 1977). The psychosocial stresses associated with both suicidal behaviour and depression may be related to differing role expectations and responsibilities of young women, and it therefore would seem important to examine their characteristics in some detail.

There is also the practical reason for assessing young women attempters, that their very preponderance should ensure that a sufficient number of patients of widely ranging degrees of medical lethality are accessible for investigation in a reasonable period of time.

CHAPTER 2

REVIEW OF THE LITERATURE

*"As indicated by just sheer numbers of publications,
there has been an ever increasing interest
in the field of self-destruction."*

(Farberow, 1976)

I. INTRODUCTION

It is not the aim of this review to provide a complete overview of all the literature relating to attempted suicide. Rather, after defining the terms 'medical lethality' and 'suicidal intent', it will focus on four broad areas.

First, general descriptive and clinical data relating to suicidal subjects as a whole will be reviewed. This will include demographic details; the methods used and the circumstances of the attempt, including recent contact with helping agencies; past psychiatric history; history of parental separation; history of personal violence; past contact with suicidal behaviour in others, and clinical diagnosis. Note will be made of associations with medical lethality and suicidal intent, although the studies referred to will be more fully discussed later in this review.

Second, research related to specific subgroups of suicidal individuals and, in particular, to young women, will be discussed.

Third, those studies which have specifically examined aspects of medical lethality and suicidal intent will be reviewed in more detail.

Finally, those other attributes of suicidal subjects which will be specifically pursued in this thesis will be reviewed. These include the depressive component; hopelessness; fear of death; and personality factors associated with attempted suicide, with particular emphasis on the hysteroid-obsessoid and locus of control dimensions of personality.

The overall thrust of this review is to concentrate on the

literature concerned with young women who attempt suicide, and to elucidate factors which may be related to medical lethality and suicidal intent.

II. DEFINITION OF TERMS

The need to distinguish the concepts of 'medical lethality' and 'suicidal intent'¹ has arisen from the influential pioneering work of Farberow (1950) and Stengel et al (1958). Thus Farberow (1950) noted that because the medical seriousness of an attempt was "*frequently so misleading*" in the assessment of suicidal subjects, he would use "*the seriousness of the suicidal tendency*" as the criterion for distinguishing his subjects. Similarly, Stengel et al (1958) noted: "*clearly, the degree of danger to life is not a reliable measure of seriousness of intent*".

As will be noted, not all work has fully substantiated these views. Nevertheless, there does appear to be a need to distinguish these components. This is evident from a review of the literature in which terms such as 'serious', 'gesture' and 'genuine' are often applied without clear definition. Such terminology not only may assume a pejorative quality, but it makes comparison of different research work extremely difficult.

Furthermore, the terms 'medical lethality' and 'suicidal intent' themselves have been used in different ways, even by the same author.

¹The terms 'suicidal intent' and 'suicide intent' appear to be used interchangeably in the literature. Thus even in the description of their intent scale (p.189) Beck et al (1974b) refer to it as both the 'Suicidal Intent' and 'Suicide Intent' Scale. The term 'suicidal intent' will be used in this thesis.

Thus, Shneidman (1963) proposed a nosology of suicidal behaviours which included "*cessation intentioned, subintentioned, unintentioned and contraintentioned*", a clear reference to suicidal intent.

However, he later wrote of the psychological autopsy as a "*retrospective reconstruction of an individual's life that focusses on lethality, that is, those features of his life that illuminate his intentions in relation to his own death*" (Shneidman, 1971).

Although 'lethality' was also used in a similar way by Tabachnik and Farberow (1961) to infer the potential for future suicide, such a use is not only inconsistent with most other authors, but with the everyday medical meaning of the term.

It is of note that the nosological distinction between medical lethality and suicidal intent was a topic for discussion by a Committee on Nomenclature and Classification which was convened as part of a conference on 'Suicide Prevention in the Seventies' (Pokorny, 1974). They agreed that "*lethality means danger to life in a medical, biological sense. It refers to the deadliness of the suicidal act or contemplated act. The rating should be based on the objective medically accepted danger, and not on what the subject knew or thought about it*". Pokorny (1974) also noted that Beck had referred to it as 'medical lethality' to clarify it even further.

There is less controversy over the term 'suicidal intent', and the definition provided by Beck et al (1974b) is relatively unambiguous: "*Suicidal intent is defined as the seriousness or*

intensity of the wish of a patient to terminate his life".

III. GENERAL DESCRIPTIVE AND CLINICAL DATA

The literature is replete with descriptive accounts of suicidal subjects, and their main characteristics have been reviewed by Weissman (1974) and Farberow (1976). The following general review has drawn extensively from these works, the studies of Kreitman and his colleagues in Edinburgh (Kreitman, 1977), the English studies of Bancroft et al (1975, 1977) and Morgan et al (1975a, 1975b), as well as the Australian work of James et al (1963a), Edwards and Whitlock (1968) and Hetzel (1971).

a. General Demographic Data

i. Age

The preponderance of younger subjects, especially women, in populations of suicide attempters has been noted in Chapter 1.

A number of studies have suggested that there is an increase in medical lethality and suicidal intent with increasing age. Thus, Weiss et al (1961), Motto (1965), Graham and Hitchens (1967), and Rosen (1970) reported that more medically lethal attempts were more likely to be made by older subjects; Dorpat and Boswell (1963) noted that *"seriousness of suicidal intent varied directly with age"*; and McHugh and Goodell (1971), using a scale which combined medical lethality and suicidal intent observed that *"individuals with high suicide rating scores tend on the average to be older"*.

However, Leon et al (1972) noted no difference in age between their 'frustrated' (those who would have died but for "opportune

intervention of another person and/or adequate medical attention") and attempted suicide groups; Silver et al (1971) found no correlation between age and scores on the Suicidal Intent Scale of Beck et al (1974b), and Pierce (1977), using a modified suicidal intent scale, found significant correlations between age and the objective circumstances and total scores, but not with the self-report intent scores.

Thus, although the majority of studies support an association between medical lethality and age, the evidence for an association between suicidal intent and age is less convincing.

ii. Nationality

There appears to be agreement that there is an increase in suicide among migrants in Australia (Whitlock, 1971a; Burvill et al, 1973). However, there are conflicting findings with regard to the importance of migration and attempted suicide.

Thus, while Gold (1965) reported attempted suicide rates for migrants twice those expected in North-East Tasmania, Buckle et al (1965) found no difference in rates between migrants and non-migrants in Melbourne; and Krupinski and Stoller (1965), also in Melbourne, reported a higher incidence of attempted suicide in non-British female immigrants than among British and Australian born. On the basis of their own work and a review of earlier Australian studies, Edwards and Whitlock (1968) concluded that immigration was not a significant cause of attempted suicide. However, more recent reports have renewed the debate. Ewing et al (quoted by Burvill, 1973b) found a higher incidence among immigrants than Australian-

born in Perth, and Burvill (1975) also in Perth, reported "the crude rates for both sexes for all immigrants were much greater than for those born in Australia, but when the rates were age-standardised the respective rates for females were almost identical 23.9 and 23.4 respectively, whereas those for males showed an excess rate for immigrants (12.4) over the Australian born (9.7)". Burvill (1975) pointed out the "large variations in the attempted suicide rates between different immigrant groups", and this factor will clearly influence the results of such studies.

It is of interest that Weissman (1974), in reviewing the literature, suggested that it is possible "that it is not immigrant status, per se, but the economic and social disadvantages associated with it that are important". It is clearly a complex issue, and perhaps not unexpectedly, it has not been pursued in groups of differing lethality.

iii. Civil State

There is a consistently noted excess of divorced or separated persons of both sexes among those who attempt suicide (Weissman, 1974). However, there are conflicting findings in those studies concerned with the question of civil state and the lethality or intent of suicidal behaviour.

Thus, Rosen (1970) compared subjects who had made 'serious attempts' (both medically and psychiatrically) and reported more married, more widowed and fewer single subjects in the 'serious' group, and Worden (1976), who used the Risk-Rescue Rating Scale (p.81),

observed that "*marriage was significantly associated with high lethality*". However, Leon et al (1972) in their study of 'frustrated' suicides noted a virtually identical pattern of marital status for the 'frustrated' suicides, other suicidal subjects and a group who had committed suicide. Similarly, Weiss et al (1961), assessed the seriousness of both the suicidal intent and the medical 'dangerousness' of their subjects' suicide attempts and found no association between the degree of seriousness and marital status.

The fact that age and civil state are closely related suggests that studies of particular age groups of persons who attempt suicide are necessary before any firm conclusions can be reached regarding civil state and lethality and intent.

iv. Socio-economic Status

Weissman (1974) noted that "*meaningful social class comparisons cannot readily be made*", and this is indeed so, since indices for the assessment of social class are poorly standardised. Despite this, there appears to be a consistent over-representation of the lower socio-economic groups among patients who have attempted suicide. This has been assumed to be partly an artefact due to the tendency of 'upper' class patients to utilise private facilities. While this may well be the case in the United States, recent research in Edinburgh (Kreitman, 1977) showed no difference in the proportions of admitted and non-admitted attempts from working-class districts and more affluent suburbs. Kreitman (1977) concluded

that: "general practitioners in the respectable middle class areas were not protecting their patients from the stigma of admission to the 'poisons ward': the rates were really lower".

Sendbuehler et al (1970) assessed socio-economic status and the medical seriousness of the suicide attempt, and reported that the 'serious' attempters were more likely to be higher in the socio-economic scale, and that "the lower in the social economic class the person is, the greater is the incident of gesture and ambivalent self destructive act". A similar finding was reported by Rosen (1970) who, in assessing the place of address or 'socio-economic area' observed that there were more "non-serious attempts from the lower-class old town tenements and the new slum clearance housing developments", whereas the 'serious attempts' were "more from inner and outer middle-class suburbs".

b. Factors Related to the Suicide Attempt

i. Agent Ingested

The most frequent method of attempted suicide is by drug over-dose, and this accounts for 70% to 90% of all attempts (Weissman, 1974). The actual number of tablets/capsules ingested is infrequently reported, but the fact that the use of multiple drugs is increasing has been documented. It is of interest that Kessell (1965) did not comment on multiple drug ingestion, but a later survey, also from Edinburgh (Holding et al, 1977), noted that "the use of multiple poisoning agents has increased and in 1974 accounted for 12 per cent of admissions". Fraser and Lawson

(1975) commented that *"only a minority of patients took more than one drug"* in their Scottish series of young women, but the comment of Lonquist (1977) that *"more than half of the patients had taken only one drug"* could be interpreted as implying a greater percentage of multiple drug ingestion for his Finnish series. Certainly, the figure of 34% of persons taking more than one drug in the Christchurch, New Zealand, series of Adam et al (1978) is greater than the multiple drug taking in the Scottish series.

In relation to the lethality and intent of suicide attempts, Rosen (1970) reported that 'serious attempters' were more likely to use barbiturates, carbon monoxide, or salicylates, but fewer other drugs. However, there has been a changing pattern in the type of drugs used for attempted suicide in the last decade. This has recently been documented by Proudfoot and Park (1978), who noted a decline in the use of barbiturates and methaqualone, and an increase in the benzodiazepines, and to a lesser extent, the tricyclic antidepressants. They noted that the decrease in morbidity as a result of benzodiazepines replacing barbiturates and methaqualone, was balanced by greater numbers of suicidal subjects overall, and a greater number of unconscious patients, due mainly to the increased use of tricyclic antidepressants.

The question of whether or not suicidal subjects are aware of the degree of danger of ingesting various tablets remains unsolved.

Kessell (1966) forthrightly noted that *"drugs are readily available to a populace aware both that they are comparatively safe and that*

their dosage can, with discretion be regulated by the taker".

However, Fox and Weissman (1973) pointed out the paradox that *"while patients taking overdoses had the least intent to kill themselves, the medical effects of their attempts were the most serious"*, and added that *"many of the attempters apparently did not realise the potential lethality of the medications they were taking"*.

This observation is consistent with the earlier comment of Graham and Hitchens (1967), that *"the relative lethality of common poisons is probably not well known to lay people"*. In fact, there has been little work investigating this topic. Sale et al (1975) in a survey of community attitudes and beliefs concerning suicidal behaviour, reported that *"in response to items concerning lethality of a typical 'sleeping tablet', normal dose given as 2 tablets, 50.8% believed that an overdose of less than 30 tablets would be fatal. The respondents' opinions of other drug toxicities differed widely from those medically accepted, with a general tendency toward an overestimation of toxicity"*.

While it is reasonable to assume that the number and nature of the drug (or drugs) taken is important to the understanding of suicidal behaviour, the precise relationship is not yet clear.

ii. Source of Agent Ingested

It is generally recognised that about two-thirds of subjects who attempt suicide do so with medically-prescribed drugs. Thus Smith (1972) in Sheffield reported that *"in over 80% of cases the drugs used had been prescribed by a doctor"*; Hetzel (1971) in

Australia noted that 82% of the drugs used had been prescribed (not specified whether prescribed solely for the patient); Morgan et al (1975a) in Bristol reported that *"seventy-eight percent of the patients took drugs which had been obtained by medical prescription"* (67 percent prescribed for the patient, 11 percent for someone else); and Holding et al (1977), reviewing the Edinburgh data, observed that *"56 percent took drugs prescribed for themselves and 15 percent took drugs prescribed for others"*.

It is of note that in commenting on the Edinburgh data, Kreitman (1977) observed: *"that there had been no change in the proportion of poisonings by prescribed as compared to non-prescribed drugs since 1962 militates against the often-cited opinion that the increase in parasuicide is largely the consequence of more liberal prescribing by doctors"*.

Of the 29% of patients who took non-prescribed drugs in Edinburgh, one-third obtained them illegally, and the remainder took freely purchased drugs.

A recent paper by Jones (1977) suggests that the number of patients taking drugs prescribed for themselves, may be falling. On the basis of studies in Sheffield, he noted that *"the drug was prescribed for the patient in only a third of cases. A further third had taken tablets belonging to a relative or friend. While the remaining third had taken drugs which were freely available without prescription"*. He suggested that *"there now appears to be a growing tendency.... especially among teenagers, to consume drugs prescribed for a parent,*

sibling, or friend". Such a trend does not appear to have been reported from other centres.

Whether or not the source of the agent ingested bears a relationship with the lethality and intent of suicide attempts has not been investigated.

iii. Use of Alcohol With or Before the Suicide Attempt

There has been a consistently noted association between alcohol ingestion and suicidal behaviour for over one-hundred-and fifty years (Casper, 1825 (quoted by Goodwin, 1973); Sullivan and Scholar, 1898; Moore, 1939; James et al, 1963b; Mayfield and Montgomery, 1972).

However, the nature and degree of this association is not clear-cut. Thus it is of interest to consider a paper read by Sullivan and Scholar (1898) to a meeting of the Medico-Psychological Association in London in February 1898. They opened by noting that: *"the important part played by alcoholism in the causation of suicide has been abundantly recognised by all observers of both these social phenomena; and so far as debate now touches the question, it is merely to deal with points of detail"*. However, in the recorded discussion a Dr. Yellowlees *"confessed that the association between alcohol and suicide had never seemed to him so marked as the statistics given by Dr. Sullivan would make it, and some of his conclusions seemed to be rather too definitely deduced from that special, limited and somewhat exceptional series of cases"*. It is of interest that such a dissenting view is reported to have caused a

Dr. Urquhart to note that *"it was rather startling to hear from Dr. Yellowlees that alcoholism and suicide were not closely related"*.

Another dissenting view in the literature has been that of Moore (1939) who reported that a lesser proportion of alcoholics than others who attempted suicide, succeeded in killing themselves (5% compared to 11%). This led him to postulate that *"alcoholism prevents suicidal patients from succeeding"*. However, more recently Mayfield and Montgomery (1972) observed that *"any blanket assumption that alcohol-related suicide attempts are benign is, we feel, a clinical error with serious consequences"*.

The literature on alcohol and suicidal behaviour is, as in so many areas of the suicidology literature, bedevilled by nosological problems. The definitions of 'drunk' or 'intoxication' can be widely diverse, and some studies refer simply to 'drinking to excess' or merely to the ingestion of alcohol. Few papers refer to blood alcohol levels.

Considerable variation in the proportion of alcohol-related suicides has been reported. Thus Sainsbury (1955) recorded 'alcoholism' in 6.2% of 390 suicides in London, but noted that only 2.3% were 'drunk' at the time of the act. Stengel et al (1958) reported 19% of 73 men and 14% of 44 women who suicided had been 'drinking to excess'; Robins et al (1959) reported 26% of 103 men and 13% of 31 women suicides had 'chronic alcoholism'; and Barraclough et al (1974) noted 19% of 64 men and 9% of 34 women

suicides had 'alcoholism'. Ayd (1961) reported that 35% of 617 suicides had a blood alcohol greater than 0.05 per cent, but this comprised men and women, and was a proportion of a larger group of suicides, and thus selection factors may have influenced this higher figure.

There have been similarly diverse figures in the literature related to attempted suicide. Thus Morgan et al (1975a) noted that "*alcohol had been taken within six hours preceding self-harm by 55% of the men and 25% of the women*"; Edwards and Whitlock (1968) reported 26% of their Brisbane subjects had taken alcohol before their attempt; James et al (1963a) in Perth noted that "*some 40% of the men and 20% of the women were found to have blood alcohol levels compatible with clinical intoxication*"; Freeman et al (1970) in Hobart recorded similar figures of 42% for men and 12% for women who had had "*recent ingestion of alcohol*"; Patel et al (1972) in a Glasgow study, noted that 70% of men and 40% of women "*had taken alcohol before the overdose*"; Kreitman (1977) reported two-thirds of men and 45% of women "*had consumed alcohol shortly before the parasuicidal act*" in Edinburgh; and Adam et al (1978), in Christchurch, reported 40% of their subjects had taken alcohol before the suicide attempt.

The papers of Patel et al (1972) and Kreitman (1977) require further comment. It is of note that 43% of the women aged between 20 and 29 in the Glasgow study of Patel et al (1972) had consumed alcohol; the mean blood alcohol concentration of all women who had attempted

suicide was 102 mg. per 100 ml.; high blood alcohol concentrations were especially common in those women with broken marriages; and they also reported that *"abuse of alcohol by husband or parents was commonly a major factor leading to the woman taking an overdose of a drug. This factor was especially evident in the younger women between twenty and thirty-nine"*.

Kreitman (1977) examined the changing role of alcohol in parasuicide in Edinburgh. He noted that the *"proportion of men who had consumed alcohol shortly before the para-suicidal act has remained constant over the years and comprised two-thirds of the admissions....in contrast to the men, the proportion of women admissions who had consumed alcohol has increased, from 25% to 45%.* He also observed that *"the increase in alcohol use at the time of the episode amongst women has been most marked in the 15-24 year olds"*; the proportion having more than doubled from 16% of admissions in 1968 to 40% in 1974.

This observation of a marked increase in alcohol consumption prior to suicidal behaviour in young women is of concern, but does not appear to have been studied intensively. Similarly, the relationship of alcohol ingestion and suicidal intent and lethality has infrequently been examined. Weiss et al (1961) reported that the diagnosis of 'alcoholism' *"was not significantly related to the seriousness of the attempt"* in their series of 35 patients; James et al (1963b), who recorded blood alcohol levels, noted *"no significant relationship between blood alcohol level and*

severity of the suicidal act"; and Pallis et al (1975) reported comparable figures for the diagnosis 'alcoholism (including drug addiction)' of 13.2% of those who had made a suicide attempt and 10.9% of those simply with suicidal ideation. On the other hand, Schmidt et al (1954) noted that "the patients in the not-serious group were more frequently drinking at the time of the attempt, 51% compared with 14% of the serious group", and Pierce (1977), who assessed suicidal intent, observed "that patients who were not heavy drinkers were given higher circumstances scores ($p < .05$)" (on a modified suicidal intent scale) "than those who were heavy drinkers".

In so far as one can extrapolate from those who suicide to attempters of high lethality, the latter two papers are reminiscent of Moore's (1939) comment that "alcoholism prevents suicidal patients from succeeding", and are perhaps unexpected in view of the accepted relationship between alcoholism and suicide. The relationship is clearly complex, and its examination in young women in whom alcohol consumption is increasing (Kreitman, 1977) might illuminate the problem.

iv. 'Impulsivity' and the Time of Most Recent Contact with a Helping Agency

A finding which has been consistently reported is that about two-thirds of all attempts are committed impulsively (James et al, 1963a, Kessel, 1965; Edwards and Whitlock, 1968; Freeman et al, 1970; Hetzel, 1971; Smith, 1972). Unfortunately, the words 'impulsive' and 'impulsively' have been invested with pejorative

connotations, with comments such as *"drug overdosage in young women is more in the nature of an impulsive act"* (Fraser and Lawson, 1975), and this could be interpreted as minimising any psychiatric morbidity, or as considering impulsivity only a characteristic of the young.

Little work has focussed on impulsivity in specific groups, or in those with formal psychiatric illness. It is of interest that Kessel (1965) reported that of his population of suicide attempters, 71% of those under 20; 71% of those aged 20-34; 63% of those 35-54; and as many as 58% of those aged 55 or more had acted impulsively. (This report is similar to the more recent study of Birtchnell and Alarcon (1971a) in which 50% of those over 39 had acted impulsively. This prompted them to comment: *"surprisingly there appeared to be no relationship between impulsivity and age"*). Kessel also reported that of patients with formal psychiatric illness *"...even among them impulsiveness characterised just over half the acts"*. The very fact that loss of ego control should allow such impulsive acts, far from leading us to minimise any disorder, would appear to demand the closest scrutiny.

It is of note that 'impulsivity' has rarely been objectively assessed in suicidal subjects. Pallis and Jenkins (1977) used Form A of the Eysenck Personality Inventory which can be scored to give a measure of 'impulsivity', and the Suicidal Intent Scale of Beck et al (1974b) to assess 124 subjects who had attempted suicide. They found that *"for males there was an association between low intent to die and impulsivity"*, but there was no such association for

the female patients. Pallis and Jenkins noted that their result was consistent with the work of Kinsinger (1971), *"who found no association between a clinical judgement of intent and extraversion or impulsivity"*.

These studies do not support the commonly held clinical opinion that young women are more impulsive than other groups. This may reflect the inadequacy of the instruments, or the clinical impression may be wrong. Rather than pursue the concept of impulsivity in this manner, it would appear to be of more practical value to consider the time of most recent contact with a helping agency, as it is in that contact that therapeutic intervention might be expected to be of benefit.

It has been noted that patients who attempt suicide have often seen some form of helping agency, usually a medical practitioner, in the period immediately preceding the act. Thus, Kreitman and Chowdbury (1973) noted that 29% of their Edinburgh subjects had had contact with a helping agency in the week prior to their overdose; Smith (1977) in Sheffield reported that *"forty percent of patients had consulted their doctor within the week before the overdose and two-thirds within the previous month"*; and Adam et al (1978) in Christchurch noted that *"64% of the sample last saw their doctor within one month of taking their overdose, 29% visiting him within the previous week"*.

Bancroft et al (1977) specifically investigated the recent contact with a helping agency of their suicidal subjects in Oxford, and

reported "that nearly 18% had made such contact within 24 hours of the attempt, 54% in the previous week and nearly 82% in the past month. The rate of such contacts was higher in those aged 40 and under (86%) compared with the over 40s (67%). Contact within 24 hours was most common within the 21-35 age group (26.5%) and relatively infrequent in the under 20s (10%) or those over 36 (11%)".

Of the women, 84% had had contact with an agency in the preceding month. 68% had had contact with a general practitioner, and 16% had had contact with a psychiatrist. (These figures are not mutually exclusive, and other contacts with, for example, clergy or samaritans combined to make the total of 84%.)

Whether or not the recent contact has any relationship to the degree of medical lethality or suicidal intent does not appear to have been investigated.

c. Past Psychiatric History

The term 'past psychiatric history' is broad and can be examined in different ways. Although it could be argued that both contact with a psychiatrist and previous history of attempted suicide may not necessarily denote psychiatric illness, these are parameters which have been recorded in some studies.

A representative sample of reports from several countries is portrayed in Table 2.1, and demonstrates that approximately 20-50% of subjects who attempt suicide have done so before, and that a proportion of the same order have had psychiatric assessment/treatment in the past. A lower figure of about 10-15% were still currently

TABLE 2.1.

HISTORY OF PREVIOUS ATTEMPTED SUICIDE
AND PREVIOUS PSYCHIATRIC TREATMENT

Table 2.1.

HISTORY OF PREVIOUS ATTEMPTED SUICIDE AND PREVIOUS PSYCHIATRIC TREATMENT

Authors	Subjects	Percentage of previous attempts	Previous contact with psychiatrists
<u>Australia</u>			
James et al (1963)	100 consecutive patients who attempted suicide in Perth W.A., "who reached the casualty department" of a general hospital	29% of men 30% of women	29% of men and 35% of women. "20% of the patients in our sample had been under psychiatric care and had been seen by a psychiatrist less than a month before their suicidal attempt."
Edwards & Whitlock (1968)	680 patients seen in the Brisbane area in one year Feb. 1965 to Feb. 1966	32% of men 38% of women	Of the repeaters, 81% of the men and 65% of the women had had previous psychiatric assessment
Hetzel (1971)	150 randomly selected patients who attempted suicide at a Melbourne general hospital in 1969	"At least 40% of the patients had taken at least one overdose previously."	"Repeated attempts were more prominent in the 21-25 age group, with a much higher incidence of previous psychiatric care."
<u>New Zealand</u>			
Werry & Pedder (1976)	"A sub-group of 100 self poisoners selected only by availability during normal working hours."	46%	53% - however, only 18% had done so within the past year, and only 15% were actually still in treatment.
Adam et al (1978)	195 consecutive admissions for suicide attempts at a general hospital.	"Half the sample had made a previous attempt."	

Germany

Kockott et al (1971) Every third suicide attempt, to a total of 100 admitted to a toxicological emergency unit 31%

England

Morgan et al (1975a) 1569 patients who presented to the Bristol Royal Infirmary, 1972-3. 48% 44% had received psychiatric outpatient treatment. 36% had been psychiatric inpatients.

Bancroft et al (1975) General hospital admissions in Oxford. 1969 - 444 patients 1972-3 - 585 patients 1969 - 23.6% 1972-3 - 35.6% "These figures are likely to be underestimated by approximately 13%." There was no sex difference in the proportion of previous attempts which was highest in the 21-25 year age group (42.3%).

Bancroft et al (1977) Representative sample of 130 patients of the above study. 50.7% had received treatment in the past; 34.8% had received it within the past year and 24.1% were currently under psychiatric care. 16% of the women had seen a psychiatrist within one month before the overdose, and 10% had done so within one week.

Scotland

Kreitman (1976b)

Data from the Edinburgh Regional Poisons Treatment Centre

For 1968: 42% of those aged 35-54 and 36% of those aged 15-34 had had a previous episode of parasuicide.

"The middle-age group...had received psychiatric care relatively more frequently, presumably having seen a psychiatrist for some problem which was not associated with suicidal behaviour."

under psychiatric care.

That subjects who attempt suicide do in fact have a large amount of psychiatric contact has recently been demonstrated by Pallis et al (1975). They compared the use of psychiatric services by patients with a history of attempted suicide to that of non-suicidal patients, and to patients who had expressed suicidal ideation. They reported that: *"Our findings seem to show conclusively that suicidal patients, and suicide attempters in particular impose greater demands on the psychiatric services"*. However, whether this denotes that these patients are more severely ill, or whether they evoke more protective responses from psychiatric personnel is an open question.

The question of past suicidal behaviour and past psychiatric contact in relation to the medical lethality and suicidal intent has less frequently been assessed. One of the earliest works to address this issue is that of Stengel et al (1958) who noted *"no marked differences"* when comparing the degrees of intent (as assessed by Stengel on the basis of patients' statements) and medical dangerousness to life, between initial suicide attempters and those who had previously attempted. A similar finding was reported by Weiss et al (1961), who in a small series in St. Louis, U.S.A., assessed 'seriousness' as a combination of medical danger and psychological intent and noted that: *"there was no significant difference in the seriousness of the attempts between the 25 patients for whom no prior suicidal attempt was noted...and the eight patients who had made suicidal attempts prior to the current one"*.

Graham and Hitchens (1967) in Cardiff, Wales, assessed their subjects as 'serious attempt' or 'gesture', "*based on the opinion in retrospect of a consultant psychiatrist*", and noted that 37% of those making a 'serious attempt', as opposed to only 15% of those making a 'gesture' had had previous psychiatric treatment.

Kockott et al (1971) in Germany reported that patients with a past history of a suicidal attempt did not make a more serious attempt, based on the depth of coma, than those patients who were first attempters. However, the repeaters were much more likely ($p < 0.001$) to have had contact with a doctor, psychiatrist or priest in the three weeks prior to the attempt.

Leon et al (1972) in Colombia noted that 34% of their 'frustrated' suicides had made previous attempts, but did not comment on the incidence of repeaters in other suicidal groups.

Worden (1976) studied three groups of attempters divided on the basis of their scores on the Risk-Rescue Rating Scale, and forthrightly noted: "*It is not surprising that psychiatric illness should be associated with high-level lethal suicide attempts*".

Pallis and Birtchnell (1977) in England compared 42 subjects who had made a 'serious attempt' (based on the reversibility of the method used) and matched them for age and sex with 42 'non-serious' attempters. They found no difference in the numbers who had repeated, with 16 of the 'serious' and 15 of the 'non-serious' reporting previous suicide attempts.

The recent work of Pierce (1977) from Wales has more specifically

examined this issue by using a suicidal intent scale. He observed that: *"patients with a history of previous self-injury (126 cases) scored significantly higher as regards risk (objective medical) and self-report (self-perceived intent) than patients injuring themselves for the first time (370 cases)"*. With regard to previous psychiatric assessment, Pierce reported that: *"patients who had received previous treatment were shown to have much higher self-report and total I.S. (Intent Scale) scores than other patients"*.

Although the findings are far from conclusive, there appears to be a trend suggesting that those subjects whose attempts are more medically lethal and/or have greater suicidal intent, are more likely to have made a previous attempt, and to have had psychiatric contact in the past.

d. Psychosexual Functioning

The term 'psychosexual functioning' for the purposes of this thesis will be confined to the following: the phase of the menstrual cycle, the possibility of pregnancy, and the history of miscarriage and termination of pregnancy.

i. Phase of menstrual cycle

It has been stated that: *"If women did not menstruate, their number of suicidal attempts might be the same as that for men"* (Pollit, 1977). Much of the interest in the possibility of such an association has developed from the work of Dalton (1959), who noted a peak in the attempted suicide rate during the menstrual phase,

with lesser increases during the premenstrual and ovulation phases. She also reported that 53% of females who attempted suicide did so on only 8 days (the four premenstrual and four menstrual days) out of the twenty-eight (Dalton, 1964).

The work of Trautman (1961), Tonks et al (1968) and Glass et al (1971) also confirmed Dalton's findings, and led Lester (1972) to conclude: *"Thus there appears to be an association between suicidal behaviour and the menstrual cycle....women attempt suicide during the bleeding phase of the cycle...."*

However, not all work has confirmed these findings. Buckle et al (1965) found no variation in attempted suicide over the menstrual cycle, and several careful recent studies have also reported similar results. Holding and Minkoff (1973) and Birtchnell and Floyd (1974, 1975) have pointed out many of the difficulties of assessing menstrual characteristics, such as the dating of the last period, the frequent assumption of a 28-day cycle and the fact that the oral contraceptive renders cycles anovulatory. Their studies are certainly the most methodologically sound.

Holding and Minkoff (1973) assessed dates of menstruation, age, gravidity, marital status, premenstrual scores, and also used the Suicidal Intent Scale which was then being developed by Beck and his colleagues (Silver et al, 1971). They found no significant relationship to the menstrual cycle on any of the parameters assessed, and concluded that they had *"failed to reject the null hypothesis that parasuicide occurs at random in relation to the menstrual cycle"*.

Birtchnell and Floyd (1974) reported similar results, and their first paper was titled "Attempted suicide and the menstrual cycle - a negative conclusion". The second (Birtchnell and Floyd, 1975), compared the menstrual characteristics of suicide attempters with matched controls, and concluded that *"the proportions of the two groups who admitted to premenstrual emotional disturbance were comparable and the incidence of such disturbance was unrelated to taking an oral contraceptive. There was no evidence that the suicide attempters had more irregular cycles or that the duration of cycle or of menstrual bleeding was longer"*.

It is of interest that the more carefully the menstrual characteristics have been studied, the less hard data there is to support an association between them and attempted suicide.

Thus the relationship of menstrual characteristics to suicidal behaviour appears to be less clear-cut than was thought ten years ago, and apart from the paper of Holding and Minkoff (1973), it has not been specifically investigated with regard to its possible association with the medical lethality or suicidal intent of suicide attempts.

ii. Pregnancy/miscarriage/termination of pregnancy

Whitlock and Edwards (1968) reviewed the incidence of pregnancy in those who attempted suicide and noted a range of 1-12%, with about 6% being the most common figure. In their series of thirty pregnant women who attempted suicide, they considered that the pregnancy played no role in 17 cases, and was the dominant cause in

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only one-sixth of patients. They concluded that pregnancy probably had little effect on the overall attempted suicide rate. It is of note that they found that suicide attempts were equally common in the first two trimesters of pregnancy but rare in the third trimester.

At variance with this is the work of Birtchnell and Floyd (1975), who in their comparison of suicide attempters with a control sample of normal women reported that *"a significantly higher proportion of suicide attempters were pregnant or beyond the date of the next expected menstrual period"*.

Two other papers also are less reassuring than the conclusion reached by Whitlock and Edwards. Thus, Fraser and Lawson (1975) reported 10.2% of their sample of 246 women aged 15-25 to be pregnant, with 12 of these being unwanted pregnancies; and Sendbuehler et al (1970) in their Canadian sample of 222 attempted suicides who *"were deemed to pose a serious threat of life"* found that 30 (20%) of the 152 women were pregnant and that a further 15 (10%) had attempted suicide in the post-partum period.

The difficulties of comparison of suicidal subjects with the normal population are no more evident than when considering the role of pregnancy, and carefully matched samples will be needed to resolve the overall issue. The role which pregnancy may play in relation to medical lethality and suicidal intent does not appear to have been investigated. Similarly, any possible association between suicidal behaviour and a history of

miscarriage or termination of pregnancy awaits investigation.

e. History of Parental Loss and Childhood Stress

There have been numerous papers concerning the relationship between attempted suicide and parental loss since the report of Palmer (1941) that 17 of 25 patients who had attempted suicide had lost one or both parents by the age of fourteen.

The question of what constitutes 'parental separation', or 'parental deprivation', or 'parent loss', or a 'broken home', or 'childhood', makes it extremely difficult to compare much of this work. Thus some have included subjects in this category if there has been severe parental discord, even without separation, whereas others have confined it to death or separation and divorce. It is of interest that Stengel (1969) suggested that *"the adoption of an agreed definition of what constitutes a broken home would be highly desirable"*. However, McConaghy et al (1966) disagreed, noting that: *"rather than adopt a uniform definition as to the nature of parental deprivation and the age by which it ceases to be of significance, it would seem necessary to continue the investigation of the many variables which at present are included in this term and the ages at which they are of significance"*.

Lester (1972) reviewed the earlier literature, and noted that there were ten studies reporting no differences in experience of loss when comparing subjects who had attempted suicide with non-suicidal persons, and seven studies which found significantly more loss in those who had attempted suicide. He also noted that:

"no studies reported less loss in the attempted suicides".

Although Munro and Griffiths (1969) challenged the significance of parental loss in psychiatric patients generally, there have been more recent studies which confirm the high incidence of parental loss or deprivation in suicidal subjects (Birtchnell, 1970; Leon et al, 1972; Morgan et al, 1975a; Werry and Pedder, 1976).

The role of parental separation in attempted suicide is clearly very complex, and it is beyond the scope of this review to cover it in depth. Rather Table 2.2. presents selected studies which not only demonstrate the high proportion of parental separation in these subjects, but also shows the diversity of definitions employed, and the complexity of results when different age groups and diagnostic categories are considered.

There appears to be only one specific mention of parental loss in studies related to lethality of suicide attempts. Leon et al (1972) reported that 68% of their 'frustrated' suicides had experienced separation, defined as the *"lack of contact for a period of at least one continuous year"* of a parent before the age of 15. Unfortunately, they did not compare this figure with the other suicidal groups.

One further paper is worthy of more detailed consideration. Crook and Raskin (1975) suggested that *"the reported association of parental loss with attempted suicide may be an artefact of a primary association between parental loss and severe depression"*. (This had, in fact, been considered by Birtchnell (1970) who

TABLE 2.2.

HISTORY OF PARENTAL SEPARATION

Table 2.2.

HISTORY OF PARENTAL SEPARATION

Author	Subject	Definition of separation, etc.	Results
Walton (1958) (England)	Casene study of 60 depressed patients, 45 of whom had attempted and 15 who had threatened suicide compared to 163 non suicidal patients at the Maudsley Hospital	"Parental deprivation: loss of a parent before the age of 14 years; or strife between the parents so gross that in the initial interview the patient described violence taking place repeatedly between the parents; or as an outcome of parental disharmony a feeling of prolonged estrangement from one of the parents."	"Parental deprivation during childhood was very significantly associated with suicidal behaviour in depressive illness."
Bruhn (1962) (Scotland)	91 attempted suicides compared to a matched sample of 91 psychiatric out patients who had not attempted suicide	"A broken home was defined as the absence or loss of one or both parents, by death or by separation due to marital disharmony, for periods of six months or more before the patient reached the age of fifteen years. (Separation or absence of either parent during periods of war was not included)."	42% of the suicidal group compared to 24% of the control group came from broken homes. Bruhn also noted "that 86% of the attempted suicides without a history of broken homes experienced marital disharmony compared to 33% of the out-patients".

Greer (1964) (Australia)	81 subjects with a history of attempted suicide and considered to be suffering from psychoneurotic disorders or sociopathic personality disturbance. Comparison group of 385 similar patients who had not attempted suicide.	"Loss or continuous absence, from whatever cause, of one or both natural parents for at least 12 months before the age of 15.	<ul style="list-style-type: none"> i. 51.8% of the suicidal subjects, compared with 29.9% of the control group had experienced parental loss. ii. "the proportion of neurotic patients who had suffered parental loss in the first 4 years of life was significantly greater in the suicidal group" iii. "only small, insignificant differences were found between suicidal and non-suicidal sociopaths in respect of parental loss incidence and age at loss"
Hill (1969) (England)	1483 patients diagnosed as suffering from depression	Death of a parent up to the age of 19.	<p>"A strong association has been demonstrated between suicidal attempt and paternal death at the age of 10 to 19 in females."</p> <p>"The modal time of parental loss coincides at age 10 to 14 for both suicidal attempt and depressive illness generally."</p>
Birtchnell (1970) (Scotland)	104 admissions to the Crichton Royal Hospital known to have attempted suicide. These subjects were matched for age and sex with 145 non-suicidal patients	"Parental death is in all cases that of the natural parent."	"Significantly more of the attempted suicide patients had experienced early parent death or were illegitimate. This was mainly due to an excess of parent death occurring from ages 10 to 19."
Morgan et al (1975a) (England)	368 patients interviewed after "deliberate self-harm" at the Bristol Infirmary	"Separation from a parent was defined as continuous separation for six months or more."	22% separated from father and 15% from mother before the age of 10. 29% separated from father and 21% from mother before the age of 15
Werry & Pedder (1976) (New Zealand)	"100 self poisoners selected only by availability during normal working hours" at Auckland Hospital	"Broken homes or ones where conflict between parents was marked" (age not specified)	"Only 36....came from intact or conflict free homes."

concluded that *"parental absence contributes both to severity of depression and to suicide attempt".*) Crook and Raskin (1975) matched 115 depressed inpatients with a history of attempted suicide with 115 non-suicidal depressed patients and 285 normal subjects. While their data did not support their original contention that the association of parental loss with attempted suicide may be due to the association of parental loss and depression, it did suggest that there may be differences in outcome of those subjects who had experienced separation due to parental death, and those who had experienced parental separation and/or divorce. They reported *"a significant excess of parental loss resulting from divorce, desertion or separation in the suicidal group...however, the incidence of parental death was nearly identical (10%)"* in the three groups. They concluded: *"This finding suggests that a childhood characterised by parental discord and the intentional separation of parent from child is associated with attempted suicide in adult life, while a childhood characterised by the loss of a parent through natural causes appears unrelated".*

This is a challenging paper, and suggests that the role of parental death and separation in subsequent suicidal behaviour is by no means clear-cut. That this is so is not unexpected when the diversity of experience that such separation or death of a parent may produce is considered. The problems of the semantics and complexity of research in this area have been comprehensively reviewed by Rutter (1972). It is of note that there is a body of evidence

which suggests that there may be marked differences in subsequent development of children when separation has been caused by death as opposed to separation or divorce; or if death of a parent follows a prolonged illness; if a father's death has been followed by economic and social deterioration; or if a surviving parent has a prolonged grief reaction.

In addition, Rutter (1972) noted: *"in some cases the break up of the home is no more than a minor episode in a long history of family discord and disruption"*. While it is beyond the scope of this study to examine early childhood factors in detail, it would be of interest to have data which goes beyond the mere reporting of the frequency of parental separation or death in these patients.

There has been considerable interest in recent years in scales of stress and events which are able to predict the subsequent onset of illness (Holmes and Rahe, 1967; Brown et al, 1973; and Paykel et al 1971). However, these most commonly used scales refer to relatively recent events, and are not suitable for the assessment of stress in childhood. The time interval between the events and their recording must clearly affect the reliability and validity of such scales, but one instrument which appears to meet the needs of such assessment is described on p.185.

The issues of parental death and separation/divorce, and the degree of reported childhood stress, do not appear to have been investigated with regard to the medical lethality and suicidal intent of those who have attempted suicide.

*Dr. R. B. ...
... of health*

f. History of Personal Violence

The themes of violence and aggression have been discussed in relation to suicidal behaviour in a number of ways for over half a century. Freud (1917) observed in "Mourning and Melancholia" that depression originated when anger towards a loved object was turned back onto the individual, and the logical extension of this is that there would be no suicide unless that person had earlier wished to kill someone else.

Hendin (1963) reviewed various psychodynamic constellations observed in suicidal patients, among which he included death being seen as a retaliatory abandonment, as omnipotent mastery and as retroflexed murder. Clearly, each of these concepts have marked elements of aggression. It is also of note that in a guide to the management of suicidal subjects, Maddison and Mackey (1966) specifically stated that a consideration of aggressive qualities of a suicidal person was of importance in assessing further suicide risk.

As in many areas of research into suicidal behaviour, the question of semantics arises. Thus a person may have particularly aggressive feelings, without actually becoming objectively violent; or, restated, a person may feel particularly violent without actually becoming aggressive. There is also an obvious difference between verbal aggression and physical aggression.

Similarly, the issue of how broadly to consider the subject of suicidal behaviour arises. Thus, since the early suggestion by Menninger (1938), the possibility that various forms of behaviour

such as drug addiction, alcoholism, repeated operations and car accidents could be construed as suicide has been pursued by various authors (Selzer and Payne, 1962; McDonald, 1964; Tabachnick et al, 1966; Burvill et al, 1973). However, these formulations remain controversial, and will not be considered further.

Although the literature attests to the degree of interpersonal disharmony and social disorganisation of suicidal subjects, it is of interest that there has been little attempt to quantify the degree of violent behaviour. Morgan et al (1975a) recorded those suicidal subjects who had demonstrated violent behaviour leading to a conviction, and noted that 12% of their male and 4% of their female patients had been convicted of causing grievous bodily harm, assault or other violence. This is a rather crude indicator of violence, and it illustrates the difficulties of its assessment.

Other papers have discussed violence in an anecdotal sense, such as in the comparison of suicidal behaviour in Edinburgh and Seattle by Ripley (1973). He observed less violent and lethal methods of self-destruction in Edinburgh, and suggested this was due to "*a cultural tradition of less violence and more controlled behaviour*". Aggression was also referred to in the clinical paper of Ringel (1973) on the "*presuicidal syndrome*". He described three components: the constriction of human relations or values; inhibited aggression; and suicidal fantasies.

Caine et al (1967) developed the Hostility and Direction of Hostility Questionnaire (HDHQ) which has been used in several studies

of suicidal subjects. Vinoda (1966) and Philip (1970) both demonstrated that suicidal subjects scored higher in general hostility in their Edinburgh samples, as did Eastwood et al (1972) in an Australian series. Murthy (1969) further investigated her earlier sample (Vinoda, 1966) by comparing the 'serious' risk and 'non-serious' risk attempters, classified on the basis of a modified Tuckman and Youngman (1968) scale for assessing suicide risk. She reported that the 'serious' group tended to be intro-punitive in the direction of their hostility, whereas the 'non-serious' group were extra-punitive.

Lester (1972) reviewed other studies designed to assess objectively the aggressive component in suicidal subjects. These had used the Buss-Durkee Hostility Inventory, the Rosenzweig Picture-Frustration Test and the Thematic Apperception Test, but few positive findings were reported.

The clinical paper of Whitlock and Broadhurst (1969) entitled "*Attempted suicide and the experience of violence*" is of particular interest, as it has attempted to measure actual examples of violence in suicidal subjects' lives and compare them with control groups. They recorded data of previous "*violent experiences*", including previous suicide attempts, road traffic accidents, alcoholism and drug addiction, and of most relevance to this thesis, "*interpersonal violence, that is, fights and brawls and any police charges arising therefrom*". They reported that subjects who had attempted suicide had had more previous suicide attempts, more accidents and more fights and brawls than their control groups. Of interest was their

comment: "Our female suicidal patients had a score for brawls and fights which was over three times that of the psychiatric controls. It is not easy to evaluate such incidents in the lives of these women, but most of the physical violence was in self-defence against an habitually aggressive spouse".

Such findings may not be surprising to clinicians working with suicidal subjects, and point the way to the need for further investigation, both when the suicidal persons have sustained violence, and when they themselves have been violent to others. The study by Murthy (1969), in demonstrating a difference in the direction of hostility in the 'serious' as compared with the 'non-serious' subjects, also suggests the need for further clinical investigation of such subgroups.

g. Family History of Psychiatric Illness

Lester (1972) noted that "there has been little work on the incidence of mental illness in the family members of suicidal individuals". In an early study Pollack (1938) reported more 'insanity' in family members of suicides than in family members of those who had attempted suicide, but the work of Ettlenger (1964), and Robin et al (1968) demonstrated no such difference, and Doroff (1969) found no difference between the family members of girls who had attempted suicide and delinquent girls. Each of these studies can be criticised on the grounds that the control groups were all designated as psychiatrically ill. More recently Kreitman (1977) and his colleagues from Edinburgh have reported no difference in the

frequency with which family members have received psychiatric treatment when comparing first attempters and repeaters.

The question of whether or not there is a difference in family history of psychiatric illness in attempters of differing lethality does not appear to have been investigated.

h. Contact with Suicidal Behaviour

That contact with suicidal behaviour in itself might enhance the possibility of such behaviour is suggested by the anecdotal reports of 'epidemics' of attempted suicide (Hankoff, 1961; Crawford and Willis, 1966; Matthews, 1968). Since these reports, a behavioural theory of "*How suicidal behaviours are learned*" has been clearly enunciated by Frederick and Resnik (1971), and the application of an operant conditioning model in the treatment of such behaviour has been described (Bostock and Williams, 1974). While such operant models do not depend simply on contact with suicidal behaviour, the positive responses which an individual may have seen following a suicide attempt in others could lead to the development of a "*modelling factor, in which an individual vicariously acquires a suicidal response by imitative learning from exposure to suicidal talk or behaviour*" (Henderson and Williams, 1974). The possibility of genetic factors contributing, if such contact has been with family members, should also be considered, and it thus appears desirable to consider contact with family and with others separately.

i. Family contact

Doroff (1969) and Hill (1969) found no difference in the family

history of suicide of their patients who had attempted suicide and that of psychiatric control groups. However, Hauschild (1968), comparing those who had attempted suicide and those without a history of psychiatric referral, and Murphy et al (1969), who compared those callers to a suicide prevention centre who had attempted suicide and those who had not, found an increase in suicidal behaviour in the family members of those who had attempted suicide.

In studies of those who suicided, and using different psychiatric comparison groups, Pollack (1938) reported a greater incidence of suicide, but both Pokorny (1960) and Ettlenger (1964) found no such increase in the family members of those who suicided.

Kreitman (1977) and his colleagues in Edinburgh examined this issue by focussing on subjects with repeated suicide attempts, and concluded that *"repeated parasuicide occurs more readily when there is a family history of self-destructive behaviour"*.

Although it may be premature to conclude unequivocally that there is an increase in suicidal behaviour in the families of those who attempt suicide, there have certainly been no studies suggesting the opposite.

ii. Other contact

It is of note that there has been little systematic research addressed to the general contacts of those who have attempted suicide, and the studies of Kreitman et al (1969, 1970) appear to stand alone in their approach to this topic. They reported a greater incidence

of suicidal behaviour than expected in the contacts of a sample of subjects who had attempted suicide, and found the association to be strongest in females under the age of 35 who had attempted suicide with drugs. However, family members were included in such contact, and the possibility of hereditary factors influencing the results, though unlikely, cannot be ignored. Their results are of note, but a causal relationship cannot be assumed, and whether or not there may be a relationship with lethality or intent was not investigated.

i. Clinical Diagnosis

It is acknowledged that psychiatric diagnoses and their comparison present difficulties, as there is variability in nosological criteria between and within countries, and between individual clinicians in the one centre. In addition, there are changing diagnostic fashions from generation to generation of psychiatrists, and this is well illustrated in the very nosology of 'attempted suicide' itself. This no doubt influences the selection of subjects in different research reports, and will be alluded to where appropriate throughout this review. Compounding these problems is the fact that in the assessment of suicidal subjects, diagnoses are frequently made hurriedly in the casualty or emergency wards by non-psychiatrically trained personnel.

There has been a diversity of opinion as to the nature of psychiatric illness, if any, in subjects who attempt suicide. Although said in relation to suicide, it is of interest that Wilhem Stekel in 1910 asked: *"are we dealing with normal, healthy individuals whose*

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emotions are so volatile that they are inclined to exaggerate the importance of the moment? Or are those writers correct who regard every suicide as the ultimate expression of an abnormal psychological tendency, of a psychosis that was previously latent and without symptoms? Or is suicide merely the symptom of a neurosis....?" Stekel further noted "how difficult it is to draw the line between sickness and health", a fact pursued with regard to psychiatric conceptualisations of normality in a more recent paper (Goldney, 1974).

It is therefore not unexpected that there is marked variation in the reports of psychiatric illness in subjects who have attempted suicide. Thus Robins and O'Neal (1957) observed that "every person who makes a suicide attempt is clinically ill". This comment came into question from later authors, especially when considering the rapid increase of young suicide attempters. Thus Kessell (1965) noted: "of particular importance is the fact that 26% of the men and 20% of the women had no psychiatric illness"; Ovenstone (1973) reported that "half the attempted suicides were psychiatrically well at the time of the act"; Fraser and Lawson (1975) found that 42% had "no psychiatric abnormality"; and Jacobson and Tribe (1972) reported that "one fifth of cases bore no real evidence of illness". On the other hand, James et al (1963a) observed: "as may be anticipated, the greater majority of the individuals showed evidence of psychiatric disorder"; Morgan et al (1975a) reported that "mental illness was judged to be absent in 10 per cent of patients"; and Leon et al

(1972) noted that less than 5% were not "suffering from some form of mental disorder".

These discrepant results are no doubt partly due to patient selection, but they can also be considered due to the vagaries of psychiatric diagnosis. Thus, Kessell (1965) noted that: *"the appropriate terms of conventional psychiatric nomenclature - depression, neurosis, personality abnormality, and the like - are ill-suited to describing, differentiating, or even pigeon-holing these patients. We have been forced into unreal decisions whether a patient's manifest unhappiness should be attributed to a depressive illness or regarded as understandable distress at intolerable living circumstances"*. However, tempering this view, Morgan et al (1975a), in commenting on the degree of psychological stress found in their series of patients who had attempted suicide, noted: *"there seems little to be gained by studiously avoiding a psychiatric diagnosis"*.

Despite these problems, there are consistencies noted, although as the following series demonstrate (Tables 2.3.; 2.4.; 2.5.; and 2.6.), consistencies can be obscured by the differing nosological terms.

Table 2.3.

DIAGNOSTIC CATEGORIES OF SUICIDE ATTEMPTERS, PERTH, AUSTRALIA

(James et al, 1963a)

Psychiatric Status	Males (34)	Females (66)	Persons (100)
Psychotic disturbance at time of attempt:			
Affective	4	10	14)
Schizophrenic	3	2	5) 22%
Organic	3	0	3)
Previous personality disorder:			
Predominantly neurotic	7	32	39)
Predominantly sociopathic	9	10	19) 58%
Other subjects	8	12	20 20%

Table 2.4.

DIAGNOSTIC CATEGORIES OF SUICIDE ATTEMPTERS, BRISBANE, AUSTRALIA

(Edwards and Whitlock, 1968)

Diagnosis	Male (197)	Female (483)	Total %
Schizophrenia	3 (1.5%)	14 (3%)	2.5
Endogenous depression	7 (3.5%)	20 (4%)	4
Depressive neurosis	53 (27%)	150 (31%)	30
Other neurosis	12 (6%)	78 (16%)	13
Sociopathic personality	22 (11%)	21 (4.5%)	6.5
Other personality disorders	85 (43.5%)	114 (24%)	29
Other diagnoses	3 (1.5%)	5 (1%)	1.5
Transient situational crisis	12 (6%)	81 (16.5%)	13.5

Table 2.5.

DIAGNOSTIC CATEGORIES OF SUICIDE ATTEMPTERS, EDINBURGH, SCOTLAND

(Ovenstone, 1973)

	% Males (433)	% Females (708)
Psychiatric diagnosis		
No formal psychiatric illness	46.7	43.5
Depression	33.7	42.5
Other	5.8	4.7
Not known	13.8	9.3
Personality diagnosis		
Normal	30.0	46.6
Personality disorder	52.0	44.4
Drug addiction/alcoholism	11.3	1.7
Not known	6.7	7.3

Table 2.6.

DIAGNOSTIC CATEGORIES OF SUICIDE ATTEMPTERS, BRISTOL, ENGLAND

(Morgan et al, 1975a)

Diagnosis	Total % (337)	Male % (114)	Female % (223)
Mental illness absent	10	5	12
Personality disorder	29	42	22
Neurosis	63	56	66
Neurotic (reactive) depression	52	39	59
Other	11	17	8
Functional psychosis	12	14	11
Manic depressive psychosis	5	5	5
Reactive depressive psychosis	4	3	4
Other affective psychoses	1	1	1
Schizophrenia	2	3	1
Paranoid psychosis	<1	1	-
Organic psychosis	10	17	6
Dementia	1	1	<1
Alcoholic psychosis	8	16	5
Associated with endocrine disorder	1	-	1
Alcohol abuse	18	36	9
Alcohol addiction	10	20	5
Heavy drinking	8	10	4

The problems of comparison are abundantly clear and will be laboured no further at this point. Additional note of varying diagnoses will be made in the review of studies relating to medical lethality and suicidal intent in suicidal subjects.

What appears to be consistently observed in these subjects is a high prevalence of both depression and personality disorders. These components of the diagnosis will be more completely reviewed in sections VIa and VIId respectively of this chapter.

j. Interim Comment

It can be seen from the general data reviewed so far that many aspects related to suicidal subjects remain to be precisely elucidated. This is particularly so when specific subgroups are considered. Although the preponderance of young women noted in these studies will influence the overall characteristics described, it cannot be assumed with certainty that these characteristics will necessarily apply to young women.

Thus the next part of the review will focus on studies of younger age groups, and then on studies pertaining to young women.

IV. STUDIES OF SPECIFIC GROUPS

a. Studies of Younger Age Groups

Although there have been a number of comparative studies of those who attempt suicide as a whole population (Sletten et al, 1973; Werry and Pedder, 1976), there has been little work addressed to specific age groups. It is of interest that in 1910, at one of the last meetings of the original Vienna Psychoanalytical Society at which

Freud presided, the topic of suicide, "*with particular reference to suicide among young students*" was addressed (Friedman, 1967). In the foreword to the translation of this meeting, Friedman briefly reviewed some of the eighteenth and nineteenth century work on suicide, and noted that it had been "*seen as the result and dependent upon immutable forces, conditions that are neither flexible nor capable of change but are inexorably imposed upon man and to which he must succumb*". This reached its peak in the postulation by the Viennese pathologist Julius Bartel that "*status thymicolymphaticus constitutes a predisposing factor to self-destruction in every human being*". In this climate, the Vienna Psychoanalytic Society met to discuss the apparent increase in suicide by students. It is of interest, and this no doubt reflected the current trends in psychoanalytic thought, that much emphasis was placed on the students' sexuality. Thus, Wilhelm Stekel noted the "*tremendous role masturbation plays in the creation of a suicide*" and gave clinical examples to illustrate his belief. Similarly, Alfred Adler also observed that "*the sensual pleasure of suicide takes the place of the sensual pleasure of masturbation*".

Despite this pioneering work, there were few systematic studies of such specific subgroups until the last two decades. Many of these have in fact focussed on adolescent suicide rather than attempted suicide, and they predominantly contain clinical and anecdotal reports from which it is difficult to draw reliable conclusions (Balser and Masterson, 1959; Haim, 1974; Hemming, 1977; Levine and

Shaioua, 1977; Holinger, 1977). The interpretation of these studies must be approached cautiously. For example, the term 'adolescence' has been used to include subjects up to the age of twenty-five by Haim (1974), it is not defined in some papers, and it is confined to the ages 12 to 18 by Marks and Haller (1977).

There have been other specific subgroups studied, such as University and College students. Thus, Hendin (1975a, 1975b) has written of his experiences in assessing suicidal college students, both male and female, in papers entitled "*Growing up dead: student suicide*", and "*Student suicide: death as a life style*". He was unable to confirm previously emphasised aetiological factors such as parental expectations, difficulty in communicating or sexual problems, but found the quality of feeling between the student and parents was crucial. He concluded "*these students are tied to their parents in a kind of death knot and have become overtly suicidal when life - coming to college, graduating, becoming seriously involved with another person, threatens to unravel this knot*". These clinical papers, though possibly of use in some treatment settings, have limitations when applied to all young persons, although the themes of dependence/independence and loss and threatened loss of dependence, are no doubt common to most who attempt suicide. An earlier review of student suicidal behaviour by Knight (1968) provided a resume of essentially clinical data, although he noted that Braaten and Darling (1963) had objectively demonstrated that suicidal students were more depressed, more schizoid and more

obsessive-compulsive, thus confirming the clinical impression that suicidal students demonstrated more psychopathology than non-suicidal students who were also attending a student health service.

A British report (Hawton et al, 1978) noted a lower incidence of attempted suicide for Oxford University students than for other persons of the same age in Oxford city, though the authors suggested this may have been due to social class differences. They noted that *"typically the student attempt was precipitated by difficulties in a relationship with a boy/girlfriend. In addition, the student may have been experiencing feelings of social inadequacy and/or depression. Social isolation, previously suggested as a major cause of student suicides (Rooke, 1959; Lyman, 1961) was not characteristic of this group of attempters"*.

One further study of students is of note. Mishara et al (1976) reported that 15% of 293 American college students had attempted suicide, a figure which led them to suggest that suicidal behaviour in students was more common than had been realised.

Davidson and Choquet (1976) studied 537 French adolescents under the age of twenty, 77% of whom were females. They compared those who had made an initial attempt with those who were repeaters. Their results were consistent with earlier studies (Bagley and Greer, 1971; Buglass and Horton, 1974), although their cohort was restricted to the younger age group. They found the risk of repetition to be greater if there was a diagnosis of psychotic illness or personality disorder, and if there were 3 of the 5 following characteristics:

four or more children in their family, a family history of alcoholism, pathological family relationships, depression and previous school behaviour problems.

One of the few studies of the younger age group in which a control group has been used is that of Stanley and Barter (1970). They compared 38 adolescents who had been hospitalised following suicidal behaviour with a control group (matched for age and sex) of psychiatrically hospitalised adolescents with no history of suicidal behaviour. There were 26 females, 19 between the ages of 16 and 21 years, and the remainder between the ages of 10 and 15. Although there was no difference between the two groups in parental loss up to the age of eighteen or in the amount of family conflict, differences appeared when these aspects were examined more closely. It is of interest that the suicide attempters had experienced parental loss more frequently under the age of 12, and that the content of the parental conflict also differentiated the two groups. Arguments about separation and divorce were "*far more common*" in those who had attempted suicide. They noted: "*Early parent loss and a current threat of such loss of parents by divorce or desertion both involve a severe and special type of crisis for the teenager which may selectively favour a symptomatic self-destructive act*".

The follow-up data at 22 months on those who had attempted suicide showed 50% had made subsequent attempts, 28% had performed inadequately at school and 42% were described as having "*inadequate peer relationships*". Although these items are not significantly

different from the control group, this should not be taken as grounds for complacency, but rather it may highlight the inadequacy of a 'control' group of subjects who were psychiatrically ill.

However, there were differences in subsequent behaviour and environmental conditions in those who repeated their suicidal behaviour, compared with both the non-repeaters and the 'control' group. The repeat attempters *"had less adequate social lives, did less well in school and were less likely to be living with a parent or parents"*.

Waldron and Eyer (1975) used an actuarial approach in attempting to determine presumed *"socioeconomic causes of the recent rise in death rates for 15-24 year olds"*. They noted *"a major cause of the rise in suicide was an increase in potentially overwhelming life problems, including increased divorce among parents, increased alcohol consumption and attendant family problems, increased illegitimate pregnancy and a relative decline in income for young people as compared to their parents. Also contributing to the rise in suicide was a trend towards greater social isolation due to increased parental divorce and decreased marriage among young adults"*. These sweeping assertions do not distinguish between males and females, and although bolstered with statistical data from various American Government Departments, it is suggested that caution should be exercised before considering the various correlations as denoting causality.

Kreitman (1976b) commented on the differences between three age

groups of parasuicide. He compared those 15-34 with those 35-54 and 55 and older. The younger group contained more women, and the other differences were thought to be consistent with age and its associated changes in civil status. More of the younger were living in crowded conditions, and they had changed dwellings more frequently in the previous five years. The younger had less 'formal disorder', including less depressive illness, and drug dependence. It is of interest that there was no significant difference between the younger and middle age groups in the proportions reporting previous parasuicide, and that the middle age group had received more previous psychiatric treatment. Although the numbers were small, middle-aged men had the highest subsequent repetition and suicide rate, whereas, perhaps unexpectedly, the lowest repetition rate was for the younger women.

The recent report of Marks and Haller (1977) is worthy of detailed consideration. It initially involved over 3000 patients from which a 'treatment' sample of 830 white boys and girls between the ages of 12 and 18 were selected. *"Among the treatment sample of 506 boys and 324 girls, 6% of the boys and 20% of the girls were referred for 'suicide attempts', and 11% of the boys and 22% of the girls were referred for 'suicidal thoughts'. There was no significant sex difference for 'suicidal threats', which had an overall referral rate of 8%."* They assessed these subjects with the MMPI, a personal data questionnaire, and *"in addition, their psychotherapists - after a minimum of 10 and an average of 20*

interview hours - had completed an extensive set of ratings on them that consisted of a Q-sort, an adjective check list, and a case data questionnaire".

It is of interest that they concluded "that there is little difference between teenagers who attempt suicide and those who think about it or threaten it". However, there were differences when comparing suicidal girls with other emotionally disturbed adolescent females. "Their therapists view them as despondent, resentful, weak, unstable, but not lazy. Additionally, they are described as having feelings of hopelessness and as being unpredictable and changeable in their behaviour and attitudes. They are typically not fearful or phobic, but lack a resilient ego-defense system and have a poor margin of control. Perhaps surprisingly, they do not exhibit hysteroid features. Their judgement is not intact, but rather is seen as extremely poor. Their ideation tends to be deviant, their affect flat, and their subjective mood moderately depressed. More often they are viewed as extremely disturbed....In concurrence with previous research, our sample of suicidal adolescent girls do indeed have histories of social isolation coupled with feelings of parental estrangement and lack of warm paternal relations."

This study appears to be of interest, but it can be criticised on the basis that it is a report of subjects already designated as 'emotionally disturbed adolescents', and it may, therefore, not represent a cross section of suicidal adolescents seen in general

clinical practice. An important point which the authors emphasise is that there were differences between the sexes, and their conclusion that *"it seems most important in future research to study the sexes separately"* is particularly germane to this thesis. The following papers have, in fact, specifically addressed the question of attempted suicide in young women.

b. Studies Pertaining Specifically to Young Women who have Attempted Suicide

One of the earliest comparative studies specifically directed towards young women who had attempted suicide was that of Doroff (1969). In a doctoral dissertation entitled *"Attempted and Gestured Suicide in Adolescent Girls"*, he examined characteristics which might distinguish American girls who had attempted suicide from adolescent delinquents. He matched 63 adolescent girls for age, socioeconomic class and IQ, and rated them on thirty social and psychological variables, including family history of suicide, parental death, broken home, depression, anxiety and suicide signs on the Rorschach test. The delinquents had more antisocial and sexual acting-out behaviour, and the attempters *"were found to be higher in the following variables: prior suicide attempt; depressed state; active conflict; ideational symptomatology; withdrawal; masochism; vindictiveness; humiliation; narcissism; social isolation; incestuous behaviour; presence of Rorschach signs"*.

While the use of delinquents as a comparison group can be criticised, the careful matching of subjects for age, IQ and socioeconomic class is infrequently done in other studies of suicidal

subjects. Doroff also assessed the adolescents who attempted suicide on the basis of the seriousness of their attempt, and this will be referred to on p.73.

The clinical paper of Fraser and Lawson (1975) is of interest as they noted characteristics of "*Acute Poisoning in Young Women*" between the ages of 15-25 in Scotland. Of those assessed psychiatrically, 42.1% were thought to have no psychiatric abnormality, 25.4% were considered to have a personality disorder, 27.6% a neurosis and 4.4% a psychotic illness. While acknowledging the difficulties of definition of psychiatric illness, they suggested that 'mental disease' may be less important in the 15-25 year old age group. Fraser and Lawson placed more emphasis on social factors, and considered their findings confirmed the earlier work of McCulloch (1971). They noted that a great many patients showed difficulty in interpersonal relationships with spouse, parents or other close relatives. As might be expected in subjects under 25 years of age, less than half were married. However, 11.8% were divorced, and in those who were married, 83.9% reported marital discord. They observed that many of the disagreements with the husbands seemed trivial, and that "*these patients appeared to tolerate stress poorly*". They also noted that "*other factors such as not living permanently in the area and recent change of home, debts and criminal record were relevant in individual patients but of minor importance in the groups as a whole*". The 'severity of poisoning' was also assessed by Fraser and Lawson, and this will be referred to

on p.85.

A controlled study which attempted to assess the degree of disability in young women who had attempted suicide, was that of Rauenhorst (1972). He compared 50 female caucasian women between 16-30 who had been seen for their first suicide attempt with a group of 50 caucasian women who had accidentally suffered minor trauma, mostly in household and automobile accidents. He attempted to contact these subjects personally, and reviewed the details of presentation and biographic data, took a brief history of the period since the index visit, and administered the Structured and Scaled Interview to Assess Maladjustment. He found little difference in adjustment between persons who had attempted suicide and his 'matched controls', and in addition, found that the subjects who had made the most medically serious attempt were no more maladjusted than the controls at follow-up, a finding which does not seem consistent with studies which have shown a correlation between seriousness and subsequent suicide (Motto, 1965; Rosen, 1970, 1976). Rauenhorst concluded: *"such suicide attempts can best be viewed as a reaction to a short-lived crisis which is subsequently resolved"*. Such a conclusion, although commonly accepted in clinical practice, does not appear consistent with the persistent morbidity noted by Stanley and Barter (1970) (p.54) or with the report of Greer and Lee (1967) that only 38% of patients who had made a potentially lethal suicide attempt had made an acceptable psychosocial adjustment.

There are other reasons for interpreting this study with some

caution. Twelve of the subjects were not interviewed, 21 interviews were conducted by telephone, and varying times up to two years had elapsed since the index visit. It is also pertinent to reflect on the problems of using a control group selected on the basis of having had accidents. Several authors have commented on the possible relation between accidents, psychological illness and suicide (Burvill et al, 1973; Holding and Barraclough, 1977; Whitlock, 1971b), and Schmidt et al (1977), in a report on fatally and non-fatally injured drivers, noted that although the incidence of suicidal behaviour was not high, *"both groups tended to be socially deviant, with above average levels of psychopathology and social aggressiveness"*. Thus a control group of persons accidentally injured may lead to unjustified conclusions.

c. Comment

Although these studies have attempted to shed further light on the problems of young women who attempt suicide, it would appear that there are special difficulties and limitations in this area. Not the least of these is the selection of a control group, a problem already alluded to in relation to several studies reviewed. The special problems of control groups in attempted suicide research have been noted by Neuringer (1974), and will be considered further in the discussion.

The wisdom of selecting a group of young women for special study is also not without criticism. Indeed, Kreitman (1976) has succinctly stated: *"it must be granted that age and sex in themselves*

are scarcely illuminating theoretical concepts, but they may gain in richness when used as pointers to the differential prevalence of various psychiatric disorders and of social roles".

Such cautions, taken in conjunction with the paucity of previous studies of specific sub-groups, and their inconclusive results, suggest that care should be exercised in the interpretation of published reports and the planning of future studies. With this in mind, this review will now focus on those studies which have specifically examined medical lethality and suicidal intent.

V. MEDICAL LETHALITY AND SUICIDAL INTENT

a. Introduction

The nosological difficulties in this area of research into attempted suicide were referred to in the introduction to this review of the literature, and definitions of medical lethality and suicidal intent were provided.

This section examines in more detail work already referred to in the review of general descriptive and clinical data. Studies will be referred to in chronological order, and will conclude with those papers which have used the Suicidal Intent Scale (Beck et al, 1974b), an instrument which is employed in this thesis (see Appendix V).

b. Studies Pertaining to Medical Lethality and Suicidal Intent

Perhaps the earliest systematic study of suicidal intent is that of Farberow (1950) who reported the results of his assessment of 64 suicidal and 32 control male patients of a Veterans' Administration Mental Hospital in Los Angeles. As already noted (p.9)

he regarded the medical lethality as "misleading" and "therefore the psychiatrist in charge was asked to rate his patients in terms of seriousness and non-serious, with the criterion being his opinion as to whether or not the patient, if left to his own devices and not given adequate care and surveillance, would probably successfully carry out his intention to destroy himself". Not only were subjects who had attempted suicide divided into 'serious' and 'non-serious' groups, but those who had threatened suicide were also so categorised. Much of the analysis is based on 'serious' subjects, both threateners and attempters, compared to 'non-serious' threateners and attempters and a control group; a feature which makes comparison with later work difficult.

Farberow (1950) reported more differences when comparing those who were threatening with those who had attempted suicide, than when comparing subjects divided into the 'serious' and 'non-serious' categories. This prompted him to observe that the "definition of subgroups is most productive when based upon some factual event which has occurred rather than upon opinion". He used the MMPI, the Hildreth Feeling and Attitude Scale, a Self-esteem Scale, the Rosenzweig Picture-Frustration Study and the Make-a-Picture Story Test, and found that in general those who attempted suicide showed "very few features which would set them apart from a non-suicidal patient".

This initial report assessing subjects on intent is a landmark in the literature of the study of suicidal behaviour. However, focussing on the seriousness of intent of both those who are threatening as well

as those who have attempted suicide, and grouping these together, appears to minimise the importance of the actual act of attempted suicide, and, as already noted, comparison with later research is difficult.

Schmidt et al (1954) assessed 109 patients in St. Louis and considered 35 to have made 'serious' and 74 'not serious' attempts. *"A serious attempt was considered to be one in which the patient had done to himself enough damage to put him in a serious medical or surgical condition (medically serious) or in which the psychiatrist was convinced the patient had fully intended to commit suicide, whether or not he succeeded in doing objectively serious damage to himself (psychiatrically serious)."* Twenty subjects were considered 'medically serious' and 24 'psychiatrically serious', with 9 subjects both 'medically' and 'psychiatrically serious'. They reported that *"the manic-depressive depression and dementias were significantly more frequent in the serious group..."*, and these diagnoses together accounted for 54% of the 'serious' attempters compared to only 15% of the 'non-serious'. They also observed that *"the purely medically serious group was very similar to the total group"*, and noted that it comprised 35% manic-depressive depression compared to 34% in the total 'serious' group. Other differences included the fact that members of the 'serious' group were older, they had more often had a recent bereavement, they reported less marital incompatibility, had been less often drinking before the attempt and they had less often notified others of the attempt. They concluded that all 'serious'

attempts should be hospitalised, and considered that this classification had some prognostic validity, as 2 subjects who subsequently suicided had been in the 'serious' group.

Stengel et al (1958) cautioned against what they termed the "far-reaching proposals of Schmidt and his associates". However, this caution, and their previously quoted observation that "clearly, the degree of danger to life is not a reliable measure of seriousness of intent" seem to be a too cautious interpretation of their own data. They had assessed 167 patients in terms of the medical "degree of dangerousness" and the "degree of intent". They observed that "the two lowest degrees of dangerousness were as a rule associated with a medium or low degree of intent", but that "only among the 'absolutely dangerous' attempts had the degree of intent been maximal in a majority". Thus, although one can agree with their conclusion that medical seriousness may not be an absolutely reliable indicator of intent, their results could be interpreted to suggest that it may be a useful clinical guide.

Rubenstein et al (1958) reported a study of 44 persons who had attempted suicide and who were seen at the New Haven Hospital (U.S.A.). They noted: "In assessing their severity we took into account the method used, how badly the patients were hurt, how they were discovered, and the behaviour and comments of the patients and those accompanying them in the emergency room". It is of interest that "a majority of those patients whose attempts were rated as severe were also among those diagnosed as psychotic". From their observations they

conceptualised four continua:- the medical lethality varying from pretence of attempted suicide to a lethal attempt in isolation; the motivation (intent) varying from *"an effort on the part of the ego to effect changes in relations with others, to motivation of a largely primary process character"*; the psychopathology varying from *"a relatively intact ego to psychotic mechanisms used in a regressed state, where the boundaries of the self and the outer world are unclear"*, and the fourth *"characterised in the middle of its range by a fusion, a delicate balance of self-preservative and destructive impulse derivatives"*. This appears to be one of the first papers to clearly describe the continuum conceptualisation of suicidal behaviour.

One component of suicidal intent is the communication of suicidal ideation. In an endeavour to assess this, Robins et al (1959) interviewed relatives and friends of 119 of 134 completed suicides. They reported that over two-thirds had communicated their suicidal ideation, and that it was not related to age, sex, marital state, religion, socioeconomic state, whether living alone or not, or to clinical diagnosis. The only trend observed was for chronic alcoholics to make more specific statements about their intentions to commit suicide.

Yessler et al (1961) also assessed the communication of suicidal ideation in a study of servicemen, 272 of whom committed suicide and 104 who had attempted suicide. They *"concluded that the frequency with which individuals are likely to communicate their suicidal*

ideas before the act occurs is not significantly correlated with the type of psychiatric disorder they manifested". It is also of note that there was no significant difference between suicides and attempted suicides in the frequency or time of having had last medical contact before their act. However, both groups were likely to have had this last contact close to the act, especially in the week before it. Although these findings do not suggest any correlation between intent as measured by communicating, and lethality as assessed by death, the subject selection and these rather crude criteria are reasons for caution before generalising the results to other suicidal subjects.

Weiss et al (1961) reported a study of 35 patients who had attempted suicide in St. Louis and who had been assessed both for the degree of 'medical danger' and 'psychological intent'. Patients were judged by two psychiatrists independently, and if there was disagreement the clinical details were discussed with the third author and a consensus agreed upon. As regards medical seriousness, nine attempts were rated 'absolutely dangerous', indicating a high probability that the patient would die (in fact, two patients did die), fifteen were 'absolutely harmless' (indicating that there was no chance that the act would cause death under any foreseeable circumstances), and eleven 'somewhat dangerous', 'an in-between category'. In terms of intent, ten were rated 'serious'. (*"The patient did not inform anyone else of the attempt prior to its occurrence in order to effect a rescue, did not expect others to arrive in time to prevent death, did not make the*

attempt when others were present or nearby, and expected that he or she would certainly die as a result of the act.") In eight the attempt was rated as a 'gesture', and in seventeen the intent was rated a 'gamble with death', indicating the patient was unsure of the possible consequences. They noted that it was statistically significant that "these attempts in which the psychological intent was serious tended to produce medical consequences which were dangerous".

It is of interest that Weiss and Scott (1974) reported a ten year follow-up of these patients, and noted that "3 of the 10 high-risk attempters were dead by suicide; none of the other attempters and none of the controls had killed themselves". However, it should be pointed out that 2 of the 3 suicides were as a result of the initial attempt. Nevertheless, the only subsequent suicide had come from the high risk group. Another finding was that "approximately two-thirds each of both the high-risk and lesser risk attempt groups, as compared with only one-third of the control group, were found to have significant psychosocial problems (continuing difficulties related to mental health, occupation or economic situation, and/or interpersonal relationships)". This emphasises the continuing psychological morbidity of both high and low lethality suicide attempters.

Although specific mention of suicidal intent is not made, the Australian study of James et al (1963a) is of note as they commented on the medical lethality of the suicide attempt of the 100 subjects studied. The attempt was "rated in terms of the potential danger to

the patient's life as 'slight' (little danger to life), 'definite' (definite threat to life in the absence of medical treatment) or 'serious' (serious threat to life in the absence of emergency medical treatment)". They noted that "three quarters of the patients suffering from psychotic disturbance made attempts which endangered their life, compared with under half of the others in the sample", thus suggesting a relationship between psychiatric seriousness and medical lethality, though not necessarily suicidal intent. However, it is pertinent to note that Stengel et al (1958) observed: "among the schizophrenics and the depressive psychoses a majority of the attempts had been undertaken with serious intent".

Dorpat and Boswell (1963) evaluated suicidal intent for 121 patients who attempted suicide in Seattle. Five raters made an independent assessment on a 5-point scale, with 1 denoting a 'suicide gesture' and 5 a 'serious suicide attempt'. For purposes of statistical analysis the mean ratings 1 to 1.9 were classified as a suicide 'gesture' (25), those with a rating 2 to 3.9 were called 'ambivalent' (72) and those who were rated 4 and above were designated 'serious' (24). It is of interest that "in nearly all of the 66 social and psychiatric items studied, the serious group resembled the completed suicides (reported by them elsewhere) and were dissimilar from the gesture and ambivalent groups". More specifically they noted that "the least lethal methods were used by the gesture group", there were more males in the 'serious' group, those who had greater suicidal intent were more likely to plan their action than those whose intent was less serious,

and suicidal intent increased with age. It is also of note that psychotic illness was more common in the 'serious' attempt group than in the 'gesture' and 'ambivalent' categories.

Kessell (1965) reported a study of 465 patients in Edinburgh in which he used an Index of Endangering Life. This combined an assessment of the quantity of poison ingested and whether or not the action was concealed or disclosed. From this four categories of predictable outcome were derived:- 'death', 'death probable', 'death unlikely' and 'certain to survive'. 'Death' could have been anticipated in 19%, and 'death probable' in a further 11% of both men and women. Kessell (1965) presented data which suggested that *"the acts of patients with formal psychiatric illness (excluding character disorder) were more life-endangering than those of patients with personality abnormality or those of patients without a psychiatric illness"*. However, he concluded that *"the index of endangering life - our measure of the seriousness of the act - is not correlated with the need for psychiatric treatment"*. Although it is acknowledged that not all with a formal psychiatric diagnosis will benefit from (or indeed accept) treatment, and that some without a formal diagnosis may benefit from some sort of intervention, it is difficult to reconcile these two comments. On the other hand, his emphasis on the assessment of psychiatric and social factors in each individual patient is undoubtedly correct. He noted: *"It is upon those factors we must act, not upon what they prompted. By the time we see the patient that is largely irrelevant"*. It would

appear that a different emphasis could be placed on Kessell's data, with a greater acknowledgement that there appeared to be a relationship between medical lethality and psychological morbidity.

It is also of interest to reflect on Kessell's (1966) comment made in relation to the assessment of suicidal intent. Despite offering the categorisation of 'intended cessation', 'subintended cessation', 'intended interruption', 'continuation was contra-indicated' and 'intended continuation', he argued that "*there is little to be gained by attempting to infer the presence of or the degree of intent to die that there was at the time of the act*". This appears to be an extreme view, as there had been evidence to suggest the contrary.

In the mid-1960's two follow-up studies of medically serious suicide attempts gave conflicting results. The first was that of Motto (1965) who reported a five to eight year follow-up of 193 suicide attempts in San Francisco. The attempts were graded 1 to 4, with 1 being a 'suicidal gesture' and 4 being an 'unequivocal attempt to end one's life'. These criteria were a combination of medical seriousness and suicidal intent gained from psychiatric assessment. The most important finding was that categories 1 and 2 combined had a 5.7% incidence of subsequent suicide compared to an incidence of 10.2% for the more serious, a finding which suggests a relationship between medical seriousness, and suicidal intent, albeit subsequent suicidal intent. The second study was that of Greer and Lee (1967), who reported a 1 to 4½ year follow-up of 52 'potentially lethal'

patients, 33 of whom were women, at King's College Hospital in London. In this group there was a higher age distribution than unselected attempted suicides, a greater incidence of psychoses, and there were relatively more patients whose economic and housing circumstances were poor. Forty-six percent had experienced loss of a parent before the age of 15. Sixty-seven percent were glad they had been saved, 24% remained ambivalent and 9% were still frankly hostile at having been resuscitated. They also noted that the psychosocial outcome was *"judged satisfactory in only 38% of the sample"*. Only two had subsequently committed suicide, and this prompted Greer and Lee to observe: *"Contrary to expectations, the long-term suicidal risk in patients who make potentially lethal attempts appears to be no higher than that reported among attempted suicides in general. This preliminary finding, which requires verification, suggests that the degree of medical danger in a suicidal attempt is not a reliable indicator of subsequent suicidal risk"*. This conclusion is certainly not in accord with that suggested by Motto's (1965) report.

Graham and Hitchens (1967) reported a study of 2484 patients in Cardiff who had attempted suicide in the years 1950-65. Attempts were categorised in retrospect by a consultant psychiatrist as 'accidental', 'suicidal (serious attempt)', 'suicidal (gesture)', and 'suicidal (undetermined)'. Such categorisation appears to be a combination of both suicidal intent and medical seriousness. Of the suicidal subjects, 42% were considered to have made a

'serious attempt', 40% a 'gesture', and 18% were doubtful. The 'serious attempt' group contained a greater proportion of men and older persons. It is also of note that only 13% of the 'serious attempt' group compared to 51% of the 'gesture' group were considered to have *"no known previous mental abnormality"*. Thirty-seven percent of the 'serious' group compared to 15% of the 'gesture' group had had previous psychiatric treatment, and 39% of the 'serious' group had a history of previous depression, though not treated, compared to only 24% of the 'gesture' group. These findings are generally consistent with other reports that indicate a greater psychological morbidity in those who make serious suicidal attempts.

Doroff (1969), in the work referred to on p.58, divided those 63 adolescents who had attempted suicide into 'high' and 'low risk' categories. This was done on the basis of both actuarial (the suicide attempt method compared to the method of successful suicides) and clinical criteria of the attempt actually succeeding, and thus it included factors relevant to both suicidal intent and medical lethality. It is of note that there were no differences between the 'high' and 'low risk' attempters distinguished on actuarial grounds, and only two significant differences between those attempters distinguished on clinical grounds. The 'high risk' group were more constricted and had more Rorschach finding. Doroff concluded: *"the failure to distinguish between the high and low risk groups (as clinically designated) reflects either a too small number of subjects or the*

possibility that the high-low dichotomy may be a false one....that, in fact there may be no real difference".

The clinical report of Stanley (1969) of 229 patients who had attempted suicide at Ashton-under-Lyne in England is of interest. He reported that *"judging by the circumstances of the attempt, statements made by the patient and others, and the results of the psychiatric interview....over three-quarters of the alleged suicidal attempts were actually suicidal gestures"*. He also noted that *"genuine suicidal attempts (were) made by individuals suffering from mental illness"*. Unfortunately, the groups were not systematically compared, and a further limitation of interpretation is imposed by the idiosyncratic use of terminology. This is illustrated by *"the attempt was judged to be serious or a 'cry for help'"*. Most researchers have used the term 'cry for help' either to apply to suicide attempts of low medical lethality, or as an aid to the understanding of suicidal behaviour in general, rather than considering it applicable to 'serious' attempts.

A further systematic study is that of Heyse et al (1969), who assessed both medical lethality and suicidal intent in 100 patients who had attempted suicide at the Max Planck Institute in Munich. The level of consciousness was assessed by physicians on a 5 point scale, and those who scored 0-3 were compared with those who were most medically lethal, scoring 4 or 5. Intent was based on two criteria:- whether the patient had expected another person after the attempt, and whether or not the attempt had been arranged in such

a way that the patient would be discovered. Demographic data was recorded and various psychological tests were also administered. They noted that the most medically serious were less likely to be expecting intervention ($p < .01$) and were more likely to have arranged the attempt so as not to be discovered ($p < .05$). They also found no significant association between making suicidal remarks and the seriousness of the attempt, and contrary to their expectations, the serious attempters did not score less on the Extraversion score of the Brengleman personality questionnaire. Reporting on the same patients, Kockott et al (1969) noted no difference in severity of an initial attempt compared to those with a past history of suicide attempts. In summarising their analysis, Heyse et al (1969) unequivocally reported that *"deep unconsciousness is a reliable criterion for the degree of serious suicidal intent"*.

It is of interest that at this stage of the development of assessment of suicidal subjects, Lester (1970a) considered that there was sufficient evidence to call into question the hitherto accepted view that suicide and attempted suicide were different but overlapping populations. In a review of papers pertinent to the concepts of medical lethality and suicidal intent, he suggested that *"suicidal behaviours fall on a continuum...available data indicate that the characteristics of groups having different self-destructive lethality change monotonically as the lethality of the groups increases"*.

Sendbuehler et al (1970) in Montreal assessed 222 persons over a seven year period, all of whom were deemed to have made a medically

serious suicide attempt. These subjects were then classified into 'serious', 'ambivalent', 'gesture' and 'doubtful' on the basis of their suicidal intent. Their clinical descriptions of varying intent are of note. Thus "cases were considered a 'serious attempt' when more influenced by internal motivations than by other people. Here there is little or no attempt at communication of their desire and the cry for help is 'internal' or delusional. These patients are more hopeless and helpless, have a generally negative approach towards life, ruminate about death and show more rigid thinking". On the other hand, it "was called a 'gesture' when despite its medical seriousness it was more influenced by other people, external happenings, or a clear cut appeal for help from readily available people. These attempters exhibit more hope, more vivid cries for help and are characterised by less helpless and less rigid thinking". Although their report is more concerned with general demographic data, it is of interest that 31 of 64 'serious' attempters were considered to have a psychotic illness, whereas only 34 of 158 'ambivalent', 'gesture' and 'doubtful' attempters were so diagnosed. This is again consistent with previously quoted studies.

Rosen (1970) reported a study of 886 patients in Edinburgh. The criteria for medical seriousness were based on pharmacological levels as described by Matthew and Lawson (1966), and the attempt was considered 'psychiatrically serious' purely on the grounds of whether or not the patient "had made preparations to avoid discovery". Only 5% were 'psychiatrically serious', 1% were both 'medically' and

'psychiatrically serious' and a further 15% were 'medically serious', making a total of 21% being 'serious' overall. In addition to the points already referred to in the review of demographic and descriptive data, Rosen noted that the 'serious' attempters had a better work record; were less crowded and more stable in their place of residence and less likely to be living in lodgings, hostels and institutions; had more insomnia; and were more likely to have a psychiatric follow-up. It is of note that depression, schizophrenia and organic disorders were diagnosed more frequently in the 'serious' group, and that although the numbers were small, and did not reach statistical significance, *"the serious-attempt group had 2.3 times the suicidal rate of the group with non-serious attempts"*. In this study suicidal intent was assessed on the parameter of the avoidance of discovery, and only distinguished 6% of patients as 'psychiatrically serious'. It is therefore of particular note that the bulk of the 'serious' group is in fact comprised of 'medically serious' patients, and this again illustrates that a distinction mainly on the basis of medical lethality appears to have relevance in terms of diagnosis and outcome.

That this is so has been more recently emphasised in the five year follow-up of those patients. Rosen (1976) reported that: *"During the five year follow-up period, a total of 34 suicides were found, which represented 3.84% of the total number at risk. Of those who had seriously attempted suicide, 12 (6.45%) of 186 succeeded later; of the other (non-serious or less serious) attempters,*

22 (3.1%) of 700 succeeded. The serious attempter suicide rate was 2.1 times that of the others, and this difference was statistically significant ($p < .05$). In addition, patients who made attempts that were judged serious on medical but not on psychiatric grounds were found to have a suicide rate significantly higher ($p < .05$) than patients who had made suicide attempts that were not a serious medical threat".

This study appears to be important as it provides a long-term follow-up of subjects graded for medical and psychiatric seriousness. Certainly its results seriously call into question the 'preliminary finding' of Greer and Lee (1967) that "the degree of medical danger in a suicide attempt is not a reliable indicator of subsequent suicidal risk". In addition, this data adds firm statistical evidence to the work of Schmidt et al (1954), Motto (1965), Retterssol (1970), and Weiss and Scott (1974), suggesting a relationship between medical lethality of an attempt and subsequent suicide. However, the consideration of 'suicidal intent' merely on the basis of the subject making 'preparations to avoid discovery' appears to be a weakness in this study. Whether or not it is a serious weakness can only be clarified by a more detailed consideration of intent as well as medical lethality.

Kinsinger (1971) assessed 60 females who had attempted suicide and administered the MMPI, Buss-Durkee Hostility Inventory and the Leary Interpersonal Check List, and correlated 48 scales from these tests with the 'lethality of suicidal intent' (sic). This index

appears to be a combination of intent and lethality. Thus, summaries of interviews with the patients *"were given to three judges who then rated each case for lethality of suicidal intention on a Lethality of Suicidal Intent Scale"*. It is of note that *"no relationship was found between these 48 scales and suicidal intent, beyond probable chance findings"*. There were trends for the more lethal attempters to be more socially stable, but more isolated than the less lethal attempters.

Birtchnell and Alarcon (1971b) assessed the suicidal intent of 91 consecutive attempted suicide patients in Aberdeen by asking whether or not they wanted to die at the time of the suicidal act. They distinguished three groups: those who wanted to die, those who were unsure and those who did not want to die, and compared the depression scores (modified Zung Self-Rating Scale), of the three groups. The medical seriousness was also gauged by the level of consciousness in three grades: normal, drowsy, and unconscious. The depression scores of the three groups graded by intent differed significantly ($p < .01$), and they concluded that there was *"a close relationship between the severity of depression and the professed wish to die at the time of the attempt"*. However, it is of note that the three groups graded by medical seriousness, as assessed by the level of consciousness, showed no relationship to either the degree of intent or the level of depression. This lack of a relationship between medical seriousness and intent certainly was not in accord with the work of Heyse et al (1969), the most directly comparable study.

The paper by McHugh and Goodell (1971) reports the development of "a rating scale to gauge the life-threatening severity of suicidal behaviour" for "sedative self-poisoning patients" in New York. This was based on three parameters. The 'depth of coma' was assessed on a 0 to 4 scale with 0 representing no effect of the drug and 4 representing non-response to painful stimulus. The 'physical danger' was graded 0 to 4 with 0 being assigned to patients not treated or admitted, and 4 to those requiring intensive resuscitation. The 'self-destructive intent' was scored from 1, being minimal, to 4 representing a potentially lethal amount of medication taken along with measures to avoid discovery. By adding these scores a rating from 1 to 12 was possible. They also divided their 99 patients into three diagnostic categories: personality disorder, depressive illness and 'disturbed life circumstances'. They found the 'Suicidal Rating Score' of those with depressive illness to be significantly greater than those with personality disorders, but although their mean score was also greater than those with 'disturbed life circumstances', it did not reach significance. They also found that patients with higher ratings tended to be older, both as a whole, and within the diagnostic categories. They considered that the demonstration of "a continuum of severity without boundaries" was an advance on previous methods of classifying patients within "somewhat arbitrary divisions". However, the combination of concepts of intent and lethality would appear to limit the usefulness of this scale, and it does not appear

to have been employed in more recent research.

Leon et al (1972) examined 273 cases in Cali, Colombia, and distinguished 153 'attempted', 44 'frustrated', and 76 'consummated suicides'. A 'frustrated suicide' was a person who would have died but for "*opportune intervention by another person and/or adequate medical attention*", a clear reference to both intent and lethality. The 'frustrated' suicides were also compared to a psychiatric control group. Apart from the 'frustrated' group having a greater incidence of parental loss or separation before the age of 15 (68%) they reported that the "*frustrated suicides differ little from matched psychiatric controls*". In comparing the suicidal subjects, more females than males comprised the 'attempted' group, but the sex distribution of the 'frustrated' and 'consummated' groups was approximately equal.

Weisman and Worden (1972) introduced a Risk-Rescue Rating instrument for the assessment of patients who had attempted suicide. They selected five variables related to the risk or medical lethality of the attempt, and five related to the possibility of rescue, which can be considered analogous to the suicidal intent. Each item was rated on a three point scale (e.g. (1) Risk factor 2: Impaired consciousness - 1 = none in evidence; 2 = confusion, semicoma; 3 = coma, deep coma; and (2) Rescue factor 5: Delay until recovery - 1 = greater than 4 hours, 2 = less than 4 hours; 3 = immediate to 1 hour). There were also scoring modifications, such as if patients presented to hospital themselves they were

automatically given a rescue score of five. The final score was derived by:

$$\frac{\text{Risk Score}}{\text{Risk Score} + \text{Rescue Score}} \times 100$$

This instrument was used in a study reported by Worden (1976) of forty subjects admitted to the Massachusetts General Hospital after attempting suicide. They were selected in order to give three different 'lethality' categories, on the basis of their Risk-Rescue Rating scores, and were compared on a number of demographic and descriptive parameters. He reported that the high lethality group had high intent to die as assessed by the Suicidal Intent Scale of Beck et al (1974b); were more likely to be married; had a greater past psychiatric history; had a history of poor social relationships; and there had been little repudiation by their family, and no change of family religion. He noted no relationship between age and sex, but added that older males had tended to have a higher Risk-Rescue Rating score in his previous work.

This work is of interest, but should be regarded with some caution. Thus, although Worden writes of three 'lethality' categories, in fact the subjects were divided into three 'Risk-Rescue Rating' categories, with factors related both to medical lethality and suicidal intent involved.

The report of Leonard (1974), although more relevant to later sections of this review, is noted now as it demonstrates both the diversity of subjects studied in research into suicidal behaviour, and

the confusion which can result from the introduction of new terminology in the area of suicidal intent and medical lethality. The subjects comprised 38 male and 52 female inpatients in a voluntary psychiatric hospital in a university medical school setting in California. They were aged between 15 and 66, 31% were Jewish, 60% were single and they had been inpatients for a mean of 99 days, thus making them an unusual group when compared to most other series. He used the term 'suicidality', which although not actually defined, appears to be mainly related to the future potential for suicide in terms of ideation and behaviour. However, he gave the maximum rating of six to seven subjects who suicided after discharge, irrespective of their former rating. He also noted that "*many admissions had been precipitated by serious suicide attempts*", thus inferring that medical lethality contributed to their classification also. Thirty-four percent of the subjects were rated 4 and 5, "*indicating serious and pervasive suicidal indications*", 31% were rated 1 and 2 "*indicating absent or minimal indications of suicidality*", and the remainder were intermediate in suicidality. It is of interest that the best predictor of suicidality in these subjects was prolonged hospitalisation.

The paper by Card (1974) is of interest as it considered the lethality of suicidal methods and subsequent risk of suicide. Her data consisted of 1039 suicides and 1690 attempted suicides in Pennsylvania. 'Lethality' was "*restricted to its original meaning of deadliness or seriousness of a particular suicidal incident*", and

was determined in two ways. The 'Mean seriousness' was based on the 'medical response to incidents', and conforms to the generally accepted 'medical lethality' defined earlier. She also used the concept of *"Probability of Death, or the proportion of suicidal incidents involving each method resulting in death"*. These measures had a high degree of correlation ($r = .95, p < .001$). Although the numbers of attempts followed by suicide were small in some of the methods of attempted suicide, she considered that there was not a positive relationship between the lethality of a previous attempt and the subsequent risk for suicide. In fact, her analysis suggested that suicide was more common in those whose previous attempt was of such low lethality that they had not come for medical treatment. She concluded: *"clearly lethality and risk are two separate variables and use of the first term to mean both lethality as well as risk represents an unfortunate turn of events in the suicide literature"*.

More recently a different interpretation has been made of Card's data by Pallis and Barraclough (1977). They called into question some of the assumptions made by Card in the data collection, especially in regard to the effect that differential under-reporting of some methods, such as unsuccessful attempts with suffocation by plastic bags, would have in the ranking of lethality. Using Card's data they reclassified the suicidal methods into only two broad groups based on lethality, and demonstrated that a different result could be obtained: *"Suicide attempts of 'high lethality' are twice*

as likely to be associated with future suicide than suicide attempts of 'low lethality' ($p < .01$)."

They also used their own data to compare the previous attempts of those who suicided and those who were repeating a suicide attempt. They reported: "The findings were unequivocal: the suicide's earlier attempts were far more serious than those of attempted suicides, a result in accord with the findings of earlier studies, but not with Card's".

One further clinical paper is of note before reviewing those studies using the Suicidal Intent Scale (Beck et al, 1974b).

Fraser and Lawson (1975) reviewed 246 women, aged 15-25, who had attempted suicide in Scotland. They graded the 'severity of poisoning' on the basis of the patient's conscious level, according to the criteria of Matthew and Lawson (1966). They considered 1.6% to have 'accidentally' poisoned themselves, 18.4% to have 'genuinely attempted suicide', and the remaining 80% were 'suffering from self-poisoning'. They reported that of "the 19 patients who were most seriously ill physically, 10 were considered to have no significant psychiatric disorder, 3 personality disorders, (and) 5 reactive depression (in only 2 of whom was the poisoning considered to be genuine attempted suicide)". Although no actual figures were given, they concluded: "there was no correlation between the severity of the poisoning and the associated psychiatric disorder".

This finding is clearly not consistent with the majority of studies reviewed so far (Schmidt et al, 1954; Rubenstein, 1958; James et al, 1963a; Dorpat and Boswell, 1963; Kessell, 1965; Graham and

Hitchens, 1967; Stanley, 1969; Sendbuehler et al, 1970; and Rosen, 1970).

c. Research Using the Suicidal Intent Scale

The Suicidal Intent Scale (Beck et al, 1974b) was developed to provide an objective assessment of suicidal intent, disregarding the medical lethality of a suicide attempt. It is comprised of nine items related to the circumstances of the attempt and six related to a self-rated assessment by the patient, and is described in detail on p.189.

The first reference in the literature to the use of this scale is in the paper by Silver et al (1971). They studied a heterogeneous group of 45 patients who had been admitted to the Philadelphia General Hospital after having attempted suicide. (Thirty-two had taken an overdose of drugs, 6 had lacerated themselves, 5 had jumped from a height and 2 had attempted to hang themselves.) They administered the Beck Depression Inventory and the Suicidal Intent Scale to each subject, and on the basis of scores on the depression inventory (p.101) divided the subjects into 'not depressed', 'moderately depressed' and 'severely depressed' groups. Subjects in the 'not depressed' group scored a mean intent of 8, 'moderately depressed' subjects scored 13.3 and the 'severely depressed' had a mean of 15.6. *"An analysis of variance revealed that the differences among the groups were significant ($p < 0.001$)"*. As one would anticipate from these scores, there was a significant correlation between depression and intent ($r = 0.62$, $p < 0.01$).

Minkoff et al (1973) also used the Suicidal Intent Scale on a sample of 68 persons who had attempted suicide. This paper is reviewed in detail in the review of Hopelessness, but it is of note that they found the correlation of intent with depression was less than that of intent with hopelessness, although it was still significant at the 0.05 level. It is of interest that a later study by Lester and Beck (1975a), assessing a larger group of 254 subjects who had attempted suicide, was unable to demonstrate a significant correlation between depression, measured by the Beck Depression Inventory, and intent, measured by the Suicidal Intent Scale. However, they reported a significant correlation ($p < .01$) between hopelessness and intent. It is also of note that neither depression nor hopelessness correlated with medical lethality, *"as judged by the interviewer"*.

Lester and Beck (1975b) studied 145 patients in Philadelphia with suicide attempts with coma-producing drugs. There were 53 males and 92 females, of whom 76 were white, 67 black and 2 'other'. Medical lethality was based on a 10 point scale ranging from 'fully conscious and alert' through to profound coma. Ratings on this scale were made by a psychologist and then patients were divided into 3 groups: 'low lethality', 'moderate lethality' and 'high lethality'. Subjects were administered the Beck Depression Inventory, the Hopelessness Scale (Beck et al, 1974c) and the Suicidal Intent Scale. It is of interest that most of this information was gained in a second interview by a 'psychological technician', after the first clinical interview. They found that the objective measure of suicidal intent increased

with increasing medical lethality ($p < 0.05$). Only 4 other variables (of 52) were significant at the 5% level; the time between the suicide attempt and discovery increased with increasing lethality; the 'moderate lethality' attempters were more often born in the first part of the year, and they also had fewest recent house changes and lived in the least crowded dwellings. It is of note that neither depression nor hopelessness scores or the self report of intent to die differentiated the three groups. They considered there were two possibilities that may account for this - attempters of differing lethality may not differ, or the lethality may not be related to the patient's intent to die. They concluded that their data suggested that *"while the rated medical lethality of a suicide attempt is more easily assessed than the patient's intent, it probably has less utility in psychological research"*.

Beck et al (1975a) next reported on 227 attempters at the Philadelphia General Hospital and the Hospital of the University of Pennsylvania. Each patient was interviewed by a psychologist, who also made the lethality ratings on the basis of a case note study and consultation with the attending physician. Item 11 of the Suicidal Intent Scale (see Appendix V) was used to divide subjects into those who had done less than they thought would be fatal, those who were uncertain and those who equalled or exceeded what they thought would be fatal. They found the correlation between suicidal intent and medical lethality to be low overall, but the accurate predictors showed a high positive correlation between intent and lethality.

They concluded: *"These results indicate that when a patient has an accurate conception of the lethality of his suicidal act, the resulting degree of danger to his life is proportional to his suicidal intent....At the same time, the study confirms the low validity of medical lethality as a measure of the seriousness of intent, since in the majority of cases the patients inaccurately conceived the lethality of his act. Clearly, as Stengel and Cook (1958) pointed out, suicidal intent and lethality must be rated separately"*.

This study appears important as it does not support Kessell's (1965) contention that most suicidal subjects know the dangerousness of their attempt, and it is consistent with the recent study of Sale et al (1975) in which it is noted that the opinions of the general population of drug toxicity *"differed widely from those medically accepted"*. These findings indicate further the problems inherent in assessing and differentiating suicidal intent and medical lethality.

Another study which both strengthened the validity of the scale and suggested it may be of prognostic value was that of Beck et al (1974a). In a study of both attempters and completed suicides, and using only the items on the Suicidal Intent Scale which related to the objective circumstances of the attempt, they reported that 194 suicides had a higher score than 231 attempters. They also noted that the 19 patients who repeated their attempt within a year had significantly higher scores on the complete scale than those who did not repeat.

The next development was a factor analysis of items of the Suicidal

Intent Scale (Beck et al, 1976). The subjects for this study were 81 men and 107 women aged 18 to 63 at the same centres in Philadelphia. The aim was to classify suicidal behaviour in terms of dimensions of suicidal intent. The four major dimensions elucidated were the 'patients' attitudes towards attempt', 'planning', 'precautions against intervention', and 'communication with others'. It is of interest that characteristics relevant to overt behaviour (the latter three) were independent of the psychological attitude towards the attempt. Also of note was the relative independence of the 'communicating with others' factor, and Beck et al (1976) suggested this may reflect a specific behavioural pattern, and that the so-called 'cry for help' may not be a general component of all suicidal behaviour, but only *"a reflection of the personal style of a particular suicide attempter: some suicidal individuals are 'communicators' and others are not"*.

Such a conclusion was presented in another paper from the same group (Kovacs et al, 1976) addressed specifically to *"The Communication of Suicidal Intent"*. They examined individual items of the intent scale related to communication and noted: *"verbal communication, final acts, and previous suicide attempts do not seem to have much empirical promise as indicators of the extent of the wish to die or of the overall severity of suicidal intent"*. They also considered that the items of communication were more related to each individual's style of behaviour. As noted, this report comes from the same group, and these findings await replication elsewhere.

Until the paper of Pallis and Sainsbury (1976), all reports using the Suicidal Intent Scale had come from Beck's group. Pallis and Sainsbury (1976) assessed 151 patients who had attempted suicide in Chichester, and as well as using the Suicidal Intent Scale, assessed the 'medical seriousness' on the basis of 'no threat to life', 'some threat to life' and 'serious threat to life'. This was initially done by the casualty medical officer, and later by one of the authors, and only those ratings in which there was complete agreement were used. In addition, the casualty medical officer only rated 67% of the original sample, and the analysis on the basis of medical seriousness was therefore confined to 81 subjects. Those with 'no threat to life' rated a mean of 6.11 on the intent scale, those with 'some threat to life' rated 11.16 and those with a 'serious threat to life' rated 16.23. These differences are significant at the 0.001 level. They also noted that the difference between the three groups was significant when either the circumstances score ($p < .001$) or the self-report score ($p < 0.001$) was used. As well as considering medical seriousness they also used "*a scale of suicide risk developed and validated by Tuckman and Youngman (1968)*". It is of interest that when the two parts of the intent scale were considered separately with this index of suicide risk, only the circumstances score significantly differentiated the different risk groups. They also determined a "*depressive symptom score (based on the number of symptoms of depression present in the month prior to suicide attempt)*", and it is of note that this score was also

"positively associated with intent beyond the 1% level of confidence". As a result of their study, and particularly the positive association between scores on the Suicidal Intent Scale and the validated suicide risk scale, Pallis and Sainsbury (1976) concluded that the intent scale had *"potential value....as a screening instrument"*.

There has been at least one recent attempt to refine the Suicidal Intent Scale. Pierce (1977) adapted it in an attempt to develop *"a more objective scale"*, and reported its use in 500 persons who attempted suicide in East Glamorgan. Of the 12 items in this intent scale, numbers 1-6 (circumstances of act) and 8 (self-report) are the same as in the Beck scale; the self-report *"items 7-10 are more subjective in character"*; item 10 relates to the patient's reaction to the suicidal act at the time of interview; and items 11 and 12 deal with the medical risk. These refinements appear difficult to justify, as not only is the concept of medical lethality introduced into an 'intent' scale, but the item related to reaction to the act introduces another dimension, not clearly related to intent at the time. This is especially so if the cathartic effect of attempted suicide, first suggested by Farberow (1950), is in fact a valid concept. Pierce defends the former criticism, and quotes the work of Pallis and Sainsbury (1976) in his contention that medical seriousness and suicidal intent are directly linked. The latter criticism is countered by *"interviewing patients as soon as possible after admission"*. However, the very act of admission and the effect the attempt has had on significant others can have already altered a patient's feelings

towards having survived. Despite these reservations, Pierce's intent scale correlated highly with that of Beck et al ($p < .001$) and had internal consistency of items. Significant findings were: there was a positive correlation with age except for the self-report items; men scored higher than women only on the medical risk or lethality scores; those living alone had higher scores, except on the self-report score; those who attempted suicide by other than self poisoning scored higher, except on the self-report score; those with a past history of suicidal behaviour scored higher on the medical risk and self-report scores than first attempters; and those with a history of previous psychiatric treatment had a greater total score and self report score. The correlation between the objective circumstances of the act and medical risk was greater than that for the self-report score, a finding consistent with Beck's work.

There seems little doubt that the intent scale of Pierce (1977) is reliable and valid in what it measures. However, it combines concepts of medical lethality and the patient's retrospective view of having survived, and would perhaps be better named in terms suggestive of an overall suicidal risk score.

d. Comment

A review of the research delineating medical lethality and suicidal intent indicates that there is indeed a relationship between the two. Although this correlation is not perfect, it suggests that the current clinical practice of grouping patients into the medically serious and non-serious does have some relevance in terms of a patient's

suicidal intent and ultimate outcome. It also has a bearing on the everyday management of these patients, as there is evidence to suggest that clinicians are more likely to respond positively to those making medically serious suicide attempts (Ansell and McGee, 1971; Ramon, et al, 1975). If a 'positive response' implies a decision to provide the patient with more intensive assessment and management, then on the balance of evidence so far, this is probably a correct clinical response. However, the corollary that those less medically serious should receive less attention, should not be assumed. There appears to be good reason to consider specific subgroups of suicidal patients with differing degrees of medical lethality and intent, and to examine them more closely.

Thus the remainder of this review will focus on several attributes of suicidal subjects which may be of relevance to their overall management.

VI. OTHER ATTRIBUTES TO BE STUDIED

a. Psychiatric Diagnosis - Depression and Attempted Suicide

i. Introduction

Despite the difficulties involved in psychiatric diagnosis, depression is the most common diagnosis recorded in patients who have attempted suicide. However, the relative frequency of such a diagnosis varies greatly in different series. Although it is generally diagnosed in about 35%-80% of those who attempt suicide (Weissman, 1974), a figure below 10% has been reported in one series (Yessler et al, 1961). At the other end of the scale, it has also been

argued that all who attempt suicide manifest some degree of depressive affect, and that it is "*legitimate to try to measure this in every case*" (Birtchnell and Alarcon, 1971b).

The term 'depression' is open to interpretation as to whether it applies to a primary depressive illness (endogenous depression, psychotic depression, primary affective disorder) or whether it is a reactive or neurotic depression associated with personality difficulties. Such a differentiation is less difficult in the elderly where endogenous depression is more commonly encountered, but the concurrence of hysterical and hostile components in many of the young women who attempt suicide can make the diagnosis of primary depressive illness very difficult (Lazare and Klerman, 1968). It is of note that Bibb and Guze (1972), in reviewing depression and 'hysteria' considered that although it is possible to distinguish two types of depression, both may denote equal morbidity for the patient. On the other hand, a more recent paper by Paykel et al (1976) reporting a study of personality and symptom patterns of depression noted that those depressed patients with hysterical personalities tended to be less severely ill. The ways in which personality structure influences the clinical picture of depression and the differentiation of categories of depression will be further pursued in the discussion section.

ii. Clinical reports

The early studies of Stengel (1969) clearly emphasised the depressive component. In a series of patients deemed ill enough

to need management in a psychiatric ward in 1946, he reported 68% to be either suffering from a 'depressive illness' (35%) or 'other abnormal depressions' (33%). In another study, more representative of the attempted suicide population as a whole, he noted no less than 85% to be depressed, though only 26% were considered to have a 'depressive illness' and the other 59% had 'other abnormal depressions'.

It is of interest that those subsequent studies which have relied on clinical diagnosis have in general reported less depression than Stengel. Thus, the study referred to previously by Yessler et al (1961) reported only 10 of 104 male American servicemen who had attempted suicide to have a diagnosis of depression, of whom 8 were neurotically depressed. It is of interest that they noted that 18.9% of subjects had been "*depressed, morose (and had had) mood swings*". However, they pointed out that this was "*not necessarily synonymous with his psychiatric diagnosis*", and the lower figure quoted was considered to be the correct diagnosis.

Another low figure for depression was that reported by Schmidt et al (1954). In a study of 109 patients (49 men and 60 women) at the St. Louis hospital receiving room they reported that 16% had a 'manic-depressive depression', and noted that "*it was of interest that in no patient was the diagnosis of psychoneurotic depressive reaction made*". The categorisation of depression by Schmidt et al (1954) is in marked contrast to that reported by Kessell (1965). In a survey of 515 patients at the Edinburgh Regional Poisoning Treatment Centre, he noted 20% of males and 43% of females to have

'depression', and observed that *"depressive illness, the commonest condition, was hardly ever accompanied by psychotic phenomena and was preponderantly mild"*.

Other studies reporting the clinical diagnosis include Edwards and Whitlock (1968) in Brisbane who noted that of women who attempted suicide in their series, 31% were diagnosed 'neurotic depression' and 4% 'endogenous depression'; Ovenstone (1973) who reported 42.5% of females who had attempted suicide in Edinburgh over an eighteen month period to be diagnosed 'depression'; Holding et al (1977) reviewed seven years of parasuicide in Edinburgh and noted that *"the most common diagnostic category was depression (which includes reactive depression), which was diagnosed in 40 per cent of women and 28 per cent of men"*; Burke (1974) in a study of East Indian and African women in Trinidad and Tobago who had attempted suicide noted 48% to have either a 'primary' (5%) or 'secondary' (45%) 'affective disorder'; Jacobson and Tribe (1972) reported 49% of women to be depressed in a sample of attempted suicides in Sussex, of whom *"20% were more severely ill with endogenous depression, i.e. depression without apparent evidence of precipitating causes"*; and Morgan et al (1975a) reported 59% of women diagnosed as 'neurotic depression' and 10% as 'affective functional psychosis' in a study of deliberate self-harm in Bristol.

The problems of comparison of these clinical diagnoses stand out clearly in a simple examination of the terms used. Stengel (1969) used 'depressive illness' and 'other abnormal depressions', Schmidt

et al (1954) used 'manic depressive depression', and Edwards and Whitlock (1968) used 'neurotic' and 'endogenous' depression. It is of interest that Jacobson and Tribe (1972) used the term 'endogenous depression' in the sense of "*depression without apparent evidence of precipitating causes*", whereas its more generally accepted use is as a diagnosis on the basis of a pattern of symptoms (Kiloh and Garside, 1963; Kiloh et al, 1972).

The difficulties of diagnosis are also compounded by other factors. Holding et al (1977) acknowledged "*possible changing diagnostic fashions among the psychiatric staff*" in Edinburgh, and writing of the same unit, Kreitman (1976b) reported "*diagnostic finesse was necessarily limited by the emergency conditions under which the service operated*". Such a comment would apply to most units managing those patients who attempt suicide. The subjects in the report of Edwards and Whitlock (1968) were all seen by one researcher, but those in other series were seen by one of several interviewers, the status of whom is sometimes not clarified. It is also of note that in the series of Morgan et al (1975a), only 70% were allocated a diagnosis on admission, and the remainder were diagnosed retrospectively from information in the case notes.

iii. Comparative Studies and Research Utilising Objective Measures of Depression

Despite these limitations there is no doubt that depression, irrespective of how it is categorised, is of major importance in those who have attempted suicide. It is therefore a logical step to attempt

to quantify the depressive component in these patients, or to compare it with other clinically meaningful groups. Several studies have addressed this issue.

Bridges and Koller (1966) compared 198 persons who had attempted suicide with 143 general inpatients who had been referred for psychiatric assessment at King's College Hospital, London. On clinical grounds, they reported 57.6% of those who had attempted suicide to be depressed, with 50.5% 'neurotic depression' and 7.1% 'endogenous and involuntional depressions', compared with 29.4% of general hospital referrals, with 11.2% 'neurotic depression' and 18.2% 'endogenous and involuntional depressions'. Depression was clearly more commonly diagnosed in those who had attempted suicide, though it was more likely to be 'neurotic' in nature, whereas those who were referred for reasons other than suicidal behaviour were more likely to be suffering from 'endogenous and involuntional depressions'.

Birtchnell (1970) reported a series of 104 patients who had attempted suicide and were admitted to the Crichton Royal Hospital. He used a rating scale based on the presence or absence of generally recognised symptoms of depression and in a review of case notes he considered that 75% of the subjects were depressed, and that of the women, only 12.3% were not depressed, 46.2% were 'moderately depressed', and 41.5% were 'severely depressed'.

Birtchnell and Alarcon (1971b) used a modified Zung Self Rating Depression Scale on 91 patients (89 overdoses and 2 wrist cutting) in Aberdeen, and compared their scores to those of patients who were

considered sufficiently depressed to warrant electro-convulsive therapy (E.C.T.) as day patients. They excluded those persons aged under twenty from the attempted suicide group to make the samples more similar in age distribution. They reported that of the 68 patients over twenty years of age, 58.9% scored 30 or more on a 0-60 scale, a score which they considered to be *"an indication for psychiatric treatment"*. In comparing the two groups they found *"there was no significant difference in the depressive symptomatology of the E.C.T. treated patients and attempted suicides of comparable age distribution, though the mean depression scores were lower in the attempted suicide group"*. In addition, they reported *"no significant difference in the symptomatology of the younger and older suicidal patients, though the older patients are more severely depressed"*. It is of note that the patients under 20 years of age excluded from the comparison scored a mean of 25.74 on the depression scale, and that *"even in this group"* 7 of the 23 scored 30 or more, their arbitrary level for psychiatric treatment.

The degree of depression in a heterogeneous group of 45 subjects (referred to on p.86) who had attempted suicide in Philadelphia was assessed by Silver et al (1971). They used the Beck Depression Inventory and excluded the item relating to suicidal ideation. These subjects had a range of scores from 2 to 59 on the 0-63 scale, and the mean score for the entire group was 25.0, with the female population slightly higher (25.5). The score for those who had

attempted suicide was significantly higher than the score (mean 18.2) of 394 psychiatric inpatients. Previous studies using the Beck Depression Inventory, had suggested that scores 0-13 indicated a 'not depressed' group; scores 14-24 indicated 'moderate depression' and scores of 25 and greater indicated 'severe depression'. Using these criteria they found 80% of their total subjects to be depressed, and of the women 29% were 'moderately depressed' and 50% 'severely depressed'. They also noted that "61% of the women had a primary diagnosis of an affective disorder, viz. manic-depressive depression, involuntional melancholia, psychotic depressive reaction, or depressive neurosis". How the other 18% of depressed women (to make up the 79% overall) were classified is not reported.

Beck et al (1975b) also used the Beck Depression Inventory, as well as a clinical interview, and recorded a mean depression score of 23.6 in a sample of 384 suicide attempters admitted to two hospitals in Philadelphia. They noted that 45% of men and 54% of women had 'depressive disorders', but it is not clear whether these figures are based on clinical diagnosis or on the criteria described above, in the reference to the work of Silver et al (1971).

The paper of Beck et al (1973) is worthy of note as it is one of the first to specifically attempt to clarify various aspects of depression in suicidal subjects. The suicidal wishes of 247 patients who had attempted suicide were correlated with the items on the depression inventory. They reported that suicidal wishes correlated more with "cognitive factors such as pessimism, and sense of failure

and with items dealing with mood and feeling (anhedonia)", than with the "classical physical and vegetative symptoms of depression".

Leonard (1974), in a paper entitled "Depression and Suicidality" used the MMPI and Zung Self Rating Depression scale as well as clinical measures in the assessment of 90 suicidal subjects (p.82). He reported that "high suicidality patients tended to be diagnosed depressive neurosis", and that there was a positive association between 'suicidality' and the Depression Scale of the MMPI. However, he also noted that "the self-rating Depression Scale index did not prove useful", and that "suicidality and depression proved to be multidimensional and relatively independent factors".

Factor analysis of the Zung items showed at least two components of 'suicidality' which appeared to have clinical relevance:- "the first suicidal factor appears to represent dependence on hospitalisation by young patients who complained of restlessness, possibly reflecting a difficulty with control and an unusual dependence on external controls". The second factor indicated "difficulty with sleeping and eating as though physiological as well as psychological disequilibrium were present". It is of interest that the first may have relevance to the locus of control dimension of personality (p.142) and the second could well be related to the biological features of depression. It is of interest that the latter cluster of symptoms emerged in this study, as they assumed less importance in the analysis of Beck et al (1973) reviewed above. This will be noted further in the discussion.

Weissman et al (1973), from the Yale-New Haven group, compared 29 women who had attempted suicide with 29 women who were being treated as outpatients for depression. These subjects were matched for sex, age, social class, race and marital status. They used a clinical interview for depression based on the Hamilton Rating Scale and the Raskin Three-area Scale for depression. They reported: "*Both groups were rated as moderately depressed on the two clinical evaluation ratings....data analysis revealed no differences in degree of clinical depression*". However, despite the similarity in depression rating, they also noted that "*attempters, as compared with depressives had exhibited significantly less depressed appearance, less pessimism and hopelessness, and less impairment in their work performance during the previous week*". Such a finding suggests that clinical examination of these persons may not detect the degree of depression assessed by using standardised ratings.

Pallis and his colleagues have published several papers related to patients who had attempted suicide, and whose records were available from the North East Scotland Psychiatric Case Register (Pallis et al, 1975; Pallis and Birtchnell, 1976, 1977). They compared subjects who had attempted suicide, those who conceded suicidal ideation, and those in whom no suicidal ideation had been noted in their case record (Pallis et al, 1975). They found that the suicide attempt and suicidal ideation groups contained more patients diagnosed as 'neurotic' or 'reactive' depression (17.6% and 15.6% respectively) than the non-suicidal group (7.7%). It is of note

that "Depression: unspecified, endogenous, etc." was diagnosed approximately equally among the three groups, comprising 44.9%, 50.3% and 43.8% of each group respectively.

Pallis and Birtchnell (1976) used the MMPI to compare 136 suicide attempters with 233 non-suicidal subjects. The Depression Scale demonstrated a significantly greater degree of depression in those who had attempted suicide. In their subsequent paper (Pallis and Birtchnell, 1977) they compared 42 whose attempt was judged to be 'serious', with 42 'non-serious' and 126 non-suicidal subjects, each matched for age and sex. They noted that the 'serious' attempters were more often diagnosed as depressed, but the MMPI Depression Scale did not demonstrate a significant difference between the three groups. It is of note that this is consistent with the report of Leonard (1977) that the MMPI Depression Scale distinguished 'highly suicidal' patients from those who were not suicidal, but did not differentiate the suicidal patients from a group who actually subsequently committed suicide.

Two other studies have demonstrated that the degree of depression in those who attempt suicide is of the same magnitude as that in other groups of psychiatric patients. El-Gaaly (1974) compared 21 consecutive women who had attempted suicide with 17 consecutive women referred to an outpatient clinic in Leeds. Using the Hamilton Rating Scale for depression, he found no significant difference between the groups in the degree of depression, although there was

certainly more social dysfunction in the attempted suicide group. Goldney (1977) compared 40 consecutive women between the ages of 18 and 30 who had attempted suicide with 40 women also between 18 and 30 who were admitted to the psychiatric ward of a general hospital and who had no history of suicidal behaviour. Using the Levine-Pilowsky Depression questionnaire (p.191) it was found that *"both groups had a mean score which can be considered in the depressed range, and there was no significant difference in the mean score between the two groups"*.

iv. Comment

The problems of the variability of nosology and diagnosis of depression are readily apparent in this review and were alluded to on p.95. The difficulty in clarifying depression in the presence of features suggestive of the hysterical personality have been well documented (Chodoff, 1972; Lazare and Klerman, 1968), and bear consideration in assessing the above research. Thus Morgan et al (1975a) noted that patients who attempt suicide were often seen in pejorative forms, *"of which the stereotype is that of a histrionic young woman who is making a nuisance of herself and who merely needs to pull herself together, preferably without psychiatric intervention"*.

It is of interest that the studies reporting depression on the basis of clinical diagnosis have in general denoted less than those employing more objective measures of depression such as rating scales or questionnaires. Similarly, recent comparisons of patients who have attempted suicide with other groups such as clinically diagnosed

depressives, or simply other patients deemed psychiatrically ill enough to warrant hospitalisation have also demonstrated that the degree of depression in attempted suicide may have been underestimated in the past. These findings are summarised in Table 2.7.

Again it must be acknowledged that there are difficulties in diagnosis, and that the subjects in different studies are not directly comparable. However, it must also be acknowledged that it is possible that reports based on clinical diagnosis may have been influenced by the perceived histrionic component of these patients, with a resultant minimising of the depressive component. Clearly this is speculative, but it may be related to the manner in which these persons present their depressive symptomatology. That this may be so is suggested by the study of Weissman et al (1973) (p.103) in which it was noted that there was no significant difference in the degree of clinical depression on the basis of a modified Hamilton Rating Scale for depression and the Raskin Three-area Scale for depression between depressed outpatients and suicide attempters (all women), despite the clinical observation that *"attempters, as compared with depressives, had exhibited significantly less depressed appearance, less pessimism and hopelessness"*.

Clearly, the question of the depressive component in those who attempt suicide remains to be clarified, and it would appear to demand the closest scrutiny. It seems particularly important to examine the nature of depression in young women who have attempted suicide, where it may be difficult to separate the affective features from the personality aspects of their presentation.

TABLE 2.7.

DEPRESSION REPORTED IN ATTEMPTED SUICIDE

TABLE 2.7.

DEPRESSION REPORTED IN ATTEMPTED SUICIDE

<u>Author</u>	<u>Subject</u>	<u>Rating of Depression</u>	<u>Depression</u>
<u>I . Clinical Diagnosis of Depression in Attempted Suicide</u>			
Stengel (1969)	(a) 138 admissions to a London psychiatric ward in 1946, all deemed in need of psychiatric observation	Clinical diagnosis	68% 'Depressive illness' - 35% 'Other abnormal depression' - 33%
	(b) 76 unselected patients who attempted suicide in 1946	Clinical diagnosis	85% 'Depressive illness' - 26% 'Other abnormal depression' - 59%
Schmidt et al (1954)	109 patients in the St. Louis Hospital receiving room	Clinical diagnosis	16% 'Manic-depressive depression' No 'psycho-neurotic depressive reaction'
Yessler et al (1961)	104 male American servicemen	Clinical diagnosis	'Neurotic depressive reactions' - 7.69% 9.6% 'Psychotic-depressive reactions' - 0.96% and 'Manic-depressive reaction' - 0.96%
Kessell (1965)	515 patients in Edinburgh	Clinical diagnosis	'Depression' 20% males 43% females
Edwards and Whitlock (1968)	680 patients in Brisbane	Clinical diagnosis	34% 'Neurotic depression' - 30% 'Endogenous depression' - 4%
Jacobson and Tribe (1972)	254 patients in a General Hospital in Sussex	Clinical diagnosis	'Depression' 56% males 49% females
Ovenstone (1973)	1141 patients in Edinburgh RPTC	Clinical diagnosis	'Depression' 33.7% males 42.5% females
Burke (1974)	97 women in Trinidad and Tobago	Clinical diagnosis	'Affective disorder' 'Primary' 3% 'Secondary' 45%

Morgan et al (1975a)	337 patients in Bristol	Clinical diagnosis	62% 'Neurotic depression' - 52% 'Affective functional psychosis' - 10%
Holding et al (1977)	7413 patients in a 7 year review of Edinburgh RPTC	Clinical diagnosis	'Depression' 28% males 40% females

II. Objective Measurement and/or Comparative Studies of Depression in Attempted Suicide

Bridges and Koller (1966)	198 attempted suicides compared to 143 general inpatients referred for psychiatric assessment at King's College Hospital, London	Clinical diagnosis	57.6% of attempted suicide 'depressed' compared to 29.4% of general hospital referrals
Birtchnell (1970)	104 patients at Crichton Royal Hospital	Rating scale based on symptoms of depression	75% 'depressed' 87.7% females 53.9% males
Birtchnell and Alarcon (1971b)	91 patients who attempted suicide compared to outpatients having E.C.T. for depression	Modified Zung Rating Scale for Depression	58.9% of those suicide attempts over the age of 20 scored above 30 on a 0-60 scale, such a score being considered " <i>an indication for psychiatric treatment</i> ". <i>"There was no significant difference in the depressive symptomatology of the E.C.T. treated patients and attempted suicides of comparable age distribution."</i>
Silver et al (1971)	45 patients who attempted suicide and admitted to Philadelphia General Hospital	Beck Depression Inventory	80% 'Moderately depressed' - 31% 'Severely depressed' - 49%
Weissman et al (1973)	29 women who attempted suicide matched with 29 depressed women treated as outpatients (Yale-New Haven Study)	Clinical interview for depression (Modified Hamilton Rating Scale and the Raskin Three-Area Scale for Depression)	<i>"Both groups were rated as moderately depressed...no differences in degree of clinical depression."</i>

TABLE 2.7. (contd.)

DEPRESSION REPORTED IN ATTEMPTED SUICIDE

Author

Beck et al (1973)	247 consecutive attempted suicides admitted to Philadelphia General Hospital	Beck Depression Inventory	<i>"Not all symptoms of depression are equally useful in predicting accompanying suicidal preoccupation." Cognitive aspects rather than vegetative symptoms more significantly correlated with suicidal wishes.</i>
Leonard (1974)	90 patients in voluntary psychiatric hospital in University Medical School setting (see p.83 for further description)	MMPI, Zung Self-Rating Depression Scale and clinical diagnosis	<i>'Depressive neurosis' 32% "Depression and suicidality emerged in the factor structure as multi-dimensional and independent factors."</i>
El-Gaaly (1974)	21 women who attempted suicide compared with 17 depressed women treated as outpatients in Leeds	Hamilton Rating Scale for Depression	No significant difference in the degree of depression between the two groups.
Beck et al (1975)	384 suicide attempters admitted to two Philadelphia hospitals	Beck Depression Inventory and clinical diagnosis	<i>'Depressive Disorders' 45% males 54% females (It is not clear whether this is based on the clinical diagnosis or the Beck Depression Inventory.)</i>
Pallis et al (1975)	575 patients from the North East Scotland Psychiatric Case Register, of whom 136 had attempted suicide, 147 had had suicidal ideation and 233 were non-suicidal	Clinical diagnosis	More 'neurotic' or 'reactive depression', but comparable 'Unspecified, endogenous, etc.' depression in suicidal compared to non-suicidal patients.

Pallis and Birtchnell (1976)	The same subjects as in the study of Pallis et al (1975)	MMPI Depression Scale	Significantly greater depression in suicide attempters compared to those who had not attempted suicide.
Pallis and Birtchnell (1977)	42 'serious' and 42 'non-serious' suicide attempters and non-suicidal psychiatric patients, matched for age and sex	Clinical diagnosis and MMPI Depression Scale	<p>'Depression' - 'Serious' attempters - 69%</p> <p>'Non-serious' attempters 59%</p> <p>No significant difference in the MMPI depression score between the 'serious' and 'non-serious' attempters and a comparison group of non-suicidal psychiatric patients.</p>
Goldney (1977)	40 women 18-30 admitted to Royal Adelaide Hospital with drug overdose compared to 40 non-suicidal women 18-30 admitted to a general psychiatric ward	Levine Pilowsky Depression Questionnaire	<i>"Both groups had a mean score which can be considered in the depressed range, and there was no significant difference in the mean score between the two groups."</i>

b. Hopelessness and Attempted Suicide

Although depression is clearly of significance in many of those who attempt suicide, the fact that not all who appear suicidal are depressed suggests that other factors are of importance in precipitating suicidal behaviour. The work of Beck and his colleagues from Philadelphia has suggested that a stronger association may exist between 'hopelessness' and attempted suicide than between depression and attempted suicide. This work was a development of the earlier observation by Beck (1963), on the basis of psychotherapy with 50 depressed suicidal patients, that *"suicidal preoccupation seemed....related to the patient's conceptualisation of his situation as untenable or hopeless....The suicidal patients generally stated that they regarded suicide as the only possible solution for their desperate or hopeless situations"*.

It is of note that in factor analytic studies of the Beck Depression Inventory, Pichot and Lempérière (1964) isolated a factor with high loadings for 'hopelessness' (.40) and 'suicide' (.34), and Copley and Weckowicz (1966) reported an identical factor with loadings of .53 for 'hopelessness' and .57 for 'suicidal wishes'. In an intercorrelation of individual items of the same depression inventory, Beck (1967) demonstrated that 'suicidal wishes' correlated more highly with 'hopelessness' than with any other item. The earlier factor analytic studies of the Beck Depression Inventory had been done on the responses of either depressed patients (Pichot and Lempérière, 1964) or admissions to the psychiatric service of a

general hospital (Cropley and Weckowicz, 1966). A more recent factor analysis by Beck and Lester (1973) of 254 consecutive patients who had attempted suicide yielded similar results to the previous studies, and they concluded "*that hopelessness is an important precursor to suicidal behaviour*".

Other authors have also noted the importance of 'hope' and 'hopelessness'. Kobler and Stotland (1964) and Stotland (1969) have written extensively on "*The End of Hope*" and "*The Psychology of Hope*" respectively, and Farber (1968) formulated a "*Theory of Suicide*" in which the relevance of 'hopelessness' in relation to suicide was emphasised to the extent of considering suicide as a "*disease of hope*".

Beck and his colleagues (Minkoff et al, 1973) reported a study of "*Hopelessness, Depression and Attempted Suicide*" using an unpublished Generalised Expectancies Scale. This purported to measure "*negative expectations about the future*", which can be considered as an operational definition of 'hopelessness'. This scale was later published as the Hopelessness Scale (Beck et al, 1974c), and it will be referred to as such in this thesis.

Minkoff et al (1973) administered this scale to 68 consecutive suicide attempters admitted to the Philadelphia General Hospital and correlated scores obtained, and those of the Beck Depression Inventory, with scores on the Suicidal Intent Scale. They found the correlation between the depression score and intent ($r = .26$) was significant at the .05 level, whereas the correlation of

hopelessness ($r = .47$) was significant at the .001 level. They also reported that correlation between intent and hopelessness was higher than that between intent and depression ($p < .001$ using Hotelling's test of the difference between two dependent correlation coefficients). Furthermore, they found that the partial correlation of intent with hopelessness (holding depression constant) was .41 ($p < .001$) while the partial correlation of intent with depression (holding hopelessness constant) was $-.09$, not significant. When examining the different diagnostic groups, it was found that for depressives the correlation between hopelessness score and suicidal intent was even greater ($r = .64$, $p < .001$), but for the schizophrenic group the correlation though positive, was not significant. Although they pointed out that this relationship *"does not prove that hopelessness causes suicidal behaviour"*, it was noted that *"this not only suggests a solution to the puzzling question of why there is a relationship between depression and suicide, but also indicates that approaches specifically designated to alleviate hopelessness may be successful in preventing suicide"*.

A study by Pokorny et al (1975) was not able to reproduce the results of Minkoff et al (1973). They used the Zung Self-Rating Depression Scale (but noted that there was a high degree of correlation between it and the Beck Depression Inventory in 19 subjects who had taken both), and the same Hopelessness Scale and Suicidal Intent Scale. They confined the comparison to 21 subjects who were depressed and who had been assessed within 72 hours of

their suicide attempt, and found the correlation between suicidal intent and depression to be .52, but the correlation between hopelessness and suicidal intent to be only .39, and not significant. Pokorny et al (1975) suggested that the conflicting results might be related to the demographic differences in the two samples studied, and these issues will be further pursued in the discussion of the present results.

It is also of note that the study of Leonard (1974) (pp.82, 102) does not support the degree of importance ascribed to hopelessness by Beck and his colleagues. Thus Leonard (1974) concluded that *"suicidal patients in this study tended to be characterised by self reports of physical disequilibrium and control problems rather than by feelings of despondency and hopelessness"*. However, subject selection may have influenced these results, and conclusions drawn from a comparison of subjects seen in a general hospital shortly after having attempted suicide and those who have been in a psychiatric unit in a medical school setting for a mean of 99 days should be guarded.

There are two further reports from Beck's group which support the earlier findings of Minkoff et al (1973). Kovacs et al (1975) used the Hopelessness Scale, the Beck Depression Inventory and the Current Suicidal Intent Scale (a 13 item scale, as opposed to the group's more commonly recognised 15 item Suicidal Intent Scale). In a study of 32 males and 55 females hospitalised for suicide attempts, they found that hopelessness and depression were both positively correlated with the *"extent of current suicidal risk"*, and that hopelessness

showed a significantly higher ($p < .05$) correlation with current suicidal risk than did depression. They also noted that *"hopelessness was significantly better than depression in predicting how much a patient does not want to live"*. In addition, partial correlation between hopelessness and current suicidal intent (controlling for depression) was significant, whereas when controlling for hopelessness, depression was not significantly correlated with intent. They noted: *"In other words, the relationship between our measures of depression and current suicidal intent is primarily due to a common source of variance: hopelessness"*.

The same authors, Beck et al (1975b) published a larger series of 384 suicide attempters in which they used the Hopelessness Scale, the Beck Depression Inventory and the Suicidal Intent Scale. These subjects comprised 160 men and 224 women, aged from 17-63 years. 250 had ingested dangerous substances, 66 had cut or pierced themselves with instruments and the remaining 68 had used a variety of methods such as jumping, gas inhalation and drowning. They reported similar results to their earlier smaller study and to that of Minkoff et al (1973), and in addition analysed their data by dividing the sample into two groups on the basis of the median scores for hopelessness and depression. Of particular note, although expected from their lack of correlation between depression and intent when controlling for hopelessness, is the fact that irrespective of whether the depression scores were high or low, the groups with the high hopelessness scores had the higher mean intent scores.

A more recent study employing the Hopelessness Scale, the Zung Self-Rating Depression Scale, and the Suicidal Intent Scale is that of Wetzel (1976), who compared 48 subjects who had attempted suicide with 56 threateners and 50 psychiatric controls. In view of the previous studies, it is surprising that he found *"neither depression nor hopelessness correlated significantly with suicidal intent at the time of attempt"*. However, he was able to obtain the scores of 94 of his original sample of 154 subjects one month later, and at that time both hopelessness and depression correlated significantly with the current suicidal ideation of those who had previously attempted suicide (HS, $r = .67$, $p < .001$; Zung, $r = .63$, $p < .001$). Both hopelessness ($r = .43$) and depression ($r = .34$) remained significantly related to intent when partially correlated. Wetzel (1976) concluded: *"in the sample of subjects used, hopelessness correlated slightly higher with suicide intent or suicidal behaviour than depression did in every case....thus the data seems to support Beck's contention that hopelessness is more crucial to suicide risk than depression in general"*.

This study is of interest, but the fact that there was no correlation between suicidal intent and depression and hopelessness scores immediately after the attempted suicide is certainly not consistent with other studies. In addition, the reliability of the scales returned one month later in exchange for a "\$10 subject fee", and on which Wetzel's support for Beck mainly depends, could be considered suspect. Thus, although the study of Wetzel does in

general support the work of Beck and his colleagues, it is clear that comparisons of different research on this attribute require careful consideration.

Hopelessness has long been considered a component of various psychopathological processes, including depression (Melges and Bowlby, 1969), and its general importance was acknowledged by Beck et al (1975b). However, for suicidal individuals they suggested it may be of more relevance than the global concept of depression. They noted that *"emphasis on the relationship between depression and suicide has often left workers at a loss in explaining self-destructive behaviours in clinically non-depressed individuals. The current findings have removed the puzzle by pinpointing hopelessness as the missing link between depression and suicidal behaviour"*. They considered that hopelessness was therefore a logical target symptom in the treatment of suicidal individuals, and that *"by focussing on reduction of a patient's hopelessness, the professional may also be able to alleviate suicidal crises more effectively than in the past"*.

A review of the limited literature available on this attribute suggests it does hold promise in the assessment of suicidal subjects. However, it is difficult to fully endorse the claims of Beck and his colleagues on the basis of the evidence so far presented. Hopelessness may well prove to be of unique importance in suicidal behaviour, and its elucidation in young women, the group most at risk for attempting suicide, is clearly of importance.

c. Death Anxiety in Attempted Suicide

Death and associated themes have formed a controversial part of psychoanalytic theory since the early formulations of Freud related to life and death instincts (Brown, 1961). Papers such as "*Notes upon the fear of death*" (Chadwick, 1929), "*One component of fear of death in early infancy*" (Harnik, 1930), and the work of Klein (1948) have broadened the notion of death and associated anxiety, so much so that Hoffman and Brody (1957) suggested that death anxiety could be interpreted as the perceived threat of any instinctual demand.

In the last two decades the general psychiatric literature has addressed itself to the concepts of death and dying, and the extent of this interest prompted Schnaper (1975) to pose the question: "*Death and dying: has the topic been beaten to death?*". His answer was, perhaps predictably, that it had not been, but an analysis of papers on this topic would suggest that some areas have been researched extensively, whereas others have been relatively neglected. The area of attempted suicide would appear to be one such neglected area, and one can only agree with Neuringer (1968) who observed that "*very little research effort has been directed towards the investigation of the suicidal individual's phenomenological attitudes towards life and death*".

That such attitudes may be relevant was also suggested by Sainsbury (1973), who commented: "*I believe that the attitudes to death and self-destruction prevailing within a society and its institutions, particularly its religious ones, must also be a potent influence on*

the occurrence of suicide.

How such attitudes might influence suicide and attempted suicide has not yet been determined, but it is pertinent to reflect on the frequently reported comments of medically non-serious suicide attempters that they are too afraid of death to really try and kill themselves. It is, therefore, of interest that there have been few studies directed towards the elucidation of the 'fear of death' or 'death anxiety' in those who have attempted suicide.

An early controlled enquiry into the fear of death of psychiatric patients was that of Cassidy et al (1957). Using a self-report method they noted that manic-depressive subjects had a greater fear of death and of suicidal thoughts than a group of medical patients.

Farberow et al (1964), presumably using a retrospective clinical method, found no difference in the fear of death of patients with cancer who had committed suicide and those who were not suicidal.

Boyar (1964) first developed a fear of death scale, but this was not employed with suicidal subjects until Lester (1967b) used it with his own scale to assess the fear of death in 43 volunteer students, only 14 of whom had never considered suicide. He found that suicidal students had less fear of death on both scales, but noted that *"whether these differences in part determine suicidal pre-occupation or whether they result from experiences with suicidal thought is a question for further investigation"*. This finding was contrary to that earlier reported by Lester (1967a) in which in a smaller group of college students he reported that those who had

threatened suicide had a greater fear of death than those who had never considered it.

The semantic differential has been used in several studies to ascertain attitudes towards death. Ganzler (1967) compared suicidal and non-suicidal patients at a suicide prevention centre. He found that suicidal subjects rated suicide as less negative, life as less positive, and death as more positive, than the non-suicidal persons. Blau et al (1967, quoted by Lester, 1972) studied several concepts including that of death, in a comparison of suicidal and non-suicidal psychiatric patients, but considered the few differences were probably due to chance factors and that the reliability of the significant difference on only one scale (fast/slow) out of ten for death was probably low.

Neuringer (1968) also used the semantic differential to examine divergencies between attitudes towards life and death in suicidal, psychosomatic and psychologically normal hospitalised patients. His results did not suggest that suicidal persons perceived death in a positive manner, and life negatively. On the contrary, the suicidal group considered life more positive and death more negative than either of the other two groups. In discussing the results, Neuringer (1968) acknowledged that the divergency in attitudes to life and death by suicidal persons may reflect the suicidal subjects' desire to appear "*hypernormal and contrite*" or be related to the abreactive effect of the attempt, a phenomenon first suggested by Farberow (1950). Thus it is possible that the data might have been different if it had

been collected at the time of the attempt. However, Neuringer also considered that the perceived clear differences between life and death may be one of the conditions that makes a choice between life and death possible. He commented that this clear differentiation of life and death may be an example of what had been called the "*dichotomous thinking*" of suicidal individuals (Neuringer, 1961), and that such thinking "*would polarise death as being very different from life, thus making them strong alternative possibilities*".

There have been other methods used in attempting to elucidate differences in response to the themes of death and suicide. Eisenthal (1968) exposed non-suicidal patients, patients who had attempted suicide and those who had had suicidal ideation to pictures representing death. He reported no differences between the groups in their rated tension, mood arousal or time chosen to view the pictures.

The physiological component of anxiety, which was elicited as a response to the concept of 'suicide', was measured by Spiegel (1969). In an investigation of the clinical observation that patients appear to have less mood disturbance before actually committing suicide, he used the semantic differential and the autonomic measurement of galvanic skin response to assess non-suicidal patients, those who had attempted suicide, and those who were threatening suicide. It is of interest that those who were threatening showed least autonomic reaction and the non-suicidal the most as a response to the concept of 'suicide'. In accord with this, those threatening suicide showed less affective response than the other two groups on the semantic

differential. Furthermore, those suicidal subjects who showed a galvanic skin response to the concept of 'suicide' greater than to neutral words were more ambivalent to suicide as rated on the semantic differential. This study would appear to be important for several reasons. First, it demonstrated that psychophysiological differences existed between the suicidal and non-suicidal subjects of that experiment. Second, the greater degree of response of those who had actually attempted suicide compared to those who were threatening could be interpreted as support for the notion of an abreactive effect of the attempt (Farberow, 1950), with a post-suicide attempt response approaching that of the non-suicidal subjects. Third, it suggests that there may indeed be suppression of emotion and autonomic reactivity in those who threaten suicide, and this may facilitate the actual attempt. This study would appear to offer promise in assessing anxiety by autonomic measures, but follow-up studies have not been found in the literature yet.

There appears to have been only one study directed at the elucidation of death anxiety in suicide attempters of differing lethality. Tarter et al (1974) used the Death Anxiety Scale of Templer (1970), and a measure of lethality derived from the Weisman and Worden (1971) Risk-Rescue Rating Scale (p.81). They found no relationship between death anxiety and risk or lethality of suicide attempts, but there was a small but significant correlation between death anxiety and the potential for rescue. They suggested that this may be explained by death anxiety related to a suicide attempt not being

TABLE 2.8.

STUDIES RELATED TO ATTITUDE TO DEATH OF SUICIDAL SUBJECTS

Table 2.8.

STUDIES RELATED TO ATTITUDE TO DEATH OF SUICIDAL SUBJECTS

<u>Authors</u>	<u>Subjects</u>	<u>Assessment</u>	<u>Reported Findings</u>
Cassidy et al (1957)	Manic-depressive patients	Clinical self-report	More suicidal thoughts and fear of death than control group.
Farberow et al (1964)	Cancer patients	Clinical report	No greater fear of death in cancer patients who suicided compared to non-suicidal cancer patients.
Lester (1967a)	College students	Lester Fear of Death Scale	Greater fear of death in suicidal subjects.
Lester (1967b)	College students	Boyar and Lester Fear of Death Scales	Less fear of death in suicidal subjects.
Ganzler (1967)	Subjects at Suicide Prevention Centre	Semantic differential	Suicidal subjects rated suicide less negative, life less positive and death more positive than non-suicidal subjects.
Blau et al (1967)	Suicidal and non-suicidal psychiatric patients	Semantic differential	No definite difference.
Neuringer (1968)	Hospitalised suicidal, psychosomatic and psychologically normal patients	Semantic differential	Suicidal group considered life more positive and death more negative. Suicidal subjects showed greater divergency between attitudes to life and death.
Eisenthal (1968)	Non-suicidal, suicide attempters and those who had attempted suicide	Reactions to pictures suggestive of death	No differences between groups.

Spiegel (1969)	Subjects who had attempted suicide, were threatening suicide and who were non-suicidal	Galvanic skin response and semantic differential	Threateners showed least autonomic response and least affective response on semantic differential. Non-suicidal showed most autonomic response.
Tarter et al (1974)	Patients who had attempted suicide	Death Anxiety Scale (Templer) and Risk-Rescue Scale (Weissman and Worden)	No relation between death anxiety and lethality or risk of suicide attempts, but a significant (though small) correlation between death anxiety and the potential for rescue.

dissipated when the opportunity for rescue is high. They also noted that repeat and first attempters were not distinguished by scores of the Death Anxiety and Risk-Rescue Rating Scales.

A review of the studies of attitude towards death of those who are suicidal appears to provide conflicting results (see Table 2.8) and at present does not substantiate any general relationship between suicidal behaviour and fear or anxiety regarding death. Although the concept of 'death anxiety' appears to be a promising area of enquiry in attempted suicide, it clearly requires further elucidation.

d. Personality and Attempted Suicide

i. Introduction

This review will examine few early reports in detail, but will discuss the difficulties inherent in assessing personality factors on the basis of clinical assessment alone. More recent standardised methods of measurement will then be discussed. Finally, the hysterical personality and the internal-external locus of control dimension of personality will be reviewed in more detail.

ii. Clinical assessment of personality

The most lucid presentation of early observations of the personality of suicidal persons is that of Vinoda (1966), reproduced in Table 2.9.

As with much early research, Vinoda (1966) commented that "*most of these studies have been mainly descriptive and lacking in comparative control groups*". Furthermore, the variations in nosology of personality assessment are no less evident here than as already noted

Table 2.9.PERSONALITY CHARACTERISTICS OF ATTEMPTED SUICIDE

(Vinoda, 1966)

<u>Author</u>	<u>Personality Characteristics</u>
Fairbank, 1932	Rigid personalities
Stoneman, 1935	Marked irritability, ambivalence, sexual frustration.
Williams, 1936	Inability to adapt to changed situations because of narcissistic component integrated into personality and a marked introversion.
Hopkins, 1937	Solitary, introverted, asocial.
Raphael, et al, 1937) Siewers & Davidoff, 1942)	Poorly integrated personalities
Wall, 1944	Rigid, extreme of cycloid or schizoid temperament, feeling of rejection and unwanted by others.
Andics, 1947	Weakness of character, sexual maladjustment, difficulty in forming friendships.
Faris, 1948	Quitter type, dependent, egocentric, personality disorganization prone to take place in social disorganization.
Teicher, 1947	Insecurity, inadequacy and exhibitionism.
Hendin, 1950	Immature and asocial types of personality.
Batchelor, 1954	Vulnerable personalities, morbid sensitivity, shy, seclusive, undue dependency, passive homosexual, timid, obsessive disposition, with tendencies to hypochondriasis.
Schneider, 1954) Sainsbury, 1955)	Abnormal personality traits

in relation to depression. In fact, before pursuing this review, several difficulties peculiar to personality assessment should be noted.

The question of when an abnormality of personality should be considered as such, or whether it should be considered merely a

'character disorder', or indeed whether these two categories are distinct at all, are questions which are beyond the scope of this thesis. For the purpose of this study and review the comment of Walton et al (1970) that *"a distinction has to be made between psychiatric illness on the one hand and the various forms of abnormal personality on the other hand"* is accepted. Walton et al (1970) noted that some would dispute that the examination of personality abnormalities is rightly the concern of psychiatrists. However, the traditional inclusion of terminology related to personality in diagnostic glossaries and more particularly the association between personality and some psychiatric illness adds weight to the suggestion that all patients should be evaluated both for the presence of illness and for any personality abnormality (Foulds, 1965). For the purpose of the clinical assessment of this study, the criteria for classification of personality disorders are those of the International Classification of Diseases, and are included in Appendix III.

In addition to problems of nosology, there are particular methodological problems of assessment of personality in those who have attempted suicide, and these have been comprehensively discussed by Eastwood et al (1972). They noted the problem of gaining access to these persons and suggested that the impulsive, unpredictable and emotionally immature traits described by Philip (1970), *"are hardly those which are going to motivate patients to cooperate in a research project"*. They also commented on the

effects that drugs may have on patients' responses, and that responses may also be inhibited as these patients *"are, on the whole, going to suppress the experience"*.

These factors have no doubt influenced the choice of subjects for research into personality and attempted suicide. Indeed, in commenting on some earlier work related to personality and attempted suicide, Philip (1970) succinctly pointed out that men in American Veterans' Administration Hospitals who may have threatened or attempted suicide are hardly likely to be representative of the attempted suicide population as a whole, a population which is predominantly comprised of younger women.

The reported frequency of clinical diagnosis of 'personality disorder' in those who have attempted suicide varies widely. For example, Edwards and Whitlock (1968) in their Australian series of 680 subjects considered 28.5% of women and 54.5% of men to have a 'personality disorder'; Yessler et al (1961) noted 75.96% of their sample of 104 servicemen to have a 'character and behaviour disorder'; and, Ovenstone (1973) in a review of admissions to the Edinburgh Regional Poisoning Treatment Centre reported that 52% of 433 men and 44.4% of 708 women had a 'personality disorder'. Much lower figures were quoted by Pallis et al (1975) who reported 8.1% of 136 patients from North East Scotland had a 'personality disorder' and Jacobson and Tribe (1972), who in their series of 254 patients seen at Brighton, England, described only 14% of men and 9% of women as having a 'personality disorder'.

Even with this extremely limited review of epidemiological studies, the wide variation is quite evident. These figures are also confused by the necessity to consider whether or not the personality assessment is made separate from the psychiatric illness diagnosis. Thus, in the reports of Edwards and Whitlock (1968), Jacobson and Tribe (1972) and Pallis et al (1975) the term 'personality disorder', and in the paper of Yessler et al (1961) the term 'character and behaviour disorder' is considered as part of the primary diagnosis along with depression, schizophrenia, neurosis, etc. However, the report of Ovenstone (1973) employs 'personality diagnosis' (under which are subsumed the categories of 'normal', 'personality disorder', 'drug addiction/alcoholism' and 'not known') quite distinctly from the 'psychiatric diagnosis'. Any comparison of studies must therefore be made with extreme caution.

Although attempts to delineate a specific suicidal personality have not been successful (Philip, 1970), certain characteristics have been noted in clinical studies. However, the possibility that these observations may not always be helpful was suggested by Morgan et al (1975a), who commented that *"there is a distinct tendency to see the self-harming patient in pejorative terms, of which the stereotype is that of a histrionic young woman who is making a nuisance of herself...."* Similar caution to that of Morgan et al (1975a) was expressed by Bratfos (1971), who noted: *"The patients are often described as infantile, affectively labile, impulsive and hysteriform. The descriptions rest on a general impression, and the writer has not*

come across systematic investigations in this field". (In fact, there had been studies before the publication of these comments, and some of these will be considered below.) Bratfos (1971) further observed: *"To what extent the suicidal attempt in itself affects one's view of the patient is nevertheless a question that cannot be disregarded. It is easy to infer that since a patient reacts by self-inflicted injury, he or she must be immature, affectively labile and impulsive"*. These comments are certainly pertinent, and emphasise the need for objective personality assessment of those who have attempted suicide.

iii. Use of standardised psychometric tests

There have been a number of studies using standardised psychometric tests. Devries in 1968 was able to review 75 such reports, and noted that the most commonly used instruments had been the Rorschach ink-blot test, the Minnesota Multiphasic Personality Inventory (MMPI) and the Thematic Apperception Test (TAT). There were few findings of note, and it is of interest that Farberow and Mackinnon (1974) commented on this review, thus: *"Despite the consistently negative results, Devries tends to be optimistic, summarizing that with better control of independent variables, suicidal behaviour could probably be identified through the use of projective and non-projective personality tests. He feels especially that MMPI item analysis and the suicidal configuration of checklist of suicide signs on the Rorschach hold promise"*. More recent studies have by no means vindicated Devries' optimism.

1. Projective Techniques

A recent study utilising projective tests and suicidal subjects is that of Exner and Wylie (1977), who examined the Rorschach response of 59 subjects who committed suicide within 60 days of completing the test, and 31 who had attempted suicide, also within 60 days of the event, and compared the responses to control data. It is of interest that those who attempted suicide were "generally not distinguishable from the psychiatric control subjects", whereas 75% of those who subsequently committed suicide showed a combination of eight or more of eleven variables. However, the profile provided was "not a particularly new description of the suicide prone person. Much of it can be found in other writings on suicide", and the "false positives" and "misses" which it would predict "only serve to re-affirm that there is no one kind of 'suicidal personality'".

The results of Exner and Wylie (1977) give reason for more optimism than the comment of Neuringer (1965) that Rorschach results were "equivocal, inconsistent and contradictory". However, the value of projective tests would appear to be limited, a fact acknowledged by McEvoy (1974) who in relation to the Thematic Apperception Test observed: "considering the multiple problems and the complexity of these problems, it would be rather astonishing if the TAT were an effective instrument for assessing suicidal phenomena".

2. Minnesota Multiphasic Personality Inventory (MMPI)

The use of the MMPI in delineating personality profiles of suicidal persons would appear to be more promising, and has been

extensively reviewed by Clopton (1974). The most consistent finding has been that the Depression Scale has been elevated in suicidal subjects. Most work has been in attempting to assess suicide risk, as illustrated by the study of Leonard (1974), who noted a positive association between 'suicidality' and the Depression, Social Introversion and Repression-Sensitisation Scales of the MMPI. However, Clopton (1974) also quotes reports, often contradictory, related to comparisons between suicidal and non-suicidal patients. He noted that *"while MMPI profile analysis has shown some promise, there is certainly no evidence for a general suicidal profile"*.

The recent report of Pallis and Birtchnell (1976) on the analysis of 516 psychiatric patients who had completed the MMPI is worthy of note. They had a sufficient number of patients to divide into groups of those who had attempted suicide, those who had had suicidal ideation and those who were non-suicidal. For those who had attempted suicide, they found a higher degree of psychopathology or deviance on all scales except the Hysteria Scale. (The lack of difference on the Hysteria Scale will be referred to again on p.139.) They considered this confirmed the proposition that of psychiatric patients, those with a history of suicidal behaviour are more psychologically disabled, and that more specifically, they are more hostile, sociopathic and depressed than non-suicidal patients. Their findings also suggest that suicidal patients are more neurotic, anxious, introverted and more dependent on others, though they feel that this *"is yet to be demonstrated adequately"*. Of particular

interest in their study is the observation that for men, the attempters showed a more disturbed profile than those who only expressed suicidal ideas, but "*for women on the other hand, the suicidal ideation and attempt group correspond closely in the pattern and degree of deviation from the non-suicidal group. Therefore it appears that while men who only express suicidal ideas are essentially similar to non-suicidal men, women who only do so are as disturbed as those who attempt it*".

Pallis and Birtchnell (1977) extended the analysis of the previous study and compared the MMPI scores of 42 patients with a history of a 'serious' suicide attempt, with 42 patients with a history of a 'non-serious' attempt and 126 patients who had neither attempted nor contemplated suicide. (It is of interest that they used the Reversibility of Method Scale of Freeman et al (1974), and not the Probability of Intervention Scale which clearly has connotations of suicidal intent rather than just medical seriousness.) They reported that the 'non-serious' suicide attempters were the most deviant group, scoring significantly higher on the Dependency, Hostility and Unconventionality Scales, and male 'non-serious' attempters showed the most disturbed profile. Of interest was the fact that "*the serious attempters proved to be virtually indistinguishable from non-suicidal psychiatric patients*".

A recent report by Leonard (1977) provided MMPI data on 36 patients (20 men and 16 women) who suicided, and compared the scores with those for 36 'highly suicidal' patients and 36 non-suicidal patients, matched

for age and sex. The MMPI had been done a mean 218 days before suicide, but Leonard (1977) noted that other authors have suggested that *"the potential for committed suicide stems from life-long personality characteristics as well as from somewhat predictable environmental triggers"*, and that it was therefore valid to pursue this research. Female suicides differed from all male groups and from both female control groups. Of particular note, the *"females who committed suicide appeared to have more masculine interests (Mf), less insight into their own inner feelings and needs (Hy), somewhat more authority conflict (Authority Conflict Scale), and a greater tendency toward social withdrawal (Si), but were less confused (F), defensive (K), and less in conflict with their families (Familial Discord) than high-suicide females"*.

It is of interest that the MMPI profiles of the female 'committed suicides' differed significantly from both 'high-suicide' females ($p < .001$) and non-suicidal females ($p < .01$), although the degree of significance is less for the non-suicidal females compared to the 'high suicidal' group. This is consistent with the finding that male 'committed suicides' differed significantly only from non-suicidal males ($p < .05$), and illustrates the limitations of the scale as a predictor of suicide.

This study would appear to have offered as much as any of the MMPI research. However, Leonard noted that *"subgroups of subjects must be clearly defined"* in order to draw reliable and useful conclusions, and added that although the MMPI holds promise, much further study

remains to be done.

3. Other Standardised Techniques

There have been studies using instruments other than those just described. As can be inferred from the work already quoted, most had been done in the United States of America. The first British report was that of Vinoda (1966) who compared 50 women aged 17-69, who had attempted suicide, matched for sex, age, education, socio-economic status and marriage with 50 psychiatric patients and 50 normal convalescent women. She used the Mill Hill Vocabulary Tests, the Hostility and Direction of Hostility Questionnaire, the Level of Aspiration Test, the Hysteroid-Obsessoid Questionnaire (see p.199) and the Symptom Sign Inventory. Vinoda reported that both those who had attempted suicide and the psychiatric controls had a poor vocabulary and were more 'personally ill' (as assessed by the Symptom Sign Inventory) than the normal controls. Only greater 'general hostility' and 'rigidity' significantly distinguished the suicidal group from both control groups, although there was a tendency for both suicidal subjects and psychiatric controls to be more obsessoid on the Hysteroid-Obsessoid Questionnaire. Overall, it was noted that *"in general, the attempted suicides were much more similar to the psychiatric than to the normal controls"*.

Further analysis of this same group of suicidal subjects, with the inclusion of 20 others, was made (Murthy, 1969) by comparing the 'serious' risk and 'non-serious' risk attempts, classified on the basis of a modified Tuckman and Youngman Scale for assessing suicide risk.

It was reported that those who had made the 'serious' attempt tended to be above average in vocabulary level, and to be intro-punitive in the direction of their hostility, whereas the 'non-serious' attempters scored less in the vocabulary test and were extrapunitive in the direction of their hostility. The results of the Hysteroid-Obsessoid Questionnaire will be considered on p.141.

A further analysis of the Symptom Sign Inventory (SSI) Scores of Vinoda's (1966) subjects was made by Foulds (1967), who reported that 39% were 'character neurotics' and 52% were 'personally ill'. The Character Neurosis (CN) Scale of the SSI purports to identify persons who have longstanding neurotic conditions with interpersonal difficulties, and who tend to arouse antipathy in those who treat them, and the Personal Illness (PI) Scale distinguishes those who experience difficulty in interpersonal relationships to the extent that help is sought to alleviate their problems.

Philip and McCulloch (1968) also used the Symptom Sign Inventory as well as the Neuroticism Scale Questionnaire (NSQ) in an assessment of 84 patients who had attempted suicide at the Edinburgh Regional Poisoning Treatment Centre. Compared to a normal sample, suicidal patients were more anxious and scored higher on neuroticism than the normals as assessed by the NSQ, and the results of the PI and CN Scales suggested that of the suicidal group, 56% could be classed as 'character neurotics', 32% were 'personally ill but not character neurotics', and only 12% were classified as normal. They considered the differences between their results and those of Foulds (1967)

could be explained by their assessment of consecutive suicidal persons, whereas the subjects of Foulds' (1967) study had already been designated ill enough to warrant hospitalisation.

Another British study is that of Philip (1970) who administered the Symptom Sign Inventory (SSI), the Hostility and Direction of Hostility Questionnaire (HDHQ), and the Sixteen Personality Factor Questionnaire (16 PF) to 50 men and 50 women who had attempted suicide in Edinburgh. The SSI scores suggested that only 12% could be considered normal personalities, 20% were 'borderline disturbed', a further 20% were 'personally disturbed' and 48% were 'character disordered'. The HDHQ showed that the suicidal subjects scored greater 'general hostility' than either a normal or neurotic control group. The 16 PF scores distinguished the suicidal group from the standardised norms on the Emotionally Unstable, Expedient, Shy, Suspicious, Apprehensive, Self-Sufficient and Tense Scales. It is of interest that six of these seven scales (Expedient Scale excluded) are considered to contribute to the second-order factor 'anxiety' which can be derived from the primary factor scores. In summarising the 16 PF scores, Philip (1970) suggested that *"attempted suicides were more anxious, somewhat more introverted and less conscientious than average"*.

The studies of Kinsinger (1971, 1973) are of interest, as he compared suicide attempters with those who had only threatened suicide, and psychiatric controls. He used the MMPI, the Buss-Durkee Hostility Inventory and Leary's Interpersonal Check List, and found that

the attempters and psychiatric controls "were quite similar in almost every way". However, those who had threatened suicide were more passive-aggressive, dependent, anxious and masochistic, and "were even less well adjusted than the suicide attempters or non-suicidal psychiatric controls". His conclusion is of note: "The present study adds additional weight to the probability that there is little to be gained from continued efforts to differentiate suicidal attempters from non-suicidal psychiatric patients in general by means of psychological tests".

A further study using another instrument was that of Conte and Plutchik (1974). They used an Emotions Profile Index to compare 30 suicidal admissions to the Bronx State Psychiatric Hospital with 30 non-suicidal psychiatric inpatients of the Bronx Hospital, New York. They noted that "the suicidal patients were quite similar to the non-suicidal patients in terms of a number of personality traits and background variables" but that the suicidal patients scored significantly higher on the Deprivation (depression) and Destruction (aggression) Scales. They also scored less on the Protection (timidity) Scale, though this difference was not significant. The increase in depression and aggression is consistent with other studies reviewed previously, but the third difference, which they interpreted as meaning "lower on feelings of fear", is not consistent with other studies - that is, if one can compare studies of 'anxiety' with those of 'protection (timidity)". It is of interest that 67% of the suicidal patients and 92% of the control group had been

diagnosed 'schizophrenic'. Even allowing for the cross-national differences in diagnosis of schizophrenia (Cooper, 1975), these patients are unlikely to be comparable with those in British reports, and would certainly not be expected in the sample anticipated for the present study. It has been argued that the personality assessment should be made separately from the psychiatric illness diagnosis. It could perhaps also be argued that it may be necessary to control for the psychiatric illness diagnosis, before valid personality comparisons can be made.

The recent paper of Pallis and Jenkins (1977) recognised the *"need to investigate the role of personality factors in clinically important sub-groups"*. They used the Suicidal Intent Scale and the Eysenck Personality Inventory, and grouped 124 subjects who had attempted suicide on the basis of the sample's median suicidal intent score. They reported that *"for males there was an association between low intent to die and impulsivity while for both sexes there was an association between recurrent suicide attempts and neuroticism"*. These findings may have clinical relevance, as they concluded: *"Our results cast some doubt on the proposition that suicides can be prevented by simply reducing certain lethal means in the environment"*.

There are other studies which have attempted to assess various personality attributes of suicidal subjects. Thus, Wetzel (1975a, 1975b), using the semantic differential, demonstrated that *"ratings of myself distinguished between suicidal and non-suicidal Ss and between more and less suicidal Ss"*, and that *"changes in evaluation of life*

were significantly associated with change in self-rated suicide intent". Wenz (1975) has also demonstrated that "anomie as measured by the Srole Scale is positively related to the degree of lethality".

iv. Interim resume

Rather than continue a detailed review of the broad spectrum of work related to suicidal behaviour and personality, it is perhaps more pertinent to reflect on the work so far reviewed. Although there appear to be some general trends emerging from the use of the more standard forms of assessment, the difficulties and limitations of such assessment, and the integration of their results with those of lesser known tests, is readily apparent. In addition, it is pertinent to note the comment of Clopton (1974), which although made in relation to MMPI results, could equally apply to all the work reviewed:- "a successful differentiation of suicidal and non-suicidal patient groups on the basis of statistical analysis of MMPI data may be all but useless in an applied setting if the differences between the groups are quite small, even though statistically significant".

Such a comment of course, is applicable to all research, but it does highlight the possibility that studies may need to be more problem-oriented in their approach. With this in mind, this thesis proposes to examine two aspects of personality which appear to be of clinical importance. The first is the 'hysterical' component of personality and the second is the 'locus of control' construct of personality. These will be considered in more detail.

v. Attempted Suicide and the Hysterical Personality

The nosological problems of 'hysteria' and the 'hysterical personality' are generally acknowledged in the psychiatric literature, and have been extensively reviewed (Chodoff and Lyons, 1958; Lazare, 1971; Chodoff, 1974). The terms can be used in a variety of ways, one of which is "*a term of approbrium*" (Chodoff and Lyons, 1958). That these terms may have been so used in relation to those who attempt suicide has already been noted (p.125), but is worthy of reiteration. Thus, Morgan et al (1975a) observed that "*the stereotype is that of a histrionic young woman who is making a nuisance of herself*", and Bratfos (1971) noted that "*patients are described as infantile, affectively labile, impulsive and hysteriform*".

Examples of the use of such terms include the report of Sclare and Hamilton (1963) who noted that 20% of 180 patients who had attempted suicide were diagnosed as 'hysterical reactions', and "*were strikingly lacking in subjective or objective evidence of depression. Their self-assaults usually occurred in situations which produced burning resentment and often a desire to manipulate or frighten some person or persons with whom they had become dis-affected*". El-Gaaly (1974) also observed of other suicidal subjects that "*as regards personality characteristics, it was noticeable that there were more hysterical psychopathic-like individuals in the suicidal younger group*".

Such terms are usually confined to those whose attempt is of low

medical lethality. Thus McEvoy (1974, citing Reimer, 1967) noted: *"There are persons who make suicidal gestures, usually ingesting small amounts of analgesic or sedative medications. They usually are persons who might be described as hysterical and narcissistic and appear to be motivated to manipulate others or win attention"*.

There have been other comments on the association of the 'hysterical personality/hysteria' spectrum of diagnosis and suicidal behaviour. Thus, Woodruff et al (1971) noted that although suicide attempts and threats were common, the risk of suicide was less for patients diagnosed as 'hysteria' than for those with a primary affective disorder. They found that suicide attempts were equally common in each group (20%) but suicidal threats were more common in the 'hysteria' group (19%) than in the control group (11%). It is of note that follow-up studies of 'hysteria' (Guze, 1970) and affective disorder (Guze and Robins, 1970) gave similar rates of suicide of 16% and 15% respectively. It is also relevant that Wetzel (1976) noted that persons who had attempted suicide and were diagnosed 'hysteria' (only 10.4% of 48 subjects) scored significantly more on hopelessness and depression scales than other suicidal subjects.

Although the criteria of 'hysteria', promulgated by Guze (1970) as 'Briquet's syndrome', may not be identical with other terms such as 'hysterical', 'hysteriform', or 'hysteroid', it would appear important to objectively measure this component of personality. It is of note that very few studies have been addressed to this task.

Farberow (1950) reported that the Hysteria Scale of the MMPI did not differentiate between male patients who had actually attempted suicide, and those who had suicidal ideation or were non-suicidal. However, Rosen et al (1954), in a replication of Farberow's work, noted that those with suicidal ideation scored higher on the Hysteria Scale than those who attempted suicide.

The study of Pallis and Birtchnell (1976) (p.128) demonstrated no significant difference on the Hysteria Scale of the MMPI between 136 patients who had attempted suicide and 233 non-suicidal psychiatric patients. They noted: *"the failure of the Hysteria scale to differentiate between suicide attempters and non-suicidal patients is at variance with published results, and this discrepancy conceivably could be due to the fact that this scale was constructed to identify patients with specific conversion reactions. Clinicians may adopt a broader definition of the term"*. The more detailed study of the same researchers (Pallis and Birtchnell, 1977) comparing subjects who had made 'serious' suicide attempts to those who had made a 'non-serious' attempt and to non-suicidal patients also failed to differentiate the three groups on the Hysteria Scale.

The study of Leonard (1977) (p.129) is of note as it demonstrated that the Hysteria Scale was significantly raised for those patients who had actually committed suicide when compared to the 'highly suicidal' and non-suicidal patients. However, there was no difference between the clinically 'highly suicidal' and non-suicidal

patients. Leonard (1977) interpreted the elevated Hysteria Scale to imply that the 'committed suicides' had "*less insight into their own inner feelings and needs*". Although allowance must be made for the nosological differences of 'hysteria' in its use in the MMPI and in clinical reports, this finding certainly does not confirm the lesser risk of suicide for those patients diagnosed 'hysteria' as suggested by Woodruff et al (1971).

Marks and Haller (1977), in their study of suicidal adolescent girls (p.56), noted that: "*perhaps surprisingly, they do not exhibit hysteroid features*". However, this observation must be considered carefully, as it was based on the Q-Sort item 'Genotype has hysteroid features', which was rated by the subjects' psychotherapists, and which compared the suicidal subjects with other 'emotionally disturbed adolescents'. Such a finding, although of clinical interest, clearly demonstrates the need for standardised measures of personality attributes.

The Hysteroid-Obsessoid Questionnaire (Caine and Hope, 1967), which allows subjects to be placed on a hypothetical continuum between the extremes of hysterical and obsessional personalities, has also been used to assess suicidal subjects. It provides a score along the hysteroid-obsessoid dimensions of personality and is described further on p.199. Vinoda (1966) found no difference in scores between subjects who had attempted suicide, general psychiatric patients and normal controls. However, there was a trend towards suicidal patients and psychiatric controls scoring more

in the 'obsessoid' direction. A further analysis of this sample, (Murthy, 1969) on the basis of considering 'serious' and 'non-serious' attempts (using a modified Tuckman and Youngman Scale) demonstrated that 30 of the 38 subjects who had made a 'serious' attempt scored in an 'obsessoid' direction (a significant difference), whereas equal numbers of the 32 patients in the 'non-serious' group scored in the 'obsessoid' and 'hysteroid' directions. However, of the 24 subjects designated 'hysteroid', 16 were in the 'non-serious' group and only 8 in the 'serious' group.

McDowall et al (1968) compared depressed patients who suicided with those who had not, and reported that the female suicides were classified more often as 'hysteroid' than the control group. However, this classification was done on a retrospective review of case notes, bearing in mind Foulds (1965) clinical descriptions of 'hysteroid' and 'obsessoid' personalities, and not on the basis of using the Hysteroid Obsessoid Questionnaire.

There has been at least one other study using the Hysteroid-Obsessoid Questionnaire in suicidal subjects. Eastwood et al (1972) reported that *"both men and women have mean scores in the direction of obsessoid personality"*. Both men and women in this study scored similarly to the women of Vinoda's (1966) study.

Conclusion

There have been relatively few studies assessing objectively the 'hysterical' component of personality in those who have attempted suicide. It is of interest that they have failed to substantiate

the commonly held clinical view that these subjects have prominent hysterical personality traits.

Two studies have examined this issue in attempters of differing lethality. Pallis and Birtchnell (1977) found no difference on the Hysteria Scale of the MMPI between 'serious' and 'non-serious' attempters, but Murthy (1969) reported that significantly fewer 'serious' attempters scored in an 'hysteroid' direction on the Hysteroid-Obsessoid Questionnaire.

The further elucidation of the 'hysterical' personality in young women in whom this term is used so freely clearly warrants further investigation.

vi. Locus of Control and Attempted Suicide

The 'locus of control' construct and its measurement by Internal-External (I-E) locus of control scales has arisen from the research into social learning theory of Rotter (1954), and has been extensively reviewed in recent years (Rotter, 1966; Joe, 1971; Lefcourt, 1972; Phares, 1976; Phares and Lamiell, 1977).

The 'I-E locus of control' refers to the degree to which a person perceives that reinforcements are contingent upon his own actions. Thus an 'internal' person tends to perceive reinforcement as a consequence of his own behaviour, capacities or attributes, whereas an 'external' individual believes that reinforcements are unrelated to his own personal control, and considers the outcome due to luck, chance or other people.

Such a concept would appear to be promising in the assessment of

suicidal behaviours, as clinical reports have referred to attributes of these persons which seem analogous to the locus of control construct. Indeed the very impulsivity noted on p.23 appears to denote a certain lack of self-control, and the interpersonal connotations implied by Shneidman and Farberow's (1961) 'cry for help' could be interpreted as both signifying the need for control and indicating the desire to control others.

Several authors have given clinical descriptions which could imply that suicidal persons were either externally or internally oriented. For example, Weiss (1957) clearly indicates an external orientation by his comment: *"Many suicidal attempts have at least in part the character of a gamble with death, a sort of Russian Roulette, the outcome of which depends to some extent on chance. The attempts are consciously or unconsciously arranged in such a manner that the lethal probability may vary from almost certain survival to almost certain death; and 'fate' - or at least some force external to the conscious choice of the person - is compelled in some perhaps magical way to make the final decision"*.

On the other hand, the description by Shneidman (1963) of an individual with high suicidal intent is clearly internally oriented: *"A psyche-initiator believes that he will suffer cessation in the fairly near future - a matter of days or weeks - or he believes he is failing and, not wishing to accommodate himself to a new (and less effective and less virile) image of himself, does not wish to let 'it' happen to him. Rather, he wants to play a role in its*

occurrence. Thus he will do it for himself, at his own time, and on his own terms".

A similar reference to high and low intent suicide attempters was made by Sendbuehler et al (1970) who noted that 'serious' attempts were "more influenced by internal motivations than by other people" whereas 'gestures' were more guided "by other people, external happenings, or a clear cut appeal for help from readily available people".

Leonard (1974) has also alluded to the problems of control in commenting on the best predictor of 'suicidality' being prolonged hospitalisation. He observed of patients who suicided: "If the long hospitalisations represented a dependence on external controls, the suicides may have resulted from inability to control behaviour independently". He concluded: "It may be that the study of dependency and control problems may prove more useful than the study of overt depression".

An analogy to the 'reinforcement' component of the locus of control construct can also be drawn from other clinical reports. Thus "The Respectability of Self-Poisoning and the Fashion of Survival" reported by Kessell (1966) is a clear reference to the reinforcements offered to suicidal subjects, and the description of an 'operant' model of suicidal behaviour and its management by Bostock and Williams (1974) is an even more explicit demonstration of the possible therapeutic benefits of reducing reinforcements to such behaviour.

There are clearly conceptual problems into what constitutes 'control' and 'reinforcement' in suicidal subjects, and whether or not these can be considered truly analogous to the 'control' and 'reinforcement' implicit in the 'locus of control' construct is open to question. However, given the initial clinical direction, it would appear to be worthwhile to measure the I-E locus of control in suicidal persons.

It is, therefore, noteworthy that there are few studies addressed to aspects of suicidal thought and behaviour and the locus of control construct, and that the majority are confined to the assessment of psychology students. Thus Williams and Nickels (1969) administered the Rotter I-E Scale, the MMPI Suicide Scale developed by Farberow and Devries, and the Potential Suicide Personality Inventory of Devries to 235 psychology students *"who voluntarily participated in this experiment as part of their course requirement"*. They reported a significant positive correlation between external response as measured by the I-E scale and suicide potentiality for both men ($p < .01$) and women ($p < .05$) with the MMPI Suicide Scale, but the correlation for the Potential Suicide Personality Inventory only reached significance ($p < .05$) for the female students. Their results in general, confirmed their hypothesis that *"measures of the external locus of control philosophy will correlate positively with measures of suicide proneness"*.

Lester (1970b), in a theoretical paper, reported that various sociologists had observed that suicide was more likely in societies where social constraints were low. He noted several kinds of

external frustrations, such as a poor climate, that can sometimes be focussed on as a cause for problems, and suggested that the absence of these external stresses may allow persons to commit suicide more readily. Lester noted that this hypothesis was contrary to the finding of Williams and Nickels (1969) that suicidal individuals were characterised by an external orientation, and thus he implied that there was an association between an internal score and suicide. However, one could equally well postulate that it would be those subjects who are externally oriented, who having lost their external constraints, would be the ones who committed suicide. This paper is extremely speculative and does not help resolve the issue.

Lambley and Silbowitz (1973) were unable to confirm the findings of Williams and Nickels (1969) when they compared twelve white psychology students who had contemplated suicide with 51 who had not. They concluded: *"no significant difference, recorded between the groups, was interpreted as reflecting the possible inability of the scale to reflect the pathological nature of suicidal thoughts"*.

Levenson (1973) also found no difference in locus of control score between patients who had attempted suicide, and control groups of psychiatric patients and normal subjects. However, his subjects were male inpatients of an American Veterans' Administration hospital, and their suicide attempts had occurred at varying times in the past.

Boor (1976) has addressed this issue in a novel way. He noted that there was a significant correlation between the Rotter I-E scores and the suicide rates per 100,000 population of ten different countries.

He concluded that *"it thus appears that cultures that foster high perceptions of external control also foster high suicide rates"*.

This finding is consistent with that of Williams and Nickels (1969).

It is possible that the locus of control may not be related to suicidal thoughts as such, but to whether or not a subject acts upon them. This would account for the negative findings of Lambley and Silbowitz (1973), but not those of Levenson (1973).

There are other theoretical reasons for the consideration of the locus of control construct in those who have attempted suicide. Although not noted in the review of depression, one formulation of depression is that involving 'learned helplessness' (Seligman, 1972, 1978). This is the phenomenon in which a subject realises that his responses and the apparent reinforcement are independent, thus resulting in impairment of his future responses and the hypothesised depression. Both the 'learned helplessness' and 'I-E locus of control' constructs view control of reinforcement as a crucial variable, and it is of note that Hiroto (1974) demonstrated that *"externals were significantly more 'helpless' than internals"*, a finding which is consistent with the observed depression in suicidal patients, and Williams and Nickels' (1969) report of external response being correlated with suicide proneness.

The work of Bryant and Trockel (1976) is also relevant, as it attempted to relate the locus of control orientation to significant life events in the developmental history of college women. They reported that *"relatively large amounts of affectively significant*

recalled life stresses (preschool) were clearly related to a strong external control orientation in adulthood", a finding that would be consistent with the reported correlation of externality and suicide proneness (Williams and Nickels, 1969) and the generally acknowledged importance of early childhood events in adult psychiatric illness and attempted suicide.

The locus of control construct and its measurement has an hypothetical appeal in the assessment of patients who have attempted suicide. However, at present there have been few studies other than those of psychology students, and none appear to have been directed at its assessment in suicide attempters of differing lethality.

VII. SUMMARY OF THE REVIEW OF THE LITERATURE

a. General Descriptive and Clinical Data

i. General demographic data

There is a consistently noted excess of divorced or separated persons among those who attempt suicide. However, there are no definite trends when attempters of differing lethality are examined. The close relationship of age and civil state suggests that studies of particular age groups are necessary before firm conclusions can be drawn regarding the association between civil state and lethality of suicide attempts.

Although there appears to be an over-representation of subjects from lower socio-economic groups among those who attempt suicide, there is consistent, though not strong, evidence that the more medically lethal attempters are drawn from subjects of higher socio-economic class.

Although there is firm evidence to suggest that migrants are more at risk for committing suicide than native born persons, there is conflicting data with regard to migrant status and attempted suicide, and the possibility that it may be related to the lethality of suicide attempts has not been determined.

ii. Circumstances related to the suicide attempt

1. Drugs used

There has been a changing pattern of drug use in attempted suicide, with barbiturates being replaced by tricyclic antidepressants as the drugs most likely to produce medically serious consequences. The number of tablets/capsules ingested had been infrequently reported, though the fact that the majority of attempters obtained them from medical practitioners has been consistently noted.

2. 'Impulsivity' and time of most recent medical contact

'Impulsivity' of suicide attempters has frequently been noted, but its definition is fraught with difficulties, and work using operational definitions has generally not confirmed clinical impressions. Potentially of more practical value is the observation that a large proportion of attempters have relatively recently had contact with medical practitioners, but such contact has not been examined in relation to the medical lethality of the subsequent attempted suicide.

3. Alcohol and attempted suicide

An association between alcohol and suicidal behaviour has been noted for over a hundred years, but the relationship has not been clearly delineated. A recent increase in the number of young women

consuming alcohol before attempting suicide has been noted, and there is also some evidence to suggest that fewer of those whose attempt is of high lethality have taken alcohol when compared with other attempters.

iii. Past psychiatric history

Suicide attempters as a group have a high rate of previous psychiatric treatment, and there is some evidence to suggest that the medically serious attempters may have had more such treatment than other attempters.

iv. Psycho-sexual functioning

Although there is a literature which suggests that attempted suicide may be related to specific phases of the menstrual cycle, recent methodologically sound studies have been unable to confirm these early reports. No association between medical lethality and menstrual characteristics has been demonstrated.

v. Parental death and separation/divorce and childhood stress

Parental death and separation/divorce, and childhood stress, appear to be related to attempted suicide in adult life, but the relationship is complex and it is difficult to compare studies because of the different definitions employed. Any possible relationship with medical lethality awaits investigation.

vi. History of personal violence

There is a body of evidence which suggests that suicide attempters have a greater history of hostility and violence than other psychiatric patients and normal controls. Despite the difficulties of definition and assessment of this attribute, there is also evidence which suggests that medically serious attempters may be

more intropunitive in the direction of their hostility than non-serious attempters.

vii. Family history of psychiatric illness

There is little evidence to support the contention that attempters may have a greater family history of psychiatric illness than non-suicidal subjects, and the possibility that attempters of differing lethality may have different rates of family psychiatric illness does not appear to have been investigated.

viii. Contact with suicidal behaviour

Although there are conflicting reports, the weight of evidence appears to favour the view that suicide attempters have had greater contact with persons who have previously attempted suicide. Any association with medical lethality does not appear to have been investigated.

ix. Clinical diagnosis

Differing nosological terms make comparisons between series of attempters difficult. However, there does appear to be a consistently reported high rate of depression and personality disorder in those who attempt suicide. There is also evidence, though it is by no means unequivocal, that attempters of high medical lethality have a greater degree of psychiatric illness than those of low lethality.

b. Studies of Specific Groups

The composition of the subjects of different research reports is often extremely varied. Thus some American reports are confined to men of Veterans'Administration hospitals, and in general, the

subjects of American studies appear to be quite heterogeneous, often having attempted suicide in a variety of ways which are less commonly found in other countries. Furthermore, when control groups have been used, they have usually comprised other psychiatric patients or victims of accidental trauma, and conclusions drawn from such work must be guarded.

Although there have been anecdotal papers referring to specific groups such as college or university students, in view of the preponderance of young women among suicide attempters, it is surprising that so little systematic work has been directed at this particular group of subjects. That work which has been done suggests that these attempters may have less formal psychiatric illness than other subjects, and that their attempts may be of lesser medical lethality.

c. Medical Lethality and Suicidal Intent

Although the need to distinguish the concepts of medical lethality and suicidal intent was recognised over twenty years ago, many studies have continued to use terms which embody both concepts. Despite this limitation to the interpretation of data, there are findings which appear to be relatively consistent. Thus subjects who make a suicide attempt of high medical lethality are generally older, are more likely to have a severe psychiatric illness, and have a greater chance of subsequently committing suicide. Although other attributes have also been reported to distinguish groups of differing lethality and intent, they have been less frequently and

less consistently noted than the above. Indeed, the fact that so few items distinguish these groups is perhaps of most significance in this review.

Studies using standardised methods of assessment of suicidal intent have enabled its relationship with medical lethality to be more closely examined. Although initial work appeared to emphasise the importance of distinguishing these two attributes, it is of interest that more recent research has demonstrated a significant degree of association between medical lethality and suicidal intent.

d. Other Attributes to be Studied

i. Depression

The frequency with which depression is diagnosed in those who have attempted suicide differs markedly in different reports. Thus papers have varied from noting less than ten per cent of such subjects to be depressed, to considering that all who attempt suicide must manifest some degree of depression. The nosological issues involved in the delineation of depression also confound this topic. However, despite these limitations, depression, irrespective of how it is categorised, appears to be of major importance. Thus it is diagnosed clinically in about 30 to 50 per cent of attempters, with the majority of these being designated neurotic or reactive depression, rather than endogenous or psychotic depression. It is of interest that when standardised methods of assessment are used, approximately two-thirds of attempters are designated as depressed. While it would be unwise to unreservedly accept the results of the

questionnaire and rating-scale assessments of depression, it is possible that personality characteristics of those who attempt suicide may make it difficult to accurately clinically delineate the affective component of their symptomatology. G

In the few studies that have examined depression and lethality of suicide attempts, there has been no difference in the degree of depression between patients of high and low medical lethality. ? Pallas
S. Sander

ii. Hopelessness

The feeling of hopelessness is acknowledged to be a component of various psychopathological processes, and it has been suggested that it may be of unique importance for those who attempt suicide. Thus it has been reported to correlate more with suicidal intent than does depression. However, not all studies support this finding, and it has not been specifically investigated with regard to the medical lethality of suicide attempts. 11/1/83
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iii. Death anxiety

The possibility that fear of death or death anxiety, might bear some relationship to suicidal behaviour has been alluded to in clinical reports. However, attempts to assess this parameter in subjects who have attempted suicide have provided conflicting results, and no difference was found in the only study directed at the assessment of death anxiety in patients of differing lethality.

iv. Personality and attempted suicide

1. General

The problems of nosology in delineating personality and

the fact that some researchers consider the personality diagnosis as part of the primary diagnosis, rather than distinguishing it from a primary illness diagnosis, make comparison of different studies difficult.

On clinical grounds, many descriptive terms have been ascribed to those who have attempted suicide. Thus they have been considered to demonstrate immature, dependent, hostile and hysterical traits, and inevitably some of these terms have assumed pejorative connotations.

On the basis of objective psychological assessment, no definite 'suicidal personality' has emerged. However, certain consistencies have emerged, although these are often obscured by the diverse terminology of different psychometric instruments. Thus those who have attempted suicide appear to be more hostile, anxious and dependent, but less conscientious, than non-suicidal subjects. Little work has examined differences between subjects of differing lethality, but it is of interest that it has been reported that medically serious attempters may have less personality disturbance than non-serious attempters.

2. The hysterical personality

There are problems peculiar to the delineation of this component of personality. Thus varying terms have been used to indicate that those who attempt suicide, on the basis of clinical assessment, are likely to have prominent hysterical personality traits.

However, objective psychometric assessment has failed to substantiate

these clinical opinions, and indeed, there is evidence which suggests that suicide attempters may score more in an obsessoid direction on the Hysteroid-Obsessoid Questionnaire (HOQ) than non-suicidal subjects. Two studies have examined this personality attribute in groups of differing lethality, but the only distinguishing feature reported is for fewer medically serious attempters to score in an hysteroid direction on the HOQ.

3. Locus of control dimension of personality

The locus of control construct refers to the degree to which a person perceives that reinforcements are contingent upon his or her own actions, and comments which appear relevant to this construct have been made in clinical reports of suicidal subjects. Thus attempters as a whole appear to have expectations from others which would suggest that they have an external orientation, whereas medically serious attempters have been described in terms suggestive of an internal orientation. There is some evidence to suggest that subjects with suicidal ideation may have an external orientation. However, this has not definitely been confirmed for patients who have actually attempted suicide, and the locus of control construct does not appear to have been investigated in attempters of differing lethality.

e. Comment

There are two broad aspects of the review of the literature on attempted suicide which have led to the formulation of the present study. The first is that the majority of reports have been of

heterogeneous groups, with little regard to specific subgroups of attempters. The second is that although some research has enabled certain characteristics of suicidal subjects to be clarified, it is of interest that when other attributes have been systematically examined, not only has their relationship with suicidal behaviour appeared to become more complex, but certain clinically held beliefs have not been substantiated.

CHAPTER 3

THE PRESENT STUDY

"It must be granted that age and sex in themselves are scarcely illuminating theoretical concepts, but they may gain in richness when used as pointers to the differential prevalence of various psychiatric disorders and of social roles."

(Kreitman, 1976)

This study will focus on young women who have attempted suicide by drug overdose. Differing subgroups, based on the medical lethality of the suicide attempt will be compared, and the patients, as a whole, will be contrasted with a comparison group of women, matched for age, who have no history of suicidal behaviour.

I. HYPOTHESES TO BE TESTED

a. Related to General Demographic, Descriptive and Diagnostic Data

That those patients who have attempted suicide in contrast to the comparison group, and those patients of high lethality compared to those of lower lethality will:

i. Be more likely to be migrants.

ii. Be less likely to be either married or in a de facto relationship.

That those patients who have attempted suicide in contrast to the comparison group will:

iii. Be of lower socio-economic status, but that those patients of high lethality compared to those of lower lethality will be of higher socio-economic status.

That those patients who have attempted suicide in contrast to the comparison group and those patients of high lethality compared to those of lower lethality will:

iv. Have had more recent contact with a 'helping agency' (medical practitioner).

v. Have had more past psychiatric assessment/treatment.

That those patients of high lethality compared to those of low lethality will:

- vi. Have more often previously attempted suicide.

That those patients who have attempted suicide in contrast to the comparison group, and those patients of high lethality compared to those of lower lethality will:

- vii. Have more past history of drug abuse.
- viii. Have a greater history of use of alcohol.
- ix. Be more likely to be in the menstrual phase of the menstrual cycle.
- x. Have a greater history of parental separation/divorce and death.
- xi. Report a greater number of childhood stress factors as assessed by the method of Langner and Michael (1963).
- xii. Have a greater history of violent behaviour, both used and received.
- xiii. Have a greater family history of psychiatric illness.
- xiv. Have a greater history of contact with suicidal behaviour.
- xv. Be more likely to warrant a psychiatric diagnosis.

b. Related to Instruments Used

In addition to the above, hypotheses related to the following will be examined:

- i. Suicidal intent
 - a. That patients of high lethality will score higher on the Suicidal Intent Scale (Beck et al, 1974b) than patients of lower lethality.

- ii. Depression
 - b. That patients of high lethality will score higher on the Levine-Pilowsky Depression (LPD) Questionnaire (Pilowsky et al, 1969) than patients of lesser lethality.
 - c. That patients of high lethality are more likely to be classified as 'endogenous depression' by the LPD Questionnaire.
 - d. That as a group, those patients who have attempted suicide will score higher on the LPD Questionnaire than subjects of the comparison group.
- iii. Hopelessness
 - a. That patients of high lethality will gain higher scores on the Hopelessness Scale (Beck et al, 1974c), than patients of lesser lethality.
 - b. That as a group, those patients who have attempted suicide will score higher on the Hopelessness Scale than subjects of the comparison group.
- iv. Death anxiety
 - a. That patients of high lethality will score less on the Death Anxiety Scale (Templer, 1970) than patients of lesser lethality.
 - b. That as a group, those patients who have attempted suicide will score less on the Death Anxiety Scale than subjects of the comparison group.

- v. Hysteroid-obsessoid dimension of personality
- a. That those patients of high lethality will score more towards the obsessoid dimension of the Hysteroid-Obsessoid Questionnaire (Caine and Hope, 1967) than patients of lesser lethality.
 - b. That as a group, those patients who have attempted suicide will score more towards the hysteroid dimension of personality than subjects of the comparison group.
- vi. Locus of control dimension of personality
- a. That those patients of high lethality will score more towards an internal locus of control orientation as measured on the Adult Nowicki-Strickland Internal-External locus of control scale (Nowicki and Duke, 1974) than patients of lesser lethality.
 - b. That as a group, those patients who have attempted suicide will score more towards an external locus of control orientation than subjects of the comparison group.

II. SUBJECTS

Subjects for this study were women between the ages of 18 and 30 years, who had attempted suicide and were being treated at the Royal Adelaide Hospital. The comparison group was chosen from women between 18 and 30 years who were attending self-help classes at a suburban community health centre.

a. Age Limit

The lower age limit of 18 years was selected as this

is now the legal age of majority in South Australia. It could reasonably be argued that to exclude those less than 18 years might minimise the relevance of any findings to adolescents as a whole. However, it was felt that by accepting 18, the question of parental consent to participate in this programme did not arise, and each patient could be approached as an autonomous adult, albeit a young adult in many cases. In addition, it is still uncommon for women less than 18 years of age to marry and bear children in South Australia. This would suggest that women between the ages of 18 and 30 would provide a more homogeneous group of subjects, each influenced by society's changing role expectations of career, interpersonal commitment and parenthood. Illustrating this are the Australian Bureau of Statistics (1975) figures for South Australia for 1974 which show that of women who were married in that year, 84% were between 18 and 30, and of the births registered for the same year, 83% were to women between 18 and 30 years of age. The upper limit of 30 is more arbitrary, but was chosen as the majority of overdoses are taken by women less than this age.

b. Definition of Attempted Suicide

The problem of what constitutes a suicide attempt has been addressed by many authors, and there is now a considerable literature on the subject. Perhaps the most frequently quoted authority is Stengel (1963), who provided: *"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*

patients' behaviour".

This definition could include a wide variety of behaviour which could be interpreted as self-destructive, such as wrist-cutting, some 'accidents' (especially motor vehicle accidents in which the driver was under the influence of alcohol), drug and alcohol dependence, and also non-compliance with reasonable treatment demands, such as continuing to smoke despite the presence of chronic airways disease or continuing to ingest analgesics with chronic renal failure. However, Stengel (1968) qualified his definition in a later publication: *"This definition does not include behaviour patterns which, though self-damaging in the short or long run, are not undertaken with the intention of self-destruction"*. He also commented on the inclusion by Menninger (1938) of alcoholism and drug dependence as a form of 'chronic suicide', noting that *"it would be confusing to include them among the more or less intentional suicidal acts"*. Thus it was logical to exclude alcohol and drug dependence per se from this research project. However, admissions due to experimental drug use and toxic reactions occurring in persons who were drug dependent have been included, since the action was deliberate and the drugs had been used both outside the therapeutic range and the therapeutic context. Patients who did not comply with reasonable treatment requests were not included, and 'accident' victims were only to be included if there was a specific consultation from the Accident and Emergency Department for an alleged suicide attempt.

Furthermore, those women who had attempted suicide by wrist-cutting were not included. This was so because there is some evidence that they may constitute a specific syndrome (Graff and Mallin, 1967; Simpson, 1975; Rosenthal et al, 1972; Novotny, 1972). Although Weissman (1975) has cast doubt on this in an epidemiological rather than clinical study, it is of interest that the paper of Morgan et al (1975a), found that the subjects they were unable to interview were significantly more likely to have lacerated themselves. It would appear that the possibility that they comprise a special group still remains, and their exclusion is justified in an attempt to examine as homogeneous a group as possible.

Allowing for these exceptions, a more specific definition than that originally provided by Stengel is required. Appropriate to this study is the definition provided by Bancroft et al (1975), who described 'self-poisoning' as the: "*deliberate acute self-administration of a drug or poison with the intention of causing or risking death or harm, or in order to give the impression of such intention. In doubtful cases the recorded opinions of the responsible clinician was to be accepted*". This pragmatic approach represents well the generally accepted clinical definition of attempted suicide by drug overdose.

c. The Research Setting

The Royal Adelaide Hospital is a 1000 bed general hospital, situated in the City of Adelaide, and is the longest established and largest hospital in South Australia. There are no specific catchment areas, but Modbury Hospital and The Flinders Medical centre are on the

periphery of the city, and The Queen Elizabeth Hospital is 5 km. west of the city. There have been no epidemiological studies to delineate the extent of suicidal behaviour in South Australia, and its very categorisation is haphazard. Despite these difficulties, it is thought that about 800 persons per year are admitted having attempted suicide, and in the year July 1973 to June 1974 there were over 300 women between the ages of 18 and 30, of whom 47 were admitted to the Intensive Care Unit.

The question of how representative such samples are of the attempted suicide population as a whole has been considered previously in Britain. Parkin and Stengel (1965) in Sheffield found that one in five cases of attempted suicide seen in the patients' homes by their doctor were not sent to hospital. In another study of attempted suicide in general practice in Edinburgh, Kennedy and Kreitman (1973a) found that general practitioners treated about 30% of episodes without referral to hospital, but that these did not differ qualitatively from the hospital-treated episodes. Again, equivalent data for Adelaide are not available, but it is likely that the figure for those treated outside major hospitals would be less than 30% because of the different medical services available. In the last five years out-of-hours general practitioner locum services have been employed by up to eighty per cent of Adelaide metropolitan practices, and with the acknowledged difficulties of providing on-going care by such services, these locum practitioners are encouraged to refer all patients with suicidal behaviour to major

hospitals (Adelaide Emergency Locum Services, Personal Communication, 1977).

The admission policy of the Royal Adelaide Hospital with regard to those who attempt suicide has undergone change in the last three years. Whereas some would not be admitted in the past, it is now formal policy that all should be admitted, at least overnight. It is of note that in the first thirteen months of the twenty months of data collection only six women between 18 and 30 were brought to the researcher's attention and not admitted. This was despite circularisation of all casualty resident medical staff with a request to see these persons, no matter what time of the day or night, and frequent visits to the casualty department and discussions with the sisters-in-charge. These residents had been undergraduate students of the researcher, and were aware of his research interest. There may have been others, but cooperation with casualty staff appeared good, and the referral of psychosocial problems unrelated to attempted suicide was always maintained from this area of the hospital.

In retrospect, it seems possible that the request to see persons who were to be sent away may have mitigated against such management, and contributed to the policy of admission for all persons considered to have attempted suicide.

d. Selection of Subjects

An examination of the routine management of these patients will clarify the selection of subjects.

All persons who attempt suicide are initially assessed by a

casualty resident medical officer. All are then routinely assessed by a registrar in anaesthetics, no matter how little the patient may have ingested. Gastric lavage is not performed routinely, and is dependent on the nature of the drug and the time elapsed since ingestion.

i. High lethality subjects (Intensive Care Unit subjects)

At this initial assessment, if the patient is deeply unconscious with her airway compromised, admission to the Intensive Care Unit (I.C.U.) is arranged. In practical terms this means that the patient is considered to require a Guedel's airway, or assisted ventilation. A further criterion for transfer to the I.C.U. at this stage is fulfilled if the patient has taken more than 500 mg. of a tricyclic antidepressant, and gastric lavage is deemed not worthwhile. These patients are admitted for cardiac monitoring for the cardiotoxic effects of these drugs.

All other patients are admitted to the general recovery ward, and in addition to the usual nursing observations of state of consciousness, the anaesthetic registrar reassesses each patient after one and two hours. If the state of consciousness has further deteriorated, continued reassessment by the anaesthetic registrar is done routinely, and if the patient is unable to manage her airway, transfer is arranged to the I.C.U.

Subjects in the high lethality group were consecutive admissions to the I.C.U. from 3:12:75 to 10:9:77, except for the periods January 1976, January 1977, 19th March to 11th April, 1977, 17th April to

24th April, 1977 and 12th May to 31st July, 1977. These gaps were due to unavoidable absences of the researcher. (During these times seven persons were admitted to the I.C.U.).

Only one person was not seen when the researcher was available. She had taken intravenous heroin and discharged herself at her own risk immediately on transfer from the I.C.U. She could not be contacted at the address supplied by her friends who had brought her to hospital. One transsexual (biologically male) was also excluded. Two patients died in the I.C.U., and have not been included in this study.

The acceptance of admission to the I.C.U. per se as the criterion for inclusion into the high lethality group is open to criticism. Some authors have used terms such as 'severe loss of consciousness' (Heyse et al, 1969) and 'unconscious on admission and in need of intensive medical care' (Ettlinger, 1975) in delineating those whose lives were more at risk. It might appear that criteria such as length of time intubated and the necessity for artificial ventilation might give an even more homogeneous group. However, trends in resuscitation, as in other areas of medicine, change, and the use of such supports as artificial ventilation varies from unit to unit (Jensen, 1974; Freeman et al, 1970a).

The inclusion of those who have taken more than 500 mg. of tricyclic antidepressants could also be criticised as providing bias to this group of those already designated as depressed by a doctor. This will be further considered in the discussion.

Perhaps tempering these criticisms is the premium placed on beds in the I.C.U. of a busy general hospital. This always ensured a careful evaluation of each patient before such transfer. Certainly, the selection of such a group was not influenced by the presence of this research project, and it represents a clinically meaningful cohort of patients whose lives have been in jeopardy.

Subjects in the high lethality (HL) are therefore defined as those women between the ages of 18 and 30 whose suicide attempt by drug or poison ingestion posed a definite threat to life, and who were admitted to an Intensive Care Unit.

Vignettes illustrating these subjects are provided in Appendix XI.

ii. Subjects of lesser lethality

Those patients not requiring I.C.U. resuscitation were originally to have been placed in two groups. The first was to have been those admitted to the general recovery ward, and the second was to have been those whose attempt appeared physically so trivial that they were discharged from casualty. After each consecutive admission to the I.C.U., the next admission to the recovery ward and the next person to be turned away from casualty were to be assessed.

However, during the first thirteen months of data collection it became apparent that the numbers were less than had been anticipated from a review of the Royal Adelaide Hospital data for the year July 1973 to June 1974. There were only 24 persons admitted to the

Intensive Care Unit, and only 6 persons had not been admitted. There had been no difficulty in seeing the next admission to the general recovery ward following each I.C.U. admission, but even there it had been noted that the numbers were less than in previous years. (There are several possible contributing factors. The opening of the Modbury and Flinders Hospitals may have contributed to the overall decrease and the change in hospital policy towards the medically trivial overdose has already been noted.)

At that point, the subject selection for those other than admissions to the I.C.U. was varied, and consecutive admissions to the general recovery ward (still women between the ages of 18 and 30) were seen between 18th February, 1977 and 10th September, 1977 except for the periods noted on pp. 167, 168) when the researcher was unavoidably absent.

On two days during that period there were 3 patients, and due to pressure of other clinical work it was impossible to commit oneself to three assessments in one day, and considered unreasonable to keep the patient an extra day without assessment. On those two days, the toss of a coin was used to exclude one patient (heads the patient whose surname closest to the letter A, or tails, the patient whose surname closest to the letter Z).

During the period of intake of patients into the project there were 4 patients who fulfilled the criteria but were not seen. One patient discharged herself at her own risk early in the morning following admission and made no response to efforts to contact her. Another

patient refused to participate in the research project, and it is of note that she was a medical practitioner's wife. Two other patients were seen and discharged by a new registrar. This was caused by a breakdown in communication between the researcher, and both the previous and the new psychiatric registrars.

It was planned that the data already gathered on those patients not requiring I.C.U. resuscitation would be included with the data on the consecutive admissions to the general recovery ward. Three senior clinicians would then be asked to allocate patients into two groups on the basis of the medical seriousness of their suicidal behaviour.

This was done by a specialist physician and anaesthetist to the Intensive Care Unit (Dr. L. Worthley), the senior medical registrar in clinical pharmacology (Dr. R. Penhall) and the medical superintendent and specialist physician (Dr. B. Kearney). On the basis of a retrospective examination of clinical records, they were independently asked to divide those patients into two groups:

1. comprising those whose physical condition would warrant some cautionary observation, and
2. those who would have sustained negligible physical harm and who could well have been discharged should the bed situation have warranted it.

This is necessarily an arbitrary decision, and these experienced clinicians were given no further guidelines.

Rather than reaching a consensus, each rater made an independent

decision, and if there was disagreement the subject was placed in the category which two of the three raters had chosen. There was agreement between all three raters for 57 of the 77 patients, and it is of note that disagreement between raters was consistent. Thus Dr. Penhall, the clinical pharmacologist was the most cautious and wished to observe more patients, whereas Dr. Worthley was willing to discharge more. Dr. Kearney, the physician superintendent, was midway between these opinions, and his decision, in fact, decided the issue when there was disagreement between Dr. Penhall and Dr. Worthley. As Dr. Worthley reflected the Intensive Care Unit approach, this can be taken to reinforce the view that admission to the Intensive Care Unit certainly denoted a significant risk to life.

In this way two further clinically meaningful groups of patients were selected.

Subjects in the group of intermediate lethality (IL) are defined as those women between the ages of 18 and 30 whose suicide attempt by drug or poison ingestion, in the opinion of at least two of three experienced clinicians, warranted cautionary observation in a general recovery ward.

Subjects in the group of low lethality (LL) are those women between the ages of 18 and 30 whose suicide attempt by drug or poison ingestion, in the opinion of at least two of three experienced clinicians, produced negligible physical harm, and who could have been discharged on purely physical grounds had the bed situation warranted it.

Vignettes illustrating patients in the IL and LL groups are provided in Appendices XII and XIII.

ii. Comparison subjects

These were women between the ages of 18 and 30 who were attending the St. Agnes Community Health Centre, a Government funded centre in outer suburban Adelaide. This centre has five general practitioners, and a full complement of other staff including a visiting psychiatrist, two visiting psychologists, two social workers, two nurse educators and a physical fitness instructor. This particular setting was chosen as it provided an opportunity to have a comparison group of persons who had not attempted suicide, who had been to their family doctor, and who were using the facilities available in an appropriate and constructive way. Initial contact was provided by Professor T. G. C. Murrell, Professor of Community Medicine, University of Adelaide, whose department has a teaching and research commitment at the centre. Attendance at the centre's practice meeting allowed close liaison with Ms. Diane Chessell, Social Worker, and Mr. Kevin Edwards, a physical fitness instructor, and subjects from their groups were assessed.

Ms. Chessell and Mr. Edwards expressed a certain amount of anxiety regarding the assessment of their subjects, and it was agreed that any reference to attempted suicide would not be made in the initial selection. They, therefore, called for volunteers to meet with a researcher from the University of Adelaide Department of Psychiatry

who wished to compare a group of persons attending the health centre with those persons attending the psychiatric unit of the Royal Adelaide Hospital. In fact, this was logical, as to ask persons to attend only if they had not attempted suicide could well have been embarrassing to some subjects. As part of the general interview for obtaining demographic data, each person was asked if they had taken an overdose or attempted suicide in any way, and if they had, they would have been excluded from the study. In fact, none of the comparison group conceded having demonstrated any suicidal behaviour in the past.

Ms. Chessell's group was named a 'Mix and Chat' group, in a deliberate attempt to de-emphasise any psychological morbidity, and was comprised mainly of young women who were bored or anxious about different aspects of their lives. These were persons considered by the general practitioners not to require either assessment by the psychiatrist or psychologists, but who would nevertheless benefit by some interpersonal contact. Ms. Chessell asked for volunteers to meet in groups of four or five in the evening, and twelve of approximately twenty-five women between the ages of 18 and 30 attending her classes agreed to participate.

Mr. Edwards' fitness classes were more heterogeneous in terms of age and marital status. They also had been seen by their family doctor before participation, and referral to these classes seemed to be for several reasons - specifically to get fit, to lose weight, or essentially using it as a socialising exercise. These persons were

also seen in small groups, and thirteen of approximately thirty eligible persons agreed to participate.

Subjects in the comparison group were therefore, not a 'control' group in the strictest sense of random community selection, but were women between the ages of 18 and 30 who had not attempted suicide, who had attended their local family doctor at a Community Health Centre, and who were participating in programmes which required some initiative on their part. It was hoped that such a comparison group of persons demonstrating adaptive behaviour within the medical setting would allow the differences (if any) between it and those groups who had attempted suicide to stand out in more stark relief.

Vignettes of subjects in the comparison group are provided in Appendix XIV.

III. METHOD

a. Suicide Attempters

i. Location of interview

Each patient was initially seen at the bedside, and after introducing himself as a psychiatrist who would be interviewing them about their hospitalisation, the researcher asked either a ward sister or nurse to help the patient to a room where the interview would take place.

Interviews were conducted either in the researcher's office in the Department of Psychiatry, in an office attached to the general recovery ward, or in a clinic room attached to the general medical

wards. In each case it was carried out in private.

Initially further introduction was made: that the interviewer was a member of the University of Adelaide, Department of Psychiatry, that he had a special interest in persons who took more than the prescribed dose of medication, and that he wished the patients to take part in an interview which would last about an hour-and-a-half, and which would include the administration of questionnaires. As noted before, only one subject refused cooperation at this stage.

ii. Interview technique

Initially rapport was established by making sure the patient was comfortable, and suggesting, in an open-ended manner, that most people who come to hospital in similar circumstances were upset and anxious. This enabled an immediate focussing on the events leading to admission. In those patients who appeared hostile and resistant, immediate interpretation was made along the following lines: first, that they may not be able to trust the researcher, and indeed why should they trust a stranger, albeit one in a helping role; and, second, that as they may have been let down by someone recently, perhaps in relation to the overdose, they may feel reluctant to share their feelings.

In addition, any dialogue about whether or not the patient really wanted to commit suicide was avoided. Denial was accepted, but immediately tempered by a statement that often people have mixed feelings about living and dying when they feel desperate enough to take extra tablets. This was almost invariably accepted.

After the initial establishment of rapport, details relating to the overdose were elicited, and if the patient appeared drowsy, or had difficulty in recall, tests of orientation and serial subtraction of 7 from 100 were administered. If the patient was still confused from the overdose, the initial interview was terminated and the patient seen either later that day or early next morning. Nine patients were seen in this way, and having made initial contact, none declined a further interview.

Those patients who were not confused continued assessment, and the interview proceeded along relatively structured lines of eliciting information regarding family and personal history, past medical and psychiatric history, premorbid personality and the assessment of mental status.

iii. Administration of questionnaires

The initial interview described above lasted about 40 minutes, and at that point, the Levine-Pilowsky Depression Questionnaire was administered. It was introduced as a depression questionnaire, and each patient was asked to answer each item in relation to how they had been feeling in the few days leading up to their admission. The Hopelessness Scale was then given, and described as an instrument which was examining a particular aspect of that person's feelings, again in the few days leading to the overdose. The Death Anxiety Scale was next administered, and subjects were asked to answer each item in relation to how they usually felt.

During this time, the researcher was completing the demographic

details chart and the Suicidal Intent Scale, and any items which remained unclear were clarified after completion of the first three questionnaires. A further break from marking the questionnaires was provided by the elucidation of childhood stress items. (It was of note that these often facilitated the recall of relevant family history.) Finally, the Hysteroid-Obsessoid Questionnaire and Adult Nowicki and Strickland locus of control scale were introduced as personality questionnaires, and subjects were asked to answer them as they normally would, and not to allow their recent experience to influence them.

During this time the researcher completed the outstanding mental status observations and diagnostic formulations, ensuring that he did not appear to be waiting for, or hurrying the patient.

iv. General problems

An initial concern that patients would be unwilling to participate in a study involving extensive use of questionnaires proved to be unfounded. In fact, patient cooperation was extremely good throughout, and although it is possible that some subjects were irritated by the number of questionnaires, it was the researcher's opinion that few were done in haste.

There were only two patients, one each in the low lethality and intermediate lethality groups, who refused to cooperate at all with the questionnaires, although demographic data and items related to their suicidal intent are available. Three patients, two from the intermediate lethality group and one from the low lethality group

failed to complete the final questionnaire. There were two patients, both from the low lethality group, who were unable to attempt the questionnaires because of language difficulties (Greek and Indonesian), and three patients, all from the intermediate lethality group, who had acute schizophrenic illnesses and their active thought disorder and distractability made it impossible for them to concentrate.

The questionnaire items were read aloud to two subjects who were unable to read because of low intelligence and/or educational difficulties, and to two other subjects who, although having no clouding of consciousness, still had marked blurring of vision due to drug effects.

Although patient cooperation was good, there were some problems. Thus, one patient (referred to in the section on subject selection, (p.171) refused to participate at all, and there were two, referred to above, who refused to complete a questionnaire.

One subject in the high lethality group had discharged herself at her own risk immediately after transfer from the Intensive Care Unit. However, she responded to a telegram, and in fact, expressed surprise that anyone would take the trouble to speak with her, and cooperated with the questionnaires when seen. Another subject in the high lethality group was extremely hostile, abusive and expressed anger that she had been saved. She repeatedly expressed further suicidal ideation and was transferred under certificate to a mental hospital. When seen four days later at that hospital she expressed gratitude at having been controlled, and cooperated fully with the interview

and questionnaires.

v. Comment

The literature would have led one to expect a considerable degree of hostility in these patients (Philip, 1970; Paykel and Dienelt, 1971; Eastwood et al, 1972; Weissman et al, 1973b; and Pallis and Birtchnell, 1976). Though this was evident, the extent of patient cooperation was gratifying. Reasons for this may have been that formal introductions were made, the interview was conducted in private and in an unhurried manner, that a deliberate attempt to establish rapport and defuse hostility was made, and perhaps of most importance, it was a clinically relevant interview, with a decision regarding the future management of each patient having to be made at the conclusion of the interview.

b. Comparison Subjects

These subjects were seen either at the Community Health Centre or in a nearby Youth Club gymnasium. Those subjects attending Ms. Chessell's Mix and Chat classes were seen at the Health Centre. Initially, they were seen in small groups of 4-5 when it was explained that they would be interviewed individually, and asked to complete several questionnaires in order to assess how people who were using a health centre's facilities might differ from persons attending the psychiatric clinic at the Royal Adelaide Hospital. The questionnaires were completed in the small group, and each subject was interviewed in private to ascertain demographic data, including whether or not there was a past history of attempted suicide, childhood factors,

and a brief family, personal and psychiatric (if any) history.

Those at the gymnasium were seen in less ideal conditions. For three consecutive weeks subjects were seen in small groups initially, again with the explanation that they were a group of subjects using a health centre's facilities, who were to be compared with persons attending the psychiatric unit of the Royal Adelaide Hospital. They then completed the questionnaires. The individual interview, though in private, was in less comfortable circumstances than for all other groups, being in a closed corridor with seats but no desk, rather than an office. It was the researcher's impression that this did not greatly impede the disclosure of emotionally charged history.

IV. SUMMARY OF SUBJECT SELECTION AND DATA ACQUISITION

Table 3.1. portrays an overview of subject selection and data acquisition.

TABLE 3.1.

PATIENT SELECTION AND DATA ACQUISITION

Intensive Care Unit Patients n=37	34 Interviewed	<u>High Lethality (HL) Group n=33</u>	
	2 Died	All completed questionnaires	All data
	1 Excluded - transsexual		
	1 Discharged self		
General Recovery Ward and six patients not admitted n=81	77 Interviewed 1 Refused cooperation 1 Discharged self 2 Seen by Registrar	<u>Intermediate Lethality (IL) Group n=54</u>	
		1 patient refused questionnaires	General demographic data 54
		3 patients acutely schizophrenic and unable to do questionnaires	Intent scores 53
		2 patients did not complete ANSIE	Childhood factors 51
		Intent scores for one patient lost	ANSIE 48
			All other questionnaires 50
		<u>Low Lethality (LL) Group n=23</u>	
		1 patient refused to answer questions pertaining to childhood factors and would complete only the LPD questionnaire.	General demographic data 23
		2 patients were unable to communicate sufficiently because of a language barrier and the childhood factor scores and questionnaire data were not obtained	Childhood factors 20
		1 patient did not complete ANSIE	Intent scores 23
	LPD 21		
	ANSIE 19		
	All other questionnaires 20		
Comparison Group n=25	25 Interviewed	<u>Comparison Group n=25</u>	
		1 set of questionnaires lost	General demographic data 25
			Childhood factors 25
		All questionnaires 24	

V. INSTRUMENTS

a. General Descriptive and Clinical Data

The instrument used to record general descriptive and clinical data is presented in Appendix I. This is based on the coding sheet used in the Edinburgh Regional Poisoning Treatment Centre (Kreitman, Personal Communication, 1975). Some items were omitted, and others have been modified for the purposes of this study. Data relevant to this study included:

i. General demographic data

Age

Nationality

Civil state

Current household

Socio-economic status¹

Presence of children

ii. Circumstances related to overdose

Referral to hospital

Nature and number of drug(s) ingested

Source of principal drug ingested

Use of alcohol with/before overdose²

iii. Most recent contact with 'helping agency'

Time of contact

Nature of 'helping agency'

Most recent contact with medical practitioner

Nature of most recent medical contact

¹The delineation of 'socio-economic status' is provided in Appendix II.

²The use of alcohol was determined by clinical interview, and not biochemical analysis.

- iv. Past psychiatric history
 - Time of contact
 - Past history of attempted suicide
 - History of drug/alcohol abuse
- v. Psychosexual functioning
 - Time of last menstrual period
 - Possibility of pregnancy
 - History of miscarriage/termination of pregnancy
- vi. History of parental separation¹
- vii. History of personal violence²
- viii. Subjects perception of alcohol abuse by spouse
- ix. Family history of psychiatric treatment
- x. Contact with suicidal behaviour
- xi. Clinical diagnosis³
 - Illness diagnosis
 - Personality diagnosis

¹'Parental separation' was defined as the permanent separation of a parent by either death or separation/divorce up to and including the age of 15 years.

²The 'History of personal violence' was assessed on the basis of responses to the question: 'In the past five years have you been physically violent towards another person, or has anyone been physically violent towards you?' No attempt was made to record the degree of such violence.

³Clinical diagnostic criteria are provided in Appendix III.

b. Reported Childhood Stress Factors

The assessment of childhood factors related to adult mental health has followed the procedure published by Langner and Michael (1963) in "*Life Stress and Mental Health*", the second volume of the Midtown Manhattan Study, a study which was initiated in order to investigate the relationship between mental disorder and the socio-cultural environment. While the first volume covered the demographic results, the purpose of the second volume was to report the results of efforts "*to find other factors that were associated with mental health independently of the demographic factors*" (Langner and Michael, 1963).

Initially 148 items presumed to be related to environmental stress were examined in relation to Mental Health Ratings. These were based upon global independent judgements by two psychiatrists of a six-page psychiatric summary. The overall mental health was first graded on a 0-6 rating scale, and then with the addition of information about the respondent's social functioning as well as evidence from welfare agencies and other institutions, a more detailed 13-point mental health rating scale was devised. The statistical measure selected to describe this scale is of note. Langner and Michael used the 'ridit', which is a term derived from the phrase 'Relative to an Identified Distribution'. They stated that "*the average ridit is a cumulative percentile rank, indicating the probability that one group is more disturbed or impaired than another group. The larger the ridit, the worse the mental health of the group. The smaller the ridit, the better the mental health of the group. The average mental health ridit of the entire population*

of Midtown is .50. Higher ridits than .50 indicate a worse-than-average group, the lower ridits than .50, a better than average group".

Using this statistic of mental health, 49 of the original items distinguished subjects at the 5 per cent level of significance when comparing mean ridits. These items were ranked one. A further 71 items approached that level of confidence and were ranked two. By a process of 'pyramiding' in which there was a concentration of first rank items, and with those of an overlapping nature being discarded, the total was reduced to 31, which were considered to represent fourteen factors relevant to adult mental health. Of these factors, eight were specifically related to childhood stress. These eight factors, comprising a total of eighteen items, have been used in this study.

There were several reasons for excluding adult stress factors for the purpose of this study. Some of the questions relating to adult stress appeared particularly relevant to New York in the 1950's, while other items were related to marriage and children, and would not be applicable to many of the subjects of the present study. Furthermore, there has been particular emphasis on the role of perceived and actual childhood experience and its relationship to adult mental health (Rutter, 1972; Bowlby, 1977).

Langner and Michael (1963) summarise the items and their administration thus: *"The preadult factors were considered to be independent variables in relation to mental health, and dealt with characteristics of the respondent's parents and his childhood and adolescent experiences.*

Parents' Poor Physical Health was based on the respondent's positive answer to 'When you were growing up (age six to eighteen) was either of your parents in poor health?'

Parents' Poor Mental Health was indicated by answers to several questions. Among these was a report of psychosomatic illnesses of the respondent's mother and father, the statement that one or both parents was 'the worrying type', and that either or both parents had a 'nervous breakdown....'

Childhood Economic Deprivation was indicated when the 'chief problems of parents' were 'unemployment' or 'financial', when parents 'often had a hard time making ends meet', and when the mother had to work full time outside the home for financial reasons.

Childhood Poor Physical Health was indicated by 'As far as you can remember or have been told, was your health in early childhood good, fair, or poor?' and 'as a child, did you catch cold fairly often?'

Childhood Broken Home was initially indicated by answers to 'Did you live together with both your real parents up to the time you were sixteen years old?' If both parents were not present till sixteen, because of separation, divorce, death, institutionalization, or other reasons, the interviewer asked the respondent's age at the time the home was 'broken'. Homes broken before age seven, those broken from ages seven to sixteen, and homes unbroken through age sixteen were considered progressively less stressful to the individual.

The stress factor of Parents' Character Negatively Perceived was based on answers to six items concerning how the respondent perceived

his parents' behaviour during childhood....The six items were 'Father spends too little time with me' (yes), 'Father wants to run his children's lives' (yes), 'Mother doesn't understand me' (yes), 'My parents are always proud of their children' (no), and 'Parents don't practice what they preach' (yes). Whether a factual report or perception....this factor constituted a good predictor of adult mental health.

Parents' Quarrels was based on a single item: 'Of course, all parents have their quarrels (arguments) with each other. In your home when you were growing up (age six to eighteen) did such quarrels occur often, occasionally, or rarely?'

Disagreements with Parents was again a single-item factor: 'When you were a teenager (age thirteen to eighteen) did you have disagreements with your parents, often, occasionally, rarely, or never?'"

It is acknowledged that some of these items are 'perceptions' rather than factual reports, and these conceptual difficulties will be noted in the discussion.

Scoring. Much of Langner and Michael's work is related to assessing combinations of stress factors in relation to adult mental health. Although a full review of their methodology is beyond the scope of this thesis, it is of interest that contrary to their initial expectations that "striking interactive effects" of stresses would emerge, "everything pointed instead to the additive importance of the number of factors involved".

They also reported: "We have found that the stress factors, when combined, seem to have an additive rather than synergistic statistical effect on mental health risk. In short, the summed effect of these stresses occurring together is seldom greater (or smaller) than their individual effects. This finding makes it only logical to combine the factors into scores in order to increase their actuarial or predictive power in relation to mental health risk....Impaired risk was found to be clearly related to the number of stresses reported".

It is of interest that they found the childhood and adult stress scores to be relatively independent, and that the childhood stress score was less strongly related to adult mental health. However, they noted that "there is a definite and strong connection between childhood experiences and adult mental health", and it is this relationship which is pursued in this study.

The composition of the reported childhood stress factors is shown in Appendix IV. Each of the 18 individual items will be assessed, as will the eight stress factors and the total scores.

c. Suicidal Intent Scale

Suicidal intent is defined as "the seriousness or intensity of the wish of a patient to terminate his life" (Beck et al, 1974b). It is clearly not a simple concept, and is comprised of the diverse factors leading to a compromise between the wish to live and the wish to die. There is reasonable evidence to suggest that it is useful to distinguish 'suicidal intent' from 'medical lethality'. However, some suicidal intent scales (e.g. McHugh and Goodell, 1971; Cutter,

1972, quoted by Beck et al, 1974b) use information related to the outcome of the attempt, data which correctly belong to an assessment of lethality. The scale of Beck et al (1974b) avoids this. It is administered after the attempt, but includes items relating to the circumstances surrounding the attempt and a record of the patients' thoughts and feelings at the time of the attempt. Those items were derived from the literature on suicide and from other work by Beck and his colleagues.

It is a fifteen-item schedule in two parts (see Appendix V). The first nine items apply to the circumstances of the attempt in relation to isolation, timing, precautions against discovery, seeking help during or after the attempt, acts in anticipation of death, the degree of planning, the presence or absence of a suicide note, whether there was communication of intent before the attempt and its purpose. The remaining six items are based on the patients' own judgements of the expectation of death, conception of lethality and seriousness of attempt, ambivalence towards living, conception of the reversibility of the attempt and its premeditation. Each item is rated on a three-point scale (0-2), giving a range of 0-30 for the suicidal intent score.

Beck et al (1974b) report a high level of inter-rater reliability ($r=.95$), and its construct validity has been demonstrated (Beck et al, 1974a; Silver et al, 1971; and Wetzel, 1974b).

The Suicidal Intent Scale has been used by other investigators, and the findings of Pallis and Sainsbury (1976) supports its usefulness in the study of suicidal behaviour.

It is of note that a more recent attempt has been made to modify the Beck scale. Thus Pierce (1977) has included items which relate

to the actual risk and outcome of the attempt. He claimed that the modified scale provided a more objective method for measuring suicidal intent, but its combination of items related to lethality and intent appears to complicate the clarification of the components of intent.

Although Pierce's work had not been published at the commencement of this study, there appear to be sound arguments to restrict the concept of suicidal intent to that defined by Beck et al, and their Suicidal Intent Scale will be used in the present study.

d. Levine-Pilowsky Depression (LPD) Questionnaire

The problems of the nosology of depression have been noted (p.95), and definitions to be used in this study are provided in Appendix III. The Levine-Pilowsky Depression (LPD) Questionnaire (Pilowsky et al, 1969) was used primarily as it provides an objective measure of depression. Furthermore, it allows classification of subjects into one of three groups: either 'non-endogenous depression' (Class A or I¹), 'endogenous depression' (Class B or II) or 'non-depression' (Class C or III). As well as providing a measure of the degree of severity of depression, it also may be used to indicate the patients' position on the endogenous-non-endogenous dimension of depression symptomatology.

The LPD is comprised of 57 items, each requiring a 'yes' or 'no' response, and is based on statements related to endogenous and neurotic depression in standard psychiatric texts (Pilowsky et al, 1969). As

¹Pilowsky and his colleagues have used the letters A, B, and C, and the numbers I, II and III interchangeably to denote the different classes of depression provided by the LPD Questionnaire. It should be noted that the 'type A' depression (Kendall, 1976) referred to in the discussion (p.339) is, in fact, analogous to the 'class II' or 'class B' depression allocation of the LPD Questionnaire. To avoid confusion, the numbers, I, II and III will be used except where direct reference is made to work specifically using the letters A, B, and C.

will be noted from the questionnaire (Table 3.2), items relate both to the affective and physiological components of depression.

The original questionnaire was administered to 200 consecutive patients on their first contact (usually as an outpatient) with the Department of Psychiatry at the University of Sheffield. The statistical method of numerical taxonomy was used to give the most parsimonious method of grouping patients on the basis of their questionnaire responses (Pilowsky and Boulton, 1970). The identification of different classes follows a decision-tree procedure, and has been described by Pilowsky and Spence (1975): "*Class membership probabilities are compared for pairs of classes, rather than all classes simultaneously, using weighted responses. It is first decided whether the patient belongs to Class A or B, and then Class B or C (or A or C). Different weightings are used in each comparison.*" The items used to discriminate between Classes A and B are shown in Table 3.2.

"The responses characterising Class A suggest a nonspecific stress reaction of a depressive type. This includes patients who would be classed as reactive depressive patients were it not for the presence of other clinical features (e.g. personality disorder, psychotic decompensation) that make an alternative diagnosis preferable. On the other hand, Class B corresponds to the pattern commonly described as endogenous depression. These patients report such symptoms as the following: constant depression, retardation, loss of libido, loss of appetite, poor concentration, general insomnia, dry mouth,

TABLE 3.2.

LIST OF LEVINE-PILOWSKY DEPRESSION QUESTIONNAIRE ITEMS
WITH THOSE RESPONSES CONTRIBUTING TO E-NE*SCORE
OR DEPRESSION SCORE MARKED

(Pilowsky and Spence, 1975)

Items	Depression† Score	E-NE* Score‡
1. Are you more irritable towards other people?	X	...
2. Have you lost interest in watching television?	X	X
3. Do you have difficulty in falling asleep without tablets?	...	X
4. Do you feel depressed all day long?	X	...
5. Do you feel slowed up in your thinking?	X	...
6. Have you any serious money worries?	...	X
7. Have you had any recent family worries?	...	...
8. Have you lost someone you love in the past year?	...	...
9. Do you feel you are a bad person?	...	...
10. Have you moved in the past year?	X	...
11. Do you avoid company?	...	...
12. Is it more difficult to concentrate on your work?	X	...
13. Have you any housing worries?	...	X
14. Do you wish you were able to cry?	...	X
15. Do you have a restless and disturbed sleep without tablets?	...	X
16. Do you feel most depressed in the evenings?	...	X
17. Are there times when you do not feel depressed?	X	...
18. Do you have less interest in reading newspapers?	X	...
19. Do you think you will get better?	...	...
20. Do you feel that people are sometimes talking about you?	...	X

*Endogenous-non-endogenous indicated by E-NE

†Each response scored "1", so that possible range of scores is from 0 to 19, usually expressed as 1 to 20, adding constant of 1 to total.

‡These responses used to discriminate between classes A and B.

TABLE 3.2. (contd.)

Item	Depression† Score	E-NE* Score‡
21. Is it easy to fall asleep without tablets?	...	X
22. Is your appetite normal?	X	X
23. Have you less interest in sex?	...	...
24. Do you feel you are a burden to others?	X	...
25. Is life worth living?	...	...
26. Do you cry a lot?	...	X
27. Are you unable to cry?	...	X
28. Have you become constipated?	...	...
29. Do you feel happier in the mornings?	...	X
30. Do you suffer from a dry mouth?	X	...
31. Have you less feeling for those close to you?	...	...
32. Do you feel you are letting other people down?	...	...
33. Have you lost your appetite?	...	X
34. Have you had trouble at work in the past year?	...	...
35. Do you wish you were dead?	X	...
36. Do you waken much earlier than your usual time without tablets?	...	X
37. Are you as good a person as most of your friends?	...	...
38. Do you feel less depressed when you are with company?	...	...
39. Do you think your illness is a punishment that you deserve?	...	...
40. Do you have less interest in things you usually enjoy?	X	...
41. Can you sleep normally without tablets?	...	X
42. Do you waken at your usual time without tablets?	...	X

*Endogenous-non-endogenous indicated by E-NE

†Each response scored "1", so that possible range of scores is from 0 to 19, usually expressed as 1 to 20, adding constant of 1 to total.

‡These responses used to discriminate between classes A and B.

-contd.-

TABLE 3.2. (contd.)

Item	Depression† Score	E-NE* Score†
43. Do you think there is something seriously wrong with your body?	...	...
44. Is your depression the same all day long?	X	...
45. Do you find difficulty in relaxing?	...	X
46. Do you feel life is not worth living?	X	...
47. Have you lost weight?	...	X
48. Do you feel most depressed in the mornings?	...	X
49. Have you overheard people talking about you?	...	X
50. Do you feel this illness has been brought upon you by yourself?	...	...
51. Do you feel slowed up in doing things?	X	X
52. Does the future look hopeful?	...	...
53. Do you feel happier in the evenings?	...	X
54. Have you thought recently about ending your life?	...	...
55. Do you feel time passing more slowly?	X	...
56. Are you doing your work as well as you used to?	X	...
57. Can you be easily cheered up?	X	...

*Endogenous-non-endogenous indicated by E-NE

†Each response scored "1", so that possible range of scores is from 0 to 19, usually expressed as 1 to 20, adding constant of 1 to total.

‡These responses used to discriminate between classes A and B.

and loss of interest. They have been found to respond substantially better to electroconvulsive therapy than Class A patients.

Since it is not until the second step in the decision tree (A or B against C) that the patient is identified as depressed or non-depressed, the score the patient receives on the first comparison (A against B) can be taken as reflecting the direction of any existing depressive features. This score may be used to indicate the patient's position on the endogenous-non-endogenous (E-NE) dimension of depressive symptomatology, even though the patient may be ultimately assigned to Class C. Thus E-NE score involves only one (A against B) comparison; class assignment to one of the three taxonomic groups requires an additional step."

In addition to the correlation with clinical diagnosis demonstrated in the original study (Pilowsky et al, 1969) this classification has been shown to correlate with treatment choice (Pilowsky and McGrath, 1970), and certain psychophysiological measures (Byrne, 1975).

The severity of depression can be measured on a 0-19 scale, and validation data for this have been provided by Pilowsky and Spalding (1972). This scale is derived from data from the original classification study (Pilowsky et al, 1969). Ninety-four of the original 200 patients were clinically not depressed, and item analysis showed that 25 of the questionnaire items discriminated between the depressive and non-depressive groups at the 0.05 level of significance. Of these 25 items, 19 were found to correlate significantly (again at this 0.05 level) and negatively with the taxonomic Class C, the non-

depression group. These 19 items, shown in Table 3.2, contribute to the depression score, and give a possible range of scores from 0-19, although this can (for convenience) be expressed as 1-20 by adding a constant of 1 to each score.

The questionnaire as presented to the subjects of this study is presented in Appendix VI(a), and the weighting of responses which contribute to the endogenous-non-endogenous discrimination is detailed in Appendix VI(b).

e. The Hopelessness Scale (H.S.)

Beck (1963) was one of the first to emphasise the component of hopelessness in depression (p.108), and his group has subsequently used a standardised method for its assessment. This was originally reported as the Generalised Expectancy Scale (Minkoff et al, 1973), and then as the Hopelessness Scale (Beck et al, 1974c). In fact, the two scales are identical (Beck, Personal Communication, 1978).

The Hopelessness Scale is based on a review of the literature by Stotland (1969) in which he *"proposed that a person's hopelessness can be objectified by defining it in terms of a system of negative expectancies concerning himself and his future life"*. Thus it is comprised of 20 items related to a subject's expectations of the future, to each of which a true or false response can be given. It contains 9 items from a test of attitudes about the future which had originally been in a semantic differential form, and 11 items drawn from a pool of pessimistic statements made by psychiatric patients who were adjudged by clinicians to appear hopeless. An increasing score from 0 to 20 denotes increasing hopelessness.

The Hopelessness Scale is reported to have concurrent validity when compared with clinical ratings of hopelessness, and significantly correlated with the pessimism item on the Beck Depression Inventory and with the Stuart Future Test. Beck et al (1974c), also presented the results of several studies which supports its construct validity.

The Hopelessness Scale is presented in Appendix VII.

f. Death Anxiety (D.A.) Scale

There have been several scales related to fear of death and death anxiety, and these have been reviewed by Templer (1970) in the paper describing the development of his Death Anxiety Scale. This was chosen as the instrument to measure this attribute primarily because of its brevity and simplicity. It is a fifteen item questionnaire requiring either a 'true' or 'false' response, and Templer believes it reflects a wider range of life experiences than previous scales.

It was constructed by selecting forty items on a rational basis, and then subjecting these to seven judges who rated the face validity. Nine items were excluded, and the remaining 31 items were embedded in 200 filler items and administered to three independent groups of subjects. To determine and maintain internal consistency of the death anxiety items, those 15 items of the 31 which had a point biserial correlation coefficient significant at the .10 level in two out of the three analyses were retained for the final Death Anxiety Scale.

Templer (1970) has presented data which indicate the scale's internal consistency and test-retest reliability. These show that social desirability and agreement response tendency do not correlate significantly with the death anxiety scores. He also reported validity studies which demonstrated that presumed high death anxiety psychiatric patients had significantly higher scores than control patients, and that scores on this scale correlated significantly with an earlier Fear of Death Scale (Boyar, 1964), an anxiety questionnaire and a word association test using words descriptive of emotions such as 'fear', 'hate', 'lonely' and 'sad'.

Although this scale has not been used extensively as yet, it would appear to be carefully designed and validated.

The Death Anxiety Scale is presented in Appendix VIII.

g. The Hysteroid-Obsessoid Questionnaire (HOQ)

The problem of conceptualisation of the hysterical personality has been noted (p.137), as has the need to distinguish personality attributes from symptoms of psychiatric illness (p.123).

The Hysteroid-Obsessoid Questionnaire (HOQ) (Caine and Hope, 1967) is a 48 item True-False questionnaire which purports to give a score along the hysteroid-obsessoid dimension of personality. The validity of considering these two attributes of personality together arises mainly from longstanding clinical observation. Thus, Caine and Hawkins (1963) noted in one of the original validation studies of the HOQ: *"The recent empirical evidence thus supports Janet in his contention that the hysteroid and obsessoid personalities can be*

usefully dichotomised along a single dimension as an examination of the traits making up the relevant constellations suggest".

The questionnaire items were developed on a simple face validity basis. The criterion group was established using the ratings of medical, nursing and occupational therapy staff (mean 7.5 rates per patient) using an original hysteroid-obsessoid rating scale of eleven traits, which had been devised by Foulds and Caine (1958). Analysis of the internal consistency in differentiating the hysteroid and obsessoid traits allowed six of the original eleven ratings to be used for the criterion group hysteroid-obsessoid allocation. In this initial validation study the questionnaire was found to relate to personality measures more closely than to any specific symptoms, and there was a correlation of .68 ($p < .001$) with the rating classification. A further validation study has since been reported by Hope and Caine (1968) who concluded: *"The validity of total score on the HOQ, estimated against a perfectly reliable criterion, is 0.78"*. Test-retest reliability studies have reported correlation coefficients of 0.85 for normal subjects after one year and of 0.77 in 62 neurotics after six weeks intensive psychotherapy (Caine, 1965), and correlations of a similar order have also been reported by Foulds (1965).

Caine (1970) reviewed studies of the HOQ and noted: *"It is clear that the HOQ is more closely related to the validation criterion of personality traits than it is to either clinical diagnosis or to symptom measures"*.

Thus, despite the difficulties in defining the hysterical personality, and in distinguishing it from other psychiatric symptoms, the HOQ appears to be a reliable and valid instrument. It is presented in Appendix IX.

h. The Adult Nowicki-Strickland Internal-External (ANSIE) Locus of Control Scale

The original locus of control scale (Rotter, 1966) has been used in most research assessing this construct. However, there has been criticism regarding its relationship with social desirability responses, the possible confounding of personal, social and political control, and the fact that its forced choice format and reading level were aimed at college students (Nowicki and Duke, 1974). These criticisms are especially pertinent for the study of suicidal subjects as such behaviour has particularly strong social connotations, and it has also been noted that these persons may be less verbally fluent than non-suicidal subjects (Vinoda, 1966; Eastwood et al, 1972). Thus a scale free from these problems would be desirable.

The Adult Nowicki-Strickland Internal-External locus of control scale (ANSIE) appears to meet these needs (Nowicki and Duke, 1974). This scale was adapted for adult use from the Nowicki-Strickland Internal-External control scale for children (Nowicki and Strickland, 1973). It consists of 40 items each requiring a 'yes' or 'no' response. Originally 102 items were constructed on a rational basis considering Rotter's (1966) definition of the internal-external locus of control dimension. The aim was to make the items readable at the fifth grade level, yet appropriate for older students. These

were given to nine clinical psychologists who were asked to rate them in an external manner. There was complete agreement in 59 items, and these were then administered to a sample of 152 children. The final 40 items were selected on the basis of the computed discriminative ability of each item. These were changed for adult use mainly by substituting 'people' for 'children', and altering the tense of some statements to make them more appropriate for adults. The scale is keyed such that the higher the score the more external the locus of control orientation.

Nowicki and Duke (1974), in a review of studies using the ANSIE scale, reported that there was a positive correlation between its scores and those obtained on the Rotter locus of control scale ($r = .68, p < .01$; $r = .48, p < .01$); that it did not correlate with the Marlowe-Crowne Social Desirability Scale; and that in a number of studies it had reliably predicted behaviour anticipated on the basis of social learning theory.

A copy of the ANSIE instrument used is presented in Appendix X.

VI. STATISTICAL ANALYSIS OF DATA

The Statistical Package for the Social Sciences (SPSS) (Nie et al, 1975) was used throughout for the analysis of data. The clarification offered by the works of Siegel (1956) and Maxwell (1961) is also acknowledged.

For nominal data such as demographic and diagnostic details, and the reported childhood stress items, the chi square (χ^2) test was used to determine whether a significant difference existed between

the observed (O) data in each category, and that expected (E) on the basis of the null hypothesis that no difference existed between the groups. The SPSS applies the Yates' correction for all 2 x 2 tables, and the Fisher exact probability test when $N < 21$. Partitioning of the χ^2 was done when appropriate according to Maxwell (1961).

For ordinal non-parametric data such as the total childhood factor score, and the scores of individual factors when composed of two or more items; the LPD, HS, ANSIE, HOQ AND DA questionnaires; and the Suicidal Intent Scales, a one-tailed Mann-Whitney U test has been used where predictions were made of differences in scores between the three groups of differing lethality. A one-tailed Mann-Whitney U test was also employed to test the significance of differences predicted between the scores of those patients who had attempted suicide and those subjects in the comparison group.

Where no predictions had been made for non-parametric data, the Kruskal-Wallis one-way analysis of variance was used to determine the significance of variation between the three groups of differing lethality. If a significant difference was found a two-tailed Mann-Whitney U test was then used to ascertain intergroup differences.

The 5% (.05) level of significance has been taken as denoting the level at which the null hypothesis may be rejected. However, note has been made of occasions when this level of significance has been approached. In addition, the exact probability has been given when possible, as Siegel (1956) noted that: *"in reporting his findings,*

the researcher should indicate the actual probability level associated with his findings, so that the reader may use his own judgement in deciding whether or not the null hypothesis should be rejected".

CHAPTER 4

RESULTS

"The outcome of most human actions, especially of most irrational actions such as suicidal acts, depends on the quantitative relationship of conflicting tendencies and on many other factors, some of them unpredictable."

(Stengel, 1960)

I. COMPARISON OF GROUPS OF DIFFERING LETHALITY

a. General Descriptive and Clinical Data

i. General Demographic Data

1. Age

There were 33 women in the high lethality group (HL), 54 in the group of intermediate lethality (IL), and 23 in the low lethality group (LL). As can be seen from Table 4.1, the mean age of subjects in the three groups was similar.

TABLE 4.1.

AGE

	Mean age	S.D.
HL (n=33)	22.7	3.5
IL (n=54)	22.4	3.4
LL (n=23)	23.2	3.8

2. Nationality

The proportion of migrants, first-generation Australian-born and second or greater generation Australian-born was similar for each group (Table 4.2).

TABLE 4.2

	<u>NATIONALITY</u>						Total
	HL		IL		LL		
	O	E	O	E	O	E	
Migrant	6	8	12	12	7	5	25
1st generation Australian	5	5	7	7	3	3	15
2nd generation Australian	22	21	35	34	13	15	70
Total	33		54		23		110

3. Civil state

Table 4.3. presents the civil state of the attempters of differing lethality.

TABLE 4.3.

	<u>CIVIL STATE</u>						Total
	HL		IL		LL		
	O	E	O	E	O	E	
Single	16	15	27	24	6	10	49
De facto	6	6	8	9	5	4	19
Married	7	8	9	13	10	5	26
Widowed	0	0	0	1	1	0	1
Separated	4	4	8	6	1	3	13
Divorced	0	1	2	1	0	0	2
Total	33		54		23		110

Subjects in the low lethality group were significantly more likely to be either married or in a de facto relationship when compared to subjects of greater lethality. This was so both when they were compared with single subjects (Table 4.4), and with the single, separated, widowed and divorced subjects combined (Table 4.5).

TABLE 4.4.

CIVIL STATE: SINGLE V. MARRIED AND DE FACTO SUBJECTS

	HL		IL		LL		Total
	O	E	O	E	O	E	
Single	16	15	27	23	6	11	49
Married and de facto	13	14	17	21	15	10	45
Total	29		44		21		94

$$\chi^2 = 6.281, df=2, p<.05$$

Partitioned χ^2

HL v. IL + LL Corrected $\chi^2 = .044, df=1, n.s.$

LL v. HL + IL Corrected $\chi^2 = 4.859, df=1, p<.05$

TABLE 4.5.

CIVIL STATE: MARRIED AND DE FACTO V. OTHER SUBJECTS

	HL		IL		LL		Total
	O	E	O	E	O	E	
Single/separated/ widowed/divorced	20	21	37	32	8	13	65
Married/de facto	13	14	17	22	15	9	45
Total	33		54		23		110

$$\chi^2 = 7.639, df=2, p<.05$$

Partitioned χ^2

HL v. IL + LL

Corrected $\chi^2 = .197, df=1, n.s.$

LL v. HL + IL

Corrected $\chi^2 = 5.894, df=1, p<.02$

4. Current household

Table 4.6. shows that subjects in the low lethality group significantly more often were living with a spouse (either married or de facto) than those of the other two groups. This is to be expected from the comparison of civil state.

TABLE 4.6.CURRENT HOUSEHOLD

	HL		IL		LL		Total
	O	E	O	E	O	E	
Spouse, including de facto	11	12	16	20	14	9	41
Parents	11	8	11	12	3	5	25
Others	11	13	27	22	6	9	44
Total	33		54		23		

$$\chi^2 = 9.964, df=4, p<.05$$

The apparent discrepancy between the numbers living with a spouse and a simple addition of those married and in a de facto relationship (see civil state, Table 4.5.) is related to four subjects, two in the group of high lethality, and one each in the other groups, who although living apart from their spouses, claimed not to be separated.

5. Socio-economic status

Table 4.7. shows that no suicidal subject was in socio-economic class one. Although there was no overall statistical difference between the three groups, it is of note that none of the low lethality group was in social class two. This approached significance when those in class two in the low lethality group were compared with those in the two more lethal groups (Table 4.8.).

TABLE 4.7.SOCIO-ECONOMIC STATUS

Social Class	HL		IL		LL		Total
	O	E	O	E	O	E	
I	0	0	0	0	0	0	0
II	7	5	9	8	0	3	16
III	10	10	15	17	9	7	34
IV	6	6	10	10	5	5	21
V	10	12	20	19	9	8	39
Total	33		54		23		110

TABLE 4.8.

SOCIO-ECONOMIC STATUS: CLASS II V. OTHERS

	HL		IL		LL		Total
	O	E	O	E	O	E	
Class II	7	5	9	8	0	3	16
Other Classes	26	28	45	46	23	10	94
Total	33		54		23		110

$$\chi^2 = 5.015, df=2, p>.05 \text{ and } p<.1$$

Partitioned χ^2

HL v. IL + LL Corrected $\chi^2 = .007, df=1, n.s.$

LL v. HL + IL Corrected $\chi^2 = 3.581, df=1, p>.05 \text{ and } p<.1$

6. Presence of children

Table 4.9. shows that the low lethality group were significantly more likely to have children than the more medically lethal groups.

TABLE 4.9.

PRESENCE OF CHILDREN

	HL		IL		LL		Total
	O	E	O	E	O	E	
No children	21	18	32	29	7	13	60
One or more children	12	15	22	25	16	10	50
Total	33		54		23		110

$$\chi^2 = 6.977, df=2, p<.05$$

Partitioned χ^2

HL v. IL + LL Corrected $\chi^2 = .014, df=1, n.s.$

LL v. HL + IL Corrected $\chi^2 = 5.644, df=1, p<.02$

ii. Circumstances Related to the Overdose

1. Referral to hospital

There was no trend evident in a comparison of the ways in which attempters of differing lethality were referred to hospital (Table 4.10.).

TABLE 4.10.

REFERRAL TO HOSPITAL

	HL		IL		LL		Total
	O	E	O	E	O	E	
Family (inc. de facto)	11	11	17	18	9	8	37
Friends	12	13	23	21	7	8	42
Family doctor	3	4	6	6	4	3	13
Psychiatric hospital	3	2	2	2	0	1	5
Police	1	2	3	2	1	1	5
Self	1	2	2	2	2	1	5
Others	2	1	1	1	0	1	3
Total	33		54		23		110

2. Drug(s)/agent(s) ingested

Table 4.11. shows the nature of the drug(s) or agent(s) ingested. Patients in the high lethality group were significantly more likely to have taken antidepressants than patients of lesser lethality.

TABLE 4.11.

DRUG(S)/AGENT(S)/INGESTED

	HL		IL		LL		χ^2	Sig. (df=2)
	O	E	O	E	O	E		
Analgesics (asprin, paracetamol)	2	5	10	9	6	4	4.332	n.s.
Minor tranquillizers	8	10	16	17	10	7	2.430	n.s.
Major tranquillizers	3	3	6	4	0	2	*	
Barbiturates	6	3	2	4	1	2	*	
Other hypnotics	9	8	9	13	8	5	3.278	n.s.
Antidepressants	14	6	6	10	1	5	17.094	p<.001
Others	11	12	23	19	5	8	3.158	n.s.

*Insufficient numbers for statistical analysis

Overall 42 (38% of the suicidal subjects ingested more than one drug/agent. Sixteen of the 33 high lethality patients, 21 of 54 in the intermediate lethality group and 5 of 23 in the low lethality group took more than one drug. Although there were fewer than expected in the low lethality group, the difference did not attain significance (Table 4.12.).

TABLE 4.12.

SINGLE V. MULTIPLE DRUG(S)/AGENT(S) INGESTED

	HL		IL		LL		Total
	O	E	O	E	O	E	
Single Drug	17	20	33	33	18	15	68
More than one drug	16	13	21	21	5	8	42
Total	33		54		23		110

$$\chi^2 = 4.128, df=2, p<.2 \text{ and } p>.1$$

Partitioned χ^2

HL v. IL + LL Corrected $\chi^2 = .368, df=1, n.s.$

LL v. HL + IL Corrected $\chi^2 = 2.508, df=1, p<.2 \text{ and } p>.1$

3. Number of tablets/capsules ingested

Table 4.13. shows the number of tablets/capsules ingested by each group with arbitrary cut-off points of different numbers of drugs. (The patient numbers are less than for other analyses as patients who took liquids (e.g. weed killer) have been excluded.) There was a significant relationship between the number of tablets ingested and the lethality of the attempt, with subjects of the high lethality group taking more tablets than those of the groups of lesser lethality. Thus 23 of 29 subjects in the high lethality group took more than 20 tablets compared to only 1 of 22 subjects in the low lethality group.

TABLE 4.13.

NUMBER OF TABLETS/CAPSULES INGESTED

	HL		IL		LL		Total
	O	E	O	E	O	E	
Less than 12	2	7	7	12	15	5	24
13 to 20	4	8	18	14	6	6	28
21 to 30	13	9	17	16	1	6	31
Greater than 30	10	5	9	9	0	5	19
Total	29		51		22		102

$$\chi^2 = 42.257, df=6, p<.001$$

4. Source of principal drug ingested

There was no significant difference between the three lethality groups in comparing the source of the principal drug ingested (Table 4.14.).

TABLE 4.14.

SOURCE OF PRINCIPAL DRUG INGESTED

	HL		IL		LL		Total
	O	E	O	E	O	E	
Prescribed by medical practitioner for the patient	20	20	33	32	13	14	66
Prescribed by medical practitioner for another person	7	5	8	9	3	4	18
Drugs obtained without prescription	1	4	8	7	5	3	14
Illegally obtained drugs	3	3	5	5	2	2	10
Others (weed killer)	2	1	0	1	0	0	2
Total	33		54		23		110

5. Use of alcohol with or immediately before the overdose

Significantly fewer patients in the high lethality group and more in the low lethality group had taken alcohol immediately before or with their overdose (Table 4.15.). Partitioning demonstrated that each contributed approximately equally to the overall chi square.

TABLE 4.15.USE OF ALCOHOL WITH OR BEFORE THE OVERDOSE

	HL		IL		LL		Total
	O	E	O	E	O	E	
Alcohol with overdose	5	11	19	17	11	7	35
No alcohol	28	23	35	37	12	16	75
Total	33		54		23		110

$$\chi^2 = 7.224, df=2, p<.05$$

Partitioned χ^2

HL v. IL + LL Corrected $\chi^2 = 2.712, df=1, p<.1$ and $p>.05$

LL v. HL + IL Corrected $\chi^2 = 2.565, df=1, p<.2$ and $p>.1$

iii. Recent Contact with 'Helping Agency'

1. Time of most recent contact

The overall results are presented in Table 4.16.

Seventeen per cent of the suicidal subjects had had contact with some form of 'helping agency' within 24 hours of the overdose, and 24% within 48 hours. Only 25% had not had some contact in the month preceding the overdose.

TABLE 4.16.

MOST RECENT CONTACT WITH 'HELPING AGENCY'

	HL		IL		LL		Total
	O	E	O	E	O	E	
Within 3 hours of o/dose	0	1	4	2	0	1	4
3-12 hours	3	2	2	4	3	2	8
12-24 hours	4	2	0	3	3	2	7
1-2 days	2	2	2	3	3	2	7
2-7 days	9	8	13	14	6	6	28
7-28 days	7	8	14	14	7	6	28
28 days to 6 months	5	6	14	10	1	4	20
Greater than 6 months	3	2	5	4	0	2	8
Total	33		54		23		110

Table 4.17 demonstrates that only one of the 23 subjects in the low lethality group had not had some form of contact with a 'helping agency' in the preceding 28 days. It is of note that the main contribution to the chi square was made by the difference between the low lethality and intermediate lethality groups.

TABLE 4.17.

MOST RECENT CONTACT WITH 'HELPING AGENCY'

	HL		IL		LL		Total
	O	E	O	E	O	E	
<48 hours	9	8	8	13	9	5	26
2-28 days	16	17	27	27	13	12	56
>28 days	8	8	19	14	1	6	28
Total	33		54		23		110

$$\chi^2 = 10.541, df=4, p<.05$$

2. Nature of 'helping agency'

Table 4.18. shows the nature of the 'helping agency'.

Although the numbers as a whole are insufficient for statistical analysis the majority of each group of suicidal subjects chose a medical practitioner as their most recent 'helping agency'.

TABLE 4.18.NATURE OF 'HELPING AGENCY'

	HL		IL		LL		Total
	O	E	O	E	O	E	
Medical practitioner	29	30	50	49	21	21	100
Social worker	2	2	3	3	2	2	7
Community nurse	0	0	1	1	0	0	1
Other	2	1	0	1	0	0	2
Total	33		54		23		110

3. Most recent contact with medical practitioner

As would be expected from the fact that approximately 90% of the suicidal subjects had seen a medical practitioner as their most recent 'helping agency', the figures in Table 4.19. are similar to those in Table 4.17. The more recent contact with a medical practitioner of the low lethality group was significant, but as in Table 4.17., the main contribution to this difference is the less frequent recent contact of the intermediate lethality group, not the high lethality group.

TABLE 4.19.

MOST RECENT CONTACT WITH MEDICAL PRACTITIONER

	HL		IL		LL		Total
	O	E	O	E	O	E	
<48 hours	8	7	7	11	8	5	23
2-28 days	15	17	27	27	14	12	56
>28 days	10	9	20	16	1	6	31
Total	33		54		23		110

$$\chi^2 = 10.764, df=4, p<.05$$

4. Nature of most recent medical contact

When the nature of the medical contact is analysed, significantly more in the high lethality group had most recently consulted a psychiatrist or trainee psychiatrist (Table 4.20.).

TABLE 4.20.

NATURE OF MEDICAL CONTACT

	HL		IL		LL		Total
	O	E	O	E	O	E	
Psychiatrist or trainee psychiatrist	12	7	8	12	4	5	24
Other medical practitioner	17	22	42	38	17	16	76
Total	29		50		21		100

$$\chi^2 = 6.839, df=2, p<.05$$

Partitioned χ^2

HL v. IL + LL Corrected $\chi^2 = 4.840, df=1, p<.05$

LL v. HL + IL Corrected $\chi^2 = .096, df=1, n.s.$

iv. Past Psychiatric History1. History of previous assessment/treatment by a psychiatrist or trainee psychiatrist.

Table 4.21. demonstrates that more patients in the high lethality group had consulted psychiatric personnel in the past, but this did not attain statistical significance. (No attempt was made to estimate the amount or nature of such contact.)

TABLE 4.21.

HISTORY OF PSYCHIATRIC CONSULTATION

	HL		IL		LL		Total
	O	E	O	E	O	E	
Previous psychiatric consultation	21	17	24	28	12	12	57
None	12	16	30	26	11	11	53
Total	33		54		23		110

$$\chi^2 = 3.023, df=2, n.s.$$

Partitioned χ^2

HL v. IL + LL Corrected $\chi^2 = 2.128, df=1, p < .2$ and $p > .1$

LL v. HL + IL Corrected $\chi^2 = .039, df=1, n.s.$

2. History of previous inpatient treatment

Table 4.22. shows that more subjects in the high lethality group had had inpatient psychiatric treatment, but this did not attain statistical significance (Table 4.23.).

TABLE 4.22.

HISTORY OF INPATIENT PSYCHIATRIC TREATMENT

	HL		IL		LL		Total
	O	E	O	E	O	E	
None	18	22	37	35	17	15	72
Inpatient at time of overdose	1	1	1	1	0	0	2
Inpatient within four weeks of overdose	2	1	1	1	0	1	3
Inpatient four weeks to one year before o.d.	7	5	8	8	2	4	17
Inpatient greater than one year before o.d.	5	4	7	9	4	3	16
Total	33		54		23		110

TABLE 4.23.

HISTORY OF INPATIENT PSYCHIATRIC TREATMENT

	HL		IL		LL		Total
	O	E	O	E	O	E	
Previous inpatient psychiatric treatment	15	11	17	19	6	8	38
None	18	22	37	35	17	15	72
Total	33		54		23		110

$$\chi^2 = 2.689, df=2, n.s.$$

Partitioned χ^2

HL v. IL + LL Corrected $\chi^2 = 1.073, df=1, n.s.$

LL v. HL + IL Corrected $\chi^2 = .508, df=1, n.s.$

3. Previous outpatient treatment

Tables 4.24. and 4.25. show that more of the high lethality group had received outpatient psychiatric assessment/treatment, and that members of this group were significantly more likely to have consulted psychiatric personnel in the four weeks prior to the overdose compared to subjects of the groups of lesser lethality.

TABLE 4.24.

HISTORY OF OUTPATIENT PSYCHIATRIC TREATMENT

	HL		IL		LL		Total
	O	E	O	E	O	E	
None	12	16	32	27	11	12	55
O.P. within 7 days of overdose	6	3	2	5	2	2	10
O.P. 1 week to 4 weeks before overdose	5	3	3	4	1	2	9
O.P. 4 weeks to 1 year before overdose	6	5	7	8	3	3	16
O.P. greater than 1 year before overdose	4	6	10	11	6	3	20
Total	33		54		23		110

TABLE 4.25.

HISTORY OF OUTPATIENT PSYCHIATRIC TREATMENT

	HL		IL		LL		Total
	O	E	O	E	O	E	
None	12	16	32	27	11	12	55
O.P. in 4 weeks prior to overdose	11	6	5	9	3	4	19
O.P. greater than 4 weeks ago	10	11	18	19	9	7	36
Total	33		54		23		110

$$\chi^2 = 9.721, df=4, p<.05$$

4. Past history of attempted suicide

Table 4.26. demonstrates a trend for fewer of the low lethality group to have made a previous suicide attempt. Partitioning of the chi square demonstrates that this trend approaches significance when the low lethality group is compared with the more lethal groups combined (Table 4.27.).

TABLE 4.26.

PAST HISTORY OF ATTEMPTED SUICIDE

	HL		IL		LL		Total
	O	E	O	E	O	E	
None	18	19	27	30	17	13	62
One	7	8	17	13	2	5	26
Two or more	8	6	10	11	4	5	22
Total	33		54		23		110

$$\chi^2 = 5.759, df=4, p = .218 \text{ n.s.}$$

TABLE 4.27.

PAST HISTORY OF ATTEMPTED SUICIDE

	HL		IL		LL		Total
	O	E	O	E	O	E	
None	18	19	27	30	17	13	62
One or more	15	14	27	24	6	10	48
Total	33		54		23		110

$$\chi^2 = 3.814, df=2, p<.1 \text{ and } p>.05$$

Partitioned χ^2

HL v. IL + LL Corrected $\chi^2 = .018, df=1, n.s.$

LL v. HL + IL Corrected $\chi^2 = 2.795, df=1, p<.1 \text{ and } p>.05$

5. Time of most recent suicide attempt

There was no significant relationship between the degree of lethality and the time of the most recent suicide attempt (Table 4.28.).

TABLE 4.28.

TIME OF MOST RECENT SUICIDE ATTEMPT

	HL		IL		LL		Total
	O	E	O	E	O	E	
Never	18	19	27	30	17	13	62
<24 hours	0	0	0	0	0	0	0
1-7 days	0	0	1	1	0	0	1
1-4 weeks	0	0	0	0	0	0	0
4 weeks to 3 months	2	2	2	3	2	1	6
3 months to 1 year	6	4	7	7	1	3	14
Greater than 1 year	7	8	17	13	3	6	27
Total	33		54		23		110

6. History of drug abuse

The number of subjects conceding drug abuse was similar in each lethality group (Table 4.29.). Only members of the high lethality group had taken narcotics or LSD.

TABLE 4.29.

HISTORY OF DRUG ABUSE

	HL		IL		LL		Total
	O	E	O	E	O	E	
None	24	25	41	41	18	17	83
Marihuana alone	2	2	3	4	3	2	8
LSD/Narcotics	3	1	0	1	0	1	3
Fenfluramine (Ponderax)	0	1	2	1	1	1	3
Marihuana plus fenfluramine, methaqualone or barbiturates	4	4	8	6	1	3	13
Total	33		54		23		110

v. History of Use of Alcohol

Significantly fewer subjects in the high lethality group used alcohol (Table 4.30.). Only one subject (in the low lethality group) was considered to be alcohol dependent.

TABLE 4.30.HISTORY OF USE OF ALCOHOL

	HL		IL		LL		Total
	O	E	O	E	O	E	
Use of alcohol	8	15	30	25	12	10	50
No use of alcohol	25	18	24	29	11	13	60
Total	33		54		23		110

$$\chi^2 = 8.559, df=2, p<.02$$

Partitioned χ^2

HL v. IL + LL Corrected $\chi^2 = 6.582, df=1, p<.02$

LL v. HL + IL Corrected $\chi^2 = .242, df=1, n.s.$

vi. Psychosexual Functioning1. Phase of menstrual cycle

Table 4.31. demonstrates no differences in the menstrual characteristics of the three groups.

TABLE 4.31.PHASE OF MENSTRUAL CYCLE

	HL		IL*		LL		Total
	O	E	O	E	O	E	
Menstruating	7	10	16	15	9	7	32
1 week premenstrual	10	10	18	17	6	7	34
Mid-cycle	13	9	11	15	6	6	30
Overdue	3	4	8	6	2	3	13
Total	33		53		23		109

*The data was missing for one subject

Table 4.32. shows that there was no significant difference between groups of varying lethality in relation to whether or not they were menstruating.

TABLE 4.32.MENSTRUATING V. OTHER PHASES

	HL		IL		LL		Total
	O	E	O	E	O	E	
Menstruating	7	10	16	16	9	6	32
Other phase	26	23	37	37	14	17	77
Total	33		53		23		109

$$\chi^2 = 2.133, df=2, n.s.$$

Partitioned χ^2

HL v. IL + LL Corrected $\chi^2 = .337, df=1, n.s.$

LL v. HL + IL Corrected $\chi^2 = .812, df=1, n.s.$

2. Possibility of pregnancy/history of miscarriage/history of termination of pregnancy

Table 4.33. shows the number of patients in each group who were pregnant, or possibly pregnant, who had a history of miscarriage or who had had a termination of pregnancy. The positive responses to these questions were too few to allow valid statistical analysis.

TABLE 4.33.

POSSIBILITY OF PREGNANCY/HISTORY OF MISCARRIAGE/
HISTORY OF TERMINATION OF PREGNANCY

	HL		IL		LL		Total
	O	E	O	E	O	E	
Pregnant or possibly pregnant	2	3	6	5	3	3	11
One or more miscarriages	3	3	5	5	2	2	10
History of termination of pregnancy	4	5	9	8	4	4	17

vii. History of Parental Death or Separation/Divorce

Table 4.34. shows that the proportion of subjects who had experienced either death of a parent or permanent loss of a parent by separation or divorce, up to and including the age of fifteen, was similar for each group. One patient in the high lethality group and three in the intermediate lethality group, had experienced loss both due to death of a parent and due to separation/divorce of their parents.

TABLE 4.34.

HISTORY OF PARENTAL DEATH OR SEPARATION/DIVORCE

	HL		IL		LL		Total
	O	E	O	E	O	E	
Parental death	3	3	7	6	2	2	12
Parental separation/ divorce	6	7	13	12	5	5	24
No such loss	25	23	37	38	16	16	78

Table 4.35. presents a breakdown of the details of the parental death and separation/divorce (combined), and although the numbers are too small for statistical analysis, it demonstrates no differentiating trends between the three groups.

TABLE 4.35.

DETAILS OF PARENTAL DEATH
AND SEPARATION/DIVORCE COMBINED

	HL		IL		LL		Total
	O	E	O	E	O	E	
Separation from mother up to and including the age of 15	4	5	8	8	4	3	16
Separation from father up to and including the age of 15	8	8	14	13	5	6	27
Separation from both parents up to and including the age of 15	4	3	5	5	1	2	10
Separation from both parents before the age of 10	2	2	4	3	1	2	7
Separation from mother before the age of 10	3	4	8	6	2	3	13
Separation from mother between the ages of 10 and 15	2	1	0	1	1	1	3
Separation from father before the age of 10	6	6	9	9	4	4	19
Separation from father between the ages of 10 and 15	2	2	5	4	1	2	8
Separation from one parent before 10 and the other between 10 and 15	1	1	1	1	0	0	2

viii. Reported Childhood Stress

Table 4.36. demonstrates that only one of the eighteen childhood items reported by these patients distinguished the three groups, in that patients in the high lethality group reported their parents to be less often 'the worrying type', when compared with patients in the other groups.

Four of the eight childhood factors deemed relevant to adult mental health by Langner and Michael (1963) are single items covered in Table 4.36. The other four are comprised of two or more individual items to give the factors presented in Table 4.37. In addition, the total score of the eight factors is given. The mean scores of these factors and the total childhood stress scores are presented, as are the mean ranks which have been compared by the Mann-Whitney U test. It is of note that there was only one significant difference between the groups of differing lethality for any of the stress factors. This was for those of the group of high lethality to have reported 'parents' poor mental health' less often than the subjects of the intermediate lethality group, a finding contrary to that predicted.

Since only two significant results at the $p < .05$ level have emerged from the analysis of childhood factor scores, little weight should be placed on these findings, as one might have expected a number of such results on the basis of chance alone, given the overall number of comparisons made.

TABLE 4.36.

CHILDHOOD STRESS IN ADULT MENTAL HEALTH: INDIVIDUAL ITEMS

Stress Factors	HL n=33		IL n=51		LL n=20		Total n=104 Totals	χ^2	Sig. (df=2)
	O	E	O	E	O	E			
1. <u>Parents' poor physical health</u>	14	14	21	22	9	8	44	.086	.958 n.s.
2. <u>Parents' poor mental health</u>									
Mother's poor mental health	14	13	22	20	5	8	41	2.161	.339 n.s.
Father's poor mental health	17	19	28	29	15	12	60	3.133	.209 n.s.
Parents 'the worrying type'	16	22	39	33	13	13	68	6.935	.031 (p<.05)
3. <u>Childhood economic deprivation</u>									
Parents' chief problems financial	14	15	26	24	8	9	48	.968	.617 n.s.
Parents often 'hard time making ends meet'	8	11	18	17	8	6	34	1.713	.425 n.s.
Mother worked 'to earn money'	11	12	21	19	7	8	39	.592	.744 n.s.
4. <u>Childhood poor physical health</u>									
Poor childhood health	7	6	9	9	3	4	19	.348	.840 n.s.
Catch cold 'fairly often'	1	4	10	6	2	3	13	5.176	.075 n.s.
5. <u>Childhood broken home</u>	11	11	17	18	8	7	36	.317	.853 n.s.
6. <u>Parents' character negatively perceived</u>									
Father spent too little time	23	18	24	28	10	11	57	4.377	.112 n.s.
Mother wanted to run her life	17	17	24	25	11	10	52	.407	.816 n.s.
Mother not understand patient	19	20	30	31	14	12	63	.934	.627 n.s.
Parents not proud of patient	18	18	25	28	14	11	57	2.554	.279 n.s.
Parents didn't 'practice what they preach'	14	12	16	19	9	8	39	1.638	.441 n.s.
Father wanted to run her life	5	8	14	13	7	5	26	2.937	.230 n.s.
7. <u>Often parents' quarrells</u>	16	18	28	28	13	11	57	1.372	.504 n.s.
8. <u>Often disagreements with parents</u>	16	19	31	29	13	12	60	1.784	.410 n.s.

TABLE 4.37.

CHILDHOOD STRESS IN ADULT MENTAL HEALTH: COMPOSITE FACTORS AND TOTAL SCORE

Stress factor	HL (n=33)	IL (n=51)	LL(n=20)	Comparison	Mean Ranks		Mann-Whitney U	Significance (one tailed)
Parents' poor mental health	1.42 (.75)	1.74 (.74)	1.65 (1.04)	HL v IL	36.7	46.2	651.0	.029 (p<.05)
				IL v LL	36.5	34.8	533.5	.374 n.s.
				HL v LL	25.7	29.2	285.5	.193 n.s.
Childhood economic deprivation	1.00 (1.08)	1.27 (1.17)	1.15 (1.23)	HL v IL	39.0	44.8	725.0	.132 n.s.
				IL v LL	36.8	33.9	551.0	.292 n.s.
				HL v LL	26.4	27.9	311.0	.356 n.s.
Childhood poor physical health	.24 (.44)	.37 (.63)	.25 (.55)	HL v IL	40.7	43.7	782.0	.242 n.s.
				IL v LL	37.0	33.6	558.5	.212 n.s.
				HL v LL	27.3	26.5	340.0	.400 n.s.
Parents' character negatively perceived	2.91 (1.55)	2.61 (1.51)	3.25 (1.41)	HL v IL	45.7	40.4	947.0	.162 n.s.
				IL v LL	33.9	41.3	403.5	.082 n.s.
				HL v LL	26.2	28.3	305.0	.320 n.s.
Total score (includes above factors and factors 1, 5, 7, 8 from Table 4.36	7.30 3.26	7.90 (2.85)	8.45 (1.91)	HL v IL	38.6	45.0	712.5	.117 n.s.
				IL v LL	35.1	38.3	463.5	.275 n.s.
				HL v LL	25.1	30.2	266.5	.121 n.s.

ix. History of Personal Violence

Table 4.38. demonstrates that the high lethality group tended to have had less history of violent behaviour, both inflicted and sustained in the five years before their overdose. Partitioning revealed that the major contribution to the chi square was the lesser violence inflicted and sustained by the high lethality group compared with the other two groups. However, this did not attain significance. Of the suicidal subjects as a whole, 27 (25%) had been violent, whereas 56 (51%) had sustained violence.

TABLE 4.38.HISTORY OF PERSONAL VIOLENCE

	HL n=33		IL n=54		LL n=23		χ^2	Sig. (df=2)
	O	E	O	E	O	E		
History of violence	13	17	32	28	13	13	3.411	p<.2 and p>.2
Violence inflicted	4	8	16	13	7	6	3.935	p<.2 and p>.2
Violence sustained	13	17	32	27	11	12	3.345	p<.2 and p>.2

x. Report of Alcohol Abuse by Spouse

For those subjects married or in a de facto relationship, Table 4.39. presents the numbers who reported that their spouses abused alcohol. The numbers were insufficient for statistical analysis.

TABLE 4.39.

REPORT OF ALCOHOL ABUSE BY SPOUSE

	HL		IL		LL		Total
	O	E	O	E	O	E	
Complaints	4	4	4	7	6	3	14
No complaints	9	9	13	10	9	12	31
Total	13		17		15		45

xi. Family History of Psychiatric Treatment

There was a similar proportion of subjects in each group with a family history of psychiatric treatment (Table 4.40.).

TABLE 4.40.

FAMILY HISTORY OF PSYCHIATRIC TREATMENT

	HL		IL		LL		Total
	O	E	O	E	O	E	
Family history of psychiatric treatment	11	12	22	20	8	9	41
None	22	11	32	22	15	8	69
Total	33		54		23		110

Table 4.41. shows the relationship to the patient of the family members who had had psychiatric treatment. The numbers are insufficient for valid statistical analysis.

TABLE 4.41.

RELATIONSHIP TO SUBJECT OF PSYCHIATRICALY

TREATED FAMILY MEMBER

	HL n=33		IL n=54		LL n=23		n=110
	O	E	O	E	O	E	
Father	4	2	3	4	1	2	8
Mother	5	4	9	8	3	5	17
Siblings	5	5	9	8	2	3	16
Other blood relative	2	2	4	4	2	2	8
More than one member	2	1	2	2	0	1	4

xii. Contact with Suicidal Behaviour in Others

Table 4.42. shows that the number of patients who had had contact with suicidal behaviour, both attempted suicide and completed suicide, was similar for each group. Overall 69 (61%) of the subjects had had some prior contact with persons exhibiting suicidal behaviour.

TABLE 4.42.

CONTACT WITH SUICIDAL BEHAVIOUR

	HL n=33		IL n=54		LL n=23	
	O	E	O	E	O	E
Contact with suicidal behaviour	20	21	35	34	14	14
Contact with attempted suicide	16	17	29	28	12	12
Contact with completed suicide	12	10	17	17	5	7

Table 4.43. does not give an indication of the exact nature or degree of contact with suicidal behaviour, but simply denotes the closest person, in terms of traditional kinship ties, that had engaged in such behaviour.

TABLE 4.43.

RELATIONSHIP TO SUBJECT OF THE PERSON EXHIBITING SUICIDAL BEHAVIOUR

	Contact with attempted suicide			Contact with completed suicide		
	HL n=33	IL n=54	LL n=23	HL n=33	IL n=54	LL n=23
Father	1	0	1	0	0	0
Mother	3	0	1	1	0	0
Siblings	2	6	2	0	0	0
Spouse	0	0	1	0	0	0
Other blood relative	1	1	1	1	2	1
In-laws	0	1	1	0	0	1
Close friends	6	13	4	6	6	1
Acquaintances	3	8	1	4	9	2

xiii. Clinical Diagnosis

1. Primary illness diagnosis

Table 4.44. presents the primary illness diagnoses. Neurotic depression was diagnosed most commonly, and in equal proportions, in the three groups. It is of interest that no subject in the low lethality group was given the diagnosis of schizophrenia, schizo-affective disorder, or anorexia nervosa. Table 4.45. demonstrates a trend, which approaches significance, for patients in the low lethality group to be diagnosed as presenting a transient situational disturbance more often than patients in the groups of greater lethality.

TABLE 4.44.

ILLNESS DIAGNOSIS

	HL		IL		LL		Total
	O	E	O	E	O	E	
Transient situational disturbance	3	6	11	11	8	5	22
Neurotic depression	24	22	34	35	14	15	72
Endogenous depression	0	0	0	1	1	0	1
Schizophrenia	3	2	5	4	0	2	8
Schizo-affective	2	2	3	2	0	1	5
Anorexia nervosa	1	1	1	1	0	0	2
Total	33		54		23		110

TABLE 4.45.

TRANSIENT SITUATIONAL DISTURBANCE V. OTHER DIAGNOSES

	HL		IL		LL		Total
	O	E	O	E	O	E	
Transient situational disturbance	3	6	11	11	8	5	22
Other diagnoses	30	27	43	43	15	18	88
Total	33		54		23		110

$$\chi^2 = 5.601, df=2, p<.1 \text{ and } p>.05$$

Partitioned χ^2

HL v. IL + LL Corrected $\chi^2 = .859, df=1, n.s.$

LL v HL + IL Corrected $\chi^2 = 2.889, df=1, p<.1 \text{ and } p>.05$

2. Other diagnoses

Table 4.46. shows secondary diagnostic categories. These have been considered separately as each is considered complementary to those diagnoses in Table 4.44. rather than mutually exclusive.

TABLE 4.46.

SECONDARY DIAGNOSTIC CATEGORIES

	HL n=33		IL n=54		LL n=23		Total
	O	E	O	E	O	E	
Homosexuality	1	1	1	1	1	1	3
Alcohol dependence	0	0	0	1	1	0	1
Other drug dependence	4	2	2	4	1	1	7
Borderline intellectual retardation	0	2	4	2	1	1	5

3. Personality diagnosis

The personality diagnoses are presented in Table 4.47. It is evident that each personality trait is not mutually exclusive to the others, as many subjects displayed several prominent personality traits. The only trend, which approached significance, was for there to be fewer patients with schizoid traits in the low lethality group compared with the groups of greater lethality (Table 4.48.).

TABLE 4.47.

PERSONALITY DIAGNOSIS

	HL n=33		IL n=54		LL n=23		Total
	O	E	O	E	O	E	
Paranoid	0	0	1	1	0	0	1
Schizoid	11	8	14	13	2	6	27
Obsessional	4	3	5	5	2	3	11
Hysterical	17	17	25	28	16	13	58
Sociopathic	4	5	9	9	5	4	18
Passive-aggressive	33	33	53	53	23	23	109
Borderline	7	4	4	6	1	2	12

TABLE 4.48.

FREQUENCY OF SCHIZOID TRAITS

	HL		IL		LL		Total
	O	E	O	E	O	E	
Schizoid traits	11	8	14	13	2	6	27
No schizoid traits	22	25	40	41	21	17	83
Total	33		54		23		110

$$\chi^2 = 4.551, df=2, p<.2 \text{ and } p>.1$$

Partitioned χ^2

HL v. IL + LL Corrected $\chi^2 = .206, df=1, n.s.$

LL v. HL + LL Corrected $\chi^2 = 2.937, df=1, p<.1 \text{ and } p>.05$

b. Other Datai. Suicidal intent

Table 4.49. demonstrates a significant difference in the degree of suicidal intent, as measured by the Suicidal Intent Scale, between the groups of differing medical lethality. This difference emerged both for the circumstances related to the suicide attempt, and for the self report components of the scale, as well as for the total intent score.

Figure 4.1. presents a histogram of the percentage distribution of suicidal intent scores of patients in each lethality group. Although the scores are significantly different as noted above, there is considerable overlap, particularly between the intermediate and low lethality groups.

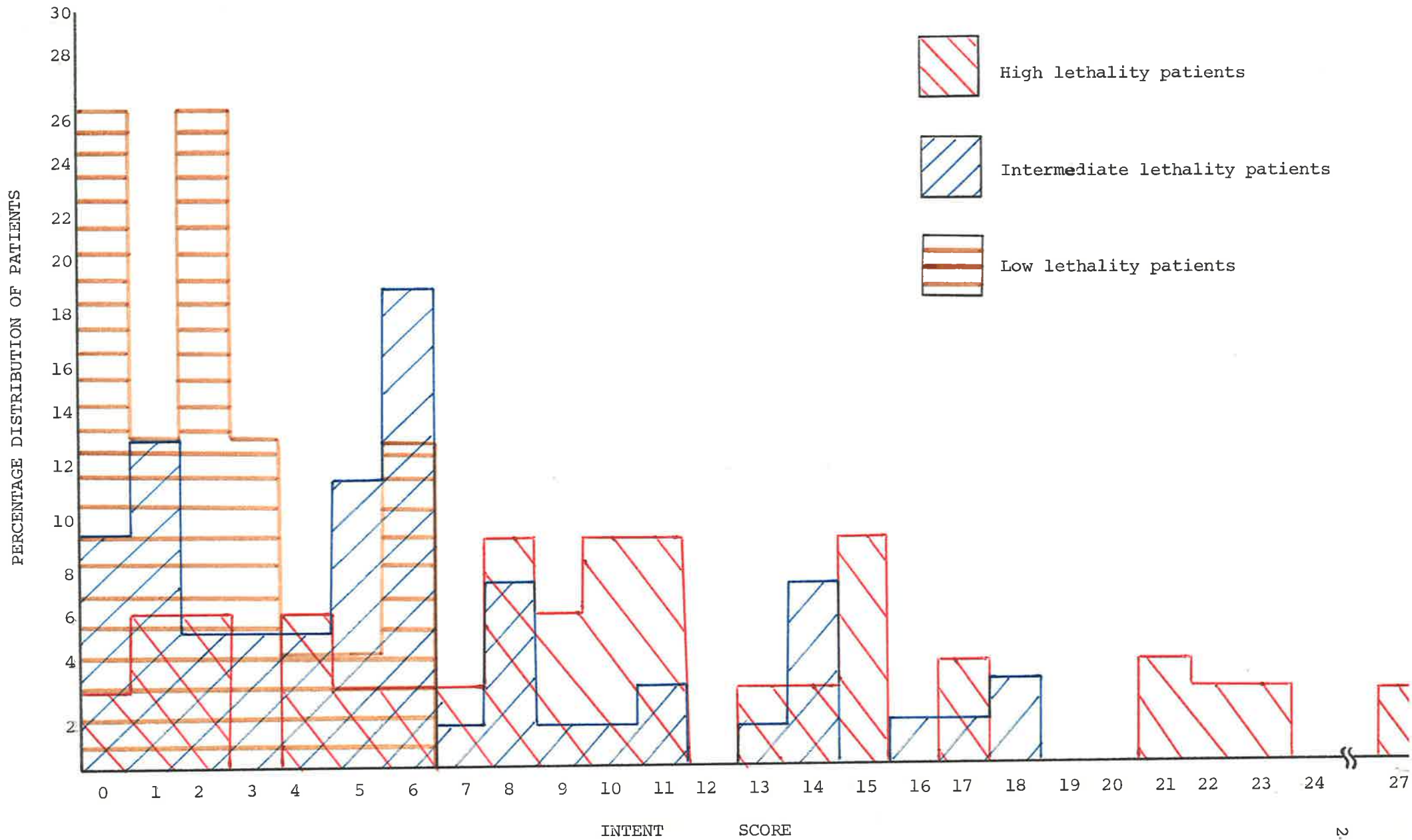
TABLE 4.49.

SUICIDAL INTENT SCORES

	HL (n=33)	IL (n=53)	LL (n=23)	Comparison	Mean ranks		Mann-Whitney U	Significance (p) (one tailed)
Intent (Circumstances)	5.303	3.189	1.000	HL v. IL	51.6	38.4	1142.5	.008
				IL v. LL	45.1	23.3	959.0	.000
Mean (SD)	(4.012)	(2.497)	(.954)	HL v. LL	37.0	16.3	659.5	.000
Intent (Self-report)	5.515	3.264	1.217	HL v. IL	53.5	37.3	1204.0	.002
				IL v. LL	43.5	26.9	876.5	.000
Mean (SD)	(3.429)	(2.890)	(1.445)	HL v. LL	36.9	16.5	656.0	.000
Intent (Total)	10.818	6.453	2.217	HL v. IL	51.3	39.5	1132.5	.011
				IL v. LL	44.8	25.4	934.0	.000
Mean (SD)	(6.957)	(4.944)	(2.022)	HL v. LL	36.7	16.8	649.0	.000

FIGURE 4.1

HISTOGRAM OF SUICIDAL INTENT SCORES



ii. Depression

The depression scores measured by the LPD Questionnaire for the groups of differing lethality are presented in Table 4.50.

TABLE 4.50.DEPRESSION SCORES: MEAN AND S.D.

	HL (n=33)	IL (n=50)	LL (n=21)
Mean	9.849	9.600	9.095
SD	5.143	4.403	3.910

There was no significant difference between the groups of differing lethality (Table 4.51.). Thus the hypothesis that those in the group of high lethality would score higher on the depression questionnaire was not supported.

TABLE 4.51.DEPRESSION SCORES COMPARED

Comparison	Mean ranks		Mann Whitney U	Significance (p) (one tailed)
HL v. IL	43.3	41.1	868.5	.343 n.s.
IL v. LL	36.7	34.4	558.0	.338 n.s.
HL v. LL	28.8	25.4	391.0	.214 n.s.

Table 4.52. presents the depression classification provided by the LPD Questionnaire for patients of each lethality group.

TABLE 4.52.

DEPRESSION CLASSIFICATION

	HL		IL		LL		Total
	O	E	O	E	O	E	
Class I (non-endogenous)	12	11	18	16	4	7	34
Class II (endogenous)	12	11	16	17	7	7	35
Class III (not depressed)	9	11	16	17	10	7	35
Total	33		50		21		104

$$\chi^2 = 3.270, df=4, p>.50, n.s.$$

Although there was a slightly greater frequency of patients classified as not depressed (class III) in the low lethality group, this did not approach significance. It is of note that approximately equal proportions, one-third of each lethality group, were assigned to the class II (endogenous pattern) depression.

There was no significant difference between the depression scores of differing groups of lethality for patients in each class of depression (Table 4.53.).

TABLE 4.53.

DEPRESSION SCORES OF EACH CLASSIFICATION OF DEPRESSION

		HL (n=33)	IL (n=50)	LL (n=21)	Kruskal-Wallis one way analysis of variance	
					Corrected χ^2	Significance (p)
Class I	Mean (SD)	9.917 (4.441)	11.056 (3.455)	10.000 (2.944)	.604	.740 n.s.
	Mean rank	16.3	18.7	15.5		
Class II	Mean (SD)	13.750 (2.768)	12.625 (2.941)	13.000 (2.828)	1.128	.569 n.s.
	Mean rank	20.4	16.3	17.7		
Class III	Mean (SD)	4.556 (3.712)	4.938 (2.380)	6.000 (1.700)	2.539	.281 n.s.
	Mean rank	16.5	16.2	22.3		

It is of note that the Class I against Class II score, which "may be used to indicate the patients' position on the endogenous-non-endogenous (E-NE) dimension of depression symptomatology" (Pilowsky and Spence, 1975), did not significantly differ between the groups of differing lethality (Table 4.54.).

TABLE 4.54.

ENDOGENOUS-NON-ENDOGENOUS DIMENSION OF DEPRESSIVE SYMPTOMATOLOGY

	HL (n=33)	IL (n=50)	LL (n=21)
Class I v. Class II score			
Mean (SD)	3.582 (6.749)	4.945 (7.390)	2.888(6.622)
Mean rank	50.3	56.5	46.4

Kruskal-Wallis one way analysis of variance:

$$\text{Corrected } \chi^2 = 1.948, p = .378, \text{ n.s.}$$

Overall, none of the parameters measured by the LPD Questionnaire significantly differed between the groups of differing lethality.

iii. Hopelessness

The scores measured by the Hopelessness Scale are presented in Table 4.55.

TABLE 4.55.HOPELESSNESS SCORES: MEAN AND S.D.

	HL (n=33)	IL (n=50)	LL (n=20)
Mean	10.576	9.460	7.400
SD	5.911	5.411	4.806

Table 4.56. presents the comparison of groups of differing lethality. It is of note that those in the high lethality group scored significantly higher on the Hopelessness Scale than those in the group of low lethality.

TABLE 4.56.HOPELESSNESS SCORES COMPARED

Comparison	Mean rank		Mann Whitney U	Significance (p) (one tailed)
HL v IL	45.0	40.00	925.0	.176 n.s.
IL v LL	37.8	29.9	612.5	.071 n.s.
HL v LL	30.0	22.0	430.5	.032

iv. Death Anxiety

Table 4.57. presents the scores of the Death Anxiety Scale for the groups of differing lethality.

TABLE 4.57.DEATH ANXIETY SCORES: MEAN AND S.D.

	HL (n=33)	IL (n=50)	LL (n=20)
Mean	6.879	7.480	7.800
SD	2.804	2.904	3.189

There was no significant difference between the groups of differing lethality. Thus the hypothesis that those in the group of high lethality would score less on the Death Anxiety Scale was not supported (Table 4.58.)

TABLE 4.58.DEATH ANXIETY SCORES COMPARED

Comparison	Mean rank		Mann Whitney U	Significance (p) (one tailed)
HL v. IL	39.8	43.4	752.5	.249 n.s.
IL v. LL	34.9	36.9	472.5	.360 n.s.
HL v. LL	25.5	29.5	280.0	.178 n.s.

v. Hysteroid/Obsessoid Dimension of Personality

The scores of the Hysteroid/Obsessoid Questionnaire are presented in Table 4.59.

TABLE 4.59.

HYSTEROID/OBSESSOID QUESTIONNAIRE SCORES: MEAN AND S.D.

	HL (n=33)	IL (n=50)	LL (n=20)
Mean	19.879	21.820	21.150
SD	5.967	6.499	5.842

Although the differences did not attain statistical significance, there was a trend for the group of high lethality to score less than the other groups, indicating a score more towards the obsessoid dimension of personality (Table 4.60.). This trend was in the direction predicted.

TABLE 4.60.

HYSTEROID/OBSESSOID QUESTIONNAIRE SCORES COMPARED

Comparison	Mean rank		Mann Whitney U	Significance (p) (one tailed)
HL v IL	37.3	45.1	670.5	.074 n.s.
IL v LL	36.2	33.8	533.0	.334 n.s.
HL v LL	25.3	29.7	275.5	.158 n.s.

vi. Locus of Control Dimension of Personality

Table 4.61. presents the scores of the Adult Nowicki-Strickland Internal-External locus of control scale for the groups of differing lethality.

TABLE 4.61.LOCUS OF CONTROL SCORES: MEAN AND S.D.

	HL (n=33)	IL (n=48)	LL (n=19)
Mean	16.970	18.542	19.526
SD	4.524	5.615	5.891

There was a significant difference between the scores of the high lethality and low lethality groups, and the difference between the high and intermediate lethality groups approached significance (Table 4.62.). Those in the high lethality group scored less, indicating a more internal locus of control orientation than the other groups. This difference was in the direction predicted.

TABLE 4.62.LOCUS OF CONTROL SCORES COMPARED

Comparison	Mean rank		Mann Whitney U	Significance (p) (one tailed)
HL v IL	35.7	44.7	616.5	.054 n.s.
IL v LL	33.3	35.7	424.5	.330 n.s.
HL v LL	23.8	31.2	224.5	.045

II. ATTEMPTED SUICIDE PATIENTS V. COMPARISON SUBJECTS

a. Introduction

The mean age of the comparison subjects was 27.4 years (S.D. 2.6) and that of the subjects who had attempted suicide was 22.6 years (S.D. 3.5). This difference was statistically significant ($t=7.66$, $p=.000$ (2-tailed)).

In view of this difference a valid comparison between all subjects of these two groups could only be made on data which was not related to age. In order to achieve as satisfactory a comparison as possible, subjects from both the comparison group and from those who had attempted suicide were matched by age. Patients from among those who had attempted suicide were selected in alphabetical order for the age of each subject in the comparison group, and in this way 21 subjects from each group could be directly matched. It is of note that the 21 patients selected from the 110 who had attempted suicide were representative of the three groups of differing lethality. Table 4.63. demonstrates no significant difference with regard to lethality group between the 21 patients matched for age with the comparison group, and the total of 110 patients who had attempted suicide. Thus the scores of those 21 patients can be considered to fairly represent those of the whole group.

TABLE 4.63.

LETHALITY GROUPS OF ATTEMPTERS AND MATCHED COMPARISON GROUP

	HL		IL		LL		Total
	O	E	O	E	O	E	
Total patients who have attempted suicide	33	33	54	53	23	24	110
Patients matched for age with comparison group	6	6	9	10	6	5	21
Total	39		63		29		131

$$\chi^2 = 0.621, df=2, p>.98, n.s.$$

It will be noted that for some data there were insufficient numbers for valid statistical analysis. In these cases, where it appeared that such data was not age-related, the total number of patients who attempted suicide (n=110) has been compared with the total number of comparison subjects (n=25).

b. General Descriptive and Clinical Data

i. General demographic data

1. Nationality

Although the numbers were insufficient for statistical analysis, Table 4.64. demonstrates no differentiating trends between patients in the group who had attempted suicide and subjects in the comparison group.

TABLE 4.64.

NATIONALITY: MATCHED GROUPS

	Attempted suicide	Comparison	Total
Migrant	4	5	9
First generation Australian	2	3	5
Second generation Australian	15	13	28
Total	21	21	42

Table 4.65. demonstrates that there was no significant difference between the total numbers (not matched for age) in each group.

TABLE 4.65.

NATIONALITY: TOTAL SUBJECTS

	Attempted suicide		Comparison		Total
	O	E	O	E	
Migrant	25	25	6	6	31
First generation Australian	15	15	4	4	19
Second generation Australian	70	70	15	15	85
Total	110		25		135

$$\chi^2 = .138, df=2, p = .933 \text{ n.s.}$$

2. Civil state

Table 4.66. demonstrates that fewer of those who had attempted suicide were married or in a de facto relationship, and more were either single, separated, widowed or divorced. Six of those who had attempted suicide were separated or divorced, compared to only one of the matched comparison group.

TABLE 4.66.

CIVIL STATE

	Attempted Suicide	Comparison	Total
Married/de facto	12	19	31
Single/separated/widowed/ divorced	9	2	11
Total	21	21	42

$$\text{Corrected } \chi^2 = 4.434, \text{ df}=1, \text{ p}=.035$$

3. Current household

As expected from an examination of the civil state, but strengthened by the fact that two patients who had attempted suicide were living apart from their spouse but claimed not be separated, the lesser frequency of those subjects who had attempted suicide living with their husband or de facto husband was significant when compared to the comparison group (Table 4.67.).

TABLE 4.67.CURRENT HOUSEHOLD

	Attempted Suicide	Comparison	Total
Living with spouse	10	19	29
Other accommodation	11	2	13
Total	21	21	42

Corrected $\chi^2 = 7.130$, $df=1$, $p=.008$

4. Socio-economic status

There were insufficient numbers for statistical analysis of this parameter. However, it can be seen that six patients who had attempted suicide compared to only one in the comparison group were in class five (Table 4.68.).

TABLE 4.68.SOCIO-ECONOMIC STATUS: MATCHED GROUPS

	Attempted Suicide	Comparison	Total
Class two	3	1	4
Class three	8	12	20
Class four	4	7	11
Class five	6	1	7
Total	21	21	42

The difference was statistically significant when the total numbers (not matched for age) for each group were compared (Table 4.69.).

TABLE 4.69.

SOCIO-ECONOMIC STATUS: TOTAL SUBJECTS

	Attempted suicide		Comparison		Total
	O	E	O	E	
Class two	16	14	1	3	17
Class three	34	38	13	9	47
Class four	21	25	10	6	31
Class five	39	33	1	7	40
Total	110		25		135

$$\chi^2 = 15.082, df=3, p=.002$$

5. Presence of children

Table 4.70 shows that there was no significant difference between the groups matched for age with regard to whether or not they had children.

TABLE 4.70.

PRESENCE OF CHILDREN

	Attempted Suicide	Comparison	Total
No children	7	4	11
One or more children	14	17	31
Total	21	21	42

$$\text{Corrected } \chi^2 = .493, df=1, p=.483, n.s.$$

ii. Recent contact with 'helping agency'

1. Comment

By the very nature of subject selection for the comparison group, each was in contact with a 'helping agency' attached to the community health centre. An analysis of that data in general would therefore be meaningless.

2. Recent contact with a medical practitioner

Patients who had attempted suicide were significantly more likely to have had contact with a medical practitioner in the forty-eight hours prior to their overdose than the comparison group had in the forty-eight hours prior to their assessment interview (Table 4.71.).

TABLE 4.71.

RECENT CONTACT WITH MEDICAL PRACTITIONER

	Attempted Suicide	Comparison	Total
Within 48 hours	10	1	11
2 days - 4 weeks	9	6	15
Greater than 4 weeks	2	14	16
Total	21	21	42

$$\chi^2 = 16.964, df=2, p=.0002$$

iii. Past psychiatric history

1. History of previous assessment/treatment by a psychiatrist or trainee psychiatrist

For the subjects matched for age, a greater frequency of those who had attempted suicide than those in the comparison group had a history of having consulted a psychiatrist in the past (Table 4.72.). This difference only just failed to achieve significance at the 0.05 level.

TABLE 4.72.

HISTORY OF PREVIOUS PSYCHIATRIC CONSULTATION: MATCHED GROUPS

	Attempted Suicide	Comparison	Total
Previous psychiatric consultation	11	4	15
None	10	17	27
Total	21	21	42

Corrected $\chi^2 = 3.733$, $df=1$, $p=.053$

It was of note that when the groups as a whole were compared (when the greater age of the comparison group might lead one to expect they would have had more psychiatric contact) this trend attained significance (Table 4.73.).

TABLE 4.73.

HISTORY OF PREVIOUS PSYCHIATRIC CONSULTATION: TOTAL SUBJECTS

	Attempted Suicide		Comparison		Total
	O	E	O	E	
Previous psychiatric consultation	57	50	5	12	62
None	53	60	20	13	73
Total	110		25		135

Corrected $\chi^2 = 7.072$, $df=1$, $p=.008$

2. Past history of attempted suicide

As noted in the section on subject selection, subjects for the comparison group would have been excluded if they had had a past history of attempted suicide. However, none conceded such an episode, and it is therefore of interest to compare those patients who had attempted suicide with the comparison group subjects. Table 4.74. demonstrates a high degree of significant difference between the two groups.

TABLE 4.74.

PAST HISTORY OF ATTEMPTED SUICIDE

	Attempted Suicide	Comparison	Total
Previous attempted suicide	11	0	11
None	10	21	31
Total	21	21	42

$$\text{Corrected } \chi^2 = 12.317, \text{ df}=1, \text{ p}=.0005$$

3. History of drug abuse

Although the numbers were insufficient for statistical analysis, it is of note that 5 of the 21 patients who had attempted suicide but none of the age matched comparison group had used non-medically prescribed drugs (Table 4.75.).

TABLE 4.75.

HISTORY OF DRUG ABUSE: MATCHED GROUPS

	Attempted Suicide	Comparison	Total
History of drug abuse	5	0	5
None	16	21	37
Total	21	21	42

Table 4.76. demonstrates that when the total patients who had attempted suicide were compared with the total comparison group subjects, the difference attained significance.

TABLE 4.76.

HISTORY OF DRUG ABUSE: TOTAL SUBJECTS

	Attempted Suicide		Comparison		Total
	O	E	O	E	
History of drug abuse	27	23	1	5	28
None	83	87	24	20	107
Total	110		25		135

$$\text{Corrected } \chi^2 = 4.056, \text{ df}=1, \text{ p}=.044$$

iv. History of use of alcohol

It is of note that when the groups matched for age were compared there was no significant difference between them with regard to whether or not they had previously used alcohol (Table 4.77.).

TABLE 4.77.HISTORY OF USE OF ALCOHOL

	Attempted Suicide	Comparison	Total
Use of alcohol	10	13	23
None	11	8	19
Total	21	21	42

Corrected $\chi^2 = .384$, $df=1$, $p=.535$, n.s.

v. Psychosexual functioning1. Phase of menstrual cycle

Table 4.78. presents the phases of the menstrual cycle of the groups matched for age. The numbers in each phase were insufficient for overall statistical analysis.

TABLE 4.78.PHASE OF MENSTRUAL CYCLE

	Attempted Suicide	Comparison	Total
Menstruating	8	4	12
Mid-cycle	3	11	14
1 week premenstrual	7	4	11
Overdue	2	1	3
Total	20*	20**	40

*Data for one patient missing

**One subject had had hysterectomy

However, it is of interest that there were significantly fewer of those who had attempted suicide in the mid-cycle phase (Table 4.79.).

TABLE 4.79.

MID-CYCLE V. OTHER PHASES

	Attempted suicide	Comparison	Total
Mid-cycle	3	11	14
Other phase	17	9	26
Total	20	20	40

Corrected $\chi^2 = 5.385$, $df=1$, $p=.020$

This trend was maintained when the total numbers of subjects were compared, but just failed to reach significance (corrected $\chi^2 = 3.593$, $df=1$, $p=.058$).

It is of note that there was no significant difference between the frequency of subjects in different groups being in the menstrual phase of the cycle (subjects matched for age: corrected $\chi^2 = 1.071$, $df=1$, $p=.301$; Total subjects: corrected $\chi^2 = .351$, $df=1$, $p=.554$).

2. Possibility of pregnancy/history of termination of pregnancy/
history of miscarriage

For those subjects matched for age, the number of positive responses was too small for statistical analysis. It is of note that no subject in the comparison group had had a termination of pregnancy or considered that she may be pregnant (Table 4.80.). A comparison

of the total number of patients who attempted suicide with the total comparison group revealed no significant differences, though again the numbers were small (Table 4.81.).

TABLE 4.80.

POSSIBILITY OF PREGNANCY/HISTORY OF TERMINATION OF PREGNANCY/
HISTORY OF MISCARRIAGE: MATCHED GROUPS

	Attempted Suicide (n=21)	Comparison (n=21)	Total
Possibility of pregnancy	2	0	2
History of termination of pregnancy	3	0	3
History of miscarriage	3	4	7

TABLE 4.81.

POSSIBILITY OF PREGNANCY/HISTORY OF TERMINATION OF PREGNANCY/
HISTORY OF MISCARRIAGE: TOTAL SUBJECTS

	Attempted Suicide (n=110)		Comparison (n=25)		Corrected χ^2	Significance df=1
	O	E	O	E		
History of miscarriage	10	12	5	3	1.474	p=.225 n.s.
History of termination of pregnancy	17	14	0	3	4.911	p=.178 n.s.
Possibility of pregnancy	11	9	0	2	1.550	p=.213 n.s.

vi. History of parental death or separation/divorce

There were insufficient positive responses for statistical analysis of the subjects matched for age. However, it is of note that no subject in the comparison group had experienced the loss of a parent through death or separation/divorce up to the age of fifteen, whereas four of those who had attempted suicide had done so (Table 4.82.). The adult age of a subject is unlikely to influence the frequency of such parental loss in childhood and adolescence, (unless one considers periods of war in relation to loss by death), and the trend observed in the matched subjects is demonstrated to be statistically significant when the total number of subjects of each group are compared (Table 4.83.).

TABLE 4.82.

HISTORY OF PARENTAL DEATH OR SEPARATION/DIVORCE: MATCHED GROUPS

	Attempted Suicide	Comparison	Total
Parental death or separation/divorce	4	0	4
None	17	21	38
Total	21	21	42

TABLE 4.83.

HISTORY OF PARENTAL DEATH OR SEPARATION/DIVORCE: TOTAL SUBJECTS

	Attempted Suicide		Comparison		Total
	O	E	O	E	
Parental death or separation/divorce	32*	26	0	6	32
None	78	84	25	19	103
Total	110		25		135

Corrected $\chi^2 = 7.992$, $df=1$, $p=.005$

*Four patients experienced loss of one parent through separation/divorce and the other by death. These have been included only once in this analysis, but in both analyses in Table 4.84., thus explaining the apparent discrepancy between an addition of the numbers in Table 4.84. and the total presented in Table 4.83.

Table 4.84. distinguishes between parental loss through death as opposed to that caused by the separation or divorce of parents. It is of interest that loss of a parent through death did not attain statistical significance, whereas there was a significant difference ($p<.05$) between those who had attempted suicide and the comparison group in the frequency with which they had experienced parental loss through separation or divorce.

TABLE 4.84.

PARENTAL LOSS BY DEATH AND SEPARATION/DIVORCE: TOTAL SUBJECTS

	Attempted Suicide (n=110)		Comparison (n=25)		Corrected χ^2	Significance (df=1)
	O	E	O	E		
Parental death	12	10	0	2	1.80	$p>.20$ n.s.
Parental separation/ divorce	24	20	0	4	5.23	$p<.05$

vii. Reported childhood stress factors

Table 4.85. demonstrates that those patients matched for age who had attempted suicide reported significantly more childhood stress factors than the comparison group.

TABLE 4.85.TOTAL REPORTED CHILDHOOD STRESS FACTORS: MATCHED GROUPS

		Attempted Suicide (n=21)	Comparison (n=21)
Childhood factors	Mean (SD)	6.810 (3.669)	3.762 (1.998)
	Mean rank	26.9	16.1

Mann-Whitney U, U=107.0, 1 tailed p=.002

The numbers of positive responses for each individual item were insufficient for statistical analysis. However, subject age would seem unlikely to influence the report of childhood factors. That this was so for the subjects of this study is demonstrated by the lack of correlation of the childhood factor score with age for the total suicidal subjects (Spearman correlation coefficient, $r_s = .0315$, $p=.376$, n.s.).

Thus the total number of patients who attempted suicide have been compared with the total number of subjects of the comparison group, both for the individual stress items (Table 4.86.), for the eight childhood stress factor scores, and for the total childhood stress score (Table 4.87.). It will be noted that eight of the eighteen individual items and five of the eight factors distinguished the two groups, as did the total childhood stress factor score.

TABLE 4.86.

REPORTED CHILDHOOD STRESS ITEMS: TOTAL SUBJECTS

Stress factors	Attempted suicide (n=104)		Comparison (n=25)		Total (n=129)	Corrected χ^2	Sig. (p) df=1
	O	E	O	E			
1. <u>Parents poor physical health</u>	44	41	7	10	51	1.179	.278 n.s.
2. <u>Parents poor mental health</u>							
M. poor mental health	41	40	9	10	50	.008	.931 n.s.
F. poor mental health	60	58	12	14	72	.425	.514 n.s.
P. 'the worrying type'	68	68	16	16	84	.011	.918 n.s.
3. <u>Childhood economic deprivation</u>							
P. chief problems financial	48	43	5	10	53	4.666	.031
P. often 'hard time making ends meet'	34	30	3	7	37	3.268	.071 n.s.
M. worked 'to earn money'	39	39	9	9	48	.008	.927 n.s.
4. <u>Childhood poor physical health</u>							
Poor childhood health	19	16	1	4	20	2.138	.144 n.s.
Catch cold 'fairly easy'	13	10	0	3	13	2.233	.135 n.s.
5. <u>Childhood broken home</u>	36	29	0	7	36	10.345	.001
6. <u>Parents character negatively perceived</u>							
F. spent too little time	57	52	8	13	65	3.331	.068 n.s.
M. wanted to run her life	52	47	6	11	58	4.505	.034
M. not interested in patient	63	55	5	13	68	11.735	.001
P. not proud of patient	57	48	2	11	59	15.957	.0001
P. did not 'practice what they preach'	39	34	3	8	42	4.864	.027
F. wanted to run his life	26	23	2	5	28	2.500	.114 n.s.
7. <u>Often parents quarrels</u>	57	49	4	12	61	10.670	.001
8. <u>Often disagreements with parents</u>	60	52	4	12	64	12.396	.0004

M=Mother F=Father P=Parents

TABLE 4.87.

REPORTED CHILDHOOD STRESS FACTORS: TOTAL SUBJECTS

Stress Factors	Attempted Suicide group n=104	Comparison group n=25	Mann-Whitney U	Significance (p) (two tailed)
Parents poor mental health	1.625 (.815) mean rank 66.1	1.480 (.823) mean rank 60.5	1187.0	.471 n.s.
Childhood economic deprivation	1.164 (1.150) mean rank 67.9	.680 (.945) mean rank 52.8	996.0	.056 n.s.
Childhood poor physical health	.308 (.559) mean rank 67.8	.040 (.200) mean rank 53.5	1012.0	.017
Parents character negatively perceived	2.827 (1.510) mean rank 73.0	1.040 (1.172) mean rank 31.6	464.5	.000
Total score (includes above factors and factors 1, 5, 7, and 8 from previous table)	7.817 (3.115) mean rank 74.0	3.840 (1.908) mean rank 27.8	369.0	.000

viii. History of personal violence

Table 4.88. demonstrates that patients who had attempted suicide tended to have a greater history of violence when compared with the comparison group matched for age. This trend, which approached significance, was for them to have sustained violence rather than themselves being violent towards others.

TABLE 4.88.

HISTORY OF PERSONAL VIOLENCE: MATCHED GROUPS

	Attempted Suicide (n=21)	Comparison (n=21)	Corrected χ^2	Significance (p) df=1
History of violence	12	5	3.558	.059
Violence inflicted	6	3	*	
Violence sustained	11	4	3.733	.053

*Insufficient numbers for statistical analysis

When the total number of patients who had attempted suicide was compared with the total comparison group this trend attained significance (Table 4.89.). It is of note that there was no difference between the groups in the frequency with which violence had been inflicted on others.

TABLE 4.89.

HISTORY OF PERSONAL VIOLENCE: TOTAL SUBJECTS

	Attempted Suicide (n=110)		Comparison (n=25)		Corrected χ^2	Significance (p) df=1
	0	E	0	E		
History of violence	58	53	7	12	4.048	.044
Violence inflicted	27	26	5	6	.049	.824 n.s.
Violence sustained	56	51	6	11	4.905	.027

ix. Report of alcohol abuse by spouse

Table 4.90. shows that five of the twelve patients who had attempted suicide and who were living with their husband or de facto husband reported that he abused alcohol, whereas only two of the nineteen comparison group subjects did so. However, the numbers were insufficient for statistical analysis.

TABLE 4.90.REPORT OF ALCOHOL ABUSE BY SPOUSE: MATCHED GROUPS

	Attempted Suicide	Comparison	Total
Report of alcohol abuse by spouse	5	2	7
No such report	7	17	24
Total	12	19	31

This trend did not attain significance when the total groups (restricted to those married or in a de facto relationship) were compared (Table 4.91.).

TABLE 4.91.REPORT OF ALCOHOL ABUSE BY SPOUSE: TOTAL SUBJECTS

	Attempted Suicide		Comparison		Total
	O	E	O	E	
No complaints	31	34	20	17	51
Complaints	14	11	3	6	17
Total	45		23		68

Corrected $\chi^2 = 1.774$, $df=1$, $p=.183$, n.s.

x. Family history of psychiatric treatment

There was no significant difference between those patients who had attempted suicide and the comparison group subjects in the frequency with which there was a history of a family member having had psychiatric treatment (Table 4.92.).

TABLE 4.92.

FAMILY HISTORY OF PSYCHIATRIC TREATMENT

	Attempted Suicide	Comparison	Total
F.H. of psychiatric treatment	8	4	12
None	13	17	30
Total	21	21	42

Corrected $\chi^2 = 1.050$, $df=1$, $p=.306$, n.s.

xi. Contact with suicidal behaviour in others

There was no significant difference between the groups matched for age in the frequency of their contact with suicidal behaviour, both attempted suicide and completed suicide (Table 4.93.).

TABLE 4.93.

CONTACT WITH SUICIDAL BEHAVIOUR IN OTHERS

	Attempted Suicide (n=21)	Comparison (n=21)	Corrected χ^2	Significance (p) df=1
Any contact	13	12	0	1.0 n.s.
Contact with attempted suicide	11	10	0	1.0 n.s.
Contact with suicide	7	3	1.181	.277 n.s.

xii. Clinical diagnosis

1. Primary illness diagnosis

Table 4.94. presents the primary illness diagnosis of subjects in the two groups matched for age. Significantly more of those who had attempted suicide were both given a diagnosis, and were given the diagnosis neurotic depression.

TABLE 4.94.

ILLNESS DIAGNOSIS

	Attempted Suicide (n=21)	Comparison (n=21)	Corrected χ^2	Significance (p df=1)
Transient situational disturbance	4	0	*	
Neurotic depression	15	1	17.063	.000
Anxiety neurosis	0	6	*	
Conversion reaction	0	1	*	
Schizophrenia	1	0	*	
Schizo-affective	1	0	*	
No diagnosis	0	13	16.042	.0001

*Numbers insufficient for analysis

2. Other diagnoses

Two of those who had attempted suicide, matched for age with the comparison group, reported that they were homosexual, one was considered to be alcohol dependent and two others conceded other drug dependence. None of the comparison group reported alcohol or drug dependence, but one had a homosexual relationship.

3. Personality diagnosis

The personality traits evident in the two groups are presented in Table 4.95. Significantly more of those who had attempted suicide were considered to display both hysterical and passive-aggressive personality traits.

TABLE 4.95.

PERSONALITY DIAGNOSIS

	Attempted Suicide (n=21)	Comparison (n=21)	Corrected χ^2	Significance (p) df=1
Schizoid	4	0	*	
Obsessive-compulsive	1	3	*	
Hysterical	12	1	11.141	.0008
Sociopathic	3	0	*	
Passive aggressive	20	10	9.4500	.0021
Borderline	3	0	*	

*Numbers insufficient for analysis

c. Other Data

i. Questionnaire scores

Table 4.96. presents the questionnaire scores of the patients who attempted suicide and the comparison subjects matched for age. It will be noted that those subjects who attempted suicide scored significantly higher on the Levine-Pilowsky Depression Questionnaire and the Hopelessness Scale. Table 4.97. demonstrates that no subject in the comparison group

was allocated to a depressed class by the LPD Questionnaire.

There was no difference in scores between the two groups on the Death Anxiety Scale.

There was a trend, which approached significance, for the attempters to score less on the Hysteroid/Obsessoid Questionnaire. This denotes that they scored more in the obsessoid direction than subjects of the comparison group, a finding contrary to that predicted.

Patients in the group who had attempted suicide scored significantly higher on the Adult Nowicki-Strickland Internal-External locus of control questionnaire than subjects in the comparison group. This denotes that they scored in a more external manner than the comparison group.

TABLE 4.96.

QUESTIONNAIRE SCORES OF ATTEMPTED SUICIDE AND COMPARISON GROUPS: MATCHED FOR AGE

	Attempted Suicide Group			Comparison group			Mann Whitney U	Significance (p) (one tailed)
	n	Score mean (SD) mean rank		n	Score mean (SD) mean rank			
Depression (LPD)	19	10.579 (3.564) Mean rank 30.2		21	2.238 (2.548) Mean rank 11.7		15.0	.0000
Hopelessness (HS)	19	10.684 (6.351) Mean rank 26.6		21	3.667 (3.276) Mean rank 15.0		83.0	.0008
Death Anxiety (DA)	19	7.000 (2.867) Mean rank 20.5		21	7.000 (4.219) Mean rank 20.5		Not applicable	n.s.
Hysteroid/Obsessoid (HOQ)	19	20.263 (5.506) Mean rank 17.1		21	23.524 (4.273) Mean rank 23.6		264.5	.078*
Locus of control (ANSIE)	19	18.421 (4.776) Mean rank 27.8		21	10.810 (4.885) Mean rank 13.9		60.5	.0001

*Two tailed test as the difference is in the opposite direction to that predicted

TABLE 4.97.

LPD CLASSIFICATION OF MATCHED GROUPS

LPD Class	Attempted Suicide	Comparison	Total
Non-endogenous depression	7	0	7
Endogenous depression	7	0	7
Not depressed	5	21	26
Total	19*	21	40

$$\chi^2 = 23.846, df=2, p<.001$$

*Two patients in the group matched for age did not complete the LPD Questionnaire

CHAPTER 5

DISCUSSION

"Statistical tests merely provide an answer to whether or not we can assert with confidence that the results of a study are more than can be attributed to chance variation alone. This determination is important, of course, but it is entirely secondary to the main purpose of research, which is whether the findings are of sufficient magnitude and importance to be relevant either to theoretical or practical ends."

(Millon and Diesenhau, 1972)

I. GENERAL COMMENTS

a. Introduction

It is pertinent to consider some of the limitations of this study before discussing specific aspects of the results. The work of Millon and Diesenhau (1972), Neuringer (1962, 1974), Eastwood et al (1972), Sainsbury and Kreitman (1975) and Birtchnell (1978) has been invaluable in clarifying these issues.

b. Research Design

It must be emphasised that this research has not employed experimental methods in which manipulation of events and the use of exact controls allows the establishment of the precise sequence of cause and effect relationships. Such a research design, with its origins in classical laboratory physics, is obviously not possible in the examination of attempted suicide. Rather, this study has used a naturalistic approach in an attempt to elucidate some of the naturally occurring complex variables which may contribute to attempted suicide and its lethality. Millon and Diesenhau (1972) have noted of such naturalistic research that: *"although the data gathered in naturalistic studies may be suggestive of causal relationships, they lack the controls requisite for ruling out rival hypotheses. Nevertheless, where complex interactions exist, and where crucial variables cannot feasibly or ethically be manipulated, naturalistic designs may provide the only systematic data for causal hypotheses"*.

This research employs ex post facto methods which attempt to establish causal relations from the observed effect. A succinct

definition of such research is provided by Kerlinger (1964, quoted by Millon and Diesenhau, 1972): *"Ex post facto research may be deemed as that research in which the independent variable or variables have already occurred and in which the researcher starts with the observation of a dependent variable or variables. He then studies the independent variables in retrospect for their possible relations to, and effects on, the dependent variable or variables"*.

That such research methodology has many pitfalls is clearly acknowledged. These have been well summarised by Millon and Diesenhau: *"Causal interpretations must be viewed with suspicion since there is insufficient control, even in the best of designs where 'experimental' and 'control' groups are matched on numerous confounding variables, to countermand the plausibility of rival hypotheses; disentangling the many and varied sources of potential influence is so difficult that the investigator can never be confident that determinants other than those he has 'controlled' or hypothesized have not been overlooked"*.

Such comments are particularly germane to attempted suicide research, and to those subjects who have attempted suicide.

c. Patient Selection

Patients for this study do not precisely represent the generality of women who attempt suicide. Patients in the high lethality group were consecutive admissions to the Royal Adelaide Hospital Intensive Care Unit, but patients in the other lethality groups were chosen in the method described in the section on subject

selection. There is thus a larger number of women in the high lethality group if one compares the overall subjects of this study with epidemiological surveys. However, this was not an epidemiological study but focussed on the differences between groups of differing lethality.

It was anticipated that by focussing on the women of high lethality it would serve to facilitate the execution of the study by obviating the need to examine a very large number of patients in order to obtain sufficient numbers of differing lethality.

While this is methodologically sound for the examination of aspects of lethality, the selection method could be germane when the total number of patients who have attempted suicide is contrasted with subjects in the comparison group. Thus the findings have been interpreted with these reservations in mind.

d. Feed-back Effects of Attempted Suicide

There are special problems associated with research conducted on patients who have attempted suicide. Neuringer (1962, 1974) has referred to the "*feedback effects of the attempt*" in which a cathartic effect of the attempt, or the intervention of medical aid might be considered to substantially effect patients and their responses. It is acknowledged that this is certainly possible, or indeed probable, but the alternative of assessing subjects immediately before attempting suicide is hardly feasible.

The effect of hospitalisation may also be important, particularly when comparing patients of differing lethality. Thus, resuscitation

in an intensive care ward, experienced by all patients in the high lethality group, might in itself be considered to contribute to anxiety about death, or to depression scores. Similarly, the conservative admission policy of the Royal Adelaide Hospital of admitting virtually all persons who present with an overdose might also influence responses.

It is reasonable to assume that the physical effects of the drug overdose are also relevant. That hypnotics effect performance was noted in a leading article in *The Lancet* (1971), and there is no reason to assume that other drugs used would be free from such effects. It would be ideal to have each patient totally free of pharmacological agents before testing; however, given the differing half-lives of drugs, and the eagerness with which some patients wish to leave hospital, such an ideal would be difficult to implement. In the present study a simple test of cognitive functioning was administered to each patient, and the interview and testing was only continued at that time if the test was completed adequately. Such an approach appears to be a reasonable compromise, given the limitations of conducting research under clinical conditions.

Neuringer (1962, 1974) has also commented that: "*the research itself may be seen by the patient as a route towards being able to leave the hospital*". This was certainly possible in this study, as in addition to obtaining data, a clinical decision had to be reached regarding further treatment for each patient. It is possible that this may have increased compliance, as there was

little non-cooperation from these patients. It may have also influenced the responses to interview and questionnaire items.

e. Control/Comparison Population

This problem has already been noted in the section on the review of the literature. It appears that whatever 'control' or 'comparison' group is chosen, limitations are inevitable.

Maxwell (1975) has noted that: *"a control group, if it is to provide an unbiased standard of comparison for an experimental group must not be external to the experiment; on the contrary, it must be part and parcel of it"*. Thus for the purposes of this study, a group who also were experiencing hospitalisation, with an illness/injury unrelated to demographic, descriptive and personality variables would be ideal. However, such a group remains elusive. The group chosen for this study, which has been referred to as a 'comparison group' rather than a 'control' group, presents its own problems. Subjects of that group were all attending the facilities of a community health centre; they were more representative of a middle-class suburban population than the total population; and, they were more often married, and slightly older than the subjects who had attempted suicide. On the other hand, there were sufficient subjects to be matched for age, and the fact that they were appropriately using the facilities of self-help which the community provided, which is the very antithesis of the behaviour of the patients who had attempted suicide, suggests that meaningful comparisons could be made. However, caution is needed before extrapolating

from these results to other comparison groups.

f. Statistical Analysis

It is acknowledged that in this research a large number of statistical comparisons have been made, and under such circumstances it is probable that several significant results will arise by chance alone. Although such a fortuitous positive finding might reinforce a prediction made on the basis of the literature review, it is more likely to be noted when there is a statistically significant finding which is unanticipated. These have been noted where appropriate.

The level of significance at which one may reject the null hypothesis is worthy of comment. In this study it has been taken to be of the 5% (.05) level. However, Siegel (1956) noted that "*a researcher may work at the .05 level, but a reader may refuse to accept any finding not significant at the .01, .005 or .001 levels, while another reader may be interested in any finding which reaches, say, the .08 or .10 levels*". It has been suggested that such considerations have particular importance in suicide research (Neuringer and Kolstoe, 1966). Thus, Neuringer and Kolstoe (1966) in a paper "*Suicide research and non-rejection of the null hypothesis*", observed: "*it is felt that the Type II error (failing to reject the null hypothesis when it is false) is probably committed too often*". Writing more specifically about suicide, they noted that the numbers are often small and there will therefore be a greater probability of a Type II error. In this particular thesis, when one examines specific subgroups of suicidal subjects, the numbers are also small,

and one could perhaps apply the argument of Neuringer and Kolstoe to this work.

However, by convention the .05 level has been accepted, although as noted in the section on statistical analysis, comment has been made when this level of significance has been approached.

Two further caveats require emphasis. Statistical analysis does not provide proof of associations, but merely denotes the confidence level at which we can consider the results are more than can be attributed to chance variation alone. Finally, a statistically significant finding may be significant only in a technical sense, and does not necessarily imply that it will have clinical utility. These issues will be further noted where appropriate.

II. DISCUSSION RELEVANT TO SPECIFIC RESULTS

a. General Descriptive and Clinical Data

i. General demographic data

1. Age

There was no difference in mean age between the three groups of differing lethality (Table 4.1.). This was an unexpected finding, as the majority of previous reports suggest that lethality increases with increasing age (Weiss et al, 1961; Motto, 1965; Graham and Hitchens, 1967; and Rosen, 1970). (However, it should be noted that Leon et al (1972) reported no difference in age between their 'frustrated' and 'attempted suicide' groups.)

Furthermore, there was no significant correlation between age and the scores of the Suicidal Intent Scale ($r_s = .0308$, $(n=109)$, $p = .375$).

This latter finding is consistent with that of Silver et al (1971) who used the same scale, but not with the clinical assessment of intent made by Dorpat and Boswell (1963), or the assessments using different instruments reported by McHugh and Goodell (1971) and Pierce (1977). The study of Pierce (1977) is of note as he used a scale only slightly modified from that of Beck et al (1974b), and although there was an association between age and the objective circumstances and total intent scores, there was no significant correlation between age and the self-report intent score. Pierce suggested that the lack of correlation of age with the self-report intent score may have been due to denial of suicidal intent by elderly females, "*even when circumstances were most suggestive of a serious attempt to end life*". However, no such reasoning could be applied to the present results.

That this study should find no association between age and medical lethality and suicidal intent is of interest. It suggests either that the age range of this population was too restricted, that differing age within the limits of 18 to 30 does not influence lethality and intent, or that intervening variables, such as depression or physical illness, are not yet sufficiently manifest in this age group to be reflected by the differing degrees of lethality and intent.

2. Nationality

It is of note that there was no difference in the proportion of migrants, first generation Australian born and second or greater generation Australian born in either the groups of differing

lethality of those who had attempted suicide (Table 4.2.), or between those patients as a whole and those subjects in the comparison group (Tables 4.64., 4.65.). This finding is in accord with the work of Buckle et al (1965), Edwards and Whitlock (1968) and Burvill (1975) (with regard to female rates), who reported no difference in attempted suicide rate between migrants and Australian born subjects.

As there is an association between migrant status and suicide, it was hypothesised that there would be more migrants in the high lethality group. This was not borne out by the results. However, the caution of Burvill (1975) that there are wide variations between subjects of different nationality should be recalled. Thus the limitations of the present study become apparent, and indeed the possibility that one centre could feasibly study subjects of differing lethality of differing nationality is open to doubt. Certainly on the basis of these negative results, such an extensive study would appear difficult to justify.

3. Civil State

It is of note that of those patients who had attempted suicide, significantly more in the low lethality group were either married or in a de facto relationship, and less were single (Table 4.4.). Weiss et al (1961) and Leon et al (1972) found no association between medical seriousness of attempt and civil state, and Rosen (1970) reported more single subjects in his 'non-serious' group compared to 'serious attempts'. The difference may reflect subject selection. Rosen

examined subjects of all ages, and noted that the 'serious attempts' were more likely in older subjects. As age and civil status are closely related, it is not unexpected that he should report more married ('including cohabitators') in the 'serious' group and more single in the 'non-serious' attempters. In subjects of comparable age as in this study, the finding that subjects in the low lethality group are more likely to be either married or in a de facto relationship is both in keeping with the importance of the communication component which has been postulated in such minimally lethal acts, and also consistent with the role that isolation appears to play in more serious suicide attempts.

The numbers of subjects who were separated, divorced or widowed were insufficient for individual statistical analysis. However, it is of interest that when they were combined with the single patients, and compared with married and de facto subjects, the significant relationship of more married and de facto subjects in the low lethality group was strengthened (Table 4.5.), adding weight to the suggestion that these minimally lethal acts may have a greater communication function.

As expected from the civil-state finding, the low lethality group were significantly more likely to be living with a spouse (either married or de facto) than the other two groups (Table 4.6.).

Although these findings support the hypothesis that the communication component is important in the low lethality suicide attempts, they do not necessarily imply that interpersonal communication is unimportant in

the high lethality group; in fact, the larger contribution to the chi square significance is provided by the lower frequency of married patients (including those in de facto relationships) in the intermediate lethality group.

When patients who had attempted suicide were matched for age with subjects of the comparison group, significantly fewer of those who had attempted suicide were either married or in a de facto relationship, and more were either single, separated, widowed, or divorced (Table 4.66.). This is consistent with other comparative studies (Weissman, 1974). It is of interest that of those patients who had attempted suicide and who were matched for age, there were five who were separated and one divorced, which contrasted with no comparison subject being separated and only one divorced. These findings are consistent with clinical observations that suicide attempts take place in the context of interpersonal disruption.

In accord with the civil-state finding, fewer of those who had attempted suicide were living with a spouse (either married or de facto) when contrasted with the comparison group (Table 4.67.).

Thus the hypotheses that those patients who have attempted suicide in contrast to the comparison group and those patients of high lethality compared to those of low lethality will be less likely to be married or in a de facto relationship have been supported by these results.

4. Socio-Economic Status

No suicidal subject was in socio-economic class one (Table 4.7.), although it will be recalled that one subject who refused to participate

in the study was a medical practitioner's wife and would have been so classified. Furthermore, none of the low lethality subjects was in socio-economic class two. This trend for the more lethal attempts to be drawn from the higher socio-economic classes is consistent with the reports of Sendbuehler et al (1970) and Rosen (1970), but did not attain statistical significance in this sample ($p > .05$ and $p < .1$). The possibility that a selection factor may have influenced this result can not be discounted. It will be recalled that Kreitman (1977) presented evidence which suggested that higher social class patients were not protected "*from the stigma of admission to the 'poisons ward'*" in Edinburgh, the centre from which Rosen (1970) obtained his data. Although there is no comparable Adelaide data, the widespread use of after-hours locum services, which are unable to provide ongoing assessment of patients, makes it likely that very few patients of any socio-economic group are not referred to the major general hospitals. That these results did not attain statistical significance may be a reflection of the greater difficulty in labelling socio-economic class in Australia compared with Scotland and Canada, or it may suggest that such class differences are less important in Australia.

However, the general trend is certainly in accord with earlier findings, and could be interpreted as being consistent with the suggestion that the low lethality attempts have more of a communication component, as the lesser verbal facility of those in lower socio-economic classes (Brandis and Henderson, 1970) may predispose them to communicate in this manner.

There were insufficient numbers for statistical analysis when patients matched for age were contrasted with subjects in the comparison group (Table 4.68.). However, it is of note that six patients who had attempted suicide and only one in the comparison group were in socio-economic class five. This trend reached statistical significance when the total numbers were analysed (Table 4.69.). Although this finding is consistent with the literature, it must be noted that the comparison group is weighted towards the middle socio-economic groups by the nature of their being selected at an outer suburban community health centre.

Thus, with the reservation imposed by the method of subject selection of the comparison group, these results support the hypothesis that patients who attempt suicide are more likely to be of lower socio-economic group.

For those patients who had attempted suicide, it had been hypothesised that those of low lethality would be of lower socio-economic group. The results were in the direction predicted, but did not attain statistical significance.

5. Presence of Children

It is of interest that significantly more of the low lethality group had one or more children when compared with the more lethal groups (Table 4.9.). However, this finding must be interpreted very carefully, as the number of children is closely related to age and civil state. This may well contribute to the finding of Rosen (1970) that less 'non-serious' attempters had children. His sample comprised

all ages, and the higher mean age of the 'serious' group would lead one to expect them to be more likely to have had children.

In the present study the difference in mean age between the groups is less than one year. However, the fact that the mean age of the low lethality group is 0.5 years greater than the high lethality group, and 0.8 years greater than the intermediate lethality group, although not statistically significant, may have influenced this finding. However, the mean age of patients without children in the high lethality group was 21.81 (SD 3.095); which was marginally greater (though not significantly so) than that of patients without children in the groups of intermediate lethality (21.22, SD 2.87) and low lethality (21.00, SD 2.77). This slight age difference would tend to influence the result in the opposite direction to that observed, and thus, if anything, it strengthens the finding.

It is also possible that this finding may simply reflect the increased number of patients who were or had been married, or who were in a de facto relationship in the group of low lethality. Thus Table 5.1. demonstrates that when single patients are excluded from the analysis, the significant difference no longer holds. It is of interest that when the chi square is partitioned, the major contribution to the chi square is for those in the low lethality group to be more likely to have children than those in the groups of greater lethality. However, this does not approach significance.

TABLE 5.1.

PRESENCE OF CHILDREN IN THOSE PATIENTS WHO HAVE BEEN MARRIED
OR IN A DE FACTO RELATIONSHIP

	HL		IL		LL		Total
	O	E	O	E	O	E	
No children	6	4	7	7	2	4	15
Child/children	11	13	20	20	15	13	46
Total	17		27		17		61

$$\chi^2 = 2.584, p < .3 \text{ and } p > .2$$

Partitioned χ^2

HL v IL + LL Corrected $\chi^2 = .042, df=1, n.s.$

LL v HL + IL Corrected $\chi^2 = 1.242, df=1, n.s.$

There is clearly a complex relationship between the presence or absence of children and the lethality of suicide attempts, with many contributing factors. When these factors are considered, there appears to be no significant difference in the frequency with which women in the groups of differing lethality have children.

It is of note that when those who had attempted suicide were matched for age with those in the comparison group, there was no significant difference between the two groups in the numbers having children (Table 4.70.).

Thus for the subjects of this study neither the occurrence of a suicide attempt, nor the lethality of that attempt, were related to the presence or absence of children.

ii. Circumstances related to the overdose

1. Referral to Hospital

The identity of the person referring the patient to hospital could provide a pointer to the patient's social network, and it is of interest that no differentiating trend was found (Table 4.10.). Because more of the low lethality group were married or in a de facto relationship, one might have expected a greater proportion of them to have been referred by their family, but this was not the case.

2. The Nature of Drug(s)/Agent(s) Ingested

There were trends for the low lethality group to have taken more proprietary (non-prescribed) analgesics and minor tranquillizers, and none in that group took major tranquillizers (Table 4.11.). However, the only statistically significant finding was that subjects in the high lethality group were more likely to have taken antidepressants than the groups of lesser lethality. This may reflect the admission policy to the intensive care ward and the caution regarding the cardiotoxic effects of tricyclic antidepressants; it may indicate that patients of most suicidal intent seek out antidepressants; or it may indicate that doctors perceive more severe depression, and prescribe antidepressants more readily in those subjects who subsequently make the most lethal suicide attempts.

Diazepam was the most commonly used drug, being taken by 5 of those in the high lethality group, 11 of the intermediate lethality and 7 of the low lethality groups. Barbiturates as a group remained the most common hypnotics used, though nitrazepam and methaqualone were used

almost as frequently. More in the high lethality group had used barbiturates, though the numbers were insufficient for valid statistical analysis, whereas the other hypnotics were evenly distributed between the three groups.

The range of substances taken was extremely broad, with no less than fifty-three different substances being taken by the subjects as a whole. Of the less common drugs not given in the results, antihistamines and anorexogenic agents were most commonly used, by nine and eight subjects respectively, being evenly distributed in the three groups. Weedkiller was taken by two subjects in the high lethality group and one in the intermediate group; and two subjects (both nursing sisters) in the high lethality group injected morphine in their suicide attempts. Other drugs included benzhexol, atropine, pentazocine, phenylbutazone, carbamazepine, digoxin, propranolol, iron tablets, antibiotics (three types) and three different migraine preparations. Three subjects took unknown tablets.

3. Multiple Drugs/Agents

It is of note that 16 (48%) of the 33 subjects in the high lethality group took more than one type of drug or agent (Table 4.12.). Although only 5 (22%) of the 23 in the low lethality group did so, this difference did not reach significance. Twenty-one (39%) of the 54 intermediate lethality group subjects took more than one drug.

These figures are higher than the Scottish series of Holding et al (1977) and Fraser and Lawson (1975), but approximate the New Zealand figure of 34% reported by Adam et al (1978). It would appear to be a

matter of some concern that even in that group considered physically at least risk, such a proportion should risk taking more than one drug.

4. The Number of Tablets/Capsules Ingested

There was a highly significant relationship between the number of tablets/capsules taken and lethality of the suicide attempt (Table 4.13.). Only one subject in the low lethality group took more than twenty tablets (she took 37 oral contraceptive tablets), whereas only two subjects in the high lethality group took twelve or less. It is of note that one of these subjects had been flown from a country town specifically for admission to the Intensive Care Unit because she had allegedly taken a lethal overdose of antidepressants. Her initial state of consciousness suggested that that was so, but she later denied having taken more than six tablets. The other subject had taken ten 'aventyl' (nortriptyline) capsules, which had been mistakenly recorded as 200 mg. 'amytal' capsules in the casualty department. She had thus been admitted to the Intensive Care Unit in anticipation of respiratory depression.

The close relationship between the number of tablets/capsules ingested and the medical lethality, and the finding that lethality and suicidal intent are themselves related (see p.331), suggests that the number of tablets taken is a reliable simple guide in the assessment of suicidal intent in these subjects. Further weight is given to this suggestion by the high degree of correlation between the number of tablets/capsules taken and the scores obtained on the Suicidal Intent Scale (Circumstances score: $r_s = .503$, $p < .001$; Self-report score:

$r_s = .485, p < .001$; Total intent score: $r_s = .527, p < .001$).

5. Source of Principal Drug/Agent Ingested

Subjects from each group of differing lethality obtained the principal agent ingested from similar sources (Table 4.14.). Overall, 60% obtained medication prescribed for themselves from a medical practitioner, and a further 16% used drugs prescribed for another person. These figures are very similar to those reported by Hetzel (1971), Smith (1972), Morgan et al (1975a), and Holding et al (1977), and do not support the suggestion by Jones (1977) that fewer are taking drugs prescribed for themselves, and more taking those prescribed for others.

There was a trend for more of the low lethality group to have used drugs available without prescription, but the total numbers were small. Illegally obtained drugs (e.g. methaqualone, antihistamines, and anorexogenic agents, all of which were usually used for hallucinatory experiences by the subject or their friends) were equally distributed in the three categories of lethality.

6. Use of Alcohol with or Immediately Before the Overdose

Significantly fewer subjects in the high lethality group had taken alcohol with or immediately before the overdose (Table 4.15.). Thus only 5 of the 33 in the high lethality group, compared to 19 of the 54 of the intermediate lethality and 11 of the 23 of the low lethality groups had had alcohol. This finding is of interest, but it should be noted that the ingestion of alcohol was rated on the clinical interview and not on the blood analysis, and it is possible that the

subjects in the high lethality group may have denied alcohol use. Certainly James et al (1963b) reported that many subjects who had attempted suicide *"denied or greatly underestimated the quantity of alcohol they had consumed"*. They postulated that this may have been related to their guilt, remorse and shame at being in hospital having attempted suicide, and that they did not wish to add to it by admitting to alcohol intoxication as well. Apparent amnesia has also been observed in such subjects (James et al, 1963b; Mayfield and Montgomery, 1972), and its aetiology is obscure. Indeed, Mayfield and Montgomery (1972), observed that *"alcohol-related amnesic episodes may be recoverable or non-recoverable and may represent a state dependent learning phenomenon or a psychodynamically determined repressive process"*. Whichever explanation is considered, there was no clinical reason why patients in the high lethality group should tend to deny or have amnesia more than those patients in the other groups.

The overall figure of 32% of subjects having consumed alcohol with or immediately before the overdose is greater than the earlier findings of James et al (1963a) and Freeman et al (1970), but of the same order as the recent studies of Patel et al (1972), Adam et al (1978) and Kreitman (1977).

The studies of Weiss et al (1961) and Pallis et al (1975) referred to 'alcoholism' rather than simple alcohol ingestion, and the lack of significant differences in regard to lethality in their studies have been noted (p.22, p.23). The work of James et al (1963b) demonstrated

'no significant relationship between blood alcohol level and severity of the suicidal act.' Although this study was carefully done with blood alcohol levels, the small number of subjects (only four) in the 'serious' group suggests that caution should be exercised before accepting their conclusions unequivocally.

The findings of the present study bear a striking similarity to the report of Schmidt et al (1953). Thus, 15% of the high lethality, 35% of the intermediate lethality and 48% of the low lethality patients had taken alcohol with or immediately before the overdose, whereas Schmidt et al (1953) reported 14% of their 'serious' group and 51% of their 'not-serious' group had done so. This finding is also consistent with that of Pierce (1977) who noted that those subjects who scored high on the objective circumstances score of his modified suicidal intent scale were less likely to be heavy drinkers. This is a challenging observation in view of the accepted relationship between alcoholism and suicide.

There are several possible explanations. Patients who survive potentially lethal overdoses may owe their very survival to not having ingested alcohol as well as drugs. This would require careful epidemiological and clinical surveys to determine. However, the relatively low figures of 2.3% of suicides being "*reported drunk at the time of the act*" (Sainsbury, 1955), and 14% of women who committed suicide "*drinking to excess*" before the incident (Stengel et al, 1958); and even the higher figure of 18.5% of women suicides with a blood alcohol of greater than .05% (Ayd, 1961), do not suggest that the alcohol per se has been of overwhelming importance in causing death by suicide.

Patients in the low lethality group may well have less intent to die, and 'treat' their difficulties with alcohol. However, as Kreeger (1966) has noted, *"alcohol, by impairing judgement and instinctual control, facilitates impulsive action in response to frustration and provocation"*, and a suicide attempt with little lethality may result. It is also possible, though perhaps less likely, that alcohol effects could ameliorate the super-ego guilt which appears to be so powerful in those who see suicide as self-punishment (Kreeger, 1966). In this sense the ingestion of alcohol could be seen as having a protective function, in making the most lethal attempts less likely. This argument appears implicit in the comment of Moore (1939) that *"alcoholism prevents suicidal patients from succeeding"*, although he could also have been referring to the impairment of the capacity to plan of those who have been drinking.

That a greater frequency of patients in the low lethality group had used alcohol could also reflect their need for dependency gratification, as could their more recent contact with helping agencies. However, in the sense that increased recent medical contact indicates that the low lethality group may not be acting as impulsively and without prior thought as is sometimes portrayed, the increased use of alcohol in general and before the overdose, with its concomitant loss of impulse control, appears to be paradoxical.

Rather than simply influencing attempted suicide by loss of impulse control, the use and non-use of alcohol may well be related to other intervening factors such as depression, or to more enduring personality traits. With regard to depression, the association of affective disorders

with alcoholism appears to be established (Winokur et al, 1971), and it is of interest that Tamerin and Mendelson (1969) observed the development of depression with suicidal ideation after two weeks experimental intoxication. The possibility that depression and the ingestion of alcohol may have been related in this study was examined by comparing the depression scores of those with and without a history of alcohol ingestion. It is of note that the depression scores of those with and without a history of use of alcohol both in general, and specifically with or before the overdose, were not significantly different (Table 5.2.).

TABLE 5.2.

USE OF ALCOHOL

		n	Depression Score		Mean rank	Mann-Whitney U	Significance (2 tailed)
			Mean	SD			
In general	Yes	48	9.0	4.4	48.8	1519.5	p= .251 n.s
	No	56	10.0	4.6	55.6		
With or before suicide attempt	Yes	34	9.1	4.5	48.9	1068.0	p= .397 n.s
	No	70	9.8	4.5	54.2		

This suggests that the use and non-use of alcohol and any association with lethality and intent of attempted suicide may be related to more enduring traits. Those who use alcohol may communicate more, and have a greater component of communication in their attempt, whereas those who do not use alcohol may be more inhibited, and communicate less.

These postulations are, of course, highly speculative. These findings await further replication in other groups of patients of differing lethality.

It is of note that when patients who had attempted suicide were matched for age with the comparison subjects, there was no significant difference in reported use of alcohol between the two groups (Table 4.77.). It must be emphasised that no attempt was made to assess the nature or degree of drinking of subjects in each group, and the results are based on subjects' responses to questioning, and therefore the possibility of denial of use is again acknowledged.

Thus, these results suggest that the use of alcohol in general is not related to attempted suicide in young women. However, it does appear to be related to the lethality of an attempt, with those patients of high lethality reporting less use of alcohol with or before their suicide attempt, and less use of alcohol in general.

The hypotheses that patients who had attempted suicide in contrast to the comparison group, and that those patients of high lethality compared to those of lower lethality would have a greater history of use of alcohol were thus not supported by the findings of this study.

iii. Recent contact with 'helping agency'.

1. Time of Most Recent Contact

As a group, 17% of the subjects had contact with some form of 'helping agency' within 24 hours of the overdose, 24% within 48 hours, 49% within the previous week and 75% within the previous 4 weeks (Table 4.16.). These figures, although confined to women aged 18-30 are remarkably similar to those recorded by Bancroft et al (1977) in their Oxford series (p. 25). When patients (matched for age) were contrasted with subjects in the comparison group, it was found that those who had attempted suicide had had significantly more recent contact with a medical practitioner (or any other 'helping agency') ($p < .001$; Table 4.71.).

It is of note that there were significant differences between the groups of differing lethality (Table 4.17.). Thus, a greater proportion of the low lethality group had had contact within the preceding four weeks, and this was most marked when considering their greater contact in the 48 hours prior to their overdose. The significant difference was not due to lesser recent contact by the high lethality group (who had had contact as often as one would expect on the basis of chance distribution), but to the lesser recent contact of the intermediate lethality group.

The greater recent contact of the low lethality group is consistent with the component of communication attributed to these subjects, but suggests that the nature of the contact was not such as to prevent suicidal behaviour.

In so far as one can extrapolate from such contact to the so-called 'impulsivity' of suicidal acts, this greater likelihood of more recent contact in the low lethality group does not support the contention that

these acts are carried out without prior thought.

The hypothesis that patients who have attempted suicide, in contrast to a comparison group, will have had more recent contact with a 'helping agency' (medical practitioner) is supported. However, the hypothesis that of those who attempt suicide, those of high lethality will have had more recent contact than those of low lethality was not supported. In fact, those of low lethality had significantly more recent contact than those of greater lethality.

2. Nature of 'Helping Agency'

Overall, 90% of those patients who had attempted suicide reported a medical practitioner as the most recent 'helping agency' with whom they had made contact, and this proportion was virtually identical for each lethality group (Table 4.18.). This suggests that subjects in each group had perceived their problems as appropriately dealt with by a medical practitioner. It is of interest that if in fact the low lethality group do not have their needs met by their more recent contact with medical practitioners, they are also unlikely to be favourably received by doctors after the attempt, as there is evidence to suggest that clinicians are more accepting of those who make more medically serious suicide attempts (Ansel and McGee, 1971; Ramon et al, 1975).

3. Nature of most Recent Medical Contact

Of those subjects who had most recently contacted a medical practitioner, significantly more of the high lethality group had consulted a psychiatrist or trainee psychiatrist (Table 4.20.). This difference was most marked when comparing the high lethality group with

that of intermediate lethality, where 12 (36%) of 33 and 8 (15%) of 54 respectively had most recently had psychiatric consultation.

This suggests either that the psychiatric services are fulfilling their role in seeing patients with the potential for suicide attempts of high lethality, or that they may be contributing in some way to the lethality of attempts, perhaps by the provision of lethal drugs such as antidepressants. Although the latter alternative is possible, the former is more likely in view of the well documented increase in psychiatric morbidity of those who make medically serious suicide attempts (Schmidt et al, 1954; Rubenstein, 1958; James et al, 1963a; Dorpat and Boswell, 1963; Kessell, 1965; Graham and Hitchens, 1967; Stanley, 1969; Sendbuehler et al, 1970; and Rosen, 1970).

iv. Past Psychiatric History.

1. History of Previous Assessment/Treatment by a Psychiatrist or trainee Psychiatrist.

Overall, 52% of patients had previously consulted a psychiatrist or trainee psychiatrist (Table 4.21), a figure similar to that reported by Morgan et al (1975a), Werry and Pedder (1976) and Bancroft et al (1977). When patients who had attempted suicide were matched for age and contrasted with subjects of the comparison group, there was a trend for fewer of the comparison group to have had past psychiatric consultation. This attained significance ($p < .01$) when total numbers were compared, when in fact the older age of the comparison group might have been expected to increase their likelihood of such assessment/treatment (Table 4.73.).

There was a trend for the high lethality group to have had more previous psychiatric consultation, and this is in accord with the findings of Graham and Hitchens (1967) who reported that 37% of those making a 'serious attempt' as opposed to only 15% of those making a 'gesture' had had previous psychiatric treatment. In this study, 21 (64%) of 33 patients of high lethality, and 24 (44%) of 54 and 12 (52%) of 23 of the intermediate and low lethality subjects respectively had had previous psychiatric assessment. Partitioning demonstrated that the major contribution to the chi square was for the comparison of the high lethality group with the groups of lesser lethality.

It could be argued that these results have been influenced by patients who have previously attempted suicide having seen a psychiatrist on that occasion only, without themselves actually conceding the need for psychiatric assessment. Thus those patients who had attempted suicide for the first time were analysed separately (Table 5.3.).

TABLE 5.3.

HISTORY OF PREVIOUS PSYCHIATRIC CONSULTATION IN PATIENTS
WHO HAD ATTEMPTED SUICIDE FOR THE FIRST TIME

	HL		IL		LL		TOTAL
	O	E	O	E	O	E	
Previous Psychiatric Consultation	9	6	5	10	8	6	22
None	9	12	22	17	9	11	40
Total	18		27		17		62

$$\chi^2 = 6.046, \text{ df} = 2, \text{ p} = .049$$

It is of interest that there was a significant difference between the three groups. However, it was not so much for the patients of low lethality to have had less treatment or the high lethality group to have had more, but for those in the group of intermediate lethality to have had less. Thus even for those patients without a past history of attempted suicide, approximately 50% of those in the groups of high and low lethality had consulted a psychiatrist or trainee psychiatrist in the past.

That there was a trend for patients in the high lethality group to have had greater psychiatric assessment/treatment in the past, and that they had significantly more often chosen to consult a psychiatrist or

trainee psychiatrist rather than other medical personnel before their overdose (Table 4.20.), adds weight to the evidence that the high lethality group do indeed have more severe and acute psychiatric illness at the time of their overdose. However, it is of note that the major contribution to these differences was made by the lesser psychiatric contact of the intermediate lethality group, and these results can not be interpreted as indicating that the low lethality group do not have a clinically significant degree of psychological morbidity.

It is of interest that Pierce (1977) noted that patients who had received past psychiatric treatment had *"much higher self-report and total I.S. (modified suicidal intent scale) scores than other patients"*. However, of more comparability to this study, in which the subjects are categorised according to lethality, is Pierce's observation that *"other scores (which included the circumstances of the attempt and items dealing with 'the medical risk') were also higher among those who had been under psychiatric care, but not significantly so"*.

There was a similar trend for the high lethality group to have had more inpatient psychiatric treatment, but again this did not reach significance (Table 4.22.) Three of the high lethality group had received inpatient treatment in the month before the overdose whereas none of the low lethality group had been so treated. It was of note that subjects in the high lethality group were significantly more likely to have had psychiatric outpatient treatment in the month prior to the overdose than those in the less lethal groups (Table 4.25.). This again could be a function of their being prescribed more lethal drugs, or a result of

their having more severe psychiatric illness with a greater likelihood of suicidal ideation.

It is of concern that one third of those who were in the high lethality group had seen a psychiatrist in the month preceding their overdose, and it is difficult to avoid the observation that an opportunity may have been lost in preventing such life-threatening behaviour.

Conclusion: The hypothesis that those who attempted suicide would be more likely to have a past history of psychiatric contact than the comparison group, was supported. For those patients who attempted suicide it had been hypothesised that those of high lethality would have a greater history of previous psychiatric assessment/treatment. Although the results are in the direction predicted, they do not attain statistical significance.

2. Past History of Attempted Suicide

There was a trend for fewer of the low lethality patients to have made a previous suicide attempt (Table 4.27.). Partitioning the chi square demonstrated that this trend approached significance when the low lethality group was compared with the more lethal groups combined. However, this trend should not be over-emphasised, as the work of Stengel et al (1958), Weiss et al (1961), Kockott et al (1971) and Pallis and Birtchnell (1977) demonstrated no preponderance of repeaters in the more serious attempters. Indeed, these previous findings were supported when the high lethality group was compared with the two groups of lesser lethality.

None of the comparison group subjects conceded having attempted suicide in the past, and this difference was statistically significant ($p < .001$) when compared to the frequency with which those who had attempted suicide reported previous such acts (Table 4.74.).

For those patients who attempted suicide it had been hypothesised that those of high lethality would have a greater history of previous attempts. This hypothesis was not supported. However, there was a trend for fewer of the low lethality patients to have made a previous suicide attempt.

3. Past History of Drug Abuse

Garzotto et al (1977) noted a *"high association between drug misuse and subsequent suicide for both sexes"*. One might therefore have expected a greater proportion of drug abuse in the high lethality group. However, approximately equal proportions (9(27%) of the high lethality, 13(24%) of the intermediate lethality and 5(22%) of the low lethality) of each group conceded abuse of drugs (Table 4.29.). It is of interest, though, that the two patients who acknowledged use of narcotics, and the one who had used LSD, were in the high lethality group. This raises the question of whether or not it is wise to consider all drugs of abuse together in the analysis. Although it is beyond the scope of this discussion to consider the relative merits of such a debate, it is of interest that those drugs which might be considered more dangerous, such as LSD and narcotics, were used only by those in the group of high lethality. However, such abuse was reported by only a small number of patients, and a study of a larger

number of subjects would be required to determine any association between different drug abuse and the lethality of suicide attempts.

When those patients matched for age were contrasted with the comparison group, there were insufficient numbers for analysis. However, it is of note that none of the comparison group as opposed to five of those who had attempted suicide conceded drug abuse. This difference attained significance when the total numbers in each group were compared (Table 4.76.).

Thus the hypothesis that patients who have attempted suicide will have a greater history of drug abuse was supported. The results do not support the additional hypothesis that those in the group of high lethality have a greater history of drug abuse than those in groups of lesser lethality.

v. Psychosexual Functioning

1. Phase of Menstrual Cycle

There was no significant difference in the phase of the menstrual cycle of the three groups of differing lethality. In particular, there was no association between the menstrual phase and lethality of suicide attempt (Tables 4.31, 4.32.).

It is also of note that when those patients matched for age who had attempted suicide were contrasted with the comparison group, there was no significant difference between the frequency of either group being in the menstrual phase of the menstrual cycle (Table 4.78.). It is of interest that significantly more of those in the comparison group were in the mid cycle phase when compared with patients matched for age who had attempted suicide (Table 4.79.). However, this association failed

to attain significance when the total numbers were compared.

These results suggest that there is no association between the menstrual phase of the menstrual cycle and both attempted suicide and the lethality of such attempts, but that there may be fewer patients in the mid cycle phase of the menstrual cycle in those who attempt suicide. Such a possibility is not unexpected when one considers the literature. As noted in the review (p. 31), the studies of Holding and Minkoff (1973) and Birtchnell and Floyd (1974, 1975) appear to be the most methodologically sound, and short-comings of the present study are acknowledged. Thus it is likely that the selection procedure of the comparison group would have influenced this finding, as one could postulate that women are more likely to attend a physical fitness class when in the mid phase of the menstrual cycle. Furthermore, those patients on oral contraceptives have not been excluded from the analysis, and a 28 day cycle has been assumed. Therefore little weight should be placed on the finding of less attempters being in the mid-cycle phase.

However, it is of note that despite the methodological short-comings of this study, the results do not support an association between menstruation and attempted suicide. Thus the hypotheses that patients who have attempted suicide in contrast to the comparison group, and those patients of high lethality compared to those of lesser lethality will be more likely to be in the menstrual phase of the menstrual cycle were not supported.

2. Possibility of Pregnancy/History of Miscarriage and Termination of Pregnancy

The numbers of patients falling into these categories were too small for statistical analysis. However, it is of note that the number of patients in each group who were, or possibly were pregnant, who had a history of miscarriage or who had had a termination of pregnancy was almost exactly that which would have been expected assuming no difference between the groups (Table 4.33.).

The overall figure of 10% of patients being pregnant or possibly pregnant would presumably be reduced in a follow-up to determine precisely whether or not these subjects were pregnant, and one would expect a figure of the same order as the 6% which Whitlock and Edwards (1968) reported to be the most common figure in suicidal subjects. Certainly it is a lesser figure than that reported by Sendbuehler et al (1970) (p.33).

The lack of any trend associating pregnancy or its possibility with the degree of lethality of the suicide attempt could be taken as being consistent with Whitlock and Edwards' (1968) contention that pregnancy had little effect on the overall attempted suicide rate, but larger samples are needed before this can be stated with authority.

The numbers involved in considering those who had attempted suicide and the comparison group matched for age were insufficient for statistical analysis (Table 4.80.). However, none of the comparison group was possibly pregnant or had had a termination of pregnancy, in contrast to two possibly being pregnant and two having had a termination of pregnancy among those who had attempted suicide. The numbers reporting

a miscarriage were similar. These trends remained when the total numbers were compared, but did not attain statistical significance (Table 4.81.). In so far as one can consider the possibility of pregnancy and a history of termination of pregnancy as indicative of change in interpersonal relations, such findings are not unexpected in those who have attempted suicide.

vi. History of Parental Death or Separation/Divorce

Overall, 10% of subjects had experienced the death of a parent up to and including the age of fifteen years, and a further 20% had lost one or both parents by separation and/or divorce. There was no difference in the proportion of patients in each lethality group who had experienced loss of a parent by death, compared with loss by separation and/or divorce, and similarly there were no trends in differentiating the groups when the separation (due to both death and separation and/or divorce) was examined more closely on the basis of age at that separation (Tables 4.34, 4.35.).

Although the numbers of patients who had experienced such losses were small, the lack of any trends suggest that it is unlikely that loss of a parent by separation or death contributes to the lethality of attempted suicide.

There were no subjects in the age-matched comparison group who had experienced parental separation or death before the age of fifteen, compared to four in those who had attempted suicide. The ages of these groups are unlikely to have influenced the frequency of such loss, and it is of note that this trend attained a high degree of significance ($p < .005$)

when the total numbers were compared (Table 4.83.).

Furthermore, when parental loss through death was distinguished from that due to separation or divorce, only that loss due to separation or divorce significantly distinguished the attempters from the comparison group (Table 4.84.). This lends some support to the contention of Crook and Raskin (1975) that it is "*intentional separation of parent from child*" that is more important in predisposing a person to attempt suicide in adult life. However, although the association did not attain significance, the number who had experienced death of a parent before the age of fifteen was small, and it would be unwise to conclude from these results alone that death of a parent before the age of fifteen was unrelated to adult attempted suicide.

It is of interest to note that there was no significant difference in the depression scores of those attempters without parental loss, and those with parental loss due to separation/divorce, parental death or both death and separation/divorce (Table 5.4.).

TABLE 5.4.

DEPRESSION AND PARENTAL DEATH OR SEPARATION/DIVORCE

	No.	No. completed LPD	LPD mean (S.D.)
No parental loss	78	76	9.697 (4.370)
Parental loss	32	28	9.250 (4.994)
Parental separation/ divorce	20	18	9.611 (4.960)
Parental death	8	7	8.714 (5.992)
Parental death and separation/divorce	4	3	8.333 (4.042)

Thus for those subjects who attempted suicide, the experience of parental loss, and its nature, appeared unrelated to the degree of depression. This is consistent with the work of Birtchnell (1970) and Crook and Raskin (1975), suggesting that the association of attempted suicide with parental loss is not simply an artefact of a primary association between parental loss and depression.

Conclusion: The hypothesis that attempters will have a greater history of parental loss due to separation or divorce than the comparison group was supported. Although there was a trend for the attempters to have a greater history of parental death, this did not attain significance.

The hypothesis that patients in the group of high lethality would have a greater history of parental separation/divorce or death before the age of fifteen than patients of lesser lethality was not supported.

vii. Reported Childhood Stress Factors

It is of note that only one of the eighteen individual items, and one of the eight factors related to reported childhood stress significantly distinguished the three groups of differing lethality (Tables 4.36, 4.37.). These indicated that fewer subjects in the high lethality group perceived their parents as the worrying type, and that they reported their parents to have symptoms suggestive of poor mental health less often than subjects in the intermediate lethality group. These findings are in the opposite direction to that predicted, and when one considers the number of analyses performed, such findings (at the .05 level) could have arisen by chance alone.

There was no difference between the groups of differing lethality when the total childhood stress scores were compared.

In contrast to these findings, the differences between the comparison group and the combined scores of those who attempted suicide were quite marked, in that eight of the eighteen childhood stress items significantly distinguished the two groups (Table 4.86.). Thus the group of attempters were more likely to report: Parents' chief problems being financial; childhood broken home; mother wanted to run patient's life; mother didn't understand the patient; the patients' parents were not proud of them; the patients' parents did not 'practice what they preach'; parents quarrelling often; and the patient often having disagreements with their parents.

Of the eight childhood factors, five significantly distinguished

the two groups (Table 4.87.). Three factors (childhood broken home; parents quarrelling often; and the patient often having disagreements with their parents) were single item factors as noted above, while the others were the higher frequency of reporting by attempters of childhood poor physical health, and of their parents character being negatively perceived.

The difference between the total stress scores of the two groups also attained a high degree of significance ($p < .001$).

Those items which provided the greatest degree of discrimination between the attempters and the comparison group were: the perception that their parents were not proud of them, their frequent disagreements with their parents, the report of their parents quarrelling often, and having a broken home in childhood.

These items all appear consistent with clinical observations of such patients. That the factor 'childhood poor physical health' significantly differentiated the groups warrants comment. It is possible that the poor health per se may have contributed to a poorer self-image and depression, but it is also possible that poor health might have added strain to their parents, resulting in subtle rejection by them. Such hypotheses would require careful investigation, and must be regarded as very tentative.

The possible shortcomings of this instrument must be emphasised. Langner and Michael (1963) have discussed these in detail, with particular emphasis on the possible confusion of a factual report and the distorted perceptions and fantasy of patients. Such

distortions would be likely to weight the scores in the direction of those who had attempted suicide, as some in fact had only recently quarrelled with their parents before their suicide attempt. The regression and dependency heightened by the suicide attempt and hospitalisation might also tend to produce distortions in these patients' perceived relationships.

The significance of these findings does not appear to lie in any specific individual differentiation of those in the comparison group and those who have attempted suicide. Rather, it is of note that there were no significant differences (other than those which one might expect by chance) between the attempters of differing lethality, whereas a clear differentiation on the basis of reported childhood stress was demonstrated between the attempters as a whole and the comparison group. Thus, while all those who have attempted suicide have high childhood stress scores, it is not possible to differentiate those of high and low lethality on the basis of their childhood stress scores.

Conclusion: The hypothesis that the high lethality group of patients would have a higher childhood stress factor score than those of lesser lethality was not supported. However, the hypothesis that those who attempted suicide would have a higher childhood stress factor score than a comparison group was strongly supported.

viii. History of Personal Violence

Although it did not attain statistical significance, it is of note that there was a trend for patients in the high lethality group to report less history of violent behaviour, (both inflicted

and sustained) in the five years preceding their overdose, when compared with those patients of lesser lethality (Table 4.38.). Any comparison with previous studies must be approached with caution. Thus this result could be considered to offer support to the clinical observation of "*inhibited aggression*" which Ringel (1973) has noted before suicide, and, although it may be unwise to extrapolate from Murthy's (1969) report that those who had made 'serious' suicide attempts were more intropunitive in the direction of their hostility than the 'non-serious'; the trend for the high lethality group patients to have less history of violence appears consistent with such a report. However, the fact that the greater component of the difference was between the high lethality and intermediate lethality groups, rather than showing a gradation from high lethality to low lethality suggests that the relationship, if any, may be complex.

When patients who had attempted suicide were matched for age with subjects of the comparison group there was a trend approaching significance for the comparison group to have less history of violence, and in particular less history of having sustained violence (Table 4.88.). These trends attained significance when the total numbers of subjects were analysed (Table 4.89.). Two points are worthy of comment. The frequency of both attempters (25%) and comparison subjects (20%) reporting that they had been violent to others was similar. This is in marked contrast to the report of Whitlock and Broadhurst (1969) that their "*female suicidal patients had a score for brawls and fights which was over three times that of the psychiatric controls.*" It is also greater than the 4% of women

having previously been convicted of causing grievous bodily harm, assault or other violence reported by Morgan et al (1975a). These differences are no doubt partly related to the definition of 'violence', and for the purposes of this study the definition of simply having inflicted physical violence upon another person, or of having sustained it, did not specify the severity of such violence, and may have been interpreted broadly by both those who attempted suicide and the comparison subjects.

The second point of note is that patients who attempted suicide as a group reported having sustained violence twice as often as having themselves been violent. This is consistent with the clinical observation that often women who attempt suicide are involved in violent interpersonal contact. However, not only do these women sustain violence more, but they also inflict danger upon themselves by attempting suicide. This appears consistent with the retroflexed anger hypothesis of suicidal behaviour.

Conclusion: These findings supported the hypothesis that patients who attempted suicide would have a greater history of violence than subjects of a comparison group. However, the difference between the groups was only significant for the attempters having sustained more violence, whereas equal proportions of both the attempters and comparison subjects reported that they had inflicted violence upon others. The hypothesis that patients of high lethality would have a greater history of violence than those of lesser lethality was not supported. Indeed, there was a trend for patients in the group of high lethality to have had less history of violence.

ix. Family History of Psychiatric Treatment

A similar proportion (about one third) of each group of attempters had a family history of a member or members having had psychiatric treatment (Table 4.40.). When the individual members of the patient's family were recorded, the numbers were too small for statistical analysis. However, it is of interest that none of the low lethality group had more than one family member with previous psychiatric history; of the two members of the intermediate lethality group who had more than one family member with previous psychiatric treatment, one had two and the other three members; and of the two members of the high lethality group who had more than one family member, each had three members who had had psychiatric treatment.

Furthermore, when those patients who had attempted suicide were matched for age with the comparison subjects, there was no significant difference between the groups in the frequency with which they reported a family history of psychiatric treatment (Table 4.92.). However, it should be noted that the numbers reporting such treatment in each group were small.

Although not of directly comparable research design, these results are consistent with those of Ettlenger (1965), Doroff (1969) and Kreitman (1977), who found no difference in family history in their comparative studies.

Thus the hypotheses that patients who had attempted suicide, and that those patients of high lethality compared to those of lesser lethality, would have a greater family history of psychiatric illness, were not supported.

x. Contact with Suicidal Behaviour

Overall, 61% of patients had had contact with some form of suicidal behaviour. It is of note that the majority of such contact was with friends and acquaintances rather than with family members. There was no difference between the groups of differing lethality in the proportions who had had such contact (Table 4.42.). When the nature of the family contact was examined (Table 4.43.), it is of interest that four subjects in the high lethality group had a parent (three a mother and one a father) who had attempted suicide, compared to none in the intermediate group and two in the low lethality group (one a mother and one a father). The only patient who had a parent (mother) commit suicide was in the high lethality group.

When those patients who had attempted suicide matched for age were contrasted with the comparison group, there was no significant difference in frequency of overall contact with suicidal behaviour in others (Table 4.93.). However, 7 of the 21 patients who had attempted suicide had had contact with a person who had committed suicide compared with only 3 of 21 comparison subjects.

These results do not provide statistical support for the hypothesis of Kreitman et al (1969, 1970) that contact with suicidal behaviour may enhance the possibility of such behaviour. However, the numbers having such contact were small, especially for those having had family contact, when genetic factors might become evident, and a more detailed examination of the nature of such contact would appear warranted in larger samples than available for this analysis.

Thus the overall hypotheses that patients who have attempted suicide in contrast to the comparison group, and that those patients of high lethality compared to those of lesser lethality will have a greater history of contact with suicidal behaviour were not supported.

xi. Clinical Diagnosis

1. Illness Diagnosis

The most common clinical diagnosis made in the patients who had attempted suicide was that of neurotic depression, and this was evenly distributed in the three lethality groups (Table 4.44.). It is of note that only one patient was considered to be endogenously depressed, and she had a severe depressive illness in the puerperium. This is consistent with the low figures of 7.1% 'endogenous and involuntional depressions' reported by Bridges and Koller (1966), the 5% 'primary affective disorder' noted by Burke (1974), the 4% 'endogenous depression' noted by Edwards and Whitlock (1968), and with the comment of Kessell (1965) that *"depressive illness, the commonest condition, was hardly ever accompanied by psychotic phenomena and was preponderantly mild"*. However, this clinical finding is in marked contrast to the results of the LPD Questionnaire, and will be discussed in detail on page 338.

The diagnosis 'transient situational disturbance' is probably synonymous with the terms 'no psychiatric illness' (Kessell, 1965; Rosen, 1970), 'no formal psychiatric illness' (Ovenstone, 1973), and 'no psychiatric abnormality' (Fraser and Lawson, 1975). However, it seems to be less judgemental than implying that these patients have

no psychological disability, when quite clearly they have demonstrated their inability to cope in more adaptive ways. It is of interest, that allowing for the differing nosology, the overall figure of 20%, (with the high lethality 9%, the intermediate lethality 20% and the low lethality group 35%), falls in the middle range of figures reported for other series (p.46).

There was a trend for patients in the low lethality group to be diagnosed 'transient situational disturbance' more frequently than patients in the groups of greater lethality, and partitioning of the chi square demonstrated that this trend approached significance (Table 4.45.). It is of note that no patient in the low lethality group was diagnosed as having a schizophrenic, schizo-affective or anorexia nervosa illness. This is consistent with the work of Rubenstein (1958), James et al (1963a), Dorpat and Boswell (1963), Sendbuehler et al (1970), and Rosen (1970). (Other papers noted in the review of the literature had also noted an increase in 'psychotic illness' in medically serious attempters, but they had referred specifically to psychotic depression (or endogenous depression or manic depressive psychosis).

When secondary diagnostic categories were examined, the only possible trend was for more patients in the high lethality group to be drug dependent (Table 4.46.). However, the numbers were too small for analysis.

Thus, while there were trends evident between the groups of differing lethality, it is of note that no primary illness diagnosis significantly distinguished the three groups of differing lethality.

When patients who had attempted suicide, matched for age, were contrasted with subjects in the comparison group, they were significantly more often given the diagnosis 'neurotic depression' (Table 4.94.).

This finding is consistent with the high prevalence of depression noted in patients who have attempted suicide. The actual nature of that depression will be discussed further, with special reference to the results of the LPD Questionnaire, in the section on depression.

Other diagnoses were rarely used, and were insufficient for analysis.

2. Personality Diagnosis

The only personality trait diagnosed on clinical grounds which tended to distinguish the three groups of differing lethality was the 'schizoid' personality (Table 4.48.). Thus partitioning of the chi square demonstrated that the lesser frequency of such a personality diagnosis in the group of low lethality approached significance when compared with the groups of greater lethality. Schizoid traits include the *"avoidance of close relations with others, inability to express directly hostility or even ordinary aggressive feelings ... (and) coldness, aloofness, emotional detachment, fearfulness, avoidance of competition and day dreams revolving around the need for omnipotence"* (N.H. & M.R.C., 1972), and no doubt this clinical diagnosis was formed on the basis of factors such as subjects of the low lethality group being more often married or in a de facto relationship, using alcohol more often, and having more recent contact with helping agencies; and the high lethality subjects tending to have less history of violence.

It is of note that hysterical personality traits were perceived

equally in the three groups of differing lethality, and this will be further commented upon in the section dealing with the Hysteroid-Obsessoid Questionnaire.

That all but one of the patients was considered to have 'passive-aggressive' traits deserves comment. It is pertinent to recall the description of such traits provided by Solomon and Patch (1971): "*the aggressiveness is concealed and the passivity or dependency is blatant they present themselves as helpless persons who feel they are not being adequately taken care of by others. The dependent person is susceptible to depressive episodes when he feels his needs are not satisfied. At such times his reactions are apt to be particularly inept and inadaptible. The crucial conflict is in the area of loss or fear of loss.*" Such a definition appears singularly applicable to patients who have attempted suicide, and might well have been proposed for just such patients. However, it certainly did not provide a distinction between the three groups of differing lethality.

When patients who had attempted suicide matched for age were contrasted with subjects of the comparison group, significantly more of those who had attempted suicide were diagnosed as having 'passive-aggressive' and 'hysterical' traits (Table 4.95.). The preponderance of passive-aggressive traits is not unexpected for the reasons given above. However, the frequency with which hysterical traits were diagnosed, although consistent with the literature based on clinical observations, warrants comment. This will be pursued in conjunction with the results of the Hysteroid-Obsessoid Questionnaire in subsequent discussion.

The allocation of clinical diagnoses can be criticised for having been made only by the researcher, without any inter-observer reliability of diagnosis having been determined. This limitation is acknowledged, and emphasis will therefore be placed on the discussion of the objective assessments of depression and the hysteroid-obsessoid dimension of personality.

Conclusion: The hypothesis that a psychiatric diagnosis would more often be given to patients who had attempted suicide than subjects of a comparison group was supported. However, although there were trends in the predicted direction, the hypothesis that patients of high lethality would be more likely to warrant a diagnosis than patients of lesser lethality was not supported.

b. Other Data

i. Suicidal Intent

There was a significant difference in the degree of suicidal intent as measured by the Suicidal Intent Scale (Beck et al, 1974b) between the groups of high, intermediate and low lethality (Table 4.49.).

Thus both the score for the circumstances related to the suicide attempt and for the self-report components of the scale, as well as the total suicidal intent score were highest for the group of high lethality, and lowest for the group of low lethality. The differences were not only significant when the groups of high and low lethality were compared, but also when the high and intermediate, and intermediate and low lethality groups were compared.

These results are consistent with the work of Lester and Beck (1975b)

and Pallis and Sainsbury (1976), which demonstrated a significant increase in intent scores with increasing medical lethality of suicide attempt. Thus, in general terms, this study does not support the alleged *"low validity of medical lethality as a measure of the seriousness of intent"* described by Beck et al (1975a), or Stengel et al's (1958) contention that *"clearly, the degree of danger to life is not a reliable measure of seriousness of intent"*. Rather, it supports the clinical studies of Schmidt et al (1954), Weiss et al (1961) and Heyse et al (1969) which noted that suicidal intent and medical lethality were related.

However, the caution of Stengel et al (1958) and others should be heeded, because the histogram of suicidal intent scores clearly demonstrates an overlap between the groups of differing lethality (figure 4.1, p.247).

Thus for the subjects of this study, although one can reasonably take medical lethality as a useful clinical guide in the assessment of suicidal intent, there will be exceptions, as indeed there are in most clinical rules of thumb.

It is of interest to compare the scores of the Suicidal Intent Scale of the present study with those obtained by Pallis and Sainsbury (1976). Pallis and Sainsbury reported that those patients with 'no threat to life' were rated a mean of 6.11, those with 'some threat to life' 11.16, and those with a 'serious threat to life' were rated 16.23. These scores are appreciably higher than the means of 2.22 for the low lethality, 6.45 for the intermediate lethality and 10.82

for the high lethality groups of the present study. There are several possible reasons. The admission policy of the Royal Adelaide Hospital may be more liberal than that of the Chichester District General Hospital, though this should not influence the difference in the high lethality group; in the British study one or more informants were interviewed as well as the patient in 50% of cases, and this may have added information which influenced the intent scores; the present researcher may have been more stringent in the allocation of intent score; or it may be a reflection of subject selection. The subjects of Pallis and Sainsbury's study comprised both men and women, and the mean ages were higher than those women of the present study. The age difference should not have influenced the results, as consistent with the results of Silver et al (1971), the correlation with age in this study was not significant ($r_s = .0308$, $(n = 109)$, $p = .375$). However, the presence of men in the study of Pallis and Sainsbury would elevate the scores, as there is clinical evidence, which although not unequivocal, suggests that men may make more serious suicide attempts than women (Lester, 1972). Each of these factors, apart from age, would tend to lead to higher suicidal intent scores in the British study.

It is of note that the depression scores obtained by the LPD Questionnaire correlated significantly with the overall suicidal intent score ($r_s = .3837$, $(n = 104)$, $p = .001$). As one might expect, there was a greater degree of correlation for the self-report component of the Suicidal Intent Scale ($r_s = .4388$, $(n = 104)$, $p = .001$) than for the circumstances of the attempt score

($r_s = .2985$, ($n = 104$), $p = .002$). The association of intent with depression was also noted by Silver et al (1971) and Lester and Beck (1975b) using the Beck Depression Inventory, and by Pallis and Sainsbury (1976) using a 'depressive symptom score (based on the number of symptoms of depression present in the month prior to the suicide attempt)'. A similar finding was also reported by Birtchnell and Alarcon (1971b). They did not use Beck's Suicidal Intent Scale, but assessed intent on the basis of the subject's "*professed wish to die at the time of the attempt*", and noted "*a close relationship*" between this and depression measured by a modified Zung Self-Rating Scale.

There appear to be certain methodological limitations in the use of the Suicidal Intent Scale. Thus it is impossible for a clinician administering the scale not to be aware, at least to a certain degree, of the medical lethality of the patient's attempt. Certainly in the present study the patients of the high lethality group were known as they had been treated in the Intensive Care Unit. However, it is reassuring that the two groups of lesser lethality, which were allocated to their groups independently by clinicians after the psychiatric assessment, demonstrated significantly different suicidal intent scores in the direction predicted. A further criticism of the present study is that no reliability study of the ratings was performed. However, Beck et al (1974) reported a high level of inter-rater reliability ($r = 0.95$), a finding confirmed by Pallis and Sainsbury (1976) in their assessment ($r = 0.97$). In addition, all ratings of the present study were conducted by the author, thus avoiding the opportunity

for inter-rater variation.

Conclusion: There were highly significant differences in suicidal intent score between the groups of differing lethality. Not only does this support Pallis and Sainsbury's (1976) contention that the Suicidal Intent Scale has "*potential value ... as a screening instrument*", but it also suggests that the degree of medical lethality itself is a useful clinical guide to the degree of suicidal intent.

Thus the hypothesis that patients in the high lethality group would tend to score higher on the Suicidal Intent Scale was supported.

ii. Depression

1. Introduction

Several aspects of depression have already been alluded to in the discussion. Thus its association with parental loss and suicidal intent was noted (p. 319, p. 333), and its frequency as assessed by clinical diagnosis was recorded on page 326. The relationship of depression and hopelessness with suicidal intent will be discussed on page 353 and the correlation with personality and age will be noted on pages 364 and 366 respectively.

In the following discussion, the scores of the groups of differing lethality and the total number of patients designated as depressed will be noted, and then the frequency with which endogenous depression was distinguished by the LPD Questionnaire will be critically discussed. Finally, comment will be made on the possible implication of these findings.

2. Depression Scores

There was no significant difference in the depression scores of the LPD Questionnaire (Pilowsky et al, 1969) between the three groups of differing lethality (Table 4.51.). However, the attempters as a group scored significantly higher than subjects of the comparison group ($p < .001$, Table 4.96.). These results are consistent with those of the most comparable studies. Thus Birtchnell and Alarcon (1971b) found no relationship between medical seriousness and the level of depression measured by a modified Zung Self-Rating Scale, and Pallis and Birtchnell (1976) reported no significant difference between medically 'serious' and 'non-serious' suicide attempters and other psychiatric patients on the MMPI Depression Scale.

It is of note that the mean depression scores of the three groups can be considered in the clinically depressed range (Pilowsky and Spalding, 1972). This is consistent with the results of Birtchnell and Alarcon (1971b), Silver et al (1971), Weissman (1973), Beck et al (1975b), El-Gaaly (1974) and Goldney (1978), each of whom have either used standardised scales to denote depression, or compared patients who have attempted suicide with clinical groups designated as depressed.

These findings indicate that not only are patients who attempt suicide significantly clinically depressed, but further, that attempts of low lethality are associated with similar degrees of depression as those of high lethality.

3. Total Number Classified as Depressed

The LPD Questionnaire also allows classification of patients into one of three groups; 'non-endogenous depression', 'endogenous depression' and 'non-depression'. The methodology of this classification has been described in the section on the instruments used in this study (p. 191).

Sixty-six per cent (69 of 104) of those who had attempted suicide and completed the LPD Questionnaire were designated as manifesting a depressive syndrome (Table 4.52.). This figure is consistent with the clinical studies of Stengel (1969), Bridges and Koller (1966) and Morgan et al (1975a), but greater than the studies of Schmidt et al (1954), Yessler et al (1961), Kessel (1965), Edwards and Whitlock (1968), Ovenstone (1973) and Holding et al (1977).

It is of note that the total number considered depressed is also of the same order as that found in the majority of studies using objective measures of depression (Birtchnell, 1970; Birtchnell and Alarcon, 1971b; Silver et al, 1971; Beck et al, 1975; Pallis and Birtchnell, 1977). The similarity of the total number depressed with that of other studies using standardised instruments thus offers a degree of consensual validity to the allocation of patients to the depressed and non-depressed classes by the LPD Questionnaire.

None of the subjects of the comparison group was designated as manifesting a depressive syndrome (Table 4.97.).

4. Frequency of Endogenous Depression

The frequency with which attempters were classified as 'endogenous depression' by the LPD Questionnaire was an unexpected finding. Thus approximately one third of the patients in each lethality group were placed in the 'endogenous' category.

It is noteworthy, that for the attempters, the class I ('non-endogenous') against class II ('endogenous') score, which *"may be used to indicate the patient's position on the endogenous - non-endogenous (E-NE) dimension of depressive symptomatology"* (Pilowsky and Spence, 1975) did not differentiate between the lethality groups (Table 4.54.). This further suggests that the nature of the depression is similar in the three groups.

This categorization of patients on the basis of their LPD Questionnaire responses is in marked contrast to the diagnosis of only one patient as endogenously depressed on the basis of the clinical interview (although it may be noted that a further five were diagnosed as schizo-affective psychoses). The LPD Questionnaire based categorization is also in contrast to most other studies using clinical diagnoses.

Lesser figures referred to previously include 16% 'manic-depressive depression' (Schmidt et al, 1954), 7.1% 'endogenous and involuntional depressions' (Bridges and Koller, 1966), 4% 'endogenous depression' (Edwards and Whitlock, 1968), 5% 'primary affective disorder' (Burke, 1974), 10% (20% of the 49% depressed) 'endogenous depression' (Jacobson and Tribe, 1972), and 10% 'affective functional psychosis'

(Morgan et al, 1975a). In fact most clinicians would concur with the comment of Kessel (1965), made in relation to his series of patients, that *"depressive illness, the commonest condition, was hardly ever accompanied by psychotic phenomena and was preponderantly mild"*.

In the light of this finding, it is necessary to further consider the concept of 'endogenous' depression. The classification of depression has recently been reviewed by Kendall (1976), and will not be pursued in detail in this thesis. However, there would appear to be a reasonable consensus that there is a 'Type A' depression (Kendall, 1976), which for practical purposes is synonymous with the terms 'endogenous depression', 'psychotic depression', 'affective psychosis (depressed)', 'manic-depressive psychosis (depressed phase)', and 'unipolar affective psychosis'; and that it has clinical features which distinguish it from the more heterogeneous 'neurotic' or 'reactive depression' (Kiloh and Garside, 1963; Paykel, 1971; Kiloh et al, 1972).

It is therefore pertinent to examine those LPD Questionnaire items which distinguished the two classes of depression in this study.

5. Distinguishing Symptoms and the "Functional Shift"

Table 5.5 presents the items which significantly distinguished patients classified as 'endogenous' and 'non-endogenous' depression. It may be seen that these items are comprised of symptoms related to sleep disturbance (items 3, 15, 21, 36 and 41), concentration (2, 12, 56), appetite disturbance (22, 33), being unable to cry (14), feeling a bad

TABLE 5.5.

QUESTIONS OF LPD QUESTIONNAIRE WHICH DIFFERENTIATED CLASS I AND CLASS II DEPRESSIONS

Questionnaire Item	Positive Responses				Corrected χ^2	Significance (df=1) (p)
	Non-Endogenous Depression N=34		Endogenous Depression N=35			
	O	E	O	E		
2. Have you lost interest in watching television?	15	21	27	21	6.572	.010
3. Do you have difficulty falling asleep without tablets?	11	21	32	21	23.177	.000
9. Do you feel you are a bad person?	14	19	25	20	5.251	.022
12. Is it more difficult to concentrate on your work?	19	26	33	26	11.709	.001
14. Do you wish you were able to cry?	12	19	26	19	9.080	.003
15. Do you have a restless and disturbed sleep without tablets?	18	25	33	26	13.220	.000
16. Do you feel most depressed in the evening?	29	24	19	24	6.436	.011
21. Is it easy to fall asleep without tablets?	21	12	4	13	16.797	.000
22. Is your appetite normal?	21	13	6	14	12.605	.000
33. Have you lost your appetite?	16	21	26	21	4.285	.038
36. Do you waken much earlier than your usual time without tablets?	9	18	27	18	15.774	.000
41. Can you sleep normally without tablets?	27	14	1	14	38.803	.000
42. Do you waken at your usual time without tablets?	25	15	5	15	22.280	.000
45. Do you find difficulty in relaxing?	25	29	34	30	5.972	.015
56. Are you doing your work as well as you used to?	17	10	4	11	10.366	.001

person (9), finding difficulty in relaxing (45) and having a diurnal mood variation (16). The majority of these items relate primarily to biological or vegetative changes rather than affective symptoms, and certainly do not indicate that those patients designated 'endogenous' are 'psychotic' in the conventional sense of the term. Thus these results are consistent with Kessell's (1965) observation that 'psychotic phenomena' were rarely present. It is possible that the absence of psychotic phenomena may sway a clinician's judgement against the diagnosis of endogenous depression, and it is important to reflect on what the above symptoms actually signify. The recent paper of Weissman and Myers (1978) is relevant to this issue. They noted that about 18% of the adult population have depressive symptoms at any given time, but cautioned that: *"the relationship between depressive symptoms and the diagnosis of major depressive disorders still requires investigation since the presence of depressive symptoms does not necessarily indicate the diagnosis of a major or minor depressive disorder"*.

Thus, whilst one cannot assume that the precise delineation of classes of depression by the LPD Questionnaire is entirely reliable, it is evident that certain patients report symptoms which have been variously described as the *"neurophysiologic response"* (Kraines, 1966); the *"vegetative nucleus"* (Pollitt, 1971); and *"the classical physical and vegetative symptoms of depression"* (Beck et al, 1973). It is also of interest to recall that Leonard (1974), in an analysis of responses by suicidal subjects to items of the Zung Self-Rating

Depression Scale, derived a factor which indicated "*difficulty with sleeping and eating as though physiological as well as psychological disequilibrium were present*" (see p. 102).

Perhaps the most parsimonious manner in which to describe these symptoms is that they represent a "*depressive functional shift*". This term was introduced by Pollitt (1960) to describe the physiological changes which some patients have accompanying the affect of depression, and represented an attempt "*to find a nucleus of depressive illness; a timeless clinical index which, while being independent of culture and era, could be confidently assessed and communicated*" (Pollitt, 1971).

The concept of distinguishing the physiological and affective components of depression is certainly not new, and in fact was alluded to by Freud (1917) in "*Mourning and Melancholia*" when he suggested that the diurnal mood variation "*is probably a somatic factor*". While the controversy over the phenomenology and nosology of depression has touched on this issue, the differentiation of these components has been most lucidly pursued by Pollitt (1960, 1965, 1971).

Thus Pollitt (1960) noted: "*notwithstanding the importance of dynamic factors both in the genesis of depression and in the comprehension of the psychic manifestations, the significance of bodily changes has long been minimised; they are often thought of as purely secondary developments*". In a later paper he suggested that the value of the concept is that "*a functional shift, however small, could be useful in distinguishing depressive illness from natural unhappiness ...*" (Pollitt, 1971).

While it is not the purpose of this thesis to argue that one third of these subjects definitely had 'endogenous' depression, it is evident that they appear to have had vegetative or biological features which have been said to comprise part of the clinical picture of 'endogenous' depression, and that they were so allocated by the LPD Questionnaire.

6. Limitations of the Present Study

It could be argued that the experience of hospitalisation, and in particular hospitalisation in the Intensive Care Unit, might contribute to the depression score. However, it is of note that 35 of the 104 patients were not classified as depressed, a figure similar to other studies, and the proportions so designated were similar in the three groups of differing lethality.

Patients in the high lethality group had significantly more often taken antidepressant drugs, and one might have expected this to influence the findings. Thus a greater number with 'endogenous' depression may have been anticipated in that group, as it is for such depressions that antidepressants are most clearly indicated. On the other hand, one might argue that the use of antidepressants in that group should have ameliorated the symptoms of those subjects. However, neither the degree nor classification of depression in the three lethality groups was different.

The unexpectedly high number of patients allocated to the 'endogenous' depression group raises the possibility that although the LPD Questionnaire may be sensitive to detecting symptoms that are

associated with such a diagnosis, it may lack specificity in the allocation of such diagnoses. It is possible that the weightings given to different items are not applicable to all depressed subjects, or that too much weighting towards an 'endogenous' depression has been given to the biological features noted previously. The younger age of the present subjects also deserves comment, as 'endogenous depression' is less frequently diagnosed in such patients. It is of note that 50% of the original sample of patients employed by Pilowsky et al (1969) in the development of the LPD Questionnaire were 35 years of age or younger, and that a weighting for age is included in the classification procedure. However, although patients up to the age of 35 are given a weighting in the 'non-endogenous' direction (see Appendix VI(b)), it is possible that this weighting may require re-adjustment to allocate fewer patients to the 'endogenous' depression category.

It was noted in the review of the literature that when objective measures were used, the degree of depression recorded was considerable, and more than that described clinically. This observation is consistent with the comment of Weissman and Myers (1976), that: *"studies that use symptom ratings show considerably higher rates of depression as contrasted with rates derived from diagnostic assessments"*.

While it would be unwise to claim that either the clinical or objective rating assessment was absolutely correct, it is relevant to reflect on factors which may have influenced these findings. That one can not precisely equate depressive symptoms with clinical diagnoses

has already been acknowledged (p. 341). However, such an approach offers a typological diagnosis, which although not ideal (Strauss, 1975), describes a patient's main characteristics and can be communicated to other clinicians.

Before examining possible influences on the clinical diagnosis, it is of interest to examine the following report. Weissman et al (1973) assessed women who were being treated for depression, and women who had attempted suicide with the Hamilton Rating Scale and the Raskin Three-area Scale for depression and found no difference in the degree of depression on these ratings. This was despite the clinical impression that those who attempted suicide "*exhibited significantly less depressed appearance*". While the difference in appearance may be real, the possibility that a clinician's perceptual set may be different when assessing those who have attempted suicide should also be considered. That this may be so is attested to by the literature concerning clinicians' attitudes to suicide attempters (Kreeger, 1969; Ansel and McGee, 1971; Zee, 1972; Maltsberger and Buie, 1974; Patel, 1975; and Dressler et al, 1975), although why this should lead to a lesser diagnosis of depression is difficult to understand.

It is more likely that the clinical diagnosis differs because clinicians take into account other factors besides those recorded by questionnaires. Thus, Strauss (1975) has noted that a comprehensive psychiatric diagnosis should take into account not only the symptoms, but the circumstances associated with the symptoms, the previous

duration and course of illness, the quality of personal relationships and the level of work function. These factors are more difficult to quantify than symptoms alone, and may contribute to some of the differences observed between clinical diagnosis, and depression as assessed by rating scales and questionnaires.

On the other hand, it may be observed that many items on the standardised rating scales and questionnaires take some, or all, of these factors into account, and it would be unwise to dismiss these findings simply because they are not congruent with current clinical concepts.

7. Implications

That there was a high frequency of depression in the three groups of differing lethality, and that the LPD Questionnaire results suggested that there were more patients with 'endogenous' depression in those groups than is usually recognised, has important therapeutic and prognostic implications.

With regard to the frequency and natural history of 'endogenous' depression, it has become increasingly apparent that such depressions may occur in the younger age groups. Thus Shopsin et al (1976) have noted the mean age of onset for 'unipolar affective illness' to be 37.3 years for women, and that of 'bipolar' and 'schizo-affective' illnesses to be 30.9 years and 22.5 years respectively. These figures are considerably younger than the 50.6 years quoted for 'affective disorders' by Slater and Roth (1969). There has also been an increasing incidence of such illnesses recorded in the last forty years

(Slater and Roth, 1969), and while this may be partly due to the increased willingness of patients to seek treatment, it also no doubt reflects the increased awareness of psychiatrists that such disorders may not be so uncommon, both in general and in younger age groups.

That this is so, even for those in the adolescent age group, has recently been emphasised by Carlson and Strober (1978), who as well as providing clinical data, extensively reviewed the literature on the subject. They noted: *"case reports, anecdotal accounts, and more systematic clinical research attest to the fact that manic-depressive illness can often present as a clinically recognisable syndrome during this development phase"*. It is also of interest that they concluded that *"failure to detect affective illness during the early stage of illness in these cases could not be attributed to a diagnostically ambiguous clinical picture ... it was striking to us how frequently the attending staff adequately recorded patient behaviour or verbatim accounts of patient verbalisations and then misinterpreted these observations"*. It is conceivable that such a comment applies to the present investigator!

The report of Mitchell-Heggs (1971) is also pertinent to this discussion, as the subjects were 400 patients seen in a general hospital practice, diagnosed as suffering from a 'primary depressive illness'. One would therefore expect these patients to more closely represent the depressives most commonly seen in practice rather than the more severely ill hospitalised patients which comprise the subjects of

many studies. It is of note that although the mean age of presentation was 38.1 years, the peak age of onset was between 20 and 30. After consideration of the symptomatology of these patients, she concluded: *"the present sample might be regarded as complementary to the population of severely ill inpatients investigated in earlier well known studies; yet the similarity between many features is striking"*.

One of the few reports using an objective measure of depression which has specifically commented on the degree of depression in young suicide attempters is that of Birtchnell and Alarcon (1971b). They used a modified Zung Self-Rating Depression Scale and noted: *"the attempted suicides aged under 20 might be expected to constitute a less depressed group, and in fact they have a mean depression score of only 25.74; however, it should be noted that even in this group, 7 (30.4 per cent) obtain a score of 30 or more."* (Thirty was the score above which the majority of a depressed control group had been given E.C.T.). Although the numbers in that study were small, the similarity to the present results of about one third being allocated an 'endogenous' diagnosis is difficult to overlook.

Although there is literature which suggests that the unexpectedly high frequency of 'endogenous' depression as allocated by the LPD Questionnaire should not be dismissed lightly, it would be unwise to focus on this entirely. Certainly it should not lead to the minimising of the importance of 'neurotic' or 'reactive' depression in those who attempt suicide.

It is probably fair to say that most therapists would regard the treatment of 'endogenous' depression with a greater sense of urgency than that of 'neurotic' or 'reactive' depression. That this may be so is supported by a recent report by Kraft and Babigian (1975). In a retrospective study of suicides with and without psychiatric contact, they were struck by the high rate of suicide of persons who had been considered to be neurotically depressed. Certainly it was only half that of persons with a manic-depressive illness, but it was eight times that of the general county population. They concluded: *"the high rate for the depressive neurosis group is especially startling in view of the limited amount of actual care given such persons prior to death."*

That persons with 'neurotic' depression may comprise a considerable proportion of those who suicide is, of course, not a new observation, but it has recently been emphasised in a comprehensive review of depression and suicide by Whitlock (1977). He noted that most studies of suicide did not distinguish between 'neurotic' and 'endogenous' depression, and no doubt this is partly due to the difficulty of making retrospective diagnoses, especially in an area of nosological contention. With regard to the incidence of 'manic-depressive psychosis', Whitlock (1977) noted that *"the majority of papers where relatively precise data are given find the incidence ... around 12-15%."* This appears a low figure for 'manic-depressive psychosis' or 'endogenous' depression, and it is possible that Whitlock's interpretation of the data is too cautious.

Indeed, Sainsbury (1978) has noted that *"the consensus from studies of suicide in which psychiatrists attempt a diagnosis using conventional clinic procedures is that the prevalence of mental disorder exceeds 90 per cent and that a primary depressive illness of the kind normally treated with antidepressant drugs or E.C.T. is the most frequent condition."*

Whichever interpretation of the data is correct, it is clear that both 'endogenous' and 'neurotic' depression demand diagnosis and effective treatment. The present data suggest that in young women aged 18 to 30 who attempt suicide there is a significant degree of depression, to the extent that two thirds warrant either the diagnosis of 'neurotic' or 'endogenous' depression.

This naturally raises the question of what should be the optimal management of these patients. It is of interest to reflect on the comments of Bancroft et al (1977) in relation to treatment. They placed emphasis on interpersonal difficulties and quarrels, particularly in the 48 hours prior to the attempts, but noted that this approach was at variance with that of Weissman et al (1973b), who considered that interpersonal strife was often secondary to depression. This prompted them to comment that *"it is of great importance to resolve this issue, as, if our view of the situation is correct there will be a danger, in labelling the 'self-poisoner' as suffering from a depressive illness, of directing therapeutic attention away from the basic interpersonal difficulty on to the individual."*

This comment appears to open the way to a polarising of views of treatment which may not be in the patients' best interest. Such polarisation can lead to comments such as *"treatment of depressive symptoms per se is undesirable, and may even be dangerous"* (Birtchnell, 1975). Such a view appears un-necessarily restrictive, especially in view of the work from Weissman et al (1976) suggesting that antidepressants may be of benefit in neurotic depression, but that psychotherapy was necessary as well. Thus they noted that *"maintenance amitriptyline therapy prevented relapse and symptom return, but did not have a differential effect on the patients' social functioning. Psychotherapy, on the other hand, did not prevent relapse or symptom return but did improve social functioning in patients who completed the trial without relapsing."*

The results of the present study suggest that not only are two thirds of women aged 18 to 30 who have attempted suicide depressed enough to warrant a psychiatric diagnosis, but that a proportion of those have a pattern of depression classified by the LPD Questionnaire as 'endogenous' depression, thus implying that they might benefit from antidepressant medication.

8. Conclusion

The degree of depression measured by the LPD Questionnaire, and in particular, the allocation of one-third of patients of each lethality group to the 'endogenous' class of depression are noteworthy findings. The present results require replication, and points noted in the discussion in relation to the prevalence of 'endogenous'

depression must be regarded as tentative. However, what can more firmly be stated is that one-third of the attempters in this study appear to have symptoms which are consistent with the concept of a "*functional shift*" (Pollitt, 1960). The exact significance of this awaits elucidation.

The hypothesis that those patients in the group of high lethality would have a higher depression score than those in groups of lower lethality was not supported. Similarly, the hypothesis that patients of high lethality would be classified as Class II or 'endogenous' depression by the LPD Questionnaire more often than patients of lesser lethality was also not supported. However, there was support for the hypothesis that patients who attempted suicide would score higher on the depression scale than subjects of a comparison group.

iii. Hopelessness

Patients in the high lethality group scored significantly higher ($p < .05$) on the Hopelessness Scale (Beck et al, 1974c) than those in the group of low lethality (Table 4.56.). Although there were trends in the predicted directions, the differences between the groups of high and intermediate lethality, and intermediate and low lethality did not attain significance.

It is of note that the difference in scores between patients who had attempted suicide, matched for age with the comparison group subjects was highly significant ($p < .001$) (Table 4.96.).

Most published work on this scale has reported on the degree of

correlation of scores obtained by it and depression scales, with suicidal intent.

In the present study there was a significant degree of correlation between both hopelessness and suicidal intent and between depression and suicidal intent, for both the total intent scores and those relating to the circumstance of the attempt and to the self report (Table 5.6.).

TABLE 5.6

CORRELATIONS (SPEARMAN) OF SUICIDAL INTENT WITH DEPRESSION
AND HOPELESSNESS

Suicidal Intent	Depression (n=104)		Hopelessness (n=103)	
	r_s	p	r_s	p
Total Intent Score	.3837	.001	.4403	.001
Circumstances Score	.2985	.002	.4263	.001
Self-Report Score	.4388	.001	.4197	.001

It was noteworthy that when partial correlations were computed, it was found that the correlations of the suicidal intent scores with those obtained by the Hopelessness Scale (holding scores of the LPD Questionnaire constant) decreased, though they still remained

significant for the total intent, and both the circumstances and self-report intent scores. However, the correlations of the suicidal intent scores with those of the LPD Questionnaire (holding scores of the HS constant) only remained significant for the self-report intent component of the Suicidal Intent Scale (Table 5.7.).

(It will be noted that the partial correlations have been performed using the Pearson correlation coefficient, as the S.P.S.S. programme does not allow for partialling of non-parametric data. The Pearson correlation coefficients before partialling were all significant at the .001 level, and were: $r=.4108$, $.3370$ and $.4365$ for the total, circumstances and self-report intent scores respectively with the depression scores; and $r=.4525$, $.4217$ and $.4301$ for the total, circumstances and self-report intent scores respectively with the hopelessness scores.)

TABLE 5.7

PARTIAL CORRELATIONS (PEARSON) OF SUICIDAL INTENT WITH DEPRESSION
AND HOPELESSNESS

Suicidal Intent	Depression (Controlling for Hopelessness)		Hopelessness (Controlling for Depression)	
	r	p	r	p
Total Intent Score	.1605	.107	.2608	.008
Circumstance Score	.0788	.431	.2797	.004
Self-Report Score	.2198	.026	.2044	.039

Thus these results support the contention of Minkoff et al (1973), Beck et al (1975b), Kovacs et al (1975) and Wetzel (1976) that there is a greater degree of association between hopelessness and suicidal intent than between depression and intent. The studies cited each used the Beck Depression Inventory, and the only study which has not confirmed this finding is that of Pokorny et al (1975), in which the Zung Self-Rating Depression Scale was used. It is significant that the present results were obtained by using the LPD Questionnaire, and this therefore offers further support to the importance of the association between hopelessness and suicidal intent.

It is pertinent to consider some of the problems in interpretation of such results. Pokorny et al (1975) commented on the difference between his results and those of Minkoff et al (1973), and suggested that subject selection may be important. They noted that the majority of the subjects of the study of Minkoff et al (1973) were depressed unmarried or separated women, who were members of racial or religious minorities, and therefore they may have reality based negative expectations of external societal supports. It is of note that the subjects of Pokorny et al (1975) were inpatients of a Veterans' hospital and therefore comprised mainly depressed married Protestant Caucasian men who might be expected to have more external social support. They noted that *"it is therefore possible that the relationship between negative expectations and suicidal intent is dependent on external*

support - that in the relative absence of external social supports, negative expectations of the future are associated with seriousness of suicidal intent, whereas negative expectations are less relevant in the presence of such supports".

While the selection of subjects in the present study could undoubtedly be criticised on some of the grounds noted by Pokorny et al (1975), it is suggested that they are more representative of the population seen in general clinical practise than the subjects of their study. Nevertheless, their caution that "*a strong hopelessness-intent relationship may exist in some circumstances, but it does not seem to be generalizable*" should be borne in mind.

The problem of when to administer the scale is a problem common to the administration of all scales. This is raised particularly with regard to the Hopelessness Scale because Wetzel (1976) found no positive correlations immediately after the attempted suicide, but reported significant findings one month after the attempt. Such findings have not been reported by others.

It is also possible that the experience of hospitalisation might influence hopelessness, although it could be postulated to do so in either direction. Thus, being hospitalised might signify to some that they are hopeless and need care, thereby re-inforcing their hopelessness, or it could be interpreted as offering hope when needed, and therefore result in a lesser score.

Conclusion: These results indicate that patients of high lethality are more hopeless, as measured by the Hopelessness Scale, than patients of

low lethality, and that patients who have attempted suicide are more hopeless than comparison subjects. Beck et al (1975b) have suggested that this may have important therapeutic implications, and they suggest that *"by focussing on reduction of a patient's hopelessness, the professional may also be able to alleviate suicidal crises more effectively than in the past"*. The results of this study suggest that such an hypothesis is not unreasonable.

Thus the hypothesis that patients who have attempted suicide would score higher on the Hopelessness Scale than patients of lower lethality was supported, though only when comparing subjects of high and low lethality. The hypothesis that patients who had attempted suicide would score higher on the Hopelessness Scale than subjects of a comparison group was also supported.

iv. Death Anxiety

It is of note that although patients in the high lethality group scored less on the Death Anxiety Scale (Templer, 1970) than those in groups of lesser lethality, a difference in the direction predicted, this difference was certainly not significant (Table 4.58.). This finding is consistent with the work of Tarter et al (1974) who found no relationship between this scale and the lethality of suicide attempts as assessed by the Risk-Rescue Rating Scale.

However, Tarter et al found a small significant correlation between death anxiety and the potential for rescue component of the Risk-Rescue Rating Scale. The component of the Suicidal Intent Scale most analogous to the potential for rescue is the objective intent,

as assessed by the circumstances surrounding the attempt. It is of note that there was a low but significant negative correlation between death anxiety scores and the intent scores assessing the circumstances of the suicide attempt (Spearman $r_s = -.1666$, $p = .047$). Thus while lethality of the attempt was unrelated to death anxiety, the suicidal intent as measured by the circumstances of the attempt was significantly negatively correlated with death anxiety. In fact, a high potential for rescue score on the Risk-Rescue Rating Scale is analogous to a low score on the Suicidal Intent Scale as assessed by the objective circumstances of the suicide attempt, and thus this study is consistent with that of Tarter et al (1974). They suggested that the result *"may indicate that the anxiety related to a suicide attempt is not dissipated where the opportunity for rescue is high."* However, an alternate hypothesis is that persons of lower death anxiety may be more willing to plan their attempts in such a way (i.e. with the circumstances surrounding the attempt suggesting high suicidal intent) that they are more likely to commit suicide. Offering support for this hypothesis is the significant (though again low) negative correlations between death anxiety and the self report component of the Suicidal Intent Scale (Spearman $r_s = -.1639$, $p = .050$), and the total suicidal intent score (Spearman $r_s = -.1803$, $p = .035$).

There was no difference between the scores on the Death Anxiety Scale of those who had had a previous episode of attempted suicide (mean 7.6, (SD3.2), mean rank 53.8) and those who were first attempters (mean 7.2, (SD2.8), mean rank 50.6; Mann-Whitney $U = 1217.5$, (two tailed)

$p = .589$ n.s.). This finding is also consistent with that of Tarter et al (1974).

A possible short coming of this study is that subjects of each lethality group had no immediate threat to their lives at the time of administration of the scale, and one might therefore not expect a difference between the groups.

It is of note that the mean death anxiety score of those subjects who had attempted suicide was identical to that of the comparison group (Table 4.96.). Although a different instrument was used, this finding is consistent with the work of Eisenthal (1968), Blau et al (1967, quoted by Lester, 1972), and Farberow et al (1964), who found no difference between suicidal and other subjects on their assessments.

Although one can not ignore the significant correlations between death anxiety and both the circumstances and self-report components of the Suicidal Intent Scale, it must be emphasised that the degree of correlation was extremely low. Certainly the other findings, in groups of young women who have attempted suicide with such widely varying degrees of lethality, and in a comparison group, suggest that death anxiety, as measured by the Death Anxiety Scale of Templer (1970), does not play a major role either in determining whether a person will make a suicide attempt, or in the degree of lethality that will arise from that attempt.

v. Hysteroid/obsessoid dimension of personality

Although there was no significant difference in scores on the Hysteroid/Obsessoid Questionnaire (HOQ) between the groups of differing lethality, there was a trend, in the predicted direction,

for patients in the high lethality group to score less than the other groups, indicating a more obsessoid score (Table 4.60.). This approached significance when the scores of the high lethality group were compared with the scores of the other two groups (Mann-Whitney $U = 946.0$, $p = .0695$ (one tailed)). This is consistent with the finding of Murthy (1969) that 'serious' attempters were significantly more often obsessoid rather than hysteroid in personality. (It is also of interest, although their finding was not significant, the Pallis and Birtchnell (1977) reported 'serious' attempters scored less on the MMPI Hysteria Scale than 'non-serious' attempters.)

When the HOQ scores are presented in the same manner as Murthy (1969), by comparing those subjects with scores of 23 and less, (which denote an obsessoid personality) with those with scores of 24 and above, (which denote an hysteroid personality), the similarity between her results and those of the present study is clearly seen. These are presented in Tables 5.8 and 5.9, and it is apparent that when subjects of the high lethality group are compared to those of the other two groups combined, significantly more of the high lethality group obtained obsessoid scores.

TABLE 5.8

COMPARISON OF 'SERIOUS' AND 'NON-SERIOUS' HOQ SCORES, MURTHY (1969)

HOQ Scores	Serious		Non-serious		Total
	O	E	O	E	
Obsessoid \leq 23	30	25	16	21	46
Hysteroid \geq 24	8	13	16	11	24
Total	38		32		70

$$\chi^2 = 7.05, \text{ df} = 1, p < .01$$

TABLE 5.9

COMPARISON OF HOQ SCORES OF DIFFERING LETHALITY GROUPS, PRESENT STUDY

HOQ Scores	HL		IL		LL		Total
	O	E	O	E	O	E	
Obsessoid \leq 23	26	21	28	32	11	12	65
Hysteroid \geq 24	7	12	22	18	9	8	38
Total	33		50		20		103

$$\chi^2 = 5.135, \text{ df} = 2, p = .077$$

Partitioned χ^2

HL v IL + LL Corrected $\chi^2 = 4.185, \text{ df} = 1, p = .041$

LL v HL + IL Corrected $\chi^2 = .335, \text{ df} = 1 \text{ n.s.}$

Thus although the HOQ scores did not significantly differentiate the groups of differing lethality, when the number of subjects scoring 23 or less, indicating an obsessoid personality, were compared to those scoring 24 or more, indicating an hysteroid personality, there were significantly more with an obsessoid personality in the high lethality group compared to those patients of lesser lethality. However, even in the groups of lesser lethality, the majority of subjects scored in an obsessoid direction.

The mean score of the comparison group was 23.52 (S.D. 4.27), a similar figure to that of 23.30 (S.D. 5.10) reported by Vinoda (1966) for her normal control group. This score was greater than that of those attempters matched for age (20.26, S.D. 5.50), indicating that the attempters scored more in an obsessoid direction than subjects of the comparison group. This result was in the opposite direction to that predicted, and it is noteworthy that the difference approached significance using a two tailed Mann-Whitney U test (Table 4.96.).

The scores for the attempters were similar to those reported by Vinoda (1966) and Eastwood et al (1972). The results are also consistent with the studies of Farberow (1950), Pallis and Birtchnell (1976) and Marks and Haller (1977) in not offering objective support to the clinical reports of an increased frequency of subjects with an hysterical personality in those who attempt suicide. Indeed

the results also conflict with the greater clinical diagnosis of hysterical personality in attempters, in contrast to the comparison group, in the present study (Table 4.95.).

That no study using standardised objective measures has been able to substantiate the clinical reports of an increase in hysterical personality in those who attempt suicide suggests that either the instruments used are not sensitive enough to detect this attribute, or that a re-assessment of clinical diagnosis may be necessary. Certainly both these possibilities bear consideration.

The items of the HOQ were based on clinical observation and constructed on a simple face validity basis, and thus scores should correspond to usual clinical diagnostic practice. It is possible that patients' responses may not indicate their usual traits shortly after attempting suicide, and the HOQ may reflect this, whereas the clinician assesses more on the life style of that patient. To illustrate the point, it may be difficult for a person with an hysterical personality to assign a 'true' or 'false' answer to statements such as 'my party manners are pretty good', or 'I like to wear eye-catching clothes', in an hysteroid manner immediately after attempting suicide. Caine (1970) has noted that *"the HOQ is more closely related to the validation criterion of personality traits than it is to either clinical diagnosis or to symptom measures"*, but it is problematical whether or not this applies to this particular clinical situation.

The HOQ has high test-retest reliability (Caine, 1965), and it would seem logical to follow these patients and determine their scores again.

The possibility that the clinical diagnosis of such patients who attempt suicide may need re-assessment should not be discounted. As noted in the review of the literature (p. 125, p. 137), the perceptual set of clinicians may have been sensitised to detect hysterical traits in these subjects. The pejorative connotations of the term 'hysterical' and its synonyms have frequently been alluded to in the general psychiatric literature (Chodoff and Lyons, 1958; Lazare, 1971; and Chodoff, 1974), and more specifically it has been noted of those who attempt suicide that "*the stereotype is that of a histrionic young woman who is making a nuisance of herself*" (Morgan et al, 1975a). However, the pitfalls of the assumption of hysterical diagnoses have also been adequately described (Slater, 1961, 1965; Ball and Lloyd, 1971; and Goldney, 1978), and militate against assuming that the results of the HOQ must be incorrect as they conflict with clinical experience.

The use of both the HOQ and the LPD Questionnaire allows the association between the hysteroid personality and depression to be examined more closely. It is of interest that Paykel et al (1976) reported that "*patients with hysterical personalities tended to be less severely ill*" when depression "*symptoms were rated on the Clinical Interview for Depression, a modified and expanded version of the Hamilton Rating Scale for Depression.*" Table 5.10 demonstrates the LPD Questionnaire classes for patients scoring in the hysteroid (≥ 24 on the HOQ) and obsessoid (≤ 23 on the HOQ) directions, and shows no significant difference in allocation of the 'endogenous' and

'non-endogenous' depressions and the 'not depressed' classes.

TABLE 5.10

DEPRESSION CLASSIFICATION OF DIFFERING HOQ SCORES

HOQ	Non-endogenous depression		Endogenous depression		Not depressed		Total	
	O	E	O	E	O	E		
Obsessoid \leq	23	24	21.5	22	22	19	21.5	65
Hysteroid \geq	24	10	12.5	13	13	15	12.5	38
Total	34		35		34		103	

$$\chi^2 = 1.581, \quad df = 2, \quad p = .454 \text{ n.s.}$$

As one would expect from the above results, the mean depression scores of those patients designated obsessoid and hysteroid, though differing in the direction suggested by Paykel et al (1976), did not approach significance (Obsessoid: LPD mean 10.03 (SD 4.46), mean rank 54.3; Hysteroid: LPD mean 8.84 (SD 4.65), mean rank 48.0; Mann-Whitney $U = 1387.0$, (one tailed) $p = .149$).

Although there were no significant differences in depression scores when assessed in the above manner, there was a significant, though weak negative correlation between scores of the HOQ and those obtained by the LPD Questionnaire ($r_s = -.2419$, $n = 103$, $p = .007$), indicating that

an increased depression score significantly correlated with a decreasing HOQ score, i.e. with an increase in the obsessoid dimension of personality. However, both the HOQ and the LPD Questionnaire significantly correlated with age (HOQ: $r_s = - .2427$, $n = 103$, $p = .007$; LPD: $r_s = .3049$, $n = 104$, $p = .001$), and the association of HOQ and LPD scores could be an artefact of their common association with age.

It is noteworthy that when a partial correlation of HOQ scores with those of the LPD Questionnaire was performed, controlling for age, the strength of correlation was reduced, but still remained significant (Pearson $r = - .2089$, $p = .018$).

(It will be noted that the partial correlation was performed using the Pearson correlation coefficient, as the S.P.S.S. programme does not allow for partialling of non-parametric data).

Paykel et al (1976) recorded correlations of "modest magnitude" between depression and measures of personality, and their conclusion "that the depressive syndrome, at least as measured in this study has a large core disturbance, which is shared by all kinds of personalities, and a definite but smaller additional element which is coloured by the premorbid personality of the depressed person", could equally apply to the results of this study.

It is pertinent to reflect on the significant correlation between age and HOQ score. Paykel et al (1976) also observed a similar correlation (using other instruments), and noted: "reasons for the strong age effects on personality are not themselves clear. It may be

that 'personality' does change with ageing, in that more obsessive, less hysterical, less dependent and less emotionally labile patterns develop." In so far as these personality characteristics may be estimated by the HOQ, the present results support the speculation of Paykel et al (1976), and in so doing they highlight one of the problems in estimating personality characteristics in those who have attempted suicide.

Conclusion: Although there was a trend for attempters in the high lethality group to score more in the obsessoid direction than those in the groups of lesser lethality, it failed to attain significance and the original hypothesis was not supported. However, when subjects were divided arbitrarily into hysteroid and obsessoid personalities on the basis of their score, significantly more of the high lethality group were obsessoid when compared with the two lesser lethality groups combined. However, even in the groups of lesser lethality, the majority of subjects scored in an obsessoid direction.

The hypothesis that attempters would score more towards the hysteroid dimension of personality than subjects of the comparison group was not supported. In fact, there was a trend, which approached significance, for the comparison subjects to be more hysteroid than those who had attempted suicide.

vi. Locus of control dimension of personality

Patients in the high lethality group scored significantly less on the ANSIE locus of control scale (Nowicki and Duke, 1974) than patients in the groups of lesser lethality (Table 4.62.). This

difference was in the direction predicted, such a prediction having been made in the belief that those persons in the high lethality group would have been more definite about their decision to die, and would have felt more in control of their fate rather than leaving it to chance.

Such a finding is consistent with the clinical reports of Shneidman (1963) and Sendbuehler et al (1970). Thus Shneidman (1963) noted that the individual of high suicidal intent, who will definitely suicide in the near future, *"does not wish to let 'it' happen to him. Rather, he wants to play a role in its occurrence. Thus he will do it for himself, at his own time, and on his own terms."* Sendbuehler et al (1970) observed that 'serious' attempts were *"more influenced by internal motivations"* whereas 'gestures' were more guided by *"external happenings"*.

It is of note that taken as a group, patients who attempted suicide scored higher on the ANSIE scale than subjects in the comparison group (Table 4.96.). This difference was highly significant ($p < .001$), and in the direction predicted, indicating that those patients who had attempted suicide were more externally oriented and thus believed that re-inforcements were unrelated to their personal control, but due to luck, chance or other people. This is consistent with a number of clinical reports (Weiss, 1957; Shneidman and Farberow, 1965; Kessell, 1966; and Bostock and Williams, 1974) which suggest that the person who attempts suicide has certain expectations from others. It is also consistent with the research of Williams and Nickels (1969), who concluded that *"measures of external locus of control philosophy will correlate*

positively with measures of suicide proneness", and the theoretical paper of Boor (1976) in which he postulated that "cultures that foster high perceptions of external control also foster high suicidal rates".

It is also of interest that the locus of control scores significantly correlated with the depression scores (for patients who had attempted suicide:- $r_s = .2636$, $(n=100)$, $p = .005$; for those who had attempted suicide and comparison subjects combined:- $r_s = .4610$, $(n=124)$, $p = .001$). It will be recalled that one formulation of depression is that involving 'learned helplessness' (Seligman, 1972, 1978), and that Hiroto (1974) demonstrated that "externals were significantly more 'helpless' than internals" under experimental conditions. The present finding in the clinical situation of an external locus of control orientation being positively correlated with depression scores is consistent with the work of Hiroto (1974) and Seligman (1972, 1978). However, the limitations of the 'learned helplessness' paradigm in relation to clinical depression is acknowledged (Depue and Monroe, 1978), as is the harsh comment of Costello (1978) that "in the case of learned helplessness, the experimental paradigms proposed are far too general and loose, leaving room unfortunately for a multitude of parametric studies." It is beyond the scope of this thesis to pursue this particular aspect in further detail, other than to note that the concepts have a superficial appeal, and the observed associations invite further investigation.

It would appear to be important to attempt to integrate the findings

related to the groups of differing lethality and those between the comparison subjects and the total number of patients who had attempted suicide. Thus, although patients of high lethality scored more internally than those of lesser lethality, they were still more externally oriented than subjects of the comparison group. (H.L. group mean 17.0 (S.D. 4.5), mean rank 36.4; comparison group mean 10.8 (S.D. 4.9), mean rank 18.8; Mann-Whitney $U = 640$ (two tailed) $p < .001$). It would therefore appear that there was a threshold of locus of control score for these subjects, above which (indicating a more external score) a suicide attempt was possible. However, once above that threshold, a lesser score, indicating a relatively more internal orientation, might predispose that individual to make a more lethal attempt.

Although this hypothesis appears consistent with the results, it should be regarded as only tentative. It will be recalled that the possibility that the concepts of 'control' and 'reinforcement' in suicidal subjects may not be precisely analagous to the 'control' and 'reinforcement' implicit in the locus of control construct was noted earlier (p. 145), and this is again acknowledged. It is also pertinent to consider possible artefacts which may have contributed to the difference in scores. Thus, the fact that each patient was seen in a general hospital setting, in which dependency on others is encouraged, may have influenced the score in an external manner. However, if that were so, one might have expected patients from the high lethality group, who had experienced most dependency on life-saving personnel and equipment, to have scored most externally. This was not the case.

Another possible reason for this pattern of scores is that these patients may have denied feeling in control, as a defence against anxiety. Such a response has been referred to as 'defensive externality' (Hamsher et al, 1968), whereby a subject adopts an external response as a means of rationalising his/her own feelings of inadequacy and failure.

The work of Bryant and Trockel (1976) was referred to earlier (see p. 147), as it attempted to relate the locus of control orientation of college women to significant stress-related life events in their developmental history. They used the ANSIE locus of control questionnaire and the Coddington life change events and weighting instrument, and found *"that women with a strong external control orientation remembered more positive and negative life changes (stresses) ... during their pre-school years than did women with strong internal control orientation"*. In the present study childhood stress factors were recorded by the instrument devised by Langner and Michael (1963), and it is of note that there was a high degree of correlation between increasing scores on the ANSIE locus of control scale, denoting increasingly external orientation, and total childhood stress factor scores (for patients who had attempted suicide:- $r_s = .3785$, $(n=100)$, $p = .001$; for those who had attempted suicide and comparison subjects combined:- $r_s = .5250$, $(n=124)$, $p = .001$). Bryant and Trockel (1976) cited seven studies which had noted that persons scoring in an external manner reported less satisfying early childhoods than did those scoring in an internal manner,

and the present results are consistent with those observations.

In considering the genesis of the locus of control orientation, Bryant and Trockel (1976) suggested that affectively significant events over which a person had had no control, such as in early childhood, might lead to an external orientation. The Langner and Michael (1963) instrument certainly refers to events over which a child has no control, and thus these results offer some support to the hypothesis of Bryant and Trockel (1976). However, as they correctly noted, longitudinal prospective studies will be needed to decide the issue.

Conclusion: The hypothesis that of patients who had attempted suicide, those of high lethality would score more towards an internal locus of control orientation than those of lesser lethality, was supported. Furthermore, the hypothesis that as a group those patients who had attempted suicide would score more towards an external locus of control orientation than subjects of the comparison group was also supported. However, the strength of the findings was unexpected when the paucity of previous research and its equivocal nature were considered. Possible artefacts which may have contributed to this finding have been referred to, and careful replication studies would appear to be mandatory.

CHAPTER 6

CONCLUSIONS

*"Suicide attempts have many meanings and,
whatever their level of lethality, ought to be taken seriously."*

(Shneidman, 1976)

I. SUMMARY OF RESULTS

a. Comparison of Groups of Differing Lethality

i. General Descriptive and Clinical Data

There was no significant difference between the groups on the basis of their age or nationality, but more of the low lethality group were married or in a de facto relationship, and were living with their spouse. There was a trend for subjects of the low lethality group to be of lower socio-economic status.

The high lethality group took more tablets/capsules, and were more likely to have taken antidepressants than the other groups. There was a trend for fewer of the low lethality group to have taken more than one drug, but this did not attain significance. Significantly fewer of the high lethality group took alcohol with their overdose, and the high lethality group also took alcohol socially less often than the other groups. There was no difference between the groups in the method of their referral to hospital, or in the source from which they obtained their drugs.

The majority of each group had had contact with some form of 'helping agency' in the four weeks before their suicide attempt, but significantly more of the low lethality group had had contact in the 48 hours before the attempt. It is of note that this was due to the lesser contact of the intermediate lethality group, and not of the high lethality group. Significantly more of the high lethality group had consulted a psychiatrist or trainee psychiatrist as their last medical contact. There was a trend for more of the high lethality

group to have had previous psychiatric assessment, but this did not attain significance. However, it was significant that more of the high lethality group had consulted a psychiatrist in the four weeks before the suicide attempt. There was a trend for fewer of the low lethality group to have made a previous suicide attempt, but there was no relationship between the time of the attempt and the lethality of the present attempt.

There was a trend for fewer of the high lethality group to have both used or been subject to violence, but this did not attain significance.

There was no significant difference in the phase of the menstrual cycle, report of alcohol abuse by spouse, history of parental death or separation/divorce, family history of psychiatric treatment, or history of contact with suicidal behaviour between the groups of differing lethality.

There were two significant differences between the groups in their report of childhood stress. Thus fewer of the high lethality group reported symptoms suggestive of parents poor mental health, or that their parents were 'the worrying type'. Little weight should be placed on these findings, as given the overall number of comparisons made, such results may have arisen by chance alone.

There were no significant differences in the clinical diagnoses of the groups of differing lethality. However, there were trends for the diagnosis transient situational disturbance to be made more often, and for schizoid personality traits to be reported less often in subjects of the low lethality group.

ii. Other Data

The score on the Suicidal Intent Scale of the high lethality group was significantly higher than that of the intermediate lethality group, which was in turn significantly higher than that of the low lethality group.

There was no difference in depression score, or in depression category between the groups of differing lethality.

Subjects of the high lethality group scored significantly higher on the Hopelessness Scale than subjects of the low lethality group.

There were no significant differences in scores between the groups of differing lethality on the Death Anxiety Scale or the Hysteroid/Obsessoid Questionnaire (HOQ). However, there was a trend for the high lethality group to score less than the other groups on the HOQ, indicating a more obsessoid score.

The high lethality group scored lower on the Adult Nowicki-Strickland Internal-External locus of control scale than the low lethality group, indicating a more internal orientation of locus of control.

b. Attempted Suicide Patients v. Comparison Subjects

i. General Descriptive and Clinical Data

Fewer of the attempters were married or living in a de facto relationship, and more were in the lowest socio-economic group when contrasted with subjects of the comparison group. There was no difference between the groups in nationality, or whether or not they

had children.

Patients who had attempted suicide had significantly more often consulted a medical practitioner in the forty-eight hours before their overdose than had subjects of the comparison group in the forty-eight hours prior to their assessment interview.

Significantly fewer of the comparison group reported either previous psychiatric consultation, a past history of attempted suicide, or a history of drug abuse.

Fewer of the attempters were in the mid phase of the menstrual cycle, but this finding should be regarded with caution because of methodological shortcomings. There was no significant difference between the groups in the frequency of the possibility of pregnancy, miscarriage or termination of pregnancy, but the numbers were small.

Significantly more of the attempters had lost a parent through separation and/or divorce. Although a greater number of attempters had experienced a loss of a parent by death, this did not attain statistical significance.

There were a number of significant differences between patients who had attempted suicide and subjects of the comparison group in their report of childhood stress. Eight of the eighteen individual items and five of the eight factors, as well as the total childhood stress factor score, distinguished the two groups, with the attempters in each case reporting more stress. Thus the group of attempters were more likely to report the items:- parent's chief problems being financial; childhood broken home; mother wanted to run patient's life;

mother didn't understand the patient; the patient's parents were not proud of them; the patient's parents did not 'practice what they preach'; parents quarrelling often; and the patient often having disagreements with their parents. Three of the factors (childhood broken home, parents quarrelling often and the patient often having disagreements with their parents) were single item factors, while the others were the higher frequency of reporting by attempters of childhood poor physical health, and of their parents character being negatively perceived.

There was a trend, which attained significance when the total numbers were compared, for the attempters to have sustained more violence from others than those in the comparison group. There was no difference in the reported use of violence between the two groups.

Although there was a trend for a greater number of attempters to report that their spouse abused alcohol, this did not attain significance.

There was no significant difference between the two groups in the frequency with which they had a family history of psychiatric treatment, or in the frequency with which they had had contact with suicidal behaviour.

Significantly more of the attempters were given the primary psychiatric diagnosis neurotic depression. The attempters were also significantly more often considered to demonstrate hysterical and passive-aggressive personality traits.

ii. Other Data

Patients who had attempted suicide scored significantly higher on the depression and hopelessness scales.

There was no difference between the groups on the measure of death anxiety.

There was a trend, which approached significance, for the attempters to score more in an obsessoid direction on the HOQ than subjects of the comparison group, a finding contrary to that predicted.

Attempters scored significantly more externally than comparison group subjects on the locus of control questionnaire.

The differences between the groups are summarised in Table 6.1.

TABLE 6.1

SUMMARY OF DIFFERENCES BETWEEN ATTEMPTERS AND COMPARISON GROUP AND BETWEEN ATTEMPTERS OF DIFFERING LETHALITY

Parameters	Suicide Attempters v. Comparison Group	Groups of Differing Lethality	
		Significant Differences	Trends Evident
Demographic and Descriptive data	Less often married or de facto Less often living with spouse Lower socio-economic status More parental separation/divorce Sustained more personal violence Greater number of reported childhood stress items/factors	LL more often married or de facto LL more often living with spouse HL less general use of alcohol	LL of lower socio-economic status HL less violence used and sustained
Past Medical and Psychiatric History	More recent contact with medical practitioner More previous psychiatric assessment/treatment More past history of attempted suicide More past history of drug abuse	LL more recent contact with medical practitioner HL more recent contact with psychiatrist	HL more previous psychiatric assessment/treatment HL more past history of attempted suicide
Data related to suicide attempt	Not applicable	HL took more tablets/capsules HL took more antidepressants HL took alcohol less often Suicidal Intent Scores: HL>IL>LL	
Clinical Diagnosis	More neurotic depression More passive-aggressive and hysterical personality traits		LL more transient situational disturbance LL less often schizoid personality traits
Questionnaire Data	Higher depression score Higher hopelessness score External locus of control orientation	Hopelessness: HL>LL HL more internal locus of control orientation	HL more obsessoid

II. OVERVIEW

The findings of this study suggest that factors which predispose to suicidal behaviour differ from those which determine the degree of lethality associated with an attempt. In terms of the subjects studied and the variables examined in this thesis, those parameters which distinguished the attempters were anticipated on the basis of the review of the literature.

The differences found between the groups of differing lethality were, in general accord with previous studies, and can be considered to be consistent with certain broad generalisations. Thus the significantly greater frequency of marriage (or de facto relationship), and the more frequent contact with a medical practitioner in the forty-eight hours before the suicide attempt by the low lethality group, and less general use of alcohol by the high lethality group; as well as the trends for the low lethality group to less often demonstrate schizoid personality traits, and to be of lower socio-economic status, and the high lethality group to have had less experience of violence, could all be considered in some sense to be related to a greater communication component in the attempters of low lethality.

There was evidence, though by no means unequivocal, of greater psychiatric morbidity in the high lethality group. Thus, trends for more subjects of high lethality to have had previous psychiatric assessment, and to have previously attempted suicide, and the significantly more recent nature of their psychiatric consultation, are suggestive of a greater psychological morbidity, certainly in

the period immediately before their suicide attempt. Despite this, there were no significant differences in clinical diagnosis between the groups of differing lethality, although the trend for patients in the low lethality group to be more frequently diagnosed transient situational disturbance is consistent with that group having less psychiatric illness. These results suggest that in the clinical situation it would be unwise to assume that subjects who have made a suicide attempt of low lethality necessarily have less psychiatric morbidity.

Two further points arising from the general descriptive and clinical data deserve comment. First, the recent consultation by attempters with medical practitioners, and in particular the recent psychiatric contact of the high lethality group is noteworthy, as clearly this contact has (at the very least) not prevented these subjects from exhibiting suicidal behaviour. Second, the fact that reported childhood stress so clearly distinguished the attempters from the comparison group, but failed to differentiate the groups of differing lethality, suggests that there may be certain relatively specific events which predispose a person to attempt suicide, but that other factors determine the lethality of suicidal behaviour.

The high lethality group, although more externally oriented than the comparison group, scored significantly more internally than the low lethality group on the locus of control questionnaire, indicating that subjects of high lethality perceived themselves as being more

in control of their situation with less expectation from others.

Such an orientation may contribute to the lesser tendency for subjects of high lethality to communicate with others. The overall higher external score of the attempters suggests that a sense of responsibility for one's own actions may have relevance in both reducing the predisposition to suicidal behaviour, and in the treatment of such patients. Such an orientation may contribute to the lesser tendency for subjects of high lethality to communicate with others.

There was a significant association between medical lethality and scores of the Suicidal Intent Scale, denoting that in general the lethality of a suicide attempt provides a guide to the suicidal intent of that patient. The number of tablets/capsules ingested was also significantly related to suicidal intent, and suggests that such an assessment may constitute a simple means of estimating suicidal intent.

It was of note that the hopelessness score was significantly greater in patients of high lethality, whereas the depression scores did not distinguish the three groups. This supports the contention that hopelessness may be of special importance in suicidal behaviour (Beck, 1975b), and should be examined independently of depression.

The results with regard to depression appear to be of particular interest. Thus the lack of association between depression scores and medical lethality of the suicide attempt, though previously reported, emphasises the fact that even subjects of low lethality may be depressed to a significant degree. The allocation of approximately

one-third of attempters of each lethality group to the endogenous depression class by the LPD Questionnaire was an unexpected finding, and if replicated in other suicidal subjects and by other methods, may have therapeutic implications.

The proportion of patients allocated to the endogenous class of depression is germane to the debate of the relative importance of intrapsychic and social factors in suicidal behaviour. In this regard, Bancroft et al (1977) noted: *"it is of great importance to resolve this issue, as if our view of the situation is correct there will be a danger, in labelling the 'self-poisoners' as suffering from a depressive illness, of directing therapeutic attention away from the basic interpersonal difficulty on to the individual"*. While the findings of this study can not resolve this issue, they do not support the position of Bancroft et al (1977). However, it would appear to be unwise to adopt polarised viewpoints in this discussion and, indeed, Sainsbury (1973) has commented: *"to take up an 'either-or' position - to applaud one lot of findings and deny others - is wasteful of knowledge and proliferates sterile argument"*. Certainly, the delineation of the precise nature of depression in young women who attempt suicide is by no means complete.

These results may have relevance in the clinical situation. Thus for young women between the ages of 18 and 30 years, those most at risk for making suicide attempts of high lethality appear to be those who are not married (or in a de facto relationship); use alcohol less

often; have had recent contact with a psychiatrist; and have a greater degree of suicidal intent and hopelessness. Furthermore, there are trends for them to be those of higher socio-economic status; to have less history of violence, both used and sustained; to more often demonstrate schizoid personality traits and to be closer to the obsessoid pole of the hysteroid-obsessoid personality continuum; and to be more likely to have had a past psychiatric contact and to have made a previous suicide attempt.

Thus the findings of this study may provide indices, not only for assessing a patient's potential for attempting suicide, but also for assessing whether such an attempt would be of high or low lethality.

APPENDICES

APPENDIX IGENERAL DESCRIPTIVE AND CLINICAL DATANAME:HOSPITAL UNIT RECORD NO.:ADDRESS:ADMISSION: Date:
Time:INTERVIEW: Date:
Time:AGE:NATIONALITY:

1. Migrant
2. 1st Gen. Aust.
3. 2nd Gen. Aust.

REFERRAL TO HOSPITAL:

- | | |
|-----------------------|------------|
| 1. N/K or N/A | 5. Self |
| 2. G.P. | 6. Family |
| 3. Psychiat. Hospital | 7. Friends |
| 4. Police | 8. Others |

CIVIL STATE:

- | | |
|------------|--------------|
| 1. N/K | 5. Widowed |
| 2. DeFacto | 6. Separated |
| 3. Single | 7. Divorced |
| 4. Married | |

PRESENT HOUSEHOLD: Ring the first applicable only - e.g. parents before siblings if with both.

- | | |
|---------------|--------------------------|
| 1. N/K | 6. Other relative/friend |
| 2. Spouse | 7. Lodgings/hotel/alone |
| 3. Parent(s) | 8. Institution |
| 4. Sibling(s) | 9. Other |
| 5. Child(ren) | |

NUMBER OF CHILDREN:

- | | |
|---------|-----------------|
| 1. N/K | 5. Three |
| 2. None | 6. Four |
| 3. One | 7. Five or more |
| 4. Two | |

NUMBER OF MISCARRIAGES:

1. N/K
2. None
3. One
4. Two
5. Three or more

NUMBER OF TERMINATIONS OF PREGNANCY:

1. N/K
2. None
3. One
4. Two
5. Three or more

L.M.P.:
 1. N/K
 2. Mens.
 3. Mid. Cycle
 4. 1/52 Pre-Mens.
 5. Overdue

PREGNANT:
 1. No
 2. Possible
 3. Yes

SOCIO-ECONOMIC STATUS:

1. N/K
 2. No usual occupation
 3. Class 1
 4. Class 2

5. Class 3
 6. Class 4
 7. Class 5

AGENT (DRUG) INGESTED:

1. N/K or N/A
 2. Minor Analgesics
 (Paracetamol, Salicylates)
 3. Minor Tranquillizers
 4. Major Tranquillizers
 5. Barbiturates

6. Other Hypnotics
 7. Anti-depressants
 8. Others
 9. Multiple Drugs

NUMBER OF DRUGS:

1. N/A or N/K
 2. Number - specify:

SOURCE OF PRINCIPAL DRUGS:

1. N/K or N/A
 2. Non-prescribed Pharmacist
 3. Non-prescribed Other

4. Prescribed for self
 5. Prescribed for others
 6. Illegal source

ALCOHOL:

History of alcohol intake

1. N/K
 2. None

3. Not excessive (within
 cultural norms)
 4. Dependence

Alcohol with overdose:

1. N/K or N/A
 2. Yes
 3. No

USE OF OTHER NON-PRESCRIBED DRUGS:

1. N/K
 2. None
 3. Marihuana
 4. Narcotics

5. Other Hallucinogens
 6. Other Prescribed
 7. Other Proprietary
 8. Multiple Drug Use

PREVIOUS PSYCHIATRIC TREATMENT:

1. Yes
 2. No

PREVIOUS IN-PATIENT PSYCHIATRIC TREATMENT:

- | | |
|------------------------------|------------------------------------|
| 1. N/K | 4. I.P. within previous week |
| 2. None | 5. I.P. within previous four weeks |
| 3. I.P. at time of admission | 6. I.P. within previous year |
| | 7. I.P. before last year |

PREVIOUS OUT-PATIENT PSYCHIATRIC TREATMENT:

- | | |
|------------------------------|------------------------------------|
| 1. N/K | 4. O.P. within previous four weeks |
| 2. None | 5. O.P. within previous year |
| 3. O.P. within previous week | 6. O.P. before last year |

MOST RECENT CONTACT WITH "HELPING AGENCY":

- | | |
|---------------------------------|---------------------------|
| 1. N/K | 6. 2-7 days before o.d. |
| 2. Less than 3 hrs. before o.d. | 7. 7-28 days before o.d. |
| 3. 3-12 hrs. before o.d. | 8. 1-6 months before o.d. |
| 4. 12-24 hrs. before o.d. | 9. Greater than 6 months |
| 5. 24-48 hrs. before o.d. | |

NATURE OF "HELPING AGENCY":

1. Medical Practitioner
2. Social Worker, Probation Officer, etc.
3. Nurse - e.g. Baby Health Sister
4. Others - e.g. G.R.O.W., Life Line, "Parents without Partners"

MOST RECENT CONTACT WITH MEDICAL PRACTITIONER:

- | | |
|---------------------------------|---------------------------|
| 1. N/K | 6. 2-7 days before o.d. |
| 2. Less than 3 hrs. before o.d. | 7. 7-28 days before o.d. |
| 3. 3-12 hrs. before o.d. | 8. 1-6 months before o.d. |
| 4. 12-24 hrs. before o.d. | 9. Greater than 6 months |
| 5. 24-48 hrs. before o.d. | |

NATURE OF MOST RECENT MEDICAL CONTACT:

1. N/K
2. Psychiatric (including trainee psychiatrists)
3. Other

PREVIOUS ATTEMPTED SUICIDE:

- | | |
|---------|------------------|
| 1. N/K | 4. Two |
| 2. None | 5. Three or more |
| 3. One | |

MOST RECENT OVERDOSE:

- | | |
|-----------------------------|----------------------------|
| 1. N/K | 6. 4 weeks to 3 months ago |
| 2. Never | 7. 3-12 months ago |
| 3. Within previous 24 hours | 8. 12 months-2 years ago |
| 4. 1-7 days ago | 9. 2 years + |
| 5. 1-4 weeks ago | |

HISTORY OF PARENTAL SEPARATION:

1. N/K
2. Not permanently separated
3. Separation from one parent before the age of 10
4. Separation from both parents before the age of 10
5. Separation from one parent between ages of 10-15
6. Separation from both parents between ages of 10-15
7. Separation from one parent before 10 and the other between 10-15

Specify:

1. N/K
2. None
3. Death of one parent
4. Separation/divorce of parents
5. Death of both parents
6. Death of one parent and separation/divorce

PERMANENT SEPARATION FROM MOTHER:

1. N/K
2. Not permanently separated
3. Permanent separation before 10 years old
4. Permanent separation between 10 and 15 years

Specify:

1. N/K
2. Not permanently separated
3. Death
4. Separation/Divorce

PERMANENT SEPARATION FROM FATHER:

1. N/K
2. Not permanently separated
3. Permanent separation before 10 years old
4. Permanent separation between 10 and 15 years

Specify:

1. N/K
2. Not permanently separated
3. Death
4. Separation/Divorce

HISTORY OF VIOLENCE:

1. Yes
2. No

VIOLENCE I: (Patient reports having been physically violent towards another person in the past 5 years)

1. N/K
2. Violent
3. Non-violent

Personality Traits

1. Paranoid personality
2. Schizoid personality
3. Obsessive-compulsive personality
4. Hysterical personality
5. Sociopathic - antisocial personality
dyssocial personality
6. Passive-aggressive personality
7. Borderline personality
8. No particular personality traits prominent

Other Diagnoses

1. Psychosexual disorder - homosexuality
2. Psychosexual disorder - transsexualism
3. Alcoholism
4. Drug dependence - Opium and derivatives
 - Barbiturates
 - Other hypnotics, sedatives
 - Cannabis
 - Other stimulants
 - Hallucinogens
5. Borderline intelligence
6. No other psychiatric diagnosis considered

APPENDIX IIASSESSMENT OF SOCIO-ECONOMIC STATUS

It has been argued that there is no uniformly accepted system for classification of socio-economic status in Australia (Mai, 1970), and it is generally acknowledged that the system provided by the Commonwealth Bureau of Census and Statistics, which provides eleven categories, is unwieldy for research purposes. The classification used in this study is that developed by Krupinski, Stoller and Baikie (1966) for their study of an Australian town, and which has been used in subsequent studies (Mai, 1970; Clayer, 1975).

It is a five-tier system, and appears to have face validity:

- I. Professional, Semi-professional, and Managerial
- II. Own Business, Shop or Farm
- III. Clerical and Sales
- IV. Skilled
- V. Semi-skilled and Unskilled.

APPENDIX III
CLINICAL DIAGNOSIS

The diagnoses used are basically those in Section V of the International Classification of Diseases (I.C.D.) as published by the National Health and Medical Research Council (1972). Variations from this are described.

The nosology employed in this study includes the following:

1. No psychiatric diagnosis made (I.C.D. 796.9)
2. Transient situational disturbance (I.C.D. 307)

"Symptoms of behaviour of varied kinds appearing at any age, caused by or associated with an event or situation involving exceptional physical demands or emotional stress, which is emotionally traumatic for this particular person ... Persistent failure to resolve such disturbances will suggest a more serious underlying disturbance and will be classified elsewhere."

3. Neuroses (I.C.D. 300)

"Emotional maladaptions due to conflicts within the personality. The chief characteristic is anxiety, which may be directly felt and expressed or which may be unconsciously and automatically controlled by utilisation of various psychological defences such as depression, conversion, displacement, dissociation, phobia formation or repetitive thoughts and acts. Thinking and judgement may be impaired but there is minimal loss of contact with reality. There is usually evidence of periodic

or constant maladjustment of varying degrees from early life. The reaction to stress may bring about acute symptomatic expression of such disorders and manifest itself by varying types of neuroses.

In contrast to those with psychoses, patients with neuroses do not exhibit gross distortion or falsification of external reality (delusions, hallucinations) and they do not present gross disorganisation of the personality."

i. Anxiety neurosis (I.C.D. 300.0)

"Characterized primarily by direct experiencing of anxiety with or without physical symptoms. The anxiety is diffuse and uncontrollable, and there is only minor utilisation of various specific defence mechanisms common in other types of neuroses."

ii. Hysterical neurosis (I.C.D. 300.1)

"Characterized by the conversion of anxiety into bodily symptoms, or by mental dissociation. The bodily symptoms may involve the loss of, or distortion of, voluntary motor or sensory functions. Blindness, deafness, anaesthesia or parasthesia, paralysis or disturbance of reflex motor action (e.g. vomiting) may occur. The mental dissociation involves dissociated motivated behaviour of various kinds, of which wandering (fugue) is the commonest and these conditions are usually followed by more or less complete amnesia. Includes

compensation neurosis. Includes conversion neurotic disorder and dissociative neuroses of childhood."

iii. Depressive neurosis

The delineation of depressive neurosis, and in particular its distinction from endogenous or psychotic depression, remains controversial. For the purposes of this study the distinction suggested by Kiloh and Garside (1963) has been used, and neurotic depression is considered to be a lowering of mood with feelings of sadness and self-pity, the person is often immature with a sense of inadequacy, the depression appears reactive to the environment, and is variable, and lacks the biological features which are indicative of endogenous or psychotic depression. The neurotic depressive reaction is more persistent and prolonged than a transient situational disturbance.

4. Affective psychoses (I.C.D. 296)

"Reactions of psychotic depth, not of a demonstrable physical aetiology, which are characterized by excessive states of depression or elation with resultant disturbances of thought and behaviour Affective psychoses have a strong tendency to recur and are self-limiting, i.e. reversion to the normal state nearly always occurs in time."

In practical terms, the entities sometimes referred to as 'endogenous depression', 'psychotic depression' or 'manic-depressive psychosis, depressed type' are considered to be

synonymous, and have the relatively discrete biological features as delineated by Kiloh and Garside (1963). There is marked depression of mood, often a past history and family history of such mood disturbances, there is characteristic sleep disturbance with waking in the early hours of the morning, a diurnal mood variation with patients reporting symptoms worse in the morning, a decreased libido, decreased appetite with weight loss and psychomotor retardation. This symptom complex characterises most patients with 'endogenous depression'. The more severe endogenous depressions may have delusions of guilt and unworthiness, or nihilistic delusions regarding bodily functions and reality testing is severely impaired. Such endogenous depressions were classically seen in older age groups and called 'involutional melancholia'.

5. Schizophrenia (I.C.D. 295)

Reactions of psychotic depth, not of a demonstrable physical aetiology, which are characterised by a fundamental disturbance in reality relationships and concept formations, with affective, behavioural and intellectual disturbances in varying degrees and mixtures.

The disorders are marked by a strong tendency to retreat from reality, incongruity of affect, unpredictable disturbances in the stream of thought, regressive behaviour and, in some, by a tendency to deterioration. Delusions and hallucinations

are common."

(This definition is essentially a composite of both Bleulerian and Schneiderian criteria.)

i. Simple type (I.C.D. 295.0)

"Characterised by withdrawal and impoverishment of human relationships with gradual development of an apathetic state and indifference, but without other strikingly peculiar behaviour and without expression of delusions and hallucinations. It is insidiously progressive over a long period of time, usually with mental deterioration."

ii. Hebephrenic type (I.C.D. 295.1)

"Shallow inappropriate affect, irrelevant giggling, facile behaviour, delusions, hallucinations and regressive behaviour are characteristic of the hebephrenic type."

6. Personality disorders (I.C.D. 301)

"Disorders which are characterised by developmental defects of pathological trends in the personality structure, with minimal subjective anxiety, and little or no sense of distress are included here. Usually the disorder is manifested by a lifelong pattern of behaviour, rather than by mental symptoms."

i. Paranoid (I.C.D. 301.0)

"Individuals displaying extreme sensitivity in inter-personal relations and with a marked tendency to use projective mechanisms expressed by suspiciousness, envy, jealousy and stubbornness, are included in this sub-category."

ii. Schizoid (I.C.D. 301.2)

"Personalities displaying inherent traits such as avoidance of close relations with others, inability to express directly hostility or even ordinary aggressive feelings, and autistic thinking, are included here. Coldness, aloofness, emotional detachment, fearfulness, avoidance of competition, and day-dreams revolving around the need for omnipotence, are characteristic features."

iii. Obsessive-compulsive (I.C.D. 301.4)

"Individuals who display chronic, excessive or obsessive concern with adherence to standards of conscience or of conformity, are included here. Over-inhibition, over-conscientiousness, an inordinate capacity for work, rigidity and lack of a normal capacity for relaxation, are characteristic features."

iv. Hysterical (I.C.D. 301.5)

"Characterised by labile, shallow emotional feelings, susceptibility to suggestion, egocentricity, impulsive behaviour and over-dependence on others. Such individuals react with excitability and ineffectiveness when confronted with minor stress. Their judgements may be faulty under stress, they are demanding of attention and tend to over-dramatise situations. Includes so-called 'histrionic personality'."

v. Sociopathic (I.C.D. 301.7 Antisocial)

"Chronically antisocial individuals who are always in trouble, benefiting neither from experience nor punishment, and maintaining no real loyalties to any person, group or code, are included here. Such individuals are callous and hedonistic, showing marked emotional immaturity, with lack of a sense of responsibility, lack of judgement, and an ability to rationalize their behaviour so that it appears warranted, reasonable and justified."

a. Antisocial sociopathic personality

The classic sociopathic personality, as described above, with loyalties to no-one.

b. Dyssocial sociopathic personality

This sub-classification is reserved for those personalities whose behaviour, although antisocial in general, may demonstrate strong within group loyalties.

vi. Passive-aggressive (passive dependent, hostile dependent)

These traits have been sometimes considered as part of an asthenic or inadequate personality. Solomon and Patch (1971) describe it thus: "In some individuals with a passive-aggressive character disorder, the aggressiveness is concealed and the passivity or dependency is blatant. These individuals are sometimes referred to as 'passive-dependent' characters. They are frequent visitors to the outpatient clinic or family service agency, where they present themselves as helpless

persons who feel they are not being adequately taken care of by others. The dependent person is susceptible to depressive episodes when he feels his needs are not satisfied. At such times, his reactions are apt to be particularly inept and inadaptible. The crucial conflict is in the area of loss or fear of loss".

vii. Borderline personality

This entity has gained acceptance in recent years, and Gunderson and Singer (1975) have provided the identifying features as: "the presence of intense affect, usually depressive, or hostile; a history of impulsive behaviour; a certain social adaptiveness; brief psychotic experiences; loose thinking in unstructured situations; and relationships that vacillate between transient superficiality and intense dependency".

7. Psychosexual disorder (I.C.D. 302 sexual deviation)

These conditions provide the main, if not the only means of achieving sexual excitement or gratification.

i. Homosexuality (I.C.D. 302.0)

ii. Transsexualism.

8. Alcoholism (I.C.D. 303)

"Alcoholism is defined as any form of drinking which in its extent goes beyond the traditional and customary 'dietary' use or the ordinary compliance with the social drinking customs of the whole community concerned, irrespective of the aetiological

factors leading to such behaviour and irrespective also of the extent to which such aetiological factors are dependent upon heredity, constitution, or acquired physiopathological and metabolic influences."

This broad term is used to include 'Episodic excessive drinking' (I.C.D. 303.0), 'Habitual excessive drinking' (I.C.D. 303.1), and 'Alcoholic addiction' (I.C.D. 303.2).

9. Drug dependence (I.C.D. 304)

This classification was given to those persons who demonstrated dependence, psychic or physical or both, on a chemical agent. The difficulties of nosology in this area are acknowledged, and it is used both as a general grouping of persons, and in conjunction with the specific agent involved.

- i. Opium, opium alkaloids and their derivatives (I.C.D. 304.0)
 - ii. Barbiturates (I.C.D. 304.2)
 - iii. Other hypnotics and sedatives or 'tranquillizers' (I.C.D. 304.3)
 - iv. Cannabis sativa (hashish, marihuana) (I.C.D. 304.5)
 - v. Other psychostimulants (I.C.D. 304.6)
e.g. Amphetamines and agents with amphetamine like effects.
 - vi. Hallucinogens (I.C.D. 304.7)
10. Anorexia Nervosa

The delineation of this syndrome presents difficulties and the relative importance of weight loss, anorexia and amenorrhoea must be balanced against the emphasis by some authors of the

anorectic behaviour per se. The criteria provided by Feighner et al (1972) are comprehensive, and have been used in this study.

"For a diagnosis of anorexia nervosa, A through E are required.

- A. Age of onset prior to 25.
- B. Anorexia with accompanying weight loss of at least 25% of original body weight.
- C. A distorted, implacable attitude towards eating, food, or weight that overrides hunger, admonitions, reassurance and threats; e.g. (1) Denial of illness with a failure to recognise nutritional needs, (2) apparent enjoyment in losing weight with overt manifestation that food refusal is a pleasurable indulgence, (3) a desired body image of extreme thinness with overt evidence that it is rewarding to the patient to achieve and maintain this state, and (4) unusual hoarding or handling of food.
- D. No known medical illness that could account for the anorexia and weight loss.
- E. No other known psychiatric disorder with particular reference to primary affective disorders, schizophrenia, obsessive-compulsive and phobic neurosis. (The assumption is made that even though it may appear phobic or obsessional, food refusal alone is not

sufficient to qualify for obsessive-compulsive or phobic disease.)

F. At least two of the following manifestations:

- (1) Amenorrhea, (2) Lanugo, (3) Bradycardia (persistent resting pulse of 60 or less), (4) Periods of overactivity,
- (5) Episodes of bulimia, (6) Vomiting (may be self-induced)."

APPENDIX IV

CHILDHOOD STRESS FACTORS IN ADULT MENTAL HEALTH

Stress Factor		Item
1. Parents' Poor Physical Health	Yes*/No	"When you were growing up (age six to eighteen), were either of your parents in poor health?"
2. Parents' Poor Mental Health		"Did any close relative ever have arthritis, asthma, bladder trouble, colitis, diabetes, hay fever, heart condition, high blood pressure, neuralgia or sciatica, nervous breakdown, epilepsy, stomach trouble, skin condition?"
	Yes*/No	"Father?"
	Yes*/No	"Mother?"
	Yes*/No	"Were either of your parents the worrying type?"
3. Childhood Economic Deprivation	Yes*/No	"Looking back, what would you say were the chief problems or troubles that your parents had to face while you were growing up?" "Unemployment", "Financial".
	Yes*/No	"During the years you were growing up, did your parents ever have a hard time making ends meet?" "Often"*, "Sometimes", "Rarely".
	Yes*/No	"From the time you were six till you were eighteen, about how many years would you say your mother worked?" "Why did she work outside the home?" To "Earn Money"*, "Have a career", or "Other" reasons?"
4. Childhood Poor Physical Health	Yes*/No	"How about your health in early childhood - that is, in the first six years of your life? As far as you can remember or have been told, was your health in early childhood good, fair or poor?"
	Yes*/No	"As a child, did you catch cold <u>fairly often</u> ?"*
5. Childhood Broken Homes	Yes/No*	"Did you always live together with both your real parents up to the time you were sixteen years old?" If "No", "What happened?" "How old were you when that happened?"

* = scored response

Stress Factor	Item
6. Parents' Character Negatively Perceived	<p>"During your school days children were often asked in school to write papers about their home life. I have here a few statements written by children some years ago... Think back to when you were growing up and tell me whether you ever felt that way..."</p> <p>Yes*/No Father spends too little time with me.</p> <p>Yes*/No Mother wants to run her children's lives.</p> <p>Yes*/No Mother does not understand me.</p> <p>Yes/No* My parents are always proud of their children. (No)*</p> <p>Yes*/No My parents don't practice what they preach</p> <p>Yes*/No Father wants to run his children's lives."</p>
7. Parents' Quarrels	<p>Yes*/No "Of course, all parents have their quarrels with each other. In your home, when you were growing up did such arguments occur <u>often*</u>, occasionally, or rarely?"</p>
8. Disagreements with parents	<p>Yes*/No "When you were a teenager, did you have disagreements with your parents, <u>often*</u>, occasionally, rarely, or never?"</p>

*= scored response

APPENDIX VINTENT SCALECIRCUMSTANCES RELATED TO SUICIDE ATTEMPT

1. Isolation
 0. Somebody present
 1. Somebody nearby or in contact (as by phone)
 2. No one nearby or in contact
2. Timing
 - () Does not apply
 0. Timed so that intervention is probable
 1. Timed so that intervention is not likely
 2. Timed so that intervention is highly unlikely
3. Precautions Against Discovery and/or Intervention
 0. No precautions
 1. Passive precautions, such as avoiding others but doing nothing to prevent their intervention (alone in room with unlocked door)
 2. Active precautions (locked door)
4. Acting to Gain Help During/After Attempt
 - () Does not apply
 0. Notified potential helper regarding attempt
 1. Contacted but did not specifically notify potential helper regarding attempt
 2. Did not contact or notify potential helper
5. Final Acts in Anticipation of Death
 0. None
 1. Patient thought about making or made some arrangements in anticipation of death
 2. Definite plans made (changes in will, giving gifts, taking out insurance)
6. Degree of Planning for Suicide Attempt
 0. No preparation
 1. Minimal or moderate preparation
 2. Extensive preparation
7. Suicide Note
 0. Absence of note
 1. Note written, but torn up, or note thought about
 2. Presence of note

8. Overt Communication of Intent Before Act
 0. None
 1. Equivocal communication
 2. Unequivocal communication
9. Purpose of Attempt
 0. Mainly to change or manipulate environment
 1. Components of "0" and "2"
 2. Mainly to remove self from environment

SELF REPORT

10. Expectations Regarding Fatality of Act
 0. Patient thought that death was unlikely or didn't think about it
 1. Patient thought that death was possible but not probable
 2. Patient thought that death was probable or certain
11. Conceptions of Method's Lethality
 0. Patient did less to himself than he thought would be lethal, or patient didn't think about it
 1. Patient wasn't sure or thought what he did might be lethal
 2. Act exceeded or equalled what patient thought was lethal
12. Seriousness of Attempt
 0. Patient did not consider act to be a serious attempt to end his life
 1. Patient was uncertain whether act was a serious attempt to end his life
 2. Patient considered act to be a serious attempt to end his life
13. Ambivalence Toward Living
 0. Patient did not want to die
 1. Patient did not care whether he lived or died
14. Conception of Reversibility
 0. Patient thought that death would be unlikely, if he received medical attention
 1. Patient was uncertain whether death could be averted by medical attention
 2. Patient was certain of death even if he received medical attention
15. Degree of Premeditation
 0. None-Impulsive
 1. Suicide contemplated for three hours or less prior to attempt
 2. Suicide contemplated for more than three hours prior to attempt

APPENDIX VI (a)L.P.D. QUESTIONNAIRE

INSTRUCTIONS: Please answer these questions as quickly as possible.
Put a circle round your answer.

- | | | |
|-----------------------------------------------------------------|-----|----|
| 1. Are you more irritable towards other people? | Yes | No |
| 2. Have you lost interest in watching television? | Yes | No |
| 3. Do you have difficulty in falling asleep without tablets? | Yes | No |
| 4. Do you feel depressed all day long? | Yes | No |
| 5. Do you feel slowed up in your thinking? | Yes | No |
| 6. Have you any serious money worries? | Yes | No |
| 7. Have you had any recent family worries? | Yes | No |
| 8. Have you lost someone you love in the past year? | Yes | No |
| 9. Do you feel you are a bad person? | Yes | No |
| 10. Have you moved house in the past year? | Yes | No |
| 11. Do you avoid company? | Yes | No |
| 12. Is it more difficult to concentrate on your work? | Yes | No |
| 13. Have you any housing worries? | Yes | No |
| 14. Do you wish you were able to cry? | Yes | No |
| 15. Do you have a restless and disturbed sleep without tablets? | Yes | No |
| 16. Do you feel most depressed in the evenings? | Yes | No |
| 17. Are there times when you do not feel depressed? | Yes | No |
| 18. Do you have less interest in reading newspapers? | Yes | No |
| 19. Do you think you will get better? | Yes | No |
| 20. Do you feel that people are sometimes talking about you? | Yes | No |

- | | | |
|---------------------------------------------------------------------|-----|----|
| 21. Is it easy to fall asleep without tablets? | Yes | No |
| 22. Is your appetite normal? | Yes | No |
| 23. Have you less interest in sex? | Yes | No |
| 24. Do you feel you are a burden to others? | Yes | No |
| 25. Is life worth living? | Yes | No |
| 26. Do you cry a lot? | Yes | No |
| 27. Are you unable to cry? | Yes | No |
| 28. Have you become constipated? | Yes | No |
| 29. Do you feel happier in the mornings? | Yes | No |
| 30. Do you suffer from a dry mouth? | Yes | No |
| 31. Have you less feeling for those close to you? | Yes | No |
| 32. Do you feel you are letting other people down? | Yes | No |
| 33. Have you lost your appetite? | Yes | No |
| 34. Have you had trouble at work in the past year? | Yes | No |
| 35. Do you wish you were dead? | Yes | No |
| 36. Do you waken much earlier than your usual time without tablets? | Yes | No |
| 37. Are you as good a person as most of your friends? | Yes | No |
| 38. Do you feel less depressed when you are with company? | Yes | No |
| 39. Do you think your illness is a punishment that you deserve? | Yes | No |
| 40. Do you have less interest in things you usually enjoy? | Yes | No |
| 41. Can you sleep normally without tablets? | Yes | No |
| 42. Do you waken at your usual time without tablets? | Yes | No |
| 43. Do you think there is something seriously wrong with your body? | Yes | No |

- | | | |
|------------------------------------------------------------------------|-----|----|
| 44. Is your depression the same all day long | Yes | No |
| 45. Do you find difficulty in relaxing? | Yes | No |
| 46. Do you feel life is not worth living? | Yes | No |
| 47. Have you lost weight? | Yes | No |
| 48. Do you feel most depressed in the mornings? | Yes | No |
| 49. Have you overheard people talking about you? | Yes | No |
| 50. Do you feel this illness has been brought upon you
by yourself? | Yes | No |
| 51. Do you feel slowed up in doing things? | Yes | No |
| 52. Does the future look hopeful? | Yes | No |
| 53. Do you feel happier in the evenings? | Yes | No |
| 54. Have you thought recently about ending your life? | Yes | No |
| 55. Do you feel time passing more slowly? | Yes | No |
| 56. Are you doing your work as well as you used to? | Yes | No |
| 57. Can you be easily cheered up? | Yes | No |

APPENDIX VI (b)

L.P.D. DISCRIMINANT FUNCTIONS

Class 1 versus 2 1 = +; 2 = -

		<u>Yes</u>	<u>No</u>			
2		-0.70	+0.88			
6		+1.87	-0.40			
13		+0.89	-0.35			
45		-0.12	+1.36			
47		-0.76	+0.76			
51		-0.19	+1.36			
3	+	0	1	2		
No	Yes	-1.50	+0.95	+2.12		
15	+	0	1	2		
No	Yes	-1.81	+0.86	+3.47		
20	+	0	1	2		
Yes	Yes	-0.95	+0.21	+0.49		
22	+	0	1	2		
Yes	No	-0.68	+0.41	+0.63		
36	+	0	1	2		
No	Yes	-1.95	+0.51	+3.02		
14	+	0	1	2	3	
Yes	No	+0.25	-0.06	+0.65	-0.93	
16	+	0	1	2	3	4
Yes	Yes	-0.12	-1.06	-0.40	+0.65	+0.65
Age	15-25	26-35	36-45	46-55	56-65	66+
	+0.81	+0.01	-0.30	+0.93	-2.25	-1.37
SCORE:						

APPENDIX VIIH.S.

Please answer these questions as quickly as possible.
Put a circle round the T (true) if you agree with the statement
or round the F (false) if you do not.

- | | | |
|-------------------------------------------------------------------------------------------------------------------|---|---|
| 1. I look forward to the future with hope and enthusiasm | T | F |
| 2. I might as well give up because there's nothing I can do about making things better for myself. | T | F |
| 3. When things are going badly, I am helped by knowing that they can't stay that way forever. | T | F |
| 4. I can't imagine what my life would be like in ten years. | T | F |
| 5. I have enough time to accomplish the things I most want to do. | T | F |
| 6. In the future I expect to succeed in what concerns me the most. | T | F |
| 7. My future seems dark to me. | T | F |
| 8. I happen to be particularly lucky and I expect to get more of the good things of life than the average person. | T | F |
| 9. I just don't get the breaks, and there's no reason to believe I will in the future. | T | F |
| 10. My past experiences have prepared me well for my future. | T | F |
| 11. All I can see ahead of me is unpleasantness rather than pleasantness. | T | F |
| 12. I don't expect to get what I really want. | T | F |
| 13. When I look ahead to the future I expect I will be happier than I am now. | T | F |
| 14. Things just won't work out the way I want them to. | T | F |
| 15. I have great faith in the future. | T | F |

- | | | |
|----------------------------------------------------------------------------------------------|---|---|
| 16. I never get what I want so it's foolish to want anything. | T | F |
| 17. It is very unlikely that I will get any real satisfaction in the future. | T | F |
| 18. The future seems vague and uncertain to me. | T | F |
| 19. I can look forward to more good times than bad times. | T | F |
| 20. There's no use in really trying to get something I want because I probably won't get it. | T | F |

APPENDIX VIIID.A.S.

This is a questionnaire to find out your feelings about death.
 Put a circle round the T (true) if you agree with the statement
 or round the F (false) if you do not.
 There are no right or wrong answers.

- | | | |
|-----------------------------------------------------------------|---|---|
| 1. I am very much afraid to die. | T | F |
| 2. The thought of death seldom enters my mind | T | F |
| 3. It doesn't make me nervous when people talk about death. | T | F |
| 4. I dread to think about having to have an operation. | T | F |
| 5. I am not at all afraid to die. | T | F |
| 6. I am not particularly afraid of getting cancer. | T | F |
| 7. The thought of death never bothers me. | T | F |
| 8. I am often distressed by the way time flies so very rapidly. | T | F |
| 9. I fear dying a painful death. | T | F |
| 10. The subject of life after death troubles me greatly. | T | F |
| 11. I am really scared of having a heart attack. | T | F |
| 12. I often think about how short life really is. | T | F |
| 13. I shudder when I hear people talking about a World War III. | T | F |
| 14. The sight of a dead body is horrifying to me. | T | F |
| 15. I feel that the future holds nothing for me to fear. | T | F |

APPENDIX IXH.O.Q.

Read over each question and decide whether it is a true description of how you usually act or feel, then put a circle round the T (true) if the statement describes you or round the F (false) if it does not. Do not spend too much time over any question. Take your first reaction bearing in mind your usual way of acting or feeling. Do not miss any questions. There are no right or wrong answers.

- | | | |
|------------------------------------------------------------------------------------------------|---|---|
| 1. I find it hard to think up stories | T | F |
| 2. I like to wear eye-catching clothes | T | F |
| 3. I keep my feelings to myself | T | F |
| 4. I am slow in making up my mind about things because I weigh up all the pros and cons | T | F |
| 5. I am a moody sort of person, with lasting moods | T | F |
| 6. I have rigid standards I feel I should stick to | T | F |
| 7. When I am working I like a job which calls for speed rather than close attention to details | T | F |
| 8. I like to ask for other people's opinions and advice about myself | T | F |
| 9. I don't feel awkward when meeting people because I know how to behave | T | F |
| 10. I prefer to be popular with everyone than to have a few deep lasting friendships | T | F |
| 11. I cannot shake off my troubles easily even if I get the opportunity | T | F |
| 12. I have a good imagination | T | F |
| 13. I keep quiet at parties or meetings | T | F |
| 14. I feel better after I've had a good row and got it off my chest | T | F |
| 15. I am quick in sizing up people and situations | T | F |
| 16. My mood is easily changed by what happens around me | T | F |

- | | | |
|-----------------------------------------------------------------------------------------------------|---|---|
| 17. My conscience seldom bothers me | T | F |
| 18. I keep a place for everything and everything in its place | T | F |
| 19. I'm rather lacking in the social graces | T | F |
| 20. I have the same friends now as I had years ago | T | F |
| 21. It pleases me to be the centre of a lively group | T | F |
| 22. I like to show people exactly how I feel about things | T | F |
| 23. The first impressions or reactions are usually the right ones | T | F |
| 24. I do not mind if things turn out badly as long as I know I've done the right thing | T | F |
| 25. I can lead more than one life in my imagination | T | F |
| 26. I like discussing myself with other people | T | F |
| 27. I do not show my emotions in front of people | T | F |
| 28. When someone asks me a question I give a quick answer and look for the reason later | T | F |
| 29. If I am not in the right mood for something it takes a lot to make me feel differently | T | F |
| 30. I usually get by without having to worry about whether I've done the right thing morally or not | T | F |
| 31. One can understand most things without having to go into all the details | T | F |
| 32. It is important to be fashionable in your opinions, clothes, etc. | T | F |
| 33. My party manners are pretty good | T | F |
| 34. The only friends I make I keep | T | F |
| 35. If I happen to be upset about something it seems to carry over into all I do for a long time | T | F |
| 36. I cannot completely lose myself in a book or story | T | F |

- | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------|---|---|
| 37. I like to sit in the background or in an inconspicuous place at socials, meetings, etc. | T | F |
| 38. I act out my feelings | T | F |
| 39. I wait until I am sure of all my facts before I make a decision | T | F |
| 40. I spend a good deal of time worrying about the rights and wrongs of conduct | T | F |
| 41. When going into a room or meeting someone for the first time I get a strong general impression first and only gradually take in the details | T | F |
| 42. When meeting people I haven't met before I usually feel I make a rather poor impression | T | F |
| 43. It upsets me to leave friends and make new ones even if I have to | T | F |
| 44. When watching a play I identify with the characters | T | F |
| 45. My feelings about things and towards other people seldom change | T | F |
| 46. I do not like taking a leading part in group activities | T | F |
| 47. Mistakes are usually made when people make snap decisions | T | F |
| 48. If two people find they disagree about things they shouldn't try to carry on being close friends | T | F |

APPENDIX XA.N.S.I.E.

Please answer these questions as quickly as possible.
Put a circle round your answer.

- | | | |
|---------------------------------------------------------------------------------------------------------------------|-----|----|
| 1. Do you believe that most problems will solve themselves if you just don't fool with them? | YES | NO |
| 2. Do you believe that you can stop yourself from catching a cold? | YES | NO |
| 3. Are some people just born lucky? | YES | NO |
| 4. Most of the time do you feel that getting good grades meant a great deal to you? | YES | NO |
| 5. Are you often blamed for things that just aren't your fault? | YES | NO |
| 6. Do you believe that if somebody studies hard enough he or she can pass any subjects? | YES | NO |
| 7. Do you feel that most of the time it doesn't pay to try hard because things never turn our right anyway? | YES | NO |
| 8. Do you feel that if things start out well in the morning that it's going to be a good day no matter what you do? | YES | NO |
| 9. Do you feel that most of the time parents listen to what their children have to say? | YES | NO |
| 10. Do you believe that wishing can make good things happen? | YES | NO |
| 11. When you get punished does it usually seem its for no good reason at all? | YES | NO |
| 12. Most of the time do you find it hard to change a friend's (mind) opinion? | YES | NO |
| 13. Do you think that cheering more than luck helps a team to win? | YES | NO |
| 14. Did you feel that it was nearly impossible to change your parent's mind about anything? | YES | NO |

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|-----|----------------------------------------------------------------------------------------------------------------------------------|-----|----|
| 15. | Do you believe that parents should allow children to make most of their own decisions? | YES | NO |
| 16. | Do you feel that when you do something wrong there's very little you can do to make it right | YES | NO |
| 17. | Do you feel that most people are just born good at sports? | YES | NO |
| 18. | Are most of the other people your age stronger than you are? | YES | NO |
| 19. | Do you feel that one of the best ways to handle most problems is just not to think about them? | YES | NO |
| 20. | Do you feel that you have a lot of choice in deciding whom your friends are? | YES | NO |
| 21. | If you find a four leaf clover, do you believe that it might bring you good luck? | YES | NO |
| 22. | Did you often feel that whether or not you did your homework had much to do with what kind of marks you got? | YES | NO |
| 23. | Do you feel that when a person your age is angry at you there's little you can do to stop him or her? | YES | NO |
| 24. | Have you ever had a good luck charm? | YES | NO |
| 25. | Do you believe that whether or not people like you depends on how you act? | YES | NO |
| 26. | Did your parents usually help you if you asked them to? | YES | NO |
| 27. | Have you felt that when people were angry with you it was usually for no reason at all? | YES | NO |
| 28. | Most of the time, do you feel that you can change what might happen tomorrow by what you do today? | YES | NO |
| 29. | Do you believe that when bad things are going to happen they just are going to happen no matter what you try to do to stop them? | YES | NO |
| 30. | Do you think that people can get their own way if they just keep trying? | YES | NO |

- | | | | |
|-----|------------------------------------------------------------------------------------------------------------------------------------|-----|----|
| 31. | Most of the time do you find it useless to try to get your own way at home? | YES | NO |
| 32. | Do you feel that when good things happen they happen because of hard work? | YES | NO |
| 33. | Do you feel that when somebody your age wants to be your enemy there's little you can do to change matters? | YES | NO |
| 34. | Do you feel that it's easy to get friends to do what you want them to do? | YES | NO |
| 35. | Do you usually feel that you have little to say about what you get to eat at home? | YES | NO |
| 36. | Do you feel that when someone doesn't like you there's little you can do about it? | YES | NO |
| 37. | Did you usually feel that it was almost useless to try in school because most other children were just plain smarter than you are? | YES | NO |
| 38. | Are you the kind of person who believes that planning ahead makes things turn out better? | YES | NO |
| 39. | Most of the time, do you feel that you have little to say about what your family decides to do? | YES | NO |
| 40. | Do you think it's better to be smart than to be lucky? | YES | NO |

APPENDIX XI(a)HIGH LETHALITY

NAME: Mrs. C.

No.: 15

AGE: 23

CIRCUMSTANCES OF OVERDOSE

Mrs. C. presented with an overdose of Glutethimide on 8:8:76 and required intensive resuscitation for 48 hours before transfer to a general ward. When seen, she was completely uncooperative and continually reiterated her wish to die. On mental state examination at that time, she appeared a slim, petite woman with obviously dyed blonde hair and prominent coloured tattoos on both arms. In behaviour, she was extremely angry and hostile. She responded with short, angry sentences, but there was no obvious evidence of thought disorder. Her affect was clearly angry and depressed. In view of the continuing suicide risk, I arranged for her transferral under compulsory detention to a psychiatric hospital.

ADDITIONAL INFORMATION

The following history was obtained when I saw her three days later at the psychiatric hospital. At that time, she was quite cooperative and, in fact, expressed gratitude at having been sent to the hospital and not having been allowed home.

She had taken the Glutethimide tablets on the afternoon of admission on her own in her flat. She had three children, two of whom were in her custody, and she had arranged for a baby-sitter to

take the children overnight. She said she had planned the suicide attempt for some days and had arranged for the children to be away so she could take the overdose and die during the night. She said she did not know who had found her as she was not expecting anybody to call. It is of interest that there was no record of how she had been found, but the ambulance men, who were anonymously notified of her whereabouts, found a syringe and white powder in her flat, and it is highly likely that she had been involved in illicit drug dealing.

It would appear that for about a month, Mrs. C. had been having difficulty sleeping and controlling her twelve month old son. In addition, she had had arguments with her de facto husband who was serving a seven year prison sentence for armed robbery. Some ten days before the overdose, she had seen her local doctor who had prescribed barbiturates for insomnia. Three days before the overdose, she returned to the same doctor after having visited her husband in prison and having had another argument. She told the local doctor that she could still not sleep, and he then prescribed the Glutethimide. She said that she drank to make herself intoxicated, and then, feeling miserable and depressed, filled the doctor's prescription and planned the overdose.

FAMILY HISTORY

Mrs. C. was the only daughter of parents who lived interstate. Her father was 46 and had been married previously with a daughter by the first marriage. Her mother was pregnant at the age of 15 by

her father, and her father subsequently divorced his first wife to marry her mother. She said of her mother: "I don't like her.... she used to tell me child birth was terrible". Of her father she noted: "He's a bastard". On the other hand, she said that he was quite intelligent and that he was a very good safe-breaker, although he now worked for a safe-making company. There was no family history of psychiatric illness.

PERSONAL HISTORY

She was born 14:7:53 in Germany and came to Australia at the age of six months with her parents. She sucked her thumb until the age of 12, but there were no other neurotic traits. She had virtually no memories of her life before about the age of 12, and she noted that she deliberately put aside any painful memories of her childhood, a defense she said she still used in adult life.

She said that she achieved well at school until her step-sister came from Germany to join her father in Australia, and "that's when I started running away". She, in fact, left school and home at the age of 14, went interstate, and worked for four years as a prostitute. She then worked around Australia as a prostitute, but had been in Adelaide since November 1975, and was on a pension rather than working. She had had three children by different men, and her oldest child, a daughter, was a ward of the state and cared for by her mother. She also had a three year old daughter whom she said was well behaved, but she had great difficulty controlling her twelve month old son whom she felt didn't like her

and who always cried when she touched him. She said she had no feelings at all for him. This son was by her current de facto who, as noted before, was in prison for armed robbery.

PAST MEDICAL AND PSYCHIATRY HISTORY

Tonsillectomy at the age of 8.

She had taken several overdoses before, both in Adelaide and interstate. In February 1976 she took an overdose of barbiturates, and in 1975 she took amitriptyline, but slept this off for three days in a girl-friend's flat. She said that as soon as she woke up she obtained more amitriptyline, and took another overdose which required resuscitation in a general hospital for several days. She had always declined psychiatric assessment in the past.

MENTAL STATUS EXAMINATION

There were marked differences in her appearance and behaviour from the initial mental state examination. On this occasion, she was cooperative and polite and there was no evidence of thought disorder. Her conversation was appropriate and to the point, but she was quite frank in her feelings of not being able to trust anybody. She nevertheless appeared to cooperate well and rapport was gained. She was still a little depressed, but felt that life was worth living.

DIAGNOSIS

Neurotic depression in a person with hostile dependent and hysterical personality traits.

The strong possibility of drug dependence could not be confirmed.

DYNAMIC CONSIDERATIONS

Mrs. C. was conceived when her mother was only 15 years of age in post-war Germany, and her father at that time, was still married to another woman. It is possible that her early years were quite disrupted, but she had no recollection of them. She did not get on well with either her mother or father, and it is of note that when her step-sister, by her father's former marriage, came to Australia, she reacted by leaving home and fleeing interstate where she worked as a prostitute for a number of years. She had not formed any stable relationships, and each of her children was by a different man, and her oldest child was not in her custody. She had been involved in both drug taking and other criminal activity, and was allegedly implicated in her current de facto husband's armed robbery.

The overdose was taken in the setting of her de facto being in prison for seven years and she having arguments with him. In addition, she was having difficulty coping with her youngest child, and it was also possible, though not definite, that she may have had difficulties with the drug underworld. She could not be drawn on this, and refused to acknowledge the fact that the syringe and powder were found in her flat.

MANAGEMENT

She planned to continue contact with the psychiatric hospital in which she had had further assessment.

APPENDIX XI (b)HIGH LETHALITY

NAME: Mrs. G.

No.: 41

AGE: 30

CIRCUMSTANCES OF OVERDOSE

Mrs. G. was admitted deeply unconscious to the Intensive Care Unit on 21:2:77 having taken "a couple of handfuls" of Phenobarb and Pentone (about 20 of each) and "10 or 12" Methaqualone. She required intubation and ventilation for 24 hours before her transfer to another ward. She signed herself out within hours of arrival on the other ward, despite still being drowsy from the effects of the barbiturates. I contacted her by telegram and she telephoned, but failed to keep an appointment made for that day at the outpatient clinic. However, she had told me that she had a relationship with a male nurse at a psychiatric hospital, and through him I was able to see her the following day at that hospital. (She was not an inpatient at the time, but frequently visited there.)

She denied any recollection of the actual overdose. She was initially very hostile and did not wish to discuss it. However, after rapport built up she conceded that she had taken the drugs in an hotel and had then contacted a friend. She was taken by him to the psychiatric hospital and her admission was arranged from there to the Royal Adelaide Hospital. She was very reticent to talk about her reasons for taking the tablets, but it would appear that

she had planned to take them at least during that day as she had seen her local doctor on the day of the overdose and had filled the prescriptions he had given her.

Additional factors contributing to her taking the overdose later became apparent. She had been very dependent on a male nurse who had been in charge of the ward in which she had stayed on numerous occasions, and he was to have gone on holidays. She said that every time this male nurse left it reawakened her fears of her father dying, and she noted that she "fell to pieces" when her father died. "I've got this horrible feeling that the person I'm feeling for is going away."

Other possible precipitants were the poor relationship she had with her mother with whom she lived, and a rather tenuous relationship with a man with whom she had had a relationship for a number of years.

FAMILY HISTORY

She was reluctant to speak of her family in any detail. She was the youngest (by eight years) in a family of five.

Her mother was aged 70, and she noted: "I don't like her very much....I used to wish she'd go away....I hated her....she used to play around". She said her mother drank excessively and had blamed her for her father's death.

Her father died when she was aged 20. There had never been any actual separations in her parents' marriage, but there had been frequent arguments and the patient always related better with her

father. "I didn't have much to do with my mother when I was growing....I used to go everywhere with him....he used to let me sit on his knee." She said "I always got my own way....I was a spoilt little brat". It is of note that she was her father's favourite and she would sit on his knee and cuddle him until shortly before his death.

She had four older siblings, two brothers and two sisters, but I was unable to elicit any particular feelings about them or any facts of significance about them.

PERSONAL HISTORY

She was born 15:11:46. She was unplanned and was clearly upset when speaking of this. She refused to speak in detail of events in her early years. She did not achieve well at school, and attended a special school. She was reluctant to speak of this and certainly would not talk about the fact that she didn't attend secondary school. She said she had forgotten what age she had left school or the exact reasons why.

She had never had formal employment, but had done occasional domestic work (unpaid) for her mother's friends.

Her menarche was at the age of 12 and she described no difficulties. She had few boy-friends until she married her husband when she was aged 18. He was a truck driver, then aged 20. She had three children by him and they were aged 11, 9 and 7. She said she had not seen them for a number of years. "I think sometimes I should be able to take them out or something like that." She had not seen

her husband for at least 2 years, and his parents had the children. She said she had not actually made moves to try and see her children for some years.

She also had had a termination of pregnancy four years before. This was to have been her husband's child, but she said she had been judged to be not fit to carry the child, and at the same time, had a tubal ligation.

Her husband had left her a number of years previously, and she was separated but not yet divorced. She said she had had one friend since then, the man she had contacted after taking her overdose, but "he disappoints me all the time....he doesn't argue....I haven't got anybody to yell back at me....I've never seen him angry". She would not be drawn on her particular feelings about him in relationship to the overdose.

PAST MEDICAL AND PSYCHIATRIC HISTORY

Three normal pregnancies.

No major childhood illnesses or hospitalisations.

Termination of pregnancy and tubal ligation four years before.

She sustained severe burns for which she was hospitalised for a number of months in 1972 and 1975. It would appear that both episodes occurred when she was under the influence of drugs and was scalded in a shower. She had sustained considerable scarring and disfigurement.

Past psychiatric history was extremely long and complicated but, essentially, comprised a 10 year history of mixed drug abuse,

mainly dependence on barbiturates and methaqualone. She had had at least six overdoses treated in the Royal Adelaide Hospital. She apparently was able to obtain drugs from a doctor in the city without any difficulty.

It had been considered that she had had epilepsy in the past but whether or not this was so is doubtful. Certainly, at the psychiatric hospital she had been on no medication. It is probable that her convulsions had been related to drug withdrawal.

MENTAL STATUS EXAMINATION

She presented as a sullen, unattractive woman appearing considerably older than her 30 years. She tended to hide behind her dark brown hair. She was grossly scarred with contractures about the right side of her neck and both upper arms and right forearm, with prominent flexion deformities of her fingers, and with the shiny red contracted skin of a longstanding burn scar.

In behaviour, she was uncooperative and suspicious, but this did diminish as rapport was gained, and at times she smiled in quite a warm way. However, these episodes were very fleeting throughout the interview. Her conversation was rather uncommunicative at first until rapport was gained. There was certainly no formal thought disorder, but she was extremely guarded throughout.

In affect she was extremely angry, depressed and hopeless. There was no abnormality of perception and her cognitive function demonstrated no clouding of consciousness, though her intelligence was no more than borderline retarded or, at the most, low average.

She had no insight into her predicament.

DIAGNOSIS

Chronic drug dependence on barbiturates and methaqualone.

Neurotic depression in a person with hostile dependent, and sociopathic personality traits.

Borderline intellectual retardation.

DYNAMIC CONSIDERATIONS

Mrs. G. Was an unwanted child born 8 years after her other four siblings. She was over-indulged by her father, and she described herself as her father's "little girl....I used to go everywhere with him". This was coupled with an extreme dislike for her mother. She had only borderline intelligence, and did not gain employment after leaving school.

She had had few longstanding relations with other persons, and probably the closest relationship with anyone was her father which ended abruptly with his death from a myocardial infarction when she was aged 20. She certainly dated all her problems of drug dependence from that time. Since then, it would appear that she had been dependent on barbiturates and methaqualone, and had frequently overdosed on these. Her marriage had broken down irretrievably and she had given up custody of her children. In the previous 10 years, she had had frequent and prolonged admissions to a psychiatric hospital, and the admissions to the Royal Adelaide Hospital with severe burns were also directly related to her drug ingestion.

The precipitants for this overdose were related to the charge nurse at the psychiatric hospital going on holidays, and this had reawakened fears of her own father leaving her. (She quite clearly saw the analogy of the charge nurse being her father figure.) Other precipitants were the longstanding difficulties with her mother whom she said continued to accuse her of causing her father's death, and the unsatisfactory relationship with her man friend.

MANAGEMENT

This woman's future appeared virtually hopeless. There was little point in certifying her at the time of interviewing, as she had recovered sufficiently from her overdose to have again contacted her local doctor who had again given her a prescription for more drugs. This doctor had apparently been contacted in the past to not prescribe drugs for her, but he had said that if he did not, there were others whom she saw, and it would be impossible to let every doctor know. Her prognosis was considered to be very guarded, and it was thought highly likely that she would not survive outside the sheltered environment of a hospital and, indeed, even in that environment she could well commit suicide in the future.

POST SCRIPT

It was of note that this patient responded to the telegram by telephoning me. The charge nurse at the psychiatric hospital was surprised at this and commented that she had said "look at this, they think enough of me to send a telegram". It is just possible

that this may have some implication in terms of the management of attempted suicide, as if such a patient responds, it may behave us to try and contact more such people who initially decline assessment.

APPENDIX XI (c)HIGH LETHALITY

NAME: Miss H.

No.: 43

AGE: 23

CIRCUMSTANCES OF OVERDOSE

Miss H. took about thirty 25 mg. Imipramine tablets on 26:8:76. She said she had been depressed for about two weeks, wondering whether or not to take her life. She said, "I didn't want to do it but I couldn't get rid of this feeling". She said that two months before she had taken a smaller overdose, and then had distinctly heard a voice telling her to do so. However, on this occasion, she said there was "no voice but there was a feeling.... a feeling that I had to do it even though I didn't want to".

She had been to work as usual on the day of the overdose and had returned home to the flat in which she lived alone at about 5.30 p.m. She then watered the garden, cleaned the flat, had a shower and took the tablets at about 7 p.m. Those were the only remaining tablets she had. She said that she wasn't quite sure whether or not she had taken enough to kill herself. She panicked at about 8 o'clock when she started to feel drowsy and wondered whether or not she could be saved. She walked to a phone box at a nearby shopping centre and rang a volunteer "Crisis Care" organisation who called an ambulance and brought her to hospital.

She had mixed feelings about whether or not she wished to live or die, and said, "I didn't really think about it....I can't really

say what they (feelings of living and dying) were at the time.... I wasn't sure if it was me that was thinking things....I didn't really want to die". She said that the thought of taking her life "just kept coming" into her head and that it suggested that she might be better off dead. She was deeply unconscious upon admission.

She had known a close friend who had committed suicide in a pact with a boy-friend. The same girl who killed herself had also attempted suicide, as had another friend.

It is of note that four days before this overdose, Miss H. had gone to the home of her local doctor at 1 a.m., saying that she felt scared and that the police were looking for her. I contacted her doctor, who said at that time tangential thinking was evident and she did not seem to be in touch with reality, although she improved quickly. He had felt it safe for her to return home, and she had appointments for both him and a psychiatrist within a week.

FAMILY HISTORY

She was the second of two children of Australian born parents. She said, "I got on with them fairly well until I was 18". She described her mother as being "not very easy to talk to....a bit domineering....I don't think she means to be, it's just her manner....gets upset very easily".

It is of note that after her other overdose her mother had been seen by a resident doctor and is reported to have said "there's nothing wrong with her....the x-rays (of stomach) were quite

normal....I can't understand....she always had a good home....there's no problems in our family, none at all. We've had so much of this....it's about time she pulled herself together".

She described her father as being "quite good....happy-go-lucky.... doesn't always let you know what he's thinking". He had been employed as a shop assistant but was currently unemployed. She had an older brother aged 26, single, who had a duodenal ulcer.

There was no definite family history of nervous disorder.

PERSONAL HISTORY

She was born 21:3:54 in Adelaide, and she said that her mother "told me I was yellow". She had persistent nightmares as a child, but no other neurotic traits. Her schooling was at a private college until the age of 17. She started work as a children's hospital trainee nurse, but left after five months as she didn't like it. At that time, she wasn't coping with work, was depressed and had her first psychiatric treatment being in a private psychiatric hospital for four months.

She then went to a rehabilitation centre for four months, and then to a business college. However, she then commenced an infant teaching course, though she only remained for ten months as: "I didn't like the teaching....too nervous in front of the children". She returned to the business college and had since worked in an office for three years. She said there had been no changes in the work personnel at her place of employment, and she got on well with colleagues.

Her menarche was at the age of 14 and she "used to miss a lot" of periods. However, in the last two or three years her periods had been quite regular and without pain. She was on an oral contraceptive, and although she didn't have regular orgasm, she quite enjoyed intercourse with her current boy-friend. She had had few boy-friends throughout her life, but had been going out with a 30 year old single man for about two years. However, she was unsure of the future of this relationship. She said: "I suppose I'm not so keen on him", but she had been unable to tell him. She said "It's better to have somebody than nobody". She did not wish him to know of her hospitalisation.

PAST MEDICAL AND PSYCHIATRIC HISTORY

Jaundice at birth.

Private psychiatric hospital at age 18 for four months.

?Depression.

Aged 22, 1976: admission to private hospital for one week in November, two weeks in December, and then for three or four weeks in January 1977. The third of these admissions was following an overdose.

She conceded at least two other overdoses which had not required admission to hospital.

She had most recently seen her psychiatrist two weeks before this overdose and her local doctor four days before.

MENTAL STATUS EXAMINATION

She appeared younger than her 23 years and had shoulder-length

brown hair, and thin features. In behaviour, she was extremely quiet and withdrawn and her conversation was rather vague and slow, and although there was no definite tangential thinking evident, she seemed to have difficulty in gathering her thoughts.

Her affect was rather bland and blunted and certainly lacked any feeling. One had the feeling of the glass-wall effect characteristic of a schizophrenic illness.

She conceded auditory hallucinations in January 1977, but on this occasion, the thoughts in her head appeared more like the echo de la pensee that is sometimes recorded in a schizophrenic illness. Her thoughts arguing with each other, could also be interpreted as a Schneiderian criterion of schizophrenia.

In cognitive function, her memory, orientation and attention were within normal limits. However, she had difficulty in gathering her thoughts. She said "I'm thinking too much about things I don't want to think about". She said "I didn't think like it was me thinking of dying". In considering the thoughts in her head, she said "maybe they're mine but I don't want to think them".

She was unable to abstract the difference between ice and glass or between a wall and a fence, but was able to abstract simple proverbs.

Her intelligence was at least average.

DIAGNOSIS

Simple schizophrenia in a person with passive dependent and schizoid personality traits.

DYNAMIC CONSIDERATIONS

Miss H. was born slightly jaundiced. I was unable to elicit any particular events of significance in her early life or, indeed, in her latency and adolescent periods which could definitely predispose her to later psychological illness. However, it would appear that she had always found difficulty in communicating with her parents and she described them as a couple who lacked emotional feelings.

She had her first psychiatric illness at the age of 18 and was hospitalised for four months in a private hospital. Four years later, she had three episodes of hospitalisation over about two months, one of which followed a drug overdose. It had been in that admission that she had had auditory hallucinations as well as difficulty in thinking.

She had since been seen by a psychiatrist and also by her local doctor, and it is of note that she had not taken the major tranquillizers prescribed for her, drugs which she acknowledged had helped her in her last illness.

It would appear that some four days before this overdose she became quite distressed and visited her local doctor at his home. She then appeared to be having difficulty with her thinking, and described paranoid delusions of the police being after her. At the time of interview, she described ambivalent feelings; she had features of autistic withdrawal and difficulty in communication at an interpersonal level; she also had thought disorder; and her affect

was bland and inappropriate to her predicament. All these features were very suggestive of a schizophrenic illness, especially when taken in conjunction with the lack of any gross precipitants (so far as I could elicit) in terms of interpersonal stress.

MANAGEMENT

She was transferred to the continuing care of her psychiatrist and local doctor.

APPENDIX XI (d)HIGH LETHALITY

NAME: Miss M.

NO.: 71

AGE: 19

CIRCUMSTANCES OF OVERDOSE

Miss M. was admitted on 29:2:77 having taken forty 100 mg. tablets of Chlorpromazine. She had been home alone but was expecting both her parents and two brothers to return. She said that she did not wish to die, and that "the dose wasn't large enough". It is of note that the overdose induced convulsions and she required intensive care resuscitation. She said she found it difficult to understand why she took the tablets. She had been out with a "rotten boy" the night before. This was particularly significant as Miss M. had a long history of anorexia nervosa, and the boy took her from a dance to the hills and made sexual advances which she repulsed. She had also been anticipating a birthday party for herself at a friend's home and she noted: "I always get a bit uptight about those sorts of things". In fact, after taking the tablets she rang the girl-friend who was giving the party and told her. This friend had contacted her parents who brought her to hospital.

FAMILY HISTORY

Miss M. was the fourth of five children and the only daughter of rather strict parents. Her father, 48, was described as being "domineering....eager and keen to get on". Her mother was

described as a "fairly gentle sort of woman". She found it difficult to describe them in more detail.

Her oldest brother was a doctor, a bachelor living in London. The second brother, a university student, had a history of nervous disorder. A third brother was doing medicine, and the younger brother was at secondary school. There was no family history of either suicide or attempted suicide and the only family history of nervous disorder was that of her brother.

PERSONAL HISTORY

She was born on 2:3:57 and thought she had been planned, and that her mother had been glad to have a daughter. She felt she was "spoilt slightly", and added "Dad didn't punish me as much as he did the others".

Her schooling was from age 5 to 17. Her secondary schooling, which was at private colleges, was interrupted by her anorexia nervosa. In mid-1974, she started work in a kindergarten and worked for 18 months until the beginning of 1976 when she started a full-time child care course. She was not coping well with her studies.

Her menarche was at the age of 10. She then had one year of amenorrhoea when she was 11 with anorexia nervosa. Since the age of 13, her periods had been regular and her last period started on the day of the overdose. She said that she had had sexual relations with several boys but none for the last year. She had never been pregnant, and was very fearful of it.

PAST MEDICAL AND PSYCHIATRIC HISTORY

Tonsillectomy at the age of 8.

Her anorexia nervosa had been treated by four different private psychiatrists, and in four different hospitals. She had had difficulty in forming relations with any of these therapists, and had been with her most recent doctor for three months. She had been seeing him twice a week since then, and had most recently seen him three days before the overdose.

MENTAL STATUS EXAMINATION

She appeared younger than her 19 years and had short dark brown hair and quite sharp features. She was markedly underweight, and had characteristic lanugo hair. She was very submissive and quiet in the interview situation. Her conversation was, at times, hesitant, but this may have been related to her dry mouth as a result of the overdose of chlorpromazine. Her affect was markedly flattened. On questioning about abnormalities of perception, she appeared on the point of conceding auditory hallucinations, but this could not be considered definite. Her cognitive function was within normal limits. She described some difficulty in gathering her thoughts, but it did not sound like classical schizophrenic thought disorder. She did not demonstrate concrete thinking.

DIAGNOSIS

Anorexia nervosa.

Neurotic depression in a person with passive dependent, obsessional and schizoid traits.

There was also the suggestion of an underlying schizophrenic illness, but this was not definite. Such features are sometimes evident in persons with anorexia nervosa, and only a longitudinal assessment could decide the issue.

DYNAMIC CONSIDERATIONS

She was the first daughter after three boys, and may well have been an over-indulged child. She described both parents in rather sketchy terms, but her father was described as a rather dominating isolated person who was keener to achieve in his work than with his family. It is of note, that all her family were high achieving and that she felt she had not lived up to their expectations. She had had anorexia nervosa from the age of 12, and had had episodes of loss of weight intermittently since then.

The current overdose was precipitated by the sexual encounter with the boy on the night before the overdose; the fact that it was her birthday and she was growing up, a fact seen as distasteful to patients with anorexia nervosa; and although she denied any connection, it was likely that her relationship with her new therapist may have contributed in some way.

MANAGEMENT

I strongly recommended that she re-establish her contact with her current therapist. She agreed to this, and was transferred to his care.

APPENDIX XI(e)HIGH LETHALITY

NAME: Mrs. W.

NO.: 106

AGE: 28

CIRCUMSTANCES OF OVERDOSE

Mrs. W. was admitted to the Intensive Care Unit on 3:3:76 after being found by the police unconscious in a creek in an outer hills suburb. She required intubation, ventilation and heating for hypothermia. She took a mixture of diazepam, Mutabon D (amitriptyline and perphenazine), trimipramine, phenobarb and avil retard (pheniramine maleate). Upon rousing, she was reported to have had visual hallucinations, possibly due to the pheniramine maleate, but at the time of interview, these had subsided.

She said that the overdose was the result of the events of the last year. She said it was a "hormonal thing" and that she was having "a bit of trouble down below". She said she felt that she was changing sex and first noticed this when she started growing a moustache in July 1975. Then she had been given diazepam by her family doctor. Her husband left her in August 1975 and lived with another woman with whom he had been having an affair for about two years. She then felt relatively well until about Christmas 1975 when she felt that her face "was getting funny". She had been taken off an oral contraceptive after 11 years by a gynaecologist, but saw another general practitioner who said that she had a

hormonal imbalance and she was put back on another oral contraceptive. She felt that her face was becoming more masculine, she was tired and her skin felt as if it was getting less soft. She said that she saw the second general practitioner who said that he could refer her to a plastic surgeon, and at that stage, she went to a library and looked up plastic surgery procedures. She felt as if the shape of her face was changing, and she said that people did not recognise her. She also had no sexual feelings at that time, despite having a fleeting affair with another man. She saw the gynaecologist again, but she felt he was angry with her for not following his advice. She said that she felt then that "everyone was saying it's my nerves....it was just like I was a stranger". However, she continued to seek help and went to another general hospital on several occasions for tests for sugar and thyroid. In the month prior to the overdose, she had confided in her mother that she thought she was changing sex. Her mother had seen the family doctor on the day before the overdose, and expressed concern. The doctor had then visited her that night and spoke with her at length, and said that he would refer her to the Professor of Obstetrics and Gynaecology for assessment. Mrs. W. said she was terrified and panicked at this. The following morning, which was the morning of the overdose, she got up and took her two workmates to work as usual. She then went home and "I felt like I was a freak....everyone had said I had changed". She then packed all her tablets into a box and went to a flower shop. There she bought some flowers to put on the grave of a friend who had

died about a year before. She then rang her mother to ask her to pick her son up from school. She had written a suicide note and her mother had, in fact, found this when she took her son home from school. Mrs. W. did not tell anyone where she was going, and then drove to the hills. After selecting a place where she thought she would not be found, she took the tablets. After her mother notified the police, a search found her car, and a more intensive search at night found her unconscious in a creek.

She wanted to die and thought that she had taken enough tablets to kill herself. She still wished to die and saw no point in living.

FAMILY HISTORY

Both parents were alive. Her father was aged 63 and a retired bricklayer. He was described as "a quiet person". Her mother was described in idealised terms, as "always doing something for somebody". She had one older brother aged 30, married with two children. She also had a younger brother aged 16.

There was no family history of nervous disorder or suicidal behaviour.

PERSONAL HISTORY

She was born 26:4:47. She said she was planned but didn't know any details of her birth or early childhood. She was enuretic to the age of seven. Her schooling was at local primary and secondary schools to the age of 15. She then worked in a garage for a year until she was four months pregnant at the age of 17.

She married her husband then and they had only one child. Her husband did not wish to have any further children and, in fact, on one occasion when she thought she was pregnant, he said she would have to "get rid of it". She described the sexual relationship with her husband as "very good....we had a good sex life....only thing in common". As noted, her husband had left her 6 months before the overdose for another woman. He had had frequent extra marital relationships which she had tolerated. After he finally left, she had resumed clerical work.

PAST MEDICAL AND PSYCHIATRIC HISTORY

She had had only one episode of hospitalisation before in her life apart from her pregnancy, and that was for about three weeks following a motor-cycle accident in 1968. There had been no loss of consciousness.

She had not had psychiatric assessment in the past, though as a teenager at about 15 or 16, she had a probation officer from the Welfare Department as she was "rebellious at home".

MENTAL STATUS EXAMINATION

She had short blonde hair and flushed facies. She was tearful at appropriate times in the history, but not unduly dramatic. She often put her hands to her face to describe how its appearance had changed. There was no obvious facial abnormality. Her conversation was appropriate and there was no thought disorder evident. Her affect was quite flat, depressed and hopeless.

Apart from the hallucinations observed by the nursing staff on

arousing, there was no abnormality of perception except the possible delusional perception related to her body image.

Her cognitive function was within normal limits. Her memory, orientation and attention were intact, and in describing her thought processes, she said that she "can't stop thinking....what's wrong with me....why is it happening....". There were no ideas of reference and she was not unduly suspicious. She did not demonstrate concrete thinking.

DIAGNOSIS

Mrs. W. presented a diagnostic problem.

There was no definite, but very strong suggestive evidence of a schizophrenic illness with a marked affective component.

Differential diagnoses included manic depressive psychosis, depressed phase; severe neurotic depression in an extremely narcissistic person; and acromegaly.

DYNAMIC CONSIDERATIONS

Mrs. W. presented with a very determined suicide attempt and this had followed six or seven months feeling that her body had been changing. This change, as she had perceived it, had been mainly with her face, but had included the feeling that her genital region may be changing. She also felt her hands and feet were getting bigger.

It was possible that she may have had acromegaly, and certainly investigations were needed before firm reassurance could be given that there was no hormonal abnormality. In addition, definite evidence that her facial appearance had not changed was sought from her mother

and from photographs.

It was difficult to elicit information about her early life, though her enuresis may be relevant. She tended to idealise her relationships, but the fact that she had a probation officer as a teenager for being "rebellious" suggests all was not well.

Her marriage was not satisfactory, and she had tolerated her husband's infidelity, and would still have accepted him back. His loss was undoubtedly significant. Another loss of note must have been the friend who died, and on whose grave she placed flowers before her suicide attempt. However, she would not elaborate on this relationship.

MANAGEMENT

Organic investigations, comparison of photographs and history from relatives suggested that acromegaly was not possible. Her beliefs persisted, and in view of her continuing suicidal pre-occupation, she was transferred under certificate to a psychiatric hospital.

APPENDIX XII (a)INTERMEDIATE LETHALITY

NAME: Mrs. B.

NO.: 4

AGE: 26

CIRCUMSTANCES OF OVERDOSE

Mrs. B. was admitted about 9 p.m. on 17:3:77 having taken an overdose of 20 Orphenadrine tablets which belonged to her husband. She had been arguing with him about money and her feeling that he didn't love her. When he told her that she could leave if she wasn't happy, she took the tablets in the kitchen. While she was still taking them, her husband walked in and took her to the Royal Adelaide Hospital.

There had been friction in their marriage for some time, especially since the birth of their second son some 9 months ago. Mrs. B. felt that her husband was not giving her enough support. She was still breast-feeding her son, had to get up at night to him, and felt generally "run down". It would appear that there was some substance in her complaints about her husband, as this was later confirmed by her local doctor. Mrs. B. said that her husband didn't wish to play with the children or accept any responsibilities at home. She said he would say to her that if she helped him oil and grease the car when he was home, then he would help her in the house.

Other difficulties had been that her husband, who was a carpenter,

had recently accepted an appointment as a lecturer at a tertiary institution, but had to do further study to complete his own education. This had put extra pressure on him. There had also been a reduction in salary because of this appointment.

In addition, Mr. and Mrs. B. had recently bought a block of land and were about to sell their present house and move into a caravan while their new house was being built. Although Mrs. B. denied any particular feelings about this, it certainly seemed to be an event of some significance in her life.

She had none of the biological features of endogenous depression. She was on no medication apart from the oral contraceptive. She had not had a period since her child was born, and this was physiologically related to her continuing breast-feeding.

Mrs. B. said she had not planned the overdose for more than a few minutes, and that she had not wished to kill herself. She did not feel as if she had taken enough tablets to die.

FAMILY HISTORY

Mrs. B. was the youngest of three children. Her father had always been in poor health before his death 5 years before on the 28th February. Mrs. B. said that she couldn't cry at his funeral, and that February and March had been a difficult time of the year for her since then.

Her mother was aged 63, and although she said "she'd do anything for me" she found it difficult to describe her mother in any way. She described her parents' marriage as "perfect....they never had a

cross word and I mean never....perhaps that's why I haven't got any guts". She added that she had never been able to assert herself, and that she had always had low self-esteem.

Her oldest brother was aged 36, married with three children. Her other brother was aged 30, married, with two children. She had little contact with them.

There was no family history of any nervous disorder or other illness.

PERSONAL HISTORY

She was born in a country town on 21:12:50. Her mother told her "they never used to stitch you up in those days", and it would appear that her birth had been dramatised by her mother. At the age of 9 months, she was admitted to hospital with pneumonia and pleurisy, and "the doctor said there probably was no hope". There were no other hospitalisations in her life and no other serious illnesses. She bit her nails as a child.

Her schooling was initially in the country and then at suburban primary and secondary schools. She left school at the age of 16, and was proud of having been dux of her class.

Her family at no time was well off during her childhood, and her mother worked on occasions. After leaving school, she was an apprentice milliner for six months, and then worked for four years with an insurance company as a clerk typist. She then married and went on an "excursion around Australia" with her husband. This was a working holiday and she came back to Adelaide just before her father

died in 1972. She met her husband when she was only 15, and she had no serious boy-friends before him. He was then aged 18. She said there had been no infidelity on either part, and that marital relations had become satisfactory with her achieving orgasm at least half of the time of their intercourse which was three or four times a week. Her feelings had not changed recently.

Following their return to Adelaide, she worked as a clerk for 2½ years till her first son was born, and then worked again until her second son was born 9 months ago. She had had some difficulty with him, and he was not gaining weight and "won't eat anything". She had had no difficulties with her older son.

Her menarche was at the age of 14 and she said that her periods had never been regular, but she had had no pain. She had difficulty becoming pregnant and saw several specialists. She was on no contraception for four years before becoming pregnant.

MENTAL STATUS EXAMINATION

She appeared younger than her 26 years with long, bedraggled, blond hair and a few pimples on her chin. Her behaviour was rather fidgety but, at the same time, she presented in a rather matter of fact way.

She had a good vocabulary, but her conversation demonstrated some flight of ideas and loose associations.

In affect, she was rather flippant at times and, at other times, quite depressed. She did not cry though appeared close to it at times.

On one occasion, she demonstrated either visual hallucinations or illusions, but apart from this, there was no abnormality. This was probably related to the drug overdose.

Her cognitive function was within normal limits. Her memory and orientation were intact, but her attention was a little distractable. There were no delusions.

DIAGNOSIS

Neurotic depression in a person with passive dependent and schizoid personality traits.

The possible differential diagnoses were either psychotic depression or a schizophrenic illness. There was a suggestion of thought disorder on mental state examination, but this was probably due to the orphenadrine, and she certainly demonstrated no difficulty twenty-four hours later.

DYNAMIC CONSIDERATIONS

Mrs. B. was the third born child and only daughter of parents whom she found difficult to describe. Her father was described as a "closed-in person" and had a life-long history of illness before his death five years before from carcinoma of the lung. She described her parents' marriage in idealised terms but, at the same time, seemed to recognise that she, herself, ("I haven't got any guts") may have been stifled by them, and one could postulate a certain degree of rigidity in her upbringing.

Of note in her infancy, was a severe illness at the age of 9 months when it was feared that she would die. Apart from this, there were

no other illnesses in her life.

It would appear that her formative years were marked by little money in the home, and her parents instilled in her the attitude that she should not accept lollies from other children if she could not return the favour. It is of interest that although she achieved well at school, she had not demonstrated the same achievement since leaving, and she felt that this may have been partly due to not having had the advantage of seeing a careers officer as she was working in the school holidays to get money for her family.

Her sexual development was marked by some irregularity of periods and few boy-friends before meeting her husband at the age of 15 and marrying him several years later. She felt that she had never achieved much, and that she did not get the support she needed from her husband. There were additional stresses: there were two young children; her husband was in a new position which paid less and in which he had to do study; and they were going to sell their house and live in a caravan before building another house. With these stresses, Mrs. B. had decompensated and became neurotically depressed. It would appear that the last straw was the rejection by her husband when he suggested that she could leave him if she didn't want to put up with their circumstances.

MANAGEMENT

Her husband had already contacted their local doctor. Mrs. B. also wished to see him, and she was discharged to his care.

APPENDIX XII (b)INTERMEDIATE LETHALITY

NAME: Miss B.

NO.: 7

AGE: 24

CIRCUMSTANCES OF OVERDOSE

Miss B. was admitted on 10:4:76 at 8 p.m. having taken 10 Mutabon D tablets (each tablet containing 25 mg. amitriptyline and 4 mg. perphenazine). She had taken these at about 2 p.m. following an argument with her mother. Her mother had remonstrated about Miss B's eating habits, and had become angry. Miss B. had tried to apologise to her mother on several occasions, but her mother "kept firing things at me". She said that her mother said that she was stupid and didn't need to lose weight. She added that "for months I have been really depressed....there is no such thing as depression to her (her mother)".

Miss B. was in her bedroom when she took the tablets and said "I just wanted to end everything....I did and I didn't....I just wanted to sleep for a few days". Her 18 year old sister heard her crying and spoke with her. Miss B. told her that she had taken the tablets and she was brought into hospital.

It would appear that there had been other difficulties also. Miss B. had had no relations with men for 8 or 9 months and had felt extremely lonely. She had also had difficulties at work where she was a senior secretary. While her boss was away another man and she did not get on well, and she also had had difficulties with one of the other secretaries whom she felt was having an affair with her

boss. She had had an argument at work some three weeks previously and her local doctor gave her two weeks off work with medication. However, she said that he had not been able to spend time talking with her.

FAMILY HISTORY

Miss B. was born out-of-wedlock, and her mother married another man when she was 7 or 8 years old. She recalled always feeling that she was not wanted. She said her mother never talked about her real father, and she found out by mistake when she was aged 17 when she saw her birth certificate. She had never been able to get on with her mother and noted "I can't sit down and talk anything with her".

She had been told by relatives that her real father was a wealthy bachelor in Yugoslavia and that he might come to Australia and contact his daughter. She said that it sounded like a fairy-tale and she did not know whether to believe it.

Her step-father was a spray painter and five years younger than her mother. He was described as "a fabulous guy" who "will sit down and talk a problem out....he can understand".

She had two half-sisters. The older, aged 18, Miss B. felt was her closest friend, but the younger aged 16, was described as "what a bitch....she gets away with murder". She said that her sister would misbehave and that she (Miss B.) would be blamed by her mother for it. At this stage in the interview, Miss B. became quite agitated and felt embarrassed at feeling so strongly about her younger sister.

PERSONAL HISTORY

Miss B. was born in Yugoslavia on 15:6:51. She knew of no details of her birth or early life history. She recalled escaping over the border when she was about five, and she and her mother came to Adelaide then. She attended private Catholic schools and then graduated from business college. She worked as a secretary for a transport company for 18 months and then at a welfare institution for three years. She left there to go around Australia with a boy-friend and another couple. However, they were only away for two months when their money ran out. She returned to Adelaide and lived with the boy-friend for a year, 18 months ago. Her family were very much against this, and she said she felt quite ashamed about it. She said this relation ended with him suddenly disappearing, and she said she had been unable to understand this. For the last eighteen months, she had worked with another transport company.

Her menarche was at the age of 10. Her periods were usually regular, but the last period which was due two weeks before, had not come. She said there was no way she could be pregnant and could not understand why she had missed her period.

She had been going out with boys since the age of 18. She had had two special heterosexual relations. The first lasted for about 8 months but finished, she said, as he was in a band and could not spare enough time for her. The second lasted for some 2½ years and was with the man with whom she went around Australia. She never

had enjoyed sexual relations and had not reached orgasm. She said that "all my friends are married....they've all got kids". She said she felt the lack of a husband and lack of friendship very much.

PAST MEDICAL AND PSYCHIATRIC HISTORY

There was no past psychiatric history and the only past medical history was that she had a cyst removed from behind the right knee at the age of 18.

MENTAL STATUS EXAMINATION

She appeared younger than her 24 years and had short black hair and a rather squarish face. She was slightly over-weight. She behaved in a manner appropriate to the interview situation but showed quite marked embarrassment whenever she showed particularly strong feelings. Her conversation was quite normal and her affect was mildly depressed. There was no abnormality of perception and her cognitive function was within normal limits. Her intelligence was above average, and she had some insight into her problems.

DIAGNOSIS

Neurotic depression in a person with schizoid, obsessional, and passive dependent personality traits.

There was a paranoid flavour to her ideation regarding the work situation, but this was not of delusional intensity and there was no other evidence of a major psychotic illness.

DYNAMIC CONSIDERATIONS

Miss B. was born out-of-wedlock and her mother had never told her

of the circumstances. She had always felt unwanted and had never been able to form a close relationship with her mother. It is of note that she was unable to recall any events of her early years, but they may well have been disrupted as she recalled fleeing Yugoslavia with her mother at the age of 5. Her mother then migrated to Australia with the patient, and married shortly after.

She had marked difficulty in forming interpersonal relations and had retained few friends from school or other places of employment. Her heterosexual relations had been marked by long relationships with persons who had left her. The first was a person who she said had no time for her as he played in a band, and the second relationship ended suddenly and she could not understand why. She was having difficulties coping with work, and had fantasies that another secretary may have been having an affair with her boss.

She had been depressed for several weeks, and had been treated with medication by her local doctor but felt he did not speak with her enough. Finally, the overdose was taken when she felt further rejected by her mother after an argument.

MANAGEMENT

She agreed to outpatient followup.

APPENDIX XII (c)INTERMEDIATE LETHALITY

NAME: Mrs. D.

NO.: 33

AGE: 25

CIRCUMSTANCES OF OVERDOSE

Mrs. D. was admitted on 10:7:76 having taken fifteen 5 mg. Diazepam tablets. Following an argument with her husband, she had taken three at about 5 p.m., and further groups of two at about half-hourly intervals while walking along a main road into the city. When she felt drowsy, she told a policeman who took her to the Royal Adelaide Hospital for admission.

Mrs. D. said the precipitants were a lack of communication with her husband. She said she had been unable to get any feelings from him about the difficulties in their marriage. They had been living with her mother for ten months while their house was being built, and it was to have been finished in two weeks time. Other factors were that she had recently returned to teaching primary school after having given birth to a daughter some seven months previously. She said her husband continually told her she was a bad wife and mother, and she added "the bloody dog gets more affection than I do.... he says I don't talk, I demand things....I don't get enough affection".

She saw her local doctor regarding her difficulties four days before the overdose and he prescribed Diazepam. She did not think of contacting him before taking the tablets.

There were no biological features of endogenous depression, though

she had lost some 14 or 15 lbs. in weight in the last month by attending Weight Watchers. This was prompted by her husband having told her that she was fat and unattractive. Mrs. D. said "I can't fight....instead I throw tantrums". She said that it was very difficult to talk with her husband, not only because he had difficulty in talking about feelings but, also, because he worked at night.

FAMILY HISTORY

Mrs. D. was the oldest of three daughters, born to Lithuanian parents who separated when she was eight years old. Her mother was aged 49 and described as "a terrific person....a perfectionist.... makes life pretty hard". She said that her mother was very difficult to live with. For example, she took clothes out of her washing basket if she thought they were not dirty enough to be washed. She said that her mother had always been a perfectionist and that was why "I have always been a nervous type".

Her father was aged 56 and she said he left home at her mother's insistence as he used to drink heavily and beat her mother up. It would appear that the circumstances of the separation were very traumatic as her father threatened and, in fact, tried, to set fire to their home.

Mrs. D's. younger sisters were both happily married. One had two children and the other was pregnant. Mrs. D. had very little contact with them. The other significant parental figure was a maternal grandmother. Although Mrs. D. felt close to her, she did not trust

her and said that she used to pretend she couldn't understand English to "tell tales on me".

PERSONAL HISTORY

She was born 30:4:51 and said that "mother was torn....a pretty hard time". She knew very little of the first years of her life except that she recalled her mother often being beaten by her father. She and her sisters were also beaten on occasions. She had no major childhood illnesses but was hospitalised at the age of 5 for a tonsillectomy. She had no particular recollections about that illness.

She achieved well at school, and then completed a tertiary teachers training course and had been teaching for some 6 years. She had taught at six different schools, and on two occasions, had moved because of clashes with headmasters.

Her menarche was at the age of 11 and she said "I got the shock of my life when it started". She said she received no education from her mother, and noted that "I was never allowed to wear pads". She had had no difficulties with her periods, and her pregnancy was uneventful. She noted "I didn't even get morning sickness".

She was not allowed out with boys until the age of 17. She said she had "quite a few dates, but few boy-friends", having only one previous steady relationship before her husband. She knew her husband for one year, becoming engaged for a year until her marriage four years ago. He was not Lithuanian, a fact which did not please her mother. Her husband was aged 28 and an electrician. She

said he spent most of his time either sleeping or watching football on television. She said that he didn't care whether or not the marriage continued.

PAST MEDICAL AND PSYCHIATRIC HISTORY

She had had a tonsillectomy at the age of five and the one pregnancy.

She had taken an overdose 4 years before following an argument with her then fiance, and was seen once by a psychiatrist.

She had seen her local doctor regarding her nerves in the few weeks prior to this overdose.

She had also seen a hypnotist to aid in weight reduction.

MENTAL STATUS EXAMINATION

She appeared younger than her 25 years with acne and scarring on her face and black, dishevelled hair. She was very tearful at appropriate moments, and slumped throughout the interview. She pulled her name-tag very aggressively and noisily at times. Her conversation was continually self-deprecatory, but showed no formal thought disorder. Her affect was clearly depressed. There was no abnormality of perception or cognition. Her intelligence was above average, and she had some insight into her impulsive, rather immature, behaviour.

DIAGNOSIS

Neurotic depression in a person with hysterical and hostile dependent personality traits.

DYNAMIC CONSIDERATIONS

This overdose appeared superficially trivial in the sense that she took tablets at varying times while walking into the city, and that she contacted a policeman. However, it was of note that during the interview, she was continually self-deprecatory and was quite depressed. It was also noted that she really didn't care whether she lived or died, and had kissed her daughter goodbye saying that she would be better off without her.

The precipitants to the overdose appeared to be difficulty in communication with her husband; the fact that she, her husband and daughter, were living with her mother, though anticipating moving into their own home in two weeks; and, also, that she had resumed teaching six weeks before after a seven month break because of her pregnancy.

In considering predisposing factors to neurotic problems, it is of note that her parents' marriage was unsatisfactory, and she continually witnessed abuse of her mother by her father. Her mother had not remarried or had further heterosexual relations since the separation when the patient was 8. Mrs. D. had had difficulty in forming stable relations, and this may have been related to her lack of adequate models as a child.

During the patient's latency and adolescent period, she had few friends, and she also described difficulties in relations with the few she had. She said, at one stage she was accused of stealing money by a "so-called friend" and that her mother even took out a

court injunction against the headmaster for accusing her daughter of theft.

There was additional evidence of difficulties with authority figures in this woman's life. The initial problems with her parents and the problem with the headmaster have been noted, and later in her life, she left two schools after clashes with the respective headmasters.

It would appear that, to a large extent, Mrs. D. had been able to cope, but the factors of work, living with her mother, their new house, and the difficulties in communication with her husband, had proved too much and she had decompensated, becoming depressed and taking an overdose.

MANAGEMENT

I recommended that Mrs. D. remain in hospital to facilitate communication with her husband in a structured setting. However, this was declined.

I was able to see her husband and he was indeed a very rigid, uncommunicating person. He appeared quite inflexible and unwilling to consider the possibility that he may have contributed to Mrs. D's illness. They both declined the offer of followup or of considering the possibility of a marriage guidance council.

The main point indicating some hope, was the fact that she had a good relationship with her local doctor whom she had known for at least 15 years, and I recommended that she continue to see him.

POST SCRIPT

Mrs. D's. local doctor referred her to me some months later. She had left her husband and formed a relationship with another man. She was able to discuss her feelings in a realistic way, and appeared to be coping well.

APPENDIX XII (d)INTERMEDIATE LETHALITY

NAME: Mrs. P.

NO.: 78

AGE: 21

CIRCUMSTANCES OF OVERDOSE

Mrs. P. was admitted on 15:8:76 after having taken about forty 30 mg. Oxazepam tablets. She took these in her unlocked flat, and a neighbour entered and found her taking the last of the tablets. A chemist was contacted, and he advised taking her to hospital. She had taken another overdose of 12 diazepam tablets 4 months previously, in the presence of her husband, but he had done nothing about it. This was at the time of the separation of their marriage.

Events leading up to the overdose were a little unclear. She was unable to give any final precipitant other than the fact that three days before the overdose, there had been a court case related to custody of their two children, in which her husband had been granted access to them on alternate Saturdays. She related how she did not want him to have any access at all as she believed he would be violent towards them. It is of note that on the day she left her husband, he had hit her and fractured her left zygoma. Her fears about his violence were, therefore, well founded. She said that he hadn't ever wanted to have the children. She noted that on occasions he had thrown their 4 year old son across the room and that when he had access to them, he didn't give them anything to eat

or drink. She said that she had felt very depressed, and at the time of taking the tablets, all she wanted was "to curl up and die". She felt the same at the time of interview.

She had some biological features of depression. Her sleep had been interrupted with both initial and middle insomnia, she had lost her appetite and had lost ten kgm. in weight in the last four months. (However, she was still markedly over-weight.) In addition, she had felt unable to cope with her two children and, on occasions, they had been admitted to a home lest she lost control and harm them. She said that she had been seeing a social worker at the Adelaide Children's Hospital, but added "I don't like her". Mrs. P. was taking her older child there because, at the age of four, he had still not started to speak.

The tablets she took were her own and had been prescribed ten days before. At the time of the overdose, she thought that she may have taken enough to kill herself, though she wasn't quite sure. She had been thinking of taking an overdose for some weeks, but the final act was done on the spur of the moment.

FAMILY HISTORY

She was the second of four children born of Australian parents. She was the older of non-identical twin girls. Her mother was described as "alright....she'd do anything for you, I suppose". Her mother had not approved of her marriage, and Mrs. P. said that her mother took it out on her children by not looking after them well when baby-sitting. She said her father had recently had three

strokes, and had also had difficulty with his speaking. His last stroke had been about four months ago, and this coincided closely with the break-up of her marriage.

Her older brother was aged 27 and was in the Navy and saw very little of the patient. Mrs. P. did not get on with her younger twin who had a child, was not married, and was on the supporting mother's pension. The younger brother, aged 14, was still at school. There was no family history of nervous disorder.

PERSONAL HISTORY

She was born 17:6:55 and her birth details were not known. Her mother had had a miscarriage before the birth of her twins. As a child, she bit her fingernails and talked in her sleep. Her schooling was at local primary and secondary schools, and she left as soon as she turned 15 as she "started to get sick of it". She worked in an office for almost a year, and then at a home for children as she "loved looking after kids".

Her menarche was at the age of 13 and she had had pain and vomiting with her periods even when on an oral contraceptive. Her first boy-friend was at the age of 15, and her first intercourse was with a man some 8 years older than her who wished to marry her. She refused and "he ticked off". She then met her husband who was 5 years older than her and married him at the age of 18 when she was pregnant. She added "my parents wouldn't let me get married so I got pregnant". She said her parents had not forgiven her.

Her husband had been unemployed for three years. There had been

frequent separations (five or six times) in their marriage before she finally left him in March 1977. She said there had been no other men since she left her husband.

PAST MEDICAL AND PSYCHIATRIC HISTORY

Apart from a tonsillectomy at the age of 7, and the fractured zygoma as a result of her husband hitting her, she had had no other illnesses or psychiatric assessment.

MENTAL STATUS EXAMINATION

She appeared her 22 years and was markedly over-weight, being probably about 75 kgm. and only 5 feet tall. She appeared rather petulant and had long reddish-brown hair behind which she hid frequently during the interview. Her behaviour was marked by this hiding, and also tears at appropriate times. Her conversation showed no thought disorder but tended to be rather self-pitying and extremely hostile, at times refusing to give answers to questions.

Her affect was clearly depressed and angry. There was no abnormality of perception or cognitive functions.

DIAGNOSIS

Neurotic depression in a person with hostile dependent and hysterical personality traits. She had some biological features suggestive of endogenous depression, but not enough to substantiate that diagnosis.

DYNAMIC CONSIDERATIONS

Mrs. P. was born following a miscarriage and was the older of

twins. She did not feel close to any of her siblings, and she felt as if her mother and father did not understand her. She said that her father had "never been real close", and it is also of note that she had not heard her parents quarrel at all. This may well have caused her to inhibit feelings of anger or to relate in a passive aggressive way.

There were the neurotic traits of biting her nails and talking in her sleep, and a tonsillectomy at the age of 7 is not recalled at all which may suggest that she was suppressing feelings about that. At the age of 15, she left school because she was "sick of it", and worked in an office and then in a home for children.

Her menarche was at the age of 13, and she had had pain and vomiting with her periods since then. She had a relationship with a man some 8 years older than her whom she refused to marry, and then she met her husband who was 5 years older than her. She noted: "my parents wouldn't let me get married so I got pregnant". She said that her parents had never approved of him, and that they had not forgiven her and she felt they got back at her by being violent with her children when they were baby-sitting.

Her marriage had been unsuccessful, and there had been frequent separations and violence with her sustaining a fractured zygoma. A final separation resulted in March 1977. It is of note, that on that separation, she took an overdose, and although her husband knew she had taken tablets he allowed her to sleep them off. Since then, there had been a court case over access to the children,

and this had been two days before the overdose. Her husband had appealed over his limited access, and a further court case was to have been held in three weeks. Other stresses included the inability of her older child to speak, and the fact that he was attending the Children's Hospital twice a week for occupational and speech therapy; her father's strokes and the lack of support from her mother. These stresses proved too much for her. It was impossible to elicit any final clear-cut precipitant, and although she had thought of taking an overdose for some time, it was finally taken impulsively.

MANAGEMENT

She agreed to transfer to the psychiatric ward for further assessment and management.

APPENDIX XII(e)INTERMEDIATE LETHALITY

NAME: Mrs. S.

NO.: 95

AGE: 26

CIRCUMSTANCES OF OVERDOSE

Mrs. S. was admitted on 22:2:76 having taken about 20 Diazepam and 3 Haloperidol tablets. She had obtained these from her local doctor that morning and, in fact, had seen him with the intention of getting tablets to take. She took them less than an hour later at home. She said that she had been put on these by a psychiatrist, but she didn't need them any more. She said she took them because she had an exam for psychiatric nursing in two days and her three year old daughter wouldn't leave her alone to study. She said she rang her husband, but he had not been available. She had felt very angry and felt that he was probably playing snooker, not working, and this anger had contributed to her taking the tablets. She took the tablets in her kitchen and her child was with her. She took the tablets "two by two". Some visitors came to her home but she did not tell them that she had taken the tablets. Her husband also came home later in the afternoon, and she said she did not tell him what she had done. She must have lost consciousness then as she cannot remember how she came to be in hospital. She said she knew she wouldn't kill herself and that she only wanted to sleep.

FAMILY HISTORY

She was the second child of six. She described her father as an extremely violent man who used to assault her mother. She said that she hardly ever thought of her mother, and that she was "very underhand". Her parents were separated on one occasion, but this had been apparently only for a brief time. She said that both her father and mother beat her as a child. She had two sisters and three brothers. "All are a bit emotional." She said that one brother had moved interstate to get away from the family and another had a long police record.

PERSONAL HISTORY

She was born in Sydney on 25:7:49. Her mother had described the hospitalisation as being extremely "cold" and not spoken at all favourably of the birth. She found it difficult to recall early childhood events. She said that she went to school from the age of five to eighteen and that she completed secondary education with credits in English, History and Geography and passes in Mathematics and Science. She said that she had her first breakdown immediately after these exam results. Her life following that is very much bound up with her psychiatric illnesses. For example, she said "I've been going strange for a long time.... seeing significance in everything....believed that Gandhi and Jesus Christ were in a box in Church....I suddenly felt my psychiatrist would meet me in the Church".

Her sexual history was marked by what she thought was a late

menarche at 13. She thought this was due to incest at the age of 7 by an uncle, and she also blamed that for her current frigidity. She married at the age of 21. She had a miscarriage while in a psychiatric hospital soon after marriage, and a daughter was born on August 4th, 1972. She and her husband had moved to Adelaide 18 months before as they had been living with his parents and did not get on with them. They went on a round-Australia trip and liked Adelaide and so remained. Some twelve months before, she decided to do psychiatric nursing and enrolled at a psychiatric hospital. She said she came top in her first exam but feared sitting for the impending examination. She said if she passed she would go from less demanding chronic wards to the acute receiving house and felt that this had contributed to her overdose.

PAST MEDICAL AND PSYCHIATRIC HISTORY

She had pneumonia as an infant and was hospitalised for about two weeks. She had an appendicectomy at the age of 8 and severe concussion, also at the age of 8.

She had a long psychiatric history. At the age of about 18, she had a "break-down" and said she was sent to a convent in Sydney, and from there was transferred to a psychiatric hospital. She said she read the case notes and she was diagnosed as "a bad paranoid schizophrenic". She said that she didn't believe that, but felt that she had a methedrine psychosis at the time, because she had been dependent on methedrine for some 2 years then. She was in

hospital for several months. She had had at least six or seven admissions to psychiatric hospitals in both Sydney and Adelaide. She had had multiple overdoses and wrist slashings, but these had been mainly about six or seven years previously in Sydney. She had not taken an overdose for some 6 years until this occasion. Her most recent admission to a psychiatric hospital had been 3 months ago. She had been seeing a private psychiatrist each week for about a year. Her previous severe illness had been 3 years before, after the birth of her daughter. It was described very much as a schizophrenic illness. It is possible that she had had multiple drug psychoses, as she had, in fact, been in prison on at least three occasions for robbery of chemist shops. However, the history is also consistent with schizophrenia, and the drug taking may be a rationalisation to explain away her psychosis.

MENTAL STATUS EXAMINATION

She was a thin woman with rather attractive, fine features and brown hair. She sat quietly and appeared quite vague and her attention wandered. She fiddled incessantly with a safety-pin. Her conversation was vague but to the point when needed. Her affect was quite bland and flattened. She conceded auditory hallucinations. Her cognitive function was difficult to test fully, but her serial sevens were outside normal limits and indicated either a residual effect from her overdose, or more likely a combination of difficulty in concentrating from the overdose and

thought disorder. I would estimate her intelligence as above average.

Information from her psychiatrist

The psychiatrist who had seen her weekly for a year, considered there was no doubt that she had a schizophrenic illness and that she had been unwilling to take medication in the past. He confirmed my impression that she tended to rationalise her drug taking as a defense to acknowledging her psychosis.

DIAGNOSIS

Hebephrenic schizophrenia in a person with passive dependent, hysterical and sociopathic (antisocial) personality traits.

DYNAMIC CONSIDERATIONS

Mrs. S. was a 26 year old woman whose mother considered her birth to be "cold" and difficult. She had a history of pneumonia necessitating hospitalisation in infancy. She said she had a brutal upbringing as a child being beaten by both mother and father. Despite this, she achieved highly at school, but following her Matriculation results, she had her first psychotic illness. Her last 7 or 8 years of life had been marked by exacerbations and remissions of her illness. She claimed that she had had methedrine psychoses and, in fact, had been in prison on three occasions for stealing drugs. However, she also had features of a schizophrenic illness. The precipitants to her overdose were difficult to define, but there were difficulties in her marriage as she said she was unable to communicate with her husband at all. The last straw may well have been the fact that she was unable to concentrate on studying

for her exam because of her daughter, and the exam was significant because it would mean that she would soon be in contact with acutely psychotic patients as a psychiatric nurse.

MANAGEMENT

She agreed to continue to see her psychiatrist and was transferred to another hospital under his care.

APPENDIX XIII (a)LOW LETHALITY

NAME: Mrs. C.

NO.: 1

AGE: 29

CIRCUMSTANCES OF OVERDOSE

Mrs. C. took 8 Panadeine tablets at about 2 a.m. and a further 8 at about 6 a.m. on 23:3:77, while her husband was sleeping. These were taken in a holiday house in which she, her husband and two children were staying. She and her family returned home later that day. She took a further 8 Panadeine tablets and told her husband, but despite this, he went to work. She later phoned him at work and he then drove her to the Royal Adelaide Hospital where she was seen in Casualty by a registrar who arranged her transfer to the psychiatric ward. She did not require any resuscitation or observation because of the overdose itself. She did not feel she would die when she took the overdose but, at the same time, she said she didn't care whether she lived or died.

Mrs. C. found it difficult to explain exactly why she had taken the tablets. She said she "felt as if I was no good". She felt her husband did not care about her and added: "I'll frighten him into it". She said that she had been depressed, and felt as if she was "talking in riddles". She said that her husband regarded her as a "goodie, goodie", and she had felt belittled by him at a recent rifle club social function. He had also just returned from a week's shooting holiday interstate, and Mrs. C. wondered

if he may have had an affair while away.

She also said there was a longstanding sexual problem with her husband, and that she was unable to achieve orgasm. A further factor which only emerged late in the interview, was the possibility that she may be pregnant. One of her children had a cleft palate, and she wondered if this baby would also be so afflicted. She felt her husband didn't really care about her being pregnant. She described both her and her husband never really arguing, but becoming silent when they were cross with each other.

FAMILY HISTORY

Mrs. C. was an only child. Her father had died of a myocardial infarction when she was aged 13. He had not been ill previously. She described him as "a placid truck-driver".

Her mother was described as "always the aggressive one....dad would just go along". She said her mother had always tried to run her life and never let her go. She felt as if she was stuck with her mother and that she had been "most unkind" to her when she moved away from home 18 months after marriage. Mrs. C. and her husband had lived there until Mr. C. decided that his wife was getting "too dependent" on her mother.

PERSONAL HISTORY

She was born 6:12:46 and Mrs. C. wondered if she had ever been wanted because her parents had been married for 15 years before she born. I was unable to elicit many details of her early childhood. She attended school until the age of 16 and left in the October of

her third year. She said she had never missed any grades but was not particularly interested at school. She had had various positions as a stenographer in different firms, and appeared to have difficulty in recalling them.

Her menarche was at the age of 11 and she described no problems. She had not been prepared for it by her mother. She had few boy-friends before marrying her husband when she was aged 21. She had two children, the older a daughter, 6, who had recently commenced school, and the younger, a son aged 4 who had a cleft palate. He had had two operations for this and required another in three months. His general milestones were within normal limits and he was able to speak satisfactorily.

PAST MEDICAL AND PSYCHIATRIC HISTORY

No significant past medical history apart from a tonsillectomy at the age of 7.

She had seen a psychiatrist once 5 years before, feeling that people were against her. She would not elaborate on this, and said she had not been offered treatment.

MENTAL STATUS EXAMINATION

She appeared older than her 29 years with brown hair and rather florid facies. She was slightly over-weight. She was rather flippant throughout the interview, and although she superficially appeared eager to please and give the right answers, her conversation was guarded and a little evasive at times. However, there was no thought disorder evident. Her affect appeared

rather inappropriately cheerful and she tended to minimise any difficulties. There was no abnormality of perception evident and her cognitive function was within normal limits. I estimated her intelligence at low average.

DIAGNOSIS

Neurotic depression in a passive dependent and hysterical personality.

There was some paranoid ideation expressed, and she was guarded at times, but there was no definite evidence of a psychotic illness.

DYNAMIC CONSIDERATIONS

Mrs. C. was the only child born after her parents had been married for 15 years, and she wondered if she had been wanted. Her father died when she was 13, and she had felt bound to her mother, though in an intensively ambivalent way. Although she and her husband lived with her mother after marriage, they left as her husband felt she was too dependent on her mother.

There were difficulties in the relationship with her husband. She felt he did not care, and that he had belittled her. He had recently been interstate for a week, and Mrs. C. had had fantasies that he may have had an affair, although there was no evidence to suggest that. She had been unable to achieve orgasm with her husband and felt that that was also contributing to her problems.

It was of note that her older child had recently commenced school, and her other child had a congenital cleft palate deformity, and was soon to have another operation. She also thought that she was

pregnant again, and this had reawakened fears that this child might also have a cleft palate. She also felt that her husband didn't really want her or another pregnancy.

Mrs. C. took the overdose in an attempt to frighten her husband into caring more for her. However, he initially reacted by ignoring her and going to work, after telling her to vomit the tablets up and forget about it. She then took further tablets and contacted him again before he took her to hospital.

MANAGEMENT

It was suggested that she remain in the psychiatric ward until her husband and she had been seen more intensively to clarify whether or not there may have been a more serious psychiatric illness; whether they may accept marital therapy; and to assess the need for counselling regarding her possible pregnancy.

APPENDIX XIII(b)LOW LETHALITY

NAME: Miss C.

NO.: 23

AGE: 18

CIRCUMSTANCES OF OVERDOSE

Miss C. was referred for admission by her local doctor on 9:2:77 having taken 12 pheniramine (Avil) tablets. She had bought them from a chemist shop for car sickness. She took the tablets in her bedroom, then became scared and told her mother who took her to the local doctor. She was most reluctant to speak at all about events leading up to the overdose or, in fact, any other details and it was only after a very difficult establishment of rapport by a rather full history of her family and personal life, that she reluctantly agreed to talk about the overdose. It would appear that the man with whom she had been going out for the last seven months and whom she had known for some 5 years, had recently wished to finish their relationship. They were to have been engaged, but some three months before he had said that they were too young, and she had not been able to convince him otherwise. He had also gone out with other women, and when she wanted to talk to him about this or their future, he just walked away from her. It is of note, that although she had been on an oral contraceptive for 3 years, in the two months prior to the overdose, she had been rather spasmodic in her taking of the pill, and she had thought that she was pregnant until about mid-day on the day on which she took the

overdose. She had been four weeks overdue in her period, and had seen her local doctor only the day before the overdose for a pregnancy test. She was disappointed that she was not pregnant as she would have kept the child, and then her boy-friend may well have married her.

FAMILY HISTORY

She was the third of four children and was the only daughter. Her father was a supervisor in a factory and had been at the same factory for 31 years. She initially said that she got on "alright" with him, but later in the interview, she conceded that he beat her frequently, even to the age of 15 years when she was going out with boys. Her mother was described as two or three years older than her father and "a nervous wreck". She had been on diazepam for a number of years. She had had an abdominal operation 8 or 9 years previously, and her weight reduced to 6½ stone, and she couldn't eat or drink. Since that time, she had not had good health, and continually had argued with the patient and her brothers. Miss C. noted: "I just ignore her when she's raving".

Her oldest brother was aged 23 and married. He had had difficulties with the police and was in a reform school on two occasions. Her second brother was aged 21, married with no children. Her youngest brother, aged 15, although at school, was looking for work and had no ambition to continue his education.

It was difficult to elicit any particular thoughts or feelings about the family, but it seemed that there was considerable

disturbance as illustrated by her father beating her until the age of 15, her mother being a "nervous wreck", her older brother being in reform school, and the younger brother wanting to leave school at an early age.

PERSONAL HISTORY

She was born 8:7:58 and there were no birth difficulties. There were no neurotic traits of childhood, but she had had "childhood asthma".

Her schooling was at local primary and secondary schools, and she left in 1973 being half-way through second year. She said she "just didn't like school" and had trouble with the teachers. She said she found the work easy, and finished before the other children and then caused disturbances.

Her work history was particularly poor, and she described at least ten different jobs. In half she had been sacked, and the other half she had quit. Her perseverance was minimal, as illustrated by the fact that she stayed only two hours in one job. She had been unemployed for 4 years. Her most recent job had been as a swimming instructress just before Christmas, but she could not tolerate the children.

Her menarche was at the age of 12 and she described no difficulties. She had been on an oral contraceptive for 3 years.

PAST MEDICAL AND PSYCHIATRIC HISTORY

The only history of relevance was the childhood asthma.

MENTAL STATUS EXAMINATION

She appeared a conventionally attractive young woman of 18 years with dark features and a slim figure. She was 5'3" tall and had long black hair, and tended to hide behind it in a coquettish way. She was rather sullen and quiet in behaviour, her conversation was extremely guarded and her affect showed minimal depression. However, one could sense both depression and anger beneath the surface. There was no abnormality of perception or cognition, and no formal thought disorder.

She had some insight into the fact that she probably would lose her boy-friend, and also seemed to be quite aware of her manipulation of possibly becoming pregnant and forcing him into a marriage.

DIAGNOSIS

Neurotic depression in a person with hostile dependent and hysterical personality traits.

Her difficulties appeared to be more than just a transient situational disturbance as she had been depressed for about two months and had thought vaguely of taking tablets for at least a week, even though the final overdose was impulsive.

DYNAMIC CONSIDERATIONS

Miss C. was the first daughter after two sons and may well have been indulged by her parents. Certainly, her father's over-protective attitude towards her even in her teenage years is suggestive of over-concern. It may have been difficult for her at the age of 9 or 10, when her mother was seriously ill, and she

perceived her mother as being a "nervous wreck", from that time on.

Although it was difficult to elicit definite evidence of abnormality in the family dynamics, it could certainly be postulated to be present because of her mother's nervous condition and the older brother's difficulty with the police and being in reform school. It was also indicated by Miss C's. difficulties in forming interpersonal relationships, and problems with authority figures in both school and at work.

It would appear that Miss C. had no ambition other than to get married and have children, and she saw no advantage at all in working. She had placed great store in becoming engaged to her boy-friend, and when this had not eventuated, she had become depressed and had "forgotten" to take her contraceptive pill. This had been either conscious or very nearly so, as she readily conceded her disappointment at not being pregnant. The overdose was taken only hours after her period started, after she had thought she may be pregnant.

She presented in a rather sullen, defiant way and tended to minimise any difficulties. On the other hand, I considered that she had great difficulties in relating to any authority figures and, indeed, in forming any interpersonal relations as she described no particular peer group friends.

MANAGEMENT

I suggested that she keep in contact with the outpatient clinic but this was declined. She had also had contact with a social

worker in her local community but did not want to contact her again.

She had some insight into her predicament, but was unwilling to enter into any therapeutic relationship. I reiterated that it was possible to see somebody either at this outpatient clinic or at another hospital, or that she could see her local social worker. I did not consider that she was in need of compulsory detention, and suggested that the next move was up to her to seek help if she felt she needed it. At the time of her discharge, she did not know what the reaction of her boy-friend would be, but she appeared reconciled to losing him.

APPENDIX XIII (c)LOW LETHALITY

NAME: Mrs. M.

NO.: 67

AGE: 28

CIRCUMSTANCES OF OVERDOSE

Mrs. M. was referred by her local doctor to the Casualty department on 14:4:76 after having taken seven 5 mg. diazepam (Valium) with an uncertain amount of brandy. She had taken them in the setting of what she saw as the final disruption of her second marriage. She had been separated from her husband for the last three weeks but he had been placing pressure on her to return to him. He had asked his 20 year old son (by his first marriage) to see the patient regarding reconciliation, and she had agreed to seeing him because her husband had been ill for three months with glandular fever and a cardiac complaint, and had also been drinking heavily. This meeting was marked by bitter quarrels and her husband threatened to kill himself should she not return. The final precipitants were that she lost her cat at the caravan park where she had visited her husband. She had been unable to find the cat and had returned home and got her 8 year old son off to school and then gone to work. Her husband had rung her at work and said he would take the cat to her home unit. She had returned there and her husband had brought the cat and then put further pressure on her to return. Both she and he had taken two diazepam tablets with brandy, but she continued to take more brandy and

tablets. She said that she did not think that her husband realised that she was taking the extra tablets and he certainly had not tried to stop her. However, her husband apparently rang her brother, who called the local doctor who, in turn, referred her to the Casualty department for further assessment.

Mrs. M. said that she had resolved not to see her husband again. In fact, she had been advised not to see him again by both her parents and by a solicitor who had written to her husband with a notice of the start of a 12 month separation period before an automatic divorce. She said that she had very mixed feelings about actually taking out the divorce proceedings because she felt that her leaving might precipitate illness in her husband and that he might attempt suicide. Apparently, her husband's mother had attempted suicide on seven occasions and it was a realistic fear that her husband might do the same.

FAMILY HISTORY

The patient was the oldest of three children, with two younger brothers aged 25 and 17. Her father was a 54 year old electrical supervisor whom she described as "can be domineering....I used to be very scared of him....he tries to do the right thing". He "always had stomach nerves". Her mother was described as 51 and "very soft, very emotional like me....rings me every five minutes.... gets very upset and cries". Neither mother nor father had actually sought psychiatric help but her brother aged 25 had been to a psychiatrist with his wife for both his "upsets in the stomach" and

difficulties in their sexual relations. There was no family history of attempted or completed suicide.

PERSONAL HISTORY

She was born on 18th September, 1947. She thought she was planned but knew no details of her birth or neonatal period. She had no hospitalisations as a child or severe illnesses. She had no neurotic traits evident in childhood apart from her fear of the dark which still remained. One of her most striking memories as a child was being told by her mother never to have premarital sex and that sex was just a duty.

Her menarche was at age 12 and she often had such severe period pain that she took time off from work. Later, as a nurse, she was admitted to hospital with period pain.

Her schooling was at local primary and high schools to the age of 16. She said that she wanted to go to a teachers training college, but her parents wouldn't let her as they said a tertiary education was a waste of time for a woman. She completed a business course and worked for eighteen months as a comptometrist. She said she then had a close relationship with a man 7 years older than herself, and because of this, her parents agreed to allow her to go nursing in the country and, therefore, break up this relationship. She nursed for some 2½ years during which time she met her first husband. They lived in a small country town and this marriage was described as "disastrous". She said that her husband was "too much under his father's thumb" and that she was "too much

under my mother's skirt". She said that her father-in-law physically threatened her at times and that her first husband did not support her at all. She was separated after one year, and then met her present husband and lived with him for a few months before marrying some 6 years ago. This marriage had also not been satisfactory at any time. She said that she had never enjoyed sexual intercourse and did not reach orgasm until the age of 22, and only rarely had done so since then. Mrs. M. had an extra-marital relationship 18 months before the overdose, and said that this had shown her what she had been missing.

Her present husband was 12 years older than her and had been married previously. He was a used car salesman until he began speculating in real estate. She said that he had been drinking heavily for the last two or three years, and often drank on his own for three or four hours at home each night.

It is of interest that she had been proficient at ballet, physical culture and ballroom dancing and was in State teams for these. Her husband liked none of these pursuits and she had ceased them all. There had been at least five or six separations in their marriage, but she felt that this would be the final separation, and that this was the first time she had actually taken out legal proceedings.

PAST MEDICAL AND PSYCHIATRY HISTORY

There was no significant past medical or psychiatric history.

MENTAL STATUS EXAMINATION

Mrs. M. was a conventionally attractive woman with brown shoulder-

length hair and quite expensive jewellery. She appeared well-groomed, was poised, and demonstrated some narcissistic traits. She did not appear overtly anxious or depressed and appeared in no discomfort. She was alert and smiling, and smoked several cigarettes during the interview. Her conversation was quite circumstantial and voluble, but there was no definite thought disorder. There was no abnormality of perception or cognitive function. Her intelligence appeared above average, but she had minimal insight into her own role in her difficulties.

DIAGNOSIS

This woman showed no definite psychiatric illness. Her problems were considered to be an "adult situational reaction". She demonstrated passive dependent and hysterical personality traits.

DYNAMIC CONSIDERATIONS

Mrs. M. was the oldest of three children and there was evidence that her parents were both anxious persons who had tended to somatise their problems (e.g. "stomach nerves"). A brother had had psychiatric assessment. There was no definite evidence in this woman's early life of trauma which would predispose her to adult illness, but it is of note that she had always regarded her father as a rather domineering person, and it is possible that her hysterical traits may have had their genesis in her relationship with him. She had always been very dependent on her parents and had submitted to their wishes. She did not have a tertiary education because they thought it unnecessary, but they bargained

with her and let her go nursing as a way of getting her out of a relationship with an older man when she was about 17. It is of interest that she had chosen a man about 12 years older than herself as her second husband, and the person with whom she had had an affair, was 52 at the time. This pattern of behaviour fits in with her hysterical personality traits.

The dependent traits are marked in that she had had five or six separations from her second husband, and had felt that she could not let him down and that she might cause his illness to exacerbate if she left him. She was still markedly dependent on both her husband and her parents, but was making attempts at becoming independent. The final crisis was related to the break-up of her marriage and the pressure she felt her husband was putting on her to remain.

MANAGEMENT

She was referred to the outpatient clinic, and it was also suggested that she continue seeing her solicitor. No medication was indicated.

APPENDIX XIII(d)LOW LETHALITY

NAME: Miss M.

NO.: 68

AGE: 23

CIRCUMSTANCES OF OVERDOSE

Miss M. presented to the Casualty department on 19:3:77 with abdominal pain, a symptom similar to that for which she had recently been investigated and managed in the psychiatric ward. The Casualty officer had contacted the psychiatric registrar who had said that there were no beds available but that she could be seen urgently as an outpatient. She then took 15 to 20 Flurazepam tablets, was given a gastric lavage and admitted to the recovery ward. She said she took the tablets because "I was depressed....I've had this pain for ten weeks and it's getting beyond me....I got upset so I took them". She was on her own in a cubicle and told a nurse that she had taken them. "I just took them on the spur of the moment." She said she had no wish to die and that she was only worried about her abdominal pain.

She had had difficulties with her parents. It would appear that they had "disowned" her after her promiscuous behaviour, and she had lived with several different men since leaving them. These relationships all seemed to have disintegrated. She had difficulty explaining any precipitants, and this was consistent with her past history of being considered a person of limited intelligence who tended to somatise her problems.

FAMILY HISTORY

She was the oldest of four children with 2 brothers, aged 22 and 17, and a sister aged 11. She found it difficult to describe her parents or her siblings.

Her father was aged 46 and she described him as "very moody". She said he drank heavily, and was the dominant partner in her parents' marriage. She described her mother as "very quiet.... doesn't listen to people". She had recently had a hysterectomy.

The other significant family member appeared to be her paternal grandfather who died when she was aged 17. She said she had been very upset by his death.

There was no family history of nervous disorder.

PERSONAL HISTORY

She was born 19:4:53 and although she did not know any details, her degree of retardation had been caused by birth trauma, a fact confirmed by her parents on previous admissions. She said that her milestones were normal, but this was doubtful. She had had a stutter from as early as she could remember. She was left-handed, and recalled being made to write with her right hand as a child. She denied any childhood neurotic traits, though she still bit her nails. Her early education was marked by school refusal and she did not attend for up to six months at a time. After difficulties in two primary schools, she attended a special school for the intellectually retarded. At 14, she entered secondary school, but didn't pass any examinations.

At the age of 15, she left school and her grandfather secured her work in a printing office. She folded paper and did odd jobs until she became the tea lady, a job she had coped with for four years.

Her menarche was at the age of 15, and she had been frightened to tell her mother and kept it from her for several cycles. She was given no sexual education at home. Her first boy-friend was a workmate at the printing office and her first sexual experience was at the age of 16. It would appear that her father had always discouraged these relationships and, at times, had been quite vehement in his opposition to her boy-friends. This observation was, in fact, confirmed on a previous admission by an interview with the parents.

She had several boy-friends with fleeting sexual contact for several years until mid-1976 when she met a man aged 40. Her parents didn't approve of this relationship and she left home and lived with him temporarily. This relationship did not continue and there had been several other relations with older men since then, and the present crisis was related to this. Related also, was the fact that she had been attending the gynaecological clinic repeatedly with her lower abdominal pain. She also had requested sterilisation in the previous few months as she feared becoming pregnant. She had not been able to tolerate oral contraceptives or an intra-uterine device, and therefore had grounds for concern.

PAST MEDICAL AND PSYCHIATRIC HISTORY

She was considered to be mildly intellectually retarded, presumed due to birth trauma.

She had taken at least five overdoses in the last 3 years, and had most recently been an inpatient six weeks before this overdose.

She had had repeated contact with the gynaecological clinic with her difficulty tolerating oral contraceptives and intra-uterine devices, and for her request for sterilisation.

She had had tonsillectomy and adenoidectomy at the age of 3, and also an operation on her ears at the age of 5.

MENTAL STATUS EXAMINATION

She had thin features and was about 5'9" tall with dark-brown, close-cropped hair. In behaviour she was very submissive and passive and gave the appearance of being quite helpless in her current situation. At times, she doubled over with pain in the abdomen but for most of the interview, she was pain free. Her conversation was polite to excess and very slow and deliberate, and although she did not possess a large vocabulary, she presented in a very socially acceptable manner. Her affect was rather flat and bland. There was no abnormality of perception and her cognitive function revealed her to be probably in the borderline retardation range, and I would estimate her IQ at being 70-80.

DIAGNOSIS

Neurotic depression in a person with hysterical and dependent personality traits.

Borderline intellectual retardation.

A hysterical conversion reaction component was also considered possible to explain the pain in her abdomen.

DYNAMIC CONSIDERATIONS

Miss M. was the first born of rather rigid parents with her father being a domineering person and her mother being inhibited in relation to any sexual matters. It was apparent that she was of limited intellectual capacity, and it was possible that her parents may have over-reacted to this in smothering her with care. Certainly, they found it difficult to allow her to become independent. She had a brother a year younger and it is possible that he may have been given more attention than her and, indeed, he may have been able to give more positive feedback to his parents as he was of normal intelligence.

Her first few years of life were marked with illness, and she had operations for her tonsils and adenoids and ear infections.

Her education was marked by school refusal and extended periods of time at home. She then had a series of schools including special classes for the intellectually retarded.

Her menarche was at the age of 15 and she did not feel free to tell her mother for several cycles. Each of her boy-friends had been considerably older than her and had been met with rejection by her father. It would appear that many of her difficulties had been related to her attempting to gain independence from the control of her parents. At the age of 23, she left home much to her parents

disgust and was, in fact, rejected by them when she went to live with an older man. It would appear that this had been very difficult for her as her overdoses had continued, as had her pain, which one could postulate was related to her fear about sexual contact and the possibility of pregnancy.

As well as being predisposed to adult psychological problems by her early childhood illnesses, and the dependence which had been fostered by her parents, she had had to cope with a degree of intellectual retardation.

This overdose was taken in the setting of being rejected by her latest boy-friend and when she thought that she had found the safety of the Royal Adelaide Hospital she felt rejected again as there was not a bed available for her in the psychiatric ward.

It would appear that she then impulsively took an overdose of tablets in the Casualty department so as to ensure that she would remain in the hospital.

MANAGEMENT

In view of her regressed behaviour, it was considered that she should remain in the general ward until a psychiatric bed was available.

APPENDIX XIII(e)LOW LETHALITY

NAME: Mrs. T.

NO.: 100

AGE: 26

CIRCUMSTANCES OF OVERDOSE

Mrs. T. was referred by her local doctor on 5:12:75 having taken an overdose of 4 Nitrazepam, 6 Panadeine, and 4 Oxazepam. She took these in the kitchen while her husband was in the garden. She had argued with him for two days, and the final precipitant was the fact that he came home over an hour later than usual and then would not speak with her. She panicked after she had taken the tablets, and although she did not tell her husband, she rang her local doctor who arranged admission.

Events leading up to this overdose included a history of increasing depression for the last four or five months. The initial period of this was during the last month of her second pregnancy. She had a son 14 weeks before the overdose, and since then, had had difficulty in sleeping, had lost one stone in weight, had had minimal sexual feelings and had become extremely irritable. Her local doctor had arranged for her baby to go to a creche to give her a rest, but this had not helped.

FAMILY HISTORY

She was the youngest of three, and the only daughter, born of Dutch parents. She "never got on terribly well" with her mother. Her mother's health had been poor, and she had had at least four

operations for what sounded like a meningioma of the brain. Her mother had been irritable for years prior to the operations. Her mother had returned to Holland some 4 years before, after her father had died, and had been living with a man there for some time. She had recently left him and he had committed suicide.

Her father had been in ill health for a number of years before his death. She had felt closer to him than her mother. She noted that "I still haven't cried....I was close to him but my reaction was 'that was it'".

Her oldest brother was aged 32, single and drank excessively. Her other brother died at the age of 21 in a car accident. He had only been driving for two months and she felt the family had not got over his death.

There was a family history of suicide, with the maternal grandfather committing suicide.

PERSONAL HISTORY

She was born in Amsterdam on 18:1:49. She did not know her birth details, but her first memories were pleasant and there was no history of parental separation. There were no neurotic traits of childhood and she said she was "spoilt by her father". She attended school till the age of 11 in Amsterdam when her parents moved to Australia. She was unable to adjust to Australia and she said she reacted by refusing to learn English. She truanted often and left school before the age of 14. She then stayed at home for one year before working for 4 years as a tea girl at a ship

construction works until her brother died. She then had several different jobs until she became unemployed. At this time, she became dependent on seducaps, a proprietary hypnotic.

Her parents paid for her to return to Holland in 1970 for eight months, and she returned feeling well. Her father died four months after she returned.

Her menarche was at the age of 12, and she had not been prepared and had felt scared. She had no special boy-friends until the age of 20 when she had a strong relationship, though not sexual, with a teacher. She met and married her husband when both he and she were 22. He did not know of her drug dependence when they were married. The relationship with her husband had been strained for several years, and she did not enjoy sexual relations although she pretended to do so. She felt he paid more attention to his garden and flowers than he did to her. Her first child was a daughter, aged 2. Although she had been depressed following the birth, she described no difficulties with this child. She felt she had become quite meticulous regarding her housework since the first pregnancy.

PAST MEDICAL AND PSYCHIATRIC HISTORY

Tonsillectomy as an infant.

First pregnancy marked by threatened miscarriage, but she had refused hospitalisation. Dilating and curetage for continued post partum bleeding.

Past psychiatric history included feelings of depression following

the birth of her first child. This depression had similar symptoms to the current episode, but had been less severe and resolved after ten months. She had been depressed at the age of 17 when her mother had a brain operation and she was treated in a private hospital for five days by a psychiatrist. She was also depressed after the death of her brother and stopped work, and was unemployed for about nine months during which time she felt "miserable". Also of relevance, is the fact that at about the age of 22 or 23, she was dependent for several months on seducaps. She had been treated by the Alcohol and Drug Addiction Board and was an inpatient for a week.

MENTAL STATUS EXAMINATION

She was 5'10" tall, slim, with short, dark hair and thin features. She wore a silver cross around her neck. Her behaviour was, at times, flippant and rather sarcastic, although she obviously felt concerned for the future. There was no psychomotor retardation. Her conversation was quite appropriate and to the point, and there was no evidence of thought disorder. Her affect was clearly depressed. There was no abnormality of perception, and her cognitive function was intact. Her intelligence was at least average. Rapport was good and she had some insight into her problems.

DIAGNOSIS

Mixed depression with features of puerperal psychotic depression in a person with passive dependent, hysterical, and obsessional

personality traits.

DYNAMIC CONSIDERATIONS

Mrs. T. was the youngest of three children, an only daughter, born of Dutch parents in post-War Holland.

There was a family history of suicide, and her older brother drank excessively. Mrs. T. felt closer to her father, and was unable to mourn his death which had been 4 years before. She did not have a good relationship with her mother, and this had been made more difficult by her having a brain tumour which sounded like a meningioma and which had made her more irritable. Her mother had returned to Holland after her father's death and had lived with a man who had recently committed suicide. Mrs. T. may well have had disturbing fantasies about his death as she had a particularly strong relationship with him.

Mrs. T. had a past history of nervous disorder, having been treated for depression after one of her mother's operations; having been "miserable" and unable to work after her brother's death; and having been drug dependent for some months. In addition, she had been depressed following the birth of her first child.

Since the birth of her second child, she had lost weight, been irritable, depressed and had difficulty sleeping. She also felt that she did not have the support of her husband. The final precipitant had been his late return and refusal to speak with her.

MANAGEMENT

I strongly recommended that she remain in the psychiatric ward, and that she commence antidepressant medication. She agreed, and her child was also admitted. In addition, joint interviews with her husband were instituted.

APPENDIX XIV(a)COMPARISON GROUP

NAME: Mrs. E.

NO.: 116

AGE: 29

Mrs. E. was attending the fitness classes.

FAMILY HISTORY

She was the second child and only daughter of four children born of Australian parents. She said her father drank heavily and was frequently away from home with social organisations. She said she had overheard her parents quarrelling frequently, but she only argued with them once as she was told to mind her own business. Since then, she had found it difficult to assert herself in any arguments with her family or husband.

PERSONAL HISTORY

She was born interstate and moved to South Australia when she married at the age of 18. She and her husband then went to New Guinea for 4 years before returning to Adelaide for the birth of her first child. She was concerned about her husband's drinking, and said this made her extremely anxious. She had a daughter aged 6, and a son aged 4, both of whom were in good health.

PAST MEDICAL AND PSYCHIATRIC HISTORY

Pneumonia requiring hospitalisation, aged 25.

Two normal pregnancies.

Anxiety/depression - consultation with a psychiatrist at the age of 27.

On diazepam from local doctor.

MENTAL STATUS EXAMINATION

She was slightly over-weight, with short, dark-brown hair, and was markedly anxious. There was no evidence of psychotic illness.

DIAGNOSIS

Anxiety neurosis.

Passive aggressive personality traits.

APPENDIX XIV(b)COMPARISON GROUP

NAME: Mrs. H.

NO.: 119

AGE: 28

Mrs. H. was attending the fitness classes.

FAMILY HISTORY

She was the younger of two daughters born of English parents. She was her father's favourite, and she described how concerned he was about who she went out with, especially since her divorce. Her mother was described as being 2 years older than her father and "really good....with drive and zest". She described both parents as "over-protective".

PERSONAL HISTORY

She was born in England and came to Australia at the age of nine months and after schooling did 2 years psychiatric nursing before marriage. She still worked part-time occasionally. She said her marriage broke down because her husband "found another woman", and she currently lived with her 5 year old son and with her parents. She had no particular men friends.

PAST MEDICAL HISTORY

One normal pregnancy.

MENTAL STATUS EXAMINATION

She was a petite blonde, conventionally attractive woman, who related in a familiar way. She demonstrated no evidence of marked psychological disturbance.

DIAGNOSIS

No illness diagnosis made.

Hysterical personality traits.

APPENDIX XIV(c)COMPARISON GROUP

NAME: Mrs. J.

NO.: 122

AGE: 26

Mrs. J. was attending the fitness classes.

FAMILY HISTORY

She was the third of 7 children born in Australia of Lithuanian parents. Her father was aged 51 and a boiler attendant. He "drinks, smokes and swears....he's hopeless when he's drunk". She described her mother as "she's good, working hard....over-weight". Her mother had always worked outside the home and Mrs. J. had always felt that her parents had never been available. When available, she had never been able to argue with them.

PERSONAL HISTORY

There was little of note in her early life. She had done clerical work until her marriage at the age of 20. She had two children, a son aged 3, and a daughter aged six months. She described her marriage as satisfactory.

PAST MEDICAL HISTORY

Tonsillectomy aged 7.

Appendicectomy aged 18.

Two normal pregnancies.

MENTAL STATUS EXAMINATION

She was a tall, blonde woman with thin features who appeared quite at ease and demonstrated no psychological abnormalities.

DIAGNOSIS

No illness diagnosis made.

No particularly prominent personality traits.

APPENDIX XIV(d)COMPARISON GROUP

NAME: Mrs. R.

NO.: 128

AGE: 27

Mrs. R. was attending fitness classes.

FAMILY HISTORY

She was the third of four children with two older brothers and a younger sister. Her father was described as "very moody" and had peptic ulcers, and had always been nervous throughout his life. She said her father was always extremely proud of her. Her mother was described as being "55 and placid".

PERSONAL HISTORY

She was born of Australian parents, and worked as a nurse before her marriage. She still worked part-time occasionally. Her husband was a boilermaker and they had one child, a daughter aged 7. She said she was unable to have further children. Her husband drank excessively, she said, and when he did so he became violent towards her. There were marital difficulties, but there had been no formal separations.

PAST MEDICAL HISTORY

Normal pregnancy, aged 19.

Miscarriage, aged 21.

Appendicectomy, aged 21.

Laparotomy and wedge resection of ovary for abdominal pain, aged 23.

Laparoscopy, aged 24, for continuing abdominal pain.

MENTAL STATUS EXAMINATION

She used extensive facial make-up which appeared inappropriate to the fitness class setting. She had long, blonde hair, appeared quite athletic, and related in an inappropriately familiar manner. She demonstrated no evidence of marked psychological disturbance.

DIAGNOSIS

No illness diagnosis made.

Hysterical personality traits.

APPENDIX XIV(e)COMPARISON GROUP

NAME: Mrs. S.

NO.: 130

AGE: 29

Mrs. S. was attending the fitness classes.

FAMILY HISTORY

Mrs. S. was the youngest of three children. Her father had died some 2 years previously from a myocardial infarction, and her mother recently had had a cerebrovascular accident while driving her car, and had crashed into the patient's house. She had recollections of her mother always being ill, and of her father always being in church, as he was devoutly religious. Her next older sibling, a brother, had been 11 years older than her, but had been killed in a car accident 8 years previously.

PERSONAL HISTORY

She described her early life history in unremarkable terms. She was married, but there had been difficulties in her marriage. She had two children, aged 5 and 2.

She felt that the problems in her marriage were related to the fact that her husband was adopted and, apparently, had little affection as a child. In addition, she conceded that the problems had been exacerbated by her having a lesbian relationship with a boarder, whom she said they were trying to help through their involvement in a church.

She and her husband were currently receiving counselling from a

church group, and planned to attend a week-end seminar to help enhance their marriage relationship.

PAST MEDICAL AND PSYCHIATRIC HISTORY

Miscarriage.

Two normal pregnancies.

No formal psychiatric assessment, but attending church counselling.

MENTAL STATUS EXAMINATION

She was of thin build, had short, brown hair, and spectacles, and laughed nervously, especially when speaking of her sexuality.

DIAGNOSIS

No primary illness diagnosis made.

Passive-aggressive personality traits.

Homoosexuality.

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