Suicide and deliberate self-harm in the elderly: an examination of risk factors with implications for prevention.

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Abstract

Suicide and Deliberate Self-Harm in the Elderly: an examination of risk factors with implications for prevention

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Background

Suicide is a tragic ending of life and is a cause of considerable distress for family, carers and health professionals. Studying non-fatal deliberate self-harm (DSH) in older adults may provide insight into suicidal behaviour in this age group.

Methods

Descriptive and case-control studies were conducted. Data were collected on three groups:

Successful Suicides

The Leicestershire Mortality list was examined for possible suicides and their psychiatric and general hospital notes scrutinised. 85 deaths were categorised as definite or probable suicide.

DSH Group

76 older adults who had deliberately harmed themselves were interviewed. Information obtained included Beck Suicide Intent score, and Hopelessness Scale. A psychiatric interview determined an ICD 10-diagnosis (70), social contacts and networks. The LEDS-2 interview identified recent life events and chronic difficulties.

Depressed control Group

50 depressed older adults referred to mental health services who had never self-harmed were interviewed in a similar manner.

Results

11(13%) of elderly suicides occurred within one month of contact with psychiatric services, and 11 within one month of discharge from a general hospital ward. The majority of elderly who self-harmed had high suicide intent, 70% were depressed, and 29% had seen their G.P. within one week of the episode. DSH subjects frequently were living alone with an isolated life style and poor physical health. Compared to depressed controls, DSH subjects were significantly more likely to have a poorly integrated social network, were less likely to receive visits from health/social/voluntary services, and were more hopeless. The proportions of DSH subjects and depressed controls experiencing a severe life event were similar.

Conclusions

In 'high risk' patients known to services, careful planning of care and continual risk assessment may help to reduce suicides. After-care, including re-socialisation and addressing chronic physical health difficulties may also reduce risk. Improved mental health liaison services to general hospitals are required, as well as more assertive strategies to identify isolated and depressed older adults in the community.
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CHAPTER 1

INTRODUCTION

1.1 BACKGROUND

Suicide is a tragic ending of life and is a cause of considerable distress for families, carers, and health professionals. Identifying patients who are at high risk of suicide is a primary function of psychiatric services, and suicide reduction has become an important target in government health policy (Department of Health, 1992; Department of Health, 1998). There are few comprehensive studies of suicide in later life, but current evidence suggests there are certain factors associated with an increase in risk. Depression, physical illness, previous deliberate self-harm and particular recent life events are of importance.

Further research into suicide and deliberate self-harm in the elderly is urgently required. By paying particular attention to precipitants and risk factors it may be possible to identify warning signs that could alert those working with the elderly.

This thesis examines suicide and deliberate self-harm in the elderly. A model of suicide in the elderly is formulated from the research results. By comparing a group of elderly who have attempted suicide with a group of elderly depressives, risk factors are clarified. The conclusions reached are particularly pertinent to clinical practice and the assessment of suicide risk in the elderly.
1.2 SUICIDE IN THE ELDERLY

Epidemiology

Throughout the world, with very few exceptions, suicide rates are highest among the elderly (Pearson & Conwell, 1995). The rates for both sexes are highest for this age group, but substantially higher for males than females (Moscicki, 1995). Frequently the rates of suicide for persons aged 75 and over are even higher than those aged 65-74 years (Pearson & Conwell, 1996). There are no worldwide, standardised criteria for recording suicide; methods vary considerably from country to country and are influenced by culture, religion, reporting practice, and statistical systems. With this proviso, the United Kingdom (U.K.) appears to have a relatively low rate of elderly suicide compared to other nations, with a rate of 16/100,000/year for males over 65, and 6/100,000/year for females over 65 years (Shah & Ganesvaran, 1994). Hungary (with a male suicide rate of nearly 120/100,000 for men aged 65-74), Austria, France, Belgium, Switzerland, and Finland have some of the highest rates of suicide in the elderly, whereas Australia, the Netherlands, Norway and the U.K. have the lowest (Moscicki, 1995).

In recent years, however, there have been significant changes in the U.K. with a fall in the number of suicides, particularly the elderly, but an increase in suicide among young men (McClure, 2000). The most recent (1997) overall rate for males is 10.3/100,000, and for females only 2.9/100,000 (ibid). There are, however, considerable limitations to official suicide statistics (Farmer, 1988), and for a truer estimate of suicide rates many researchers combine verdicts for ‘suicide’ and ‘undetermined death’ (Health Advisory Service, 1994). Combining deaths due to suicide and undetermined causes still show a substantial decline for both men and women between 1990 and 1997 (McClure, 2000). The highest at risk group for suicide in the U.K. is now men aged 25-44 years (Charlton, 1996; McClure, 2000).
The commonest overall means of suicide in the elderly is overdose, but hanging remains the most popular method for men (Lindesay, 1986). Men generally resort to more violent methods than women (Cattell, 1988; Pitkala et al., 2000). In recent years the rates of suicide by self-poisoning in U.K. elderly have been progressively declining, primarily as a result of the reduction of deaths from barbiturates (Nowers & Irish, 1988). Barbiturate prescriptions have been falling dramatically following their withdrawal from the general market in 1985. This decline in deaths attributable to barbiturates has been partially offset by an increase in the number of suicides as a result of benzodiazepines and non-opiate analgesics (specifically paracetamol and dextropropoxyphene preparations). Suicides as a result of firearm use in the U.K. remain very low in this age group, contrary to findings in the United States and Finland where guns are far more readily obtainable (Frierson, 1991; Pitkala et al., 2000).

There has been concern that when the current cohorts of young and middle aged men reach retirement there will be an increase in elderly suicides. However Murphy and colleagues (1986) found little relationship between early and later suicide rates within birth cohorts. Female rates have always been significantly lower than male rates, but there is debate as to whether changing roles with different life experiences and responsibilities of the current younger cohort of women will influence rates in future years (Lindesay, 1991). In addition period effects such as health care, social and economic factors are believed to play a role in suicide rates.

Suicide rates for elderly immigrants from the Indian subcontinent, especially women, are substantially lower than the general population (Soni Raleigh et al., 1990). Old people in India are held in higher esteem and are more integrated into society than in Western cultures, and this may well be an important reason why suicide rates for the elderly in that country are low (Bhatia et al., 1987). These particular cultural factors could account for the low rates in
this population in the U.K. Interestingly, Burvill (1995) found that elderly migrants living in Australia had rates of suicide that were similar to their country of origin.

**Clinical Associations and risk factors**

Mental and physical illness, social isolation, and the social implications of growing old are all important in suicide in old age (Lindesay & Murphy, 1987; Shulman, 1978). Suicide in the elderly has been researched far less extensively than in younger adults, but recent years have brought an increasing wealth of literature. Understanding the epidemiology and associated factors for suicide can give us important information concerning risk factors. The psychological autopsy study is the most comprehensive methodology for examining suicide in the elderly, though important information may also be obtained from studying coroners’ records, hospital case-notes, and primary health care contacts. Epidemiological studies, examining both clinical and community populations may also help to elucidate risk factors, and help clarify their relative contributions to suicide.

**Psychological Autopsy Studies**

The four most detailed psychological autopsy studies of suicide in later life to date all indicate rates of mental disorder of around 80-90%, with affective disorder (principally unipolar depression) present in 63-87% of elderly suicides (Barraclough, 1971; Cowell et al., 1991; Henriksson et al., 1995; Harwood et al., 2001). Alcohol related disorders and personality disorders were the most frequent other diagnoses but significantly less common than in younger suicides (Conwell et al., 1991; Henriksson et al., 1995; Conwell & Brent, 1995). Harwood and colleagues (2001) found personality disorder or personality trait accentuation in 44% of elderly suicides, with anankastic or anxious traits the most frequent. Conwell and colleagues (1996) reported that the prevalence of psychotic disorders also declines with age.
Barraclough (1971) reported social isolation as an important finding in his psychological autopsy study, but Heikkinen and colleagues conducting the Finnish studies within the National Suicide Prevention Project found that although social isolation among persons who completed suicide was very common (52% of elderly female suicides, and 23% of elderly male suicides lived alone), isolation did not increase with age (Heikkinen et al., 1995; Heikkinen & Lonnqvist, 1995). However, elderly male suicides were more likely to be widowed, or single than the elderly male general population but widowhood was not more common in elderly female suicides apart from the 60-69 years of age group (Heikkinen et al., 1995). The subjective complaint of loneliness was, however, frequent in all ages (Heikkinen & Lonnqvist, 1995). In a study of suicide of all ages, Vogel and Wolfersdorf (1989) noted that breakdown in 'cardinal interpersonal relationships' such as family conflicts, deaths of relatives, and subjectively perceived loneliness were important in distinguishing elderly from younger suicides.

Physical illness also appears to be an important association (Barraclough, 1971; Heikkinen & Lonnqvist, 1995). Barraclough and colleagues (1974) were the first to emphasise that many patients have seen their general practitioner in the months prior to suicide, and in over one third there was clear evidence of a warning. The Finnish National Suicide Prevention Project has also confirmed that many elderly suicides had recent contact with medical services; 70% of suicides had contact with health care services during the month before their death (Pitkala et al., 2000). Suicidal intentions were rarely communicated in these contacts with health care professionals - only 18% had indicated suicide intent in the year before death, but 48% had indicated suicidal ideation or intent with their next of kin. Of particular concern in the Finnish study was that suicide intention were rarely inquired about by health care workers, only 16% were being treated with antidepressants and only 8% could be described as receiving a therapeutic dosage (Pitkala et al., 2000). In a recent study of 195 deaths classified as
‘probable’ suicides in individuals aged 60 and over from four counties in middle England, Harwood and colleagues (2000) found that 50% had visited their G.P. in the month before death, and 25% in the week before death. The majority of consultations before death were for physical complaints (54%), however 51% were receiving psychotropic medication (44% of these prescriptions were for antidepressants). Only 26% of the group of probable suicides had contact with psychiatric services in the year prior to death, and only 15% were actually under the care of the specialist services at the time of death.

There has been little research in the area of life events preceding suicide in the elderly. Heikkinen & Lonnqvist (1995) have interviewed the next of kin in the Finnish National Suicide Prevention Project with an instrument based upon the Recent Life Change Questionnaire of Rahe (1977). An important life event within 3 months of death was found in 73% of suicides over the age of 60 years, and 83% in suicides aged 20-59 years. Somatic illness appeared to be the most important event in elderly suicides, whereas family discord, unemployment, financial and job problems were more common in younger suicides (Heikkinen et al., 1995; Heikkinen & Lonnqvist, 1995).

Studies of Coroners and health care records
Studies of coroners’ records have revealed a close association between poor physical health and suicide. In studies of elderly suicides in London (Cattell, 1988) and Manchester (Cattell & Jolley, 1995) over half were physically unwell. There appears to be a particular association with stroke (Cattell, 1988), chronic pain and disability (Cattell, 1988; Cattell & Jolley, 1995), and carcinoma (Barraclough, 1971; Cattell, 1988). The Manchester and London studies also confirm the strong association with depression; this was untreated in the majority of cases despite high levels of contact with primary health care services (nearly 20% being seen by their general practitioner within one week of death, and over 40% within one month of death).
In the Manchester study, 31% had a history of deliberate self-harm, and in 14% of suicides this had occurred within 12 months of death.

Life events act as precipitating factors for suicide in the elderly: bereavement, retirement, recent somatic illness (particularly men), and recent hospital discharge are all important (Cattell, 1988; Heikkinen, 1995). Social isolation is also felt to be an important factor in suicide in old age; in the London study 16% of suicides had no contact with family or friends, with 9% stating loneliness as a reason for their actions in a suicide note.

**Epidemiological Studies**

Epidemiological studies have made important contributions to the knowledge on suicide and suicidal behaviour (Moscicki, 1995). In particular not only do they assist in the identification of individual risk factors, but they help to quantify the relative risk of a behaviour occurring. Harris and Barraclough (1994 & 1997) have conducted meta-analyses to determine the risk of suicide as an outcome of mental disorders and a wide range of physical health problems. The analysis was conducted from studies identified for persons of all ages. The highest risk of suicide is with functional disorders and the lowest with organic disorders, with substance misuse lying between. As could be expected, patients with a history of major depression, and bipolar disorder carried a high risk, greater than that associated with schizophrenia and personality disorder. The highest risk of all was associated with previous suicide attempts, suicidal ideation, and stupor. Many physical health problems were associated with high risk, in particular renal haemodialysis, head and neck neoplasms, epilepsy, SLE, multiple sclerosis, and neoplasms generally. Interestingly the only two disorders associated with a decreased risk were dementia and mental retardation, though there were too few studies to draw any firm conclusions concerning this finding. Stroke has also been established as being associated with a high risk of subsequent suicide (Stenager et al., 1998).
Lawrence and colleagues (2000) used record linkage to identify hospital contacts and records for residents of Western Australia aged 60 and above who had committed suicide, or attempted suicide for the period 1980-1995. They found that contact with mental health services was associated with approximately 4 times increased risk of suicide, and 6 times increased risk of self-harm compared to the general population. A history of completed suicide was strongly associated with previous self-harm. Again, depressive episode and affective psychosis were strongly associated with increased risk of suicide. Personality disorder and schizophrenia were also related to significantly increased risk in this population, but alcohol abuse or dependence was not. As a hierarchical classification system was used for determining diagnosis this could account for the lack of association with alcohol use disorders. Dementia was associated with a decreased risk of suicide, but an increased risk of attempted suicide. Unlike the conclusions of Harris & Barraclough's meta-analysis (1994) the diagnosis of cancer was associated with a decreased risk of suicide, however this could be an artefact created by studying only those in contact with mental health services.
Biological and Genetic Factors

Abnormalities in the serotinergic (5-HT, 5-hydroxytryptamine) system in suicide attempters and suicide victims have now been well established; however whether this is influenced to some extent by co-existing affective disorders is less understood (Traskman-Bendz & Mann, 2000). As well as being associated with suicidal behaviour, impaired serotinergic activity is also correlated with impulsivity, violence and aggression (ibid). Less extensive evidence also suggests the possible role of other neurotransmitter systems, in particular noradrenergic, dopaminergic and glutamatergic systems (ibid). The majority of the evidence is based upon studies consisting principally of younger adults, but Jones and colleagues (1990) have demonstrated lower concentrations of CSF 5-hydroxyindoleacetic acid (5-HIAA) and homovanillic acid (HVA) - both metabolites of 5-HT - in elderly suicidal patients compared to non-suicidal depressed controls. Unfortunately much of the work in this area fails to examine the potential effects of ageing on the 5-HT system (Conwell et al., 1995) - a particularly important factor in view of the fact that ageing alters the brain serotinergic activity (Meltzer, et al., 1998; Arora & Meltzer, 1989).

There is now a wide range of data from family, twin, and adoption studies showing that there is a genetic susceptibility to suicide (Roy et al., 2000). This susceptibility, however, is only likely to manifest itself at times of severe stress, or when suffering from mental disorder, particularly depression (ibid.). Whether the individual’s susceptibility to genetic factors is influenced by age has yet to be explored.
Table 1.2.1 A summary of factors commonly associated with an increased risk of suicide in old age (Dennis, 1998).

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<td>Social isolation</td>
<td>Recent life events</td>
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<td>Male sex</td>
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1.3 DELIBERATE SELF-HARM IN THE ELDERLY

The study of deliberate self-harm (DSH) in the elderly may provide a valuable insight into suicide, as episodes frequently involve a high degree of suicide intent (Nowers, 1993; Pierce, 1987; Merrill & Owens, 1990). In addition, the ratio of successful to unsuccessful attempted suicide in the elderly is much lower than for younger age groups, indicating the significant risk associated with deliberate self-harm in the elderly.

Epidemiology

The elderly remain under-represented in those who deliberately harm themselves with substantially lower rates than younger adults, and there have been no significant changes in the rates of deliberate self-harm (DSH) for the elderly since the mid 1970's (Hawton & Fagg, 1990; Pierce, 1987; Nowers, 1993; Dennis et al., 1990). In these studies the self-harm rates for both male and female were equivalent, contrasting with DSH sex ratios in younger adults and successful suicide in the elderly. We have recently conducted a two-stage audit in the Leicester Royal Infirmary (Dennis et al., 1997, Dennis et al., 2001); all attendances at the Accident and Emergency department with a diagnosis of deliberate self-harm were identified for a twelve-month period, and age-specific rates calculated for the Leicester conurbation. The rate for males aged 65 and over was 40/100,000/year (95% CI 17-78) and for females 31/100,000/year (95% CI 14-59). This corresponds to a peak of 399/100,000/year (95% CI 345-460) for young males (aged 15-34) and 544/100,000 per year (95% CI 482-611) for young women (Dennis et al., in preparation). Unfortunately as the numbers of elderly self-harming are so small this does affect the accuracy of the statistics from a single centre.
**Associated factors**

Merrill & Owens (1990) have replicated Kreitman’s (1976) classic comparison of the characteristics of DSH patients at different ages. Almost 20 years later the results they found were very similar to those of Kreitman. The elderly were less likely to have had previous mental health problems or episodes of self-harm, were significantly more depressed (90%), were physically unwell (two thirds), and had significantly higher intent scores. They concluded that elderly patients who attempt suicide still closely resemble those that successfully complete the act and should therefore be considered at high risk.

Hawton and Fagg (1990) monitored admissions to the General Hospital in Oxford with a diagnosis of self-injury or self-poisoning. The specialist deliberate self-harm team assessed most patients. This study of self-harm in older persons (over 55 years of age) reinforced the importance of social isolation as a critical risk factor, because the highest rates were among the divorced, single and widowed, with males at a particular disadvantage. Deliberate self-poisoning accounted for 90% of episodes of self-harm, and repetition was lower than in younger adults.

Pierce (1987) conducted a prospective 12-year study of elderly patients (over 65 years of age) that were admitted to a District General Hospital with a diagnosis of deliberate self-harm. A psychiatrist assessed all patients and a modified Beck Intent Scale was administered as part of the semi-structured interview. Depression was found to be present in 90% of the sample (few with psychotic symptoms) and 63% had significant physical illness, but only 10% had a previous history of self-harm. This group of elderly patients again displayed high suicide intent scores, and over 50% of patients received in-patient psychiatric care as a result of the episode. Repetition (8%) and subsequent suicide rates (3%) were very low.
Nowers' (1993) retrospective case note study of deliberate self-harm in the elderly found that over 90% of cases were self-poisoning, with benzodiazepines (61%) the most commonly taken drugs. Two distinct groups emerged: younger males (65-74 years) and older females (over 75 years) with very high levels of physical illness, and older males and younger females with higher rates of depression. All groups had high rates of previous psychiatric history (50%), and DSH (40%). Repetition of self-harm (17% at 1 year), and subsequent suicide (6% in 1 year) is noticeably higher than in other studies. Overall mortality at 1 year was 20%, emphasising the frail nature of this group of elderly people.

Hepple and Quinton (1997) followed up a group of 100 cases of DSH in the elderly for an average of 3.5 years. They found a repetition rate of lower than that of Nowers' at 5.4%/year, and a completed suicide rate of 1.5%/year. Overall mortality was higher than the general population with a relative risk of 2.5:1. Apart from suicide the other principal causes of excess death were cardiovascular and respiratory disease, and cancer. Those at risk of repetition were likely to be in contact with psychiatric services and suffering from persistent depression. Suicides were more likely to be divorced, have a previous psychiatric history, and to have had multiple previous episodes of self-harm. Age is generally a well-documented risk factor for subsequent suicide following self-harm (Owens et al., 1991).

Studies from other countries have generally confirmed the U.K. findings, though drug overdose is a more common method in the U.K. compared to the U.S., Australia and Spain (Draper, 1996). Studies from Australia (Draper, 1994) and the U.S. (Schmid et al., 1994) have also emphasised the possible importance of unresolved grief, financial problems, and relationship issues with family problems and interpersonal conflicts. These studies also reported higher rates of organic mental disorder.
Studies of DSH in the elderly generally confirm the belief that the profile of elderly persons who deliberately harm themselves closely resembles completed suicides. Both groups have high rates of social isolation, depression, physical illness and previous psychiatric contacts. There are however some differences. For example, in studies of DSH in the elderly, rates for male and female are approximately equal. This contrasts markedly with suicide rates. Why the discrepancy? One possible reason is that women use less violent means of suicide (mainly overdose) and are therefore more likely to be discovered. Women also visit their doctors more frequently than men (Nathanson, 1977) and therefore probably have greater access to prescribed medication to take as an overdose (Lindesay, 1986). In addition, being widowed is frequently an unexpected experience for men who expect to be outlived by their spouse; the distress related to widowhood within the contemporary cohort in older men is greater than among older women (Manton, et al., 1987). Battegay and Mullejans (1992) have also described the helplessness and despair that older men may feel when they are no longer able to work and carry out activities that are valued by society.

In summary there are particularly high rates of depression and physical illness in elderly patients who have self-harmed (Draper, 1996). Previous psychiatric history (30-55%), and previous DSH (30-40%) are common (Hepple & Quinton, 1997; Nowers, 1993; Pierce, 1987; Merrill & Owens, 1990). Unfortunately there are high rates of subsequent suicide, and they are likely to be suffering from persistent depression (Hepple & Quinton, 1997). The main U.K. studies are summarised in Table 1.3.1. One of the major problems with previous research into DSH in the elderly is the lack of suitable control populations.
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| Hepple & Quinton (1997) | Oxford, UK       | Retrospective case-note examination of 100 DSH subjects aged 65+, and then follow-up for mean 3.5 yrs including interview using GMS-AGECAT, CAPE., deaths identified from coroners & OPCS | Mean age 75.8 yrs. 67 had mental disorder. 47 depressed, 9 alcohol-problems, 7 dementia, 5 personality disorder. Intent scores: 40 high, 23 medium, 28 low. 53 significant physical illness, chronic pain 11 At follow-up 42 dead, SMR 251. Of survivors 39 still receiving psychiatric care, or had undetected psychiatric morbidity. Suicide rate 1.5%/year, repetition 5.4%/year | • Those at risk of repetition likely to in contact with psychiatric services and suffering from persistent depression  
• those at most risk male, divorced, depressed and in contact with psychiatric services  
• high risk of repetition/suicide  
• high overall mortality                                                                 |
| Merrill & Owens (1990) | Birmingham, UK   | Prospective examination of clinical details of self-poisoning patients admitted to a specialist poisons unit. 3 age groups compared: <35 (n=358), 35-64 (n=35-64), 65+ (n=58). | Elderly more commonly female (3:1), living alone (60%), have psychiatric disorder (90%), have poor physical health (66%). History of previous self-harm in the elderly of 32%, and psychiatric care in 54%. 43% of elderly have high suicide intent | • Confirms elderly have high intent, and are likely to be suffering from psychiatric disorder (particularly depression - 96%). |
| Pierce (1987)         | S. Wales, UK     | Prospective examination of clinical information on 145 patients admitted to general hospital aged 65+ who have self-harmed between 1973 and 1985. | Mean age 72, 95% self-poisoning. Female: male = 1.5:1. Men had higher suicide intent scores. 93% depressed, 2.8% demented. Alcohol related problems common (18 patients). 63% poor physical health. Nearly 50% received psychiatric in-patient care as a result of DSH. Variable follow-up period, 8.3% repeated DSH, 2.8% committed suicide | • Confirms high rates of depression and poor physical health.  
• Follow-up data unreliable                                                                                       |
Table 1.3.1 (cont.)

U.K. studies of Deliberate Self-Harm in the elderly

<table>
<thead>
<tr>
<th>Study</th>
<th>Place</th>
<th>Design</th>
<th>Main Findings</th>
<th>Comments</th>
</tr>
</thead>
</table>
| Nowers (1993) | London, UK     | Retrospective case-note study of 88 cases of DSH aged 65+ (56 female, 32 male) over six year period. | 50% widowed, 57% living alone. 90% of DSH episodes self-poisoning, 61% benzodiazepine o.d. Males more likely to be physically unwell; 75% of males aged 65-74 had evidence of chronic disabling illness. Depression documented in 68% females 65-74, 75% males > 75 years. Past psychiatric history much commoner in 65-74 year olds. 38% previous history of DSH. 6% suicide rate at 12 months, 17% repetition of DSH | - Elderly DSH bears a strong resemblance to completed suicide in the elderly  
- Two groups: young males (65-74) and older females (>75) with high rates of poor physical health and lower levels of mental illness; and younger females (65-74) and older males (>75) with higher rates of depression and better physical health  
- No standardized diagnosis  
- large numbers  
- limited data and comparison |
| Hawton & Fagg (1990) | Oxford, UK | Review of clinical information on 675 patients aged 55-64 (342) and aged 65+ (333) admitted to a general hospital with a diagnosis of DSH. | Almost equal sex ratio for elderly. 90% self-poisoning. Rates high in single and widowed. Repetition approximately 10% Ratio of social class IV and V compared to I and II = 3:1 | - limited data presented  
- raises the importance of poor physical health |
| Kreitman (1976) | Edinburgh, UK | Prospective examination of 822 episodes of DSH admitted to poisons unit. Comparisons made between age groups: 15-34 (n=526), 35-54 (n=273), 55+ (n=113). 2-3 yr follow-up for suicide | Compared to middle aged groups: more widows, physical illness common, personality and alcohol problems less common. | - limited data presented  
- raises the importance of poor physical health |
Table 1.3.1 (cont.)

U.K. studies of Deliberate Self-Harm in the elderly

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• Elderly DSH bears a strong resemblance to completed suicide in the elderly
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• No standardized diagnosis
• Large numbers
• Limited data and comparison
• Limited data presented
• Raises the importance of poor physical health

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1.4 DEPRESSION IN THE ELDERLY

Psychological autopsy studies and research examining coroners’ and hospital records of completed suicides have all shown high rates of depression, in many studies in excess of 90% (section 1.2). Depressive illness is found to be present in a similar proportion of elderly persons who have self-harmed (section 1.3). Any review of suicide, or deliberate self-harm therefore needs to consider the topic of depression in later life. A comprehensive review of depression in the elderly would be beyond the scope of the thesis, but a summary of relevant topics, in particular epidemiology, clinical presentation, aetiology, and prognosis is included.

Epidemiology

Depressive symptomatology is common in later life; the prevalence of depressive symptoms (‘dysthymia’, or ‘minor depression’) is approximately 10-15% for elderly living in the community (Morgan et al., 1987; Blazer & Williams, 1980; Lindesay et al., 1989). The prevalence of a true ‘depressive illness’ (corresponding to depressive episode in ICD-10 [WHO, 1993], or major depressive episode in DSM-IV [APA, 1994]) is approximately 3-4% with a female to male ratio of approximately 2:1 (Henderson et al., 1993; Blazer & Williams, 1980; Copeland, et al., 1987). Depressive illness is therefore much less common than depressive symptoms in community residing elderly, though minor degrees of depression, or ‘dysphoria’ may still be important. The prevalence of depressive illness in this age group is not significantly different from younger adults; men have a prevalence of between 1.8-3.2%, and women 2.0-9.3% (Boyd & Weissman, 1982).

The prevalence rates of depression in nursing homes is considerably higher than in community populations with rates varying from 6% to 50%, although studies vary considerably in design and criteria (Ames, 1994). Residential homes also have high rates of
depression (ibid.). Although one may question the quality of the environment in some institutional settings, the more likely reasons for these high rates are that pre-existing depressive illness is likely to precipitate admission to care, and the strong association between physical ill health and depressive disorder. As would be expected, the rates of depression in general hospital wards is greater than in the community, though again studies show a wide variation in prevalence depending upon the type of ward and criteria used (Pitt, 1998). Despite the variations, the approximate overall prevalence of depressive disorder for elderly patients on general hospital wards is 20% (Mather, 1997).

Depression is twice as common in general practice surgery attenders than in the community (Borson et al., 1986), but is frequently under-diagnosed (Williamson et al., 1964; Bowers et al., 1990) and under-treated (Gurland et al., 1983; MacDonald, 1986). In one study, only 4% of a community sample of depressed elderly received treatment (Copeland, et al., 1987).

**Clinical presentation**

On the whole, the presentation of depression in later life differs little from that in younger adults (Musetti et al., 1989). Traditionally, however, certain aspects of depressive illness in old age have been thought to be less typical (Post, 1972). Recent research is less conclusive, but there may be some minor differences to depression presenting at a younger age, in particular:

- more somatic symptoms (Blazer, 1986);
- more thoughts about death, and an increased preoccupation with the wish to die (Blazer, 1986);
- hypochondriasis is more frequent (Gurland, 1976);
- more biological symptoms (Brodaty, 1991);
• more delusions (Brodaty, 1991);
• and more cognitive impairment – ‘depressive pseudodementia’ (Brodaty, 1991).

A variety of other factors may also make the diagnosis difficult to make. The elderly may frequently deny a lowering of mood, or minimise the significance (Blanchard et al., 1993; Georgotas, 1983). Somatic symptoms of depression and hypochondriasis may be attributed to non-existent organic pathology, or conversely co-existing physical illness may mask symptoms of depression. Obsessional-compulsive symptoms, hysteria, and anxiety symptoms occurring ‘de novo’ in the elderly may well be an indication of underlying depressive illness (Baldwin, 1997). In addition, the emergence of problem drinking, shoplifting, or particular behavioural difficulties such as refusal of food or aggression may all indicate possible underlying depression (Baldwin, 1998).

**Aetiology**

a) Predisposing factors

Genetic influences are particularly important in the genesis of depressive disorders, but it is clear that their effects are weakened by age. Hopkinson (1964) found that the risk to first degree relatives of probands with depressive illness was 20% in young adults, and only 8% in the elderly. These findings have been confirmed by others (Mendelwicz, 1976).

Brain amine changes have been reported in depression, namely decreased serotonin, noradrenaline and dopamine and their metabolites, and increased MAO-B activity (Gelder et al., 1989). It is, however, not clear whether these changes are causal, or consequential in nature. Normal ageing is also associated with similar amine changes which has led some investigators to conclude that the elderly may be more biologically susceptible to depression (Veith & Raskind, 1988), though the neurochemical changes of depression in later life remain unclear (Philpot, 1994).
It is has been believed for some time that mild and barely discernable cerebral changes may be an important vulnerability factor in depression in later life (Post, 1968). Elderly depressives have enlarged ventricles compared to normal controls on computerised tomography (CT; Jacoby & Levy, 1980). Research with magnetic resonance imaging has confirmed the findings of CT scanning, and shown periventricular hyper intensities, and subcortical white matter lesions (Coffey et al., 1990; Zubenko et al., 1990; Churchill et al., 1991; Rabins et al., 1991). Dynamic imaging allows further exploration of possible pathology, and positron emission tomography shows decreased regional cerebral blood flow (CBF) in the left prefrontal cortex and left anterior cingulate gyrus (Bench et al., 1992). Studies with single photon emission computed tomography (SPECT) have confirmed the reduction in cerebral blood flow found in elderly depressives, particularly affecting the frontal cortex (Sackeim et al., 1990).

Some physical health problems may cause a secondary or 'symptomatic' depression. Prominent causes of organic depression include occult carcinoma (especially of the lung and pancreas), metabolic or endocrine disorder (i.e. hypothyroidism, hypercalcaemia), drugs, and viruses (Baldwin, 1998). In addition particular neurological disorders such as stroke (House, 1996) and Parkinson's disease (Baldwin & Byrne, 1989) are closely associated with depression.

There is surprisingly little work on the role of personality factors in the aetiology of depression in later life (Baldwin, 1998). Both Bergmann (1978) and Post (1972) noted that patients with predominately 'neurotic' types of depression had been anxious individuals throughout their lives. Abrams (1987) found an association between 'avoidant' and 'dependent' personality types and depression in later life. Murphy (1982) explained her
finding of the long-term lack of capacity for intimacy as being a vulnerability factor in
depression in terms of personality factors.

The role of social support and other social factors as vulnerability factors in the development
of depression in the elderly are considered in the sections 1.5 & 1.6.

b) Precipitating factors

The role of life events and chronic difficulties in precipitating depressive illness in the elderly
is presented in detail in the section 1.5.
Prognosis of depression in old age

Cole (1990) conducted a meta-analysis of the prognosis of depression in later life; this consisted of 10 studies with a total of almost 1000 patients. The prognosis was considered for two time periods: for up to 2 years, and over 2 years. For studies examining the prognosis up to 2 years, 44% remained well, 16% relapsed but with recovery, 27% were continuously ill, and 13% were classified as 'other'. The prognosis for depression after two years was not as good: 27% had remained well; 34% had relapsed but with recovery; 10% were chronically depressed; and 29% 'other'. The 'other' category includes death. A number of studies have found an excess of physical morbidity compared to the general population (Murphy, 1983; Rabins et al., 1985; Burvill et al., 1991; Kivela et al., 1991; Schoevers et al., 2000). The excess mortality does not appear to be due to death from suicide (Baldwin, 1998), but due to other causes, in particular cardiovascular disease (Murphy, 1988), and susceptibility to infection. Interestingly the prognosis of depression in later life is equivalent to, if not better than that found in younger adults (Baldwin, 1998).

Since 1990 there have been a number of other important studies examining the prognosis of depression in the elderly. These studies (see Table 1.4.1) were generally similar in their findings to the conclusions of Cole (1990). Most studies use the classification of outcome used by Post (1972) and Murphy (1983) namely: well, or completely recovered with no relapse; relapsed but currently recovered; residual symptoms, but not meeting diagnostic criteria for depression; chronically ill, i.e. persistent depression; and other.

There are a variety of factors suggested to be associated with a poorer outcome of depression:

- the presence of organic cerebral pathology (Post, 1962; Jacoby et al., 1981);
• initial, supervening, or chronically disabling severe physical health problems (Murphy, 1983; Baldwin & Jolley, 1986);
• patients with a life-long history of recurrent depression (Cole, 1983; Magni et al., 1988);
• more severe initial depression (Murphy, 1983);
• duration of depressive illness greater than two years (Post, 1986);
• slower recovery (Baldwin, 1998);
• two or more previous episodes in the last two years, or three in five years (Baldwin, 1998);
• and bereavement of a close relative/friend (Green et al., 1994);

Carefully planned follow-up and support is particularly important in improving the overall prognosis of depression. Relapse is more likely in the first two years after the initial episode (Godber et al., 1987; Flint, 1992), and without planned after-care there is likelihood that the relapse will remain undetected (Sadavoy & Reiman-Sheldon, 1983). Prophylaxis and maintenance treatment for a period of two years reduces the risk of recurrence (Old Age Depression Interest Group, 1993; Flint, 1997).
Table 1.4.1

Recent studies of the prognosis of depression in the elderly

<table>
<thead>
<tr>
<th>Study</th>
<th>Place</th>
<th>Design</th>
<th>Main Findings</th>
<th>Comments</th>
</tr>
</thead>
</table>
| Kivela et al., (1991) | Ahtari, Finland      | A prospective follow-up of 241 persons aged 60+ identified in an epidemiological study as suffering from either dysthymia (199), or major depression (42). Mean follow-up time approx. = 15 months. | Dysthymia  
Well = 40%, relapsed = 4%, continuously ill = 42%, other = 14%  
Major depression  
Well = 45%, relapsed = 12%, continuously ill = 14%, other = 28% (14% demented, 14% dead).  
In major depressed women poor outcome associated with diabetes, suicidal ideas/DSH, and agitation or retardation | - Community depressed, identified from epidemiological study  
- Outcome for major depression better than for dysthymia |
| Meats et al., (1991) | Manchester, UK       | Prospective follow-up for 1 year of 80 in-patients satisfying Feighner criteria for depression (56 aged 65+, 24 < 65 yrs.). | Elderly  
68% well, relapsed 12.5%, 3.6% continuously ill, 16% dead  
Younger adults  
50% well, 12.5% relapsed, 29.2% continuously ill, 8% dead | - Very good prognosis for elderly, but vigorously treated in-patient population, with good after-care  
- Prognosis of elderly better than younger adults  
- No clear association between a variety of clinical variables and outcome, but study lacks power |
| Burvill et al., (1991) | Perth, Western Australia | Prospective 1 year follow-up of 103 psychiatric in-patients (aged 60+) diagnosed as suffering DSM III major depression | 47% well, 18% relapsed, 13% 'depressive invalidism', 11% continuously ill, 11% dead | |
### Table 1.4.1 (continued)

**Recent studies of the prognosis of depression in the elderly**

<table>
<thead>
<tr>
<th>Authors</th>
<th>Location</th>
<th>Detailed Description</th>
<th>Summary</th>
</tr>
</thead>
</table>
| Green et al., 1994 | Liverpool, U.K.   | 3 year follow-up of 123 elderly (aged 65+) identified from epidemiological study as suffering from AGECAT diagnosis of depression | **At 3 years**
|                  |                   | 40% recovered, 27% still depressed, 20% dead, 13% not available for interview         | **• Recurrent or persistent depression associated with bereavement of close figure, loneliness and life dissatisfaction and chronic pain** |
| Brodaty et al., 1993 | Sydney, Australia | 242 consecutive referrals to tertiary psychiatry service aged 18+ satisfying DSM III criteria for major depression followed up for 2-4 years | **Aged 60+ at 1 year**
|                  |                   | 25% well, 20% relapsed, 38% residual symptoms, 15% chronic depression, 2% suicide  | **• Elderly similar outcome to other age groups** |
|                  |                   | **Aged 60+ at second follow-up**                                                      | **• Early onset, recurrence, and poor pre-morbid personality associated with worse prognosis** |
|                  |                   | 34% well, 23% relapsed, 20% residual symptoms, 7% chronic depression, 5% suicide, 12% dead natural causes. | **• Authors emphasis the need for assertive treatment** |
1.5 LIFE EVENTS AND MENTAL DISORDER

Theories of Life Events

There has been an understanding for many years that events can have an important impact on the psychological well-being of individuals. Life events can be seen as stressors, which, by requiring adaptation and making demands on resources, cause or trigger psychological distress and onset or relapse of psychiatric illness (Creed, 1993). Cooke & Hole (1983) concluded that in a third of psychiatric cases stressful life events have a causative role. The work of Brown & Harris has been particularly influential in exploring the role of life events and difficulties in the aetiology of mental disorder, especially in depression in younger women (Brown & Harris, 1978), schizophrenia (Brown & Birley, 1968; Birley & Brown, 1970) and anxiety (Finlay-Jones & Brown, 1981). A pioneering study by Murphy (1982) extended life events research into the psychiatry of later life.

It is not just severe life events (discrete occurrences such as separation, bereavement, physical illness etc.) that may have an impact on mental health. Other stressors such as chronic difficulties (such as financial and family problems; Brown & Harris, 1978), or even daily hassles (minor irritating and frustrating occurrences such as arguments, or being kept waiting; Kanner et al., 1981) may be significant.

Apart from the stress paradigm, the effects of life events on individuals may be seen from a life span developmental perspective (Davies, 1993). Events may actually signify life transitions, and could be considered as a normal part of a person's development rather than crisis (Murrell et al., 1988). If events are seen in this way they are more or less predictable, and a certain amount of anticipatory adjustment can take place. Events, therefore, that can be perceived as usual experiences for a person's particular developmental stage. Events such as children leaving home, birth of grandchildren, retirement, death of husband, would have a
different effect from life events which may be less expected such as a violent death, loss of child, etc. The key factors in predicting outcome may therefore be whether events are normal experiences for that individual's time in life and stage of development ('on-time'), or non-normative ('off-time') (Neugarten, 1970; Brim & Ryff, 1980). The 'social clock' theory predicts that non-normative events that are 'off-time' will be the most stressful, and will require the most re-adjustment (Davies, 1993).

The type of event, its developmental and social context, the demand on physical and psychological resources in relation to the person's own resources will determine the level of stress caused by an event for an individual (Orrell & Davies, 1994). The mechanism for the action of life events on the individual can therefore be influenced by a large number of factors summarized in the table 1.5.1.

There are many factors, therefore, that affect the psychological outcome of events on individuals, and it may not be a single factor, but a combination, or interaction of effects that need to be considered in a causal model for the role of life events in the development of mental health problems.
Table 1.5.1

Factors influencing the effects of life events

<table>
<thead>
<tr>
<th>Factor</th>
<th>Source(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree of threat (Brown &amp; Harris, 1978)</td>
<td></td>
</tr>
<tr>
<td>Vulnerability factors in the patient’s background (Brown &amp; Harris, 1978)</td>
<td></td>
</tr>
<tr>
<td>The time at which the effect of the event is measured (Brown &amp; Harris, 1978)</td>
<td></td>
</tr>
<tr>
<td>The patient’s self-esteem and cognitions (Brown et al., 1992; Murrell, 1991; Lam et al., 1987)</td>
<td></td>
</tr>
<tr>
<td>Person’s stage of development (Neugerten, 1970; Rook et al., 1989)</td>
<td></td>
</tr>
<tr>
<td>Co-existing chronic life difficulties leading to raised ‘adversity’ (Davies et al., 1988; Murphy, 1982)</td>
<td></td>
</tr>
<tr>
<td>The individual’s evaluation of the significance of an event (Brewin, 1990)</td>
<td></td>
</tr>
<tr>
<td>Dispositional resiliency and personality factors (Wieber &amp; Williams, 1992; McCrae &amp; Costa, 1986)</td>
<td></td>
</tr>
<tr>
<td>Coping strategies (Brewin, 1990; Zautro &amp; Wrabetz, 1991)</td>
<td></td>
</tr>
<tr>
<td>Presence or absence of social support (Prince et al., 1997; Brewin, 1990)</td>
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<tr>
<td>Genetic factors (Plomin et al., 1990)</td>
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</tbody>
</table>
Methodology of life events research

In order to show that life events can lead to mental health problems certain criteria must be fulfilled (Cooke, 1986; Maes et al., 1987; Orrell & Davies, 1994). These are:

- a clear statistical association between life events and mental disorder;
- evidence that events lead to illness, and not vice versa;
- satisfactory theoretical explanation for life events specifically leading to disorder; and
- the association between life events and illness replicated in different populations.

There are two main types of life events methodology, checklists, and more probing interviews. Examples of checklists are the Schedule of Recent Experiences (SRE; Holmes & Rahe, 1967) and the life events inventory of Tennant and Andrews (1976). It is widely accepted that there are problems with the checklist approach. Creed (1993) highlighted that checklists often have ambiguous questions, often leaving the subject to decide what is a 'serious illness', or 'family member'. In addition studies using this methodology had problems dating events in relation to episodes of illness, and have not taken into account whether events occurred independently of the subject's psychological state (Orrell & Davies, 1994). Since there is no attempt to prompt recall (or check accuracy of replies) checklists will inevitably also fail to identify events; Klein & Rubovits (1987) reported that questionnaires may miss as many as 36% of events. Inter-informant reliability is low (Neugebauer, 1983), and they are biased towards recording life events more frequently experienced by young people. A further problem with checklists is that they confound acute life events with chronic difficulties (Orrell & Davies, 1994).
Alternatives to the checklists are more probing semi-structured interview techniques, designed specifically to identify life events in a wide range of domains. Examples of these types of instruments are the Paykel Inventory (Paykel et al., 1969) and the Life Events and Difficulties Schedule devised by Brown and Harris (1978). The Life Events and Difficulties Schedule (LEDS) has become widely used in life events research, and has many advantages. An independent panel of raters determine the degree of threat to the individual according to a carefully designed scale. The panel makes these ratings after considering detailed contextual information obtained during the interview, but without the knowledge of the subject's emotional reaction to the event or difficulty. The raters are guided in their judgement by a highly detailed dictionary of ratings compiled by Brown, Harris and colleagues at Bedford College. This dictionary incorporates ratings in all areas of life experiences and the events presented have been collated from many research projects over the years. In addition the rating of events includes a category for 'independence' from any possible contaminating psychiatric disorder, either real or hypothetical. The method of consensus rating enables an objective measure of threat to be made without bias reporting from the subject, or interviewer expectation. Intra-informant agreement on event occurrence is around 80%, and even raters with only brief training can reach acceptable reliability for rating contextual threat (Tennant, 1979). Refinement with years of experience has led to the incorporation of new dimensions within the LEDS, in particular for severe life events, namely loss, danger, humiliation and entrapment (Brown et al., 1995).

Since Murphy (1982) first adapted the LEDS for use in the elderly, other researchers have found the LEDS suited to use in this age group, and its reliability appears as good for older people as with younger samples (Wilkinson et al., 1986). One problem with using the LEDS in the elderly may be the difficulty of assuming that the severity of threat is generalisable across subjects. As previously discussed the severity of an event may be dependent on the
stages of an individual's life (Neugarten, 1970). Young raters may not accurately appraise the
different levels of late life threat (Davies, 1993). To explore these possibilities Davies &
Hulligan (1985) examined the ratings by a group of women raters given to events from LEDS
interviews with older adults, they found no significant age differences apart from that older
women raters perceived death events as less threatening than younger women. Wilkinson et
al. (1985) examined subjects' perception of chronic difficulties and events, and found no
differences with age. Davies et al. (1987) also found no differences with age, the ratings of
threat by young and old groups of subjects agreed closely with a trained panel of raters,
whether or not contextual information was supplied. It would be justifiable to conclude that
the LEDS is both reliable and robust as a technique for examining the significance of life
events in the elderly. However, there is some evidence that a rater's stage in the life cycle
does have some influence on the severity of threat at least for deaths. There is also a high
reliability between elderly subjects recall of severe events and those of relatives/carers
(Murphy, 1982).

**Events in the Elderly**

The individual's response to life events may be significantly influenced by a variety of factors
(see previous), in particular age. They may be particularly vulnerable to 'non-normative'
events (Neugarten, 1970) because of their physically frailty, though life long experiences may
have refined their coping resources and improved their resilience (Orrell & Davies, 1994).
Many events viewed as particularly traumatic at younger ages can be viewed as normative life
transitions in the elderly, and some loss events as expected (Neugarten, 1970). An elderly
woman may be expected to adapt better to widowhood than a younger woman or elderly man;
widowhood is a much more expected and 'normal' life experience for this group in our
modern society. Within the elderly, however, they may be some people more vulnerable from the effects of life events, in particular those whose coping resources have been diminished by chronic adversity such as deprivation and poor health.

Studies using event checklists have found that the elderly generally report fewer life events than younger age groups, though this may be because checklist have been designed with younger populations in mind (Orrell & Davies, 1994). As could be expected, however, the elderly report more loss events such as death and declining health (Marsuda & Holmes, 1978; Lazarus & Delongis, 1984; Hughes et al., 1988).

When using LEDS type methodology in studies of depression, researchers have found a twelve-month prevalence of ‘severe’ life events in normal ‘control’ community populations of between 19 and 40% (Murphy, 1982; Lam et al., 1987; Emmerson et al., 1989; Evans & Katona, 1993; Orrell & Bebbington, 1995). ‘Major’ life difficulties are found in 7 to 29% of ‘normal’ elderly populations (Murphy, 1982; Lam et al., 1987; Emmerson et al., 1989; Evans & Katona, 1993). The lowest rates of both events and difficulties were found in Emmerson and colleagues’ study of depression in Western Australia, a significantly more affluent population than the other studies involving inner city London populations. In all studies health problems were the commonest major difficulty. In Davies’ (1993) study of life events in a British rural population, ‘severe’ life events (i.e. with significant long-term contextual threat) were found to have occurred in only 5.5% of subjects in the twelve months prior to interview. This is clearly much lower than found in ‘normal’ elderly populations in inner city London.
Life Events, difficulties, and depression in the Elderly

There are four studies of note using the LEDS to examine the role of severe life events in the onset of depression; these are summarised in Table 1.5.2. There is clearly an excess of life events in the 12 months preceding an episode of depression compared to the normal population (Murphy, 1982; Lam et al., 1987; Evans & Katona, 1993). In particular, the excess of life events appears to be as a result of an increase in life events in the 3 month period before the development of a depressive episode (Emmerson et al., 1989). Of the vulnerability factors originally described by Brown & Harris (1978) in their study of depression in young women, only the lack of a confiding relationship appears to be relevant to the elderly (Murphy, 1982; Evans & Katona, 1993).
<table>
<thead>
<tr>
<th>Study</th>
<th>Design</th>
<th>Life Events</th>
<th>Difficulties</th>
<th>Vulnerability Factors</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Murphy, 1982</td>
<td>UK urban (London) Case control Aged 65 or &gt; 119 depressed subjects (100 psychiatric patients, 19 identified from community screening) satisfying Feighner criteria compared with 168 age sex matched non-depressed community controls Organic disorder excluded</td>
<td>48% depressed group experienced severe event compared to 23% of 'normals' (P&lt;0.001) in 12 months before onset of depression or interview. Events principally physical illness of subject, or bereavement</td>
<td>42% of depressed had major difficulty compared with 19% of 'normals' (P&lt;0.001) 39% of depressed group had chronic poor health compared to 26% of 'normals' (P&lt;0.05)</td>
<td>Lack of confiding relationship</td>
<td>Combination of severe event and major difficulty increases risk of depression</td>
</tr>
<tr>
<td>Lam et al., 1987</td>
<td>UK urban (London) Case Control Aged 65 or &gt; 23 depressed psychiatric patients satisfying RDC criteria for depression compared with 23 non-depressed community controls Cognitively impaired excluded</td>
<td>52% of depressed patients, and 26% of controls experienced at least one severe life event in 12 months prior to onset of depression or interview</td>
<td>39% of depressed patients and 26% of controls experienced at least one major difficulty (N.S.)</td>
<td>-</td>
<td>Small numbers i.e. poor power. Elderly depressed more negative cognitions than controls.</td>
</tr>
</tbody>
</table>
Table 1.5.2 (cont).

Studies of Life Events and Difficulties in depression in the elderly using LEDS methodology

<table>
<thead>
<tr>
<th>Study</th>
<th>Design</th>
<th>Life Events</th>
<th>Difficulties</th>
<th>Vulnerability Factors</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emmerson et al., 1989</td>
<td>Australia urban (Perth)</td>
<td>24% depressed group compared to 7% of 'controls' reported at least one severe life event in 3 months before onset of depression or interview (P&lt;0.01). For 12 months results were 38% and 19% respectively (P&lt;0.01)</td>
<td>15% of depressed patients had major difficulty compared with 7% of community controls (N.S.)</td>
<td>Lack of confiding relationship significant only for males</td>
<td>Difference between depressed and control groups was as a result of excess of life events in 3 months preceding depression only</td>
</tr>
<tr>
<td>Evans &amp; Katona, 1993</td>
<td>UK urban (London)</td>
<td>51% of depression cases compared to 31% of non-cases had experienced major life event in 12 months preceding onset of symptoms (P&lt;0.05)</td>
<td>49% of depression cases compared to 29% of non-cases had chronic life difficulties (P&lt;0.05)</td>
<td>Lack of confiding relationship significant for depressed compared to non-cases (P&lt;0.05).</td>
<td>The effect of life events and chronic difficulties on depression was only apparent in subjects without a confiding relationship</td>
</tr>
</tbody>
</table>
The role of chronic difficulties in the aetiology of depression in later life appears less clear — Murphy (1982) and Evans & Katona (1993) found a significant excess of major difficulties in their depressed subjects, especially chronic poor health (Murphy, 1982). Lam and colleagues (1987), and Emmerson and colleagues (1989) failed to show a significant excess of chronic difficulties in their depressed patients. However, there were higher rates of difficulties in the depressed subjects compared to controls in both studies; in the former the group sizes were small, possibly incurring a type II error, and in the latter rates of difficulties were generally much lower than other studies.

In exploring the role of life events in late life depression in the Gospal Oak project, Prince and colleagues (1997) utilized the List of Threatening Events (LTE; Brugha et al., 1985). Although this is a checklist, it was designed to identify events carrying significant long-term threat and therefore may be more specific for depression than other checklists; it has been validated against the LEDS in younger patients (Brugha & Cragg, 1990). This study confirmed the association between severe life events and depression in the elderly, in particular for serious illness to the subject, bereavement, and theft. For serious illness to the subject and bereavement the excess of risk was concentrated to the 6 month period before the onset of depression, for theft and financial crisis the risk was throughout the 2 year study period.

The conclusion from life events research in the elderly is that depressed elderly have more recent severe life events than non-depressed. However, there a number of other important factors that may be influential in determining whether an individual would become depressed following a severe life event, in particular: negative cognition (Lam et al., 1987), low self-esteem (Murrell et al., 1991; Brown et al., 1992), chronic health difficulties (Murphy, 1982),
lack of social support (Prince et al., 1997; Krause et al., 1990), poor coping resources (Zautro & Wrabetz, 1991) and personality (McCrae & Costa, 1986).

**Deliberate self-harm**

It is well known that deliberate self-harm follows significantly threatening life events, this fact has been reported in descriptive studies (Morgan et al., 1975), and in studies utilising self-report questionnaires (Cochrane & Robertson, 1973; O'Brien & Farmer, 1980; Isherwood et al., 1982). There are, however, very few studies using more reliable research techniques.

Paykel et al. (1975) using life events methodology described previously (i.e. semi-structured technique to identify the presence of life events from a checklist), studied life events in 'suicide attempters' and compared them to matched groups of community controls and depressed patients. This study was restricted to those aged 18-65 years, and 57% were under 30 years of age and 70% female. Rates of life events in the 'suicide attempters' were four times greater than the community controls, and one and a half times greater than the depressed group. A substantial peak in life events was found in the 'suicide attempters' for the month prior to the self-harm episode, suggesting a link between the event and behaviour. The excess of life events for the self-harm group over the community sample was for most types of event (serious arguments with spouse; having a new person in the home; serious illness of family member; serious personal physical illness; and court appearances). Compared to those in the depressed group only three events were reported significantly more frequently: serious arguments with spouse; serious illness of family member; and engagement. Unlike depression, the self-harm group had both entrances, and exits from their social field, whereas the depressed group had an excess of exits only compared to the
The types of events experienced excessively by DSH subjects were, on the whole, clearly undesirable and threatening.

Farmer & Creed (1989) examined life events in a group of 82 self-poisoning subjects using the Life Events and Difficulties schedule of Brown & Harris. They only examined persons aged 17-35, principally because they were interested in comparing depressed and non-depressed self-poisoning subjects - at this age there are approximately equal numbers of depressed and non-depressed (Urwin & Gibbons, 1979). They found similar rates of severe events in both the depressed and the non-depressed self-poisoning subjects. The most common events were interaction changes (usually reduced contact with a close relative, boy/girlfriend, or confidant) and events involving contact with the police or attendance at court. Significantly more of the depressed self-poisoners had experienced chronic difficulties (severe or of any severity) than the non-depressed. The authors then went on to compare their results with a community comparison group that had been recruited from a previous study. They found that the self-poisoning group had a rate of severe life events - almost five times greater than the community comparison group over a period of 38 weeks (136 per 100 persons versus 29 per 100 persons). The self-poisoning patients had a raised rate of severe events throughout the period studied compared to the community group, but with a marked peak in the three weeks before the overdose. The majority of these events were rated as being independent of any possible control by the subject. Greater numbers of life events were found in the self-poisoning group for those with high levels of extrapunitiveness (recorded on the Hostility and Direction of Hostility Questionnaire).

De Vanna and colleagues (1990) examined the role of both life events and difficulties in deliberate self-harm using the LEDS methodology, and in addition explored the relationship between events and vulnerability factors. Fifty adult suicide attempters were compared to an
equivalent number of age-matched controls. Events of all severity were no more common in the self-harm group for the year before the episode/interview, but when comparing severe events only, these were found to be nearly twice as common in the DSH group (44% versus 24%). However when considering independent events only, again there was no difference between groups. The implication, therefore, is that the excess of life events in the DSH group was brought about as a consequence of the individual's behaviour or health status. Difficulties were found to be significantly more common in the DSH group, in particular difficulties relating to arguments with relatives, and the lack of a social relationship. They also identified three factors, which in the presence of at least one severe event or major difficulty, appeared to indicate vulnerability. These vulnerability factors were: early loss, or separation from one or both parents; absence of paid employment; and absence of living in a nuclear family unit.

1.6 SOCIAL SUPPORT AND NETWORKS

A shift in social gerontology research took place in the 1980s, concentrating on social support networks rather than merely studying the individuals contact with a range of other persons. Networks are 'identified social relationships that surround a person, their characteristics, and the individual's perceptions of them' (Bowling, 1994). Social support can be defined as 'the interactive process in which emotional, instrumental, or financial aid is obtained from one's social network (ibid).

Support networks tend to vary in size, but the average network for elderly people is around five to seven (Wenger, 1984; Stephens et al., 1978). Networks, even in the elderly remain relatively stable over time, though the exception to this is married men who experience
widowhood (Wenger, 1986). Loss from networks is principally from death and disability, with an average change of +/- 2 persons over 4 years (Wenger, 1994a). Typically networks comprise of a family core, and may also include friends, neighbours, home helps and other key individuals with regular contact. Particular relationships are generally associated with different roles. Expectations of particular individuals are generally hierarchical; spouses are top of the hierarchy, followed by other first degree relatives, then friends, neighbours and finally extended family. These expectations however are influenced by culture, gender, health, and distance (Wenger, 1994a). Elderly women's social networks tend to be slightly larger than men's. Families provide the most help with activities of daily living and the most support for elderly people (Bowling, 1994). For sufferers of dementia the family are particularly important, whereas contact with friends, neighbours and community groups is reduced (Wenger, 1994b). Friends appear to be particularly important for providing emotional support, and have an important role in maintaining the individuals self-esteem (Bowling, 1991). The presence of a confidant has also been shown to be of particularly important for elderly people; Murphy (1982) showed that lacking a confidant was a risk factor for depression. Women are more likely to have confidants outside the household than men (Fischer & Phillips, 1982). Men who are married are most likely to name their wives as the main confidant - widowhood could therefore make them particularly vulnerable.

Wenger's study of social networks in elderly people has identified five different types of network representing different lifestyles; they have different strengths and weaknesses and have different risk implications (Wenger, 1994c, 1997). These networks are described in detail in Appendix 5.

There is now a substantial body of literature showing that poor social support has a detrimental effect on health status (House et al., 1988). The relationship between social
support and health appears to be important for both physical and mental health, but with particularly strong links to the psychological well being of the elderly person.

A poor social network is associated with premature death from cardiovascular disease in middle aged men (Olsen, 1992), excess mortality following widowhood (Helsing et al., 1991), and poorer levels of functioning in the chronically disabled (Shelbourne et al., 1992). In addition the size of social network has been shown to influence functional recovery following stroke (Colantonio et al., 1993). Also social activity and presence of caregiver reduce the risk of institutionalisation following stroke (Steinach, 1992; Glazebrook et al., 1994). Studies of immune and neuroendocrine function suggest that social environment may have indirect effects on disease susceptibility (Borysenko, 1984; Kiecolt-Glaser et al, 1985).

In the absence of social support the risk of social isolation (an objective state or having limited contact with other people) and loneliness (subjective negative emotion associated with perceived isolation) increases. Social isolation and loneliness in turn have been linked with depression in the elderly; this relationship has been particularly well explored for loneliness (Wenger, 1996). Palinkas and colleagues (1990) found that depressive symptoms as measured by the Beck Depression Inventory are inversely associated with the size of social network. Green and colleagues (1994) found that relapse or continuing depression is associated with recent bereavement, loneliness, and life dissatisfaction. Perceived quality and accessibility of support may also be a particularly important factor associated with psychological health (Bowling, 1994). Research has shown that perceived poor social support can lead to the emergence of neurotic symptoms (Henderson, 1981). A study of 177 inpatients in North Carolina reported that the perception of social support was the strongest predictor of outcome of depressive illness. Wenger (1994d) has shown that support networks for people
with dementia are substantially different to community controls, with dependence on family and spouses, and reduced contact with friends, neighbours and voluntary groups.

There are considerable difficulties in interpreting much of the research concerning social networks. Many of the studies exploring the relationship between networks and health lack control for other important variables such as physical risk factors in the studies of chronic disease, and personality, socio-economic status, education, and differential exposure to life events for studies of mental health (Bowling, 1994; Murphy, 1982). Studies, which have examined the influence of a variety of factors in psychiatric morbidity, have shown that the associations with social support are less significant than other factors, particularly physical health (Bowling, 1992). However it may well be that social networks exert their principal effects through interaction with other important illness related factors; the buffering theory suggests that when people are exposed to stressful life events robust social networks reduce the detrimental physical and mental health consequences. Conversely less integrated and developed support networks may place the individual at greater risk (Wenger, 1997).

Durkheim's theories of suicide were based upon the concept of social integration (1951). Essentially social integration can be defined in two dimensions: the relation between the individual and community, and the relation of the community to the individual (i.e. the community's control over the individual). Durkheim went on to describe four conditions where the equilibrium between community and individual are disturbed leading to an increased vulnerability to suicide. In altruistic suicide the individual's sense of communality is too strong leading the individual to sacrifice themselves for the sake of a group, in fatalistic suicide the community's control over the individual is too strong, for example in a mass cult suicide act. When the individual loses their sense of integration within the community egotistic suicide may result, and when the community is in a state of flux and upheaval
control over the individual becomes weakened leading to risk of an anomie suicide. Durkheim suggested that as a general rule the frequency of suicide varies inversely with degree of integration in the community of which the individual is a part. Researchers have recently tried to substitute the concept of integration with social support and social network, but without establishing links with the moral climate of modern societies (Bille-Brahe, 2000).

Exploring the individual’s perception of the support they are receiving from different sectors of the community, as well as elucidating the support networks may be particularly important in suicide research. It has been well established in psychological autopsy studies and other suicide research (see section 1.2) that social isolation is an important correlate of suicide in later life.
CHAPTER 2

METHODS

2.1 OBJECTIVES OF THE PROJECT

1. To examine socio-demographic, psychiatric and physical health, life events and situational factors involved in deliberate self-harm in the elderly.

2. To determine 'risk factors' that might help differentiate older adults suffering from depression most at risk of self-harm and suicide.

3. By examining deliberate self-harm propose a theoretical model for suicidal behaviour in the elderly with particular reference to preventative strategies.

To achieve these objectives, descriptive and case-control studies were performed, with data collected on three groups of elderly persons:

1. successful suicides;
2. patients who have deliberately harmed themselves;
3. a 'control' group of elderly suffering from depression.
The hypotheses were:

- Deliberate self-harm in the elderly is essentially failed suicide: the DSH group having similar demographic characteristics to the suicides; having high intent scores on the Suicide Intent Scale; and usually self-harming with the motive of killing themselves.
- Depression is invariably present in elderly persons who harm themselves.
- Hopelessness and pessimism are more common and intense in the self-harm group than the depressed group.
- The self-harm group are more socially isolated, with a restricted social network compared to the depressives, and perceive themselves as being poorly supported.
- The self-harm group have higher rates of severely threatening life events than the depressives, in particular in the month preceding the episode of DSH.

2.2 SUICIDES

Leicestershire is the largest Health District in England, with a population in excess of 900,000. Mental Health Services are provided by a single NHS Trust enabling a substantial sample to be examined retrospectively over a comparatively short period of time, and facilitating the collection of psychiatric records.

The Leicestershire mortality list was examined to identify potential deaths resulting from suicide for persons aged 15 and above for the period 1988-1993. This involved scrutinising deaths recorded by coroners as: suicide, open, accidental, misadventure, self-neglect, or resulting from alcohol or drug addiction. In addition to extracting data on the basis of the coroner’s verdict, a more extensive search based on text strings was carried out. The Leicestershire mortality list contains information prepared from Coroners’ records,
demographic details, a summary of important clinical information, and the method and circumstances surrounding death. Importantly the mortality list also included information on deaths of Leicestershire residents who died outside the county boundary.

From the details recorded in the mortality list, deaths were then coded into categories relating to the cause, and probability of suicide. A search was conducted for psychiatric case records, these were scrutinised to provide both qualitative, in the form of case summaries, and quantitative data. Details about episodes of deliberate self-harm (DSH), diagnosis, treatment, date of last contact, nature of last contact, and reasons for case closure were recorded. When available primary health care and District General Hospital records were also examined (for those aged 65 and over).

A review of the mortality list information was then conducted considering any further clinical information obtained from medical records. Deaths were then categorised into four discrete groups ('definite suicide', 'probable suicide', 'suicide unlikely', and 'definitely not suicide') by a local panel of experts (Dr M.S. Dennis, Dr H. Andrews, and Dr S. Read). Suicide rates were then determined based upon definite and probable suicides using 1991 OPCS Census data. As Mortality Statistics do not include details of ethnicity, validated name mapping techniques (Nam Pehchan, 1996) were used to identify those of South-Asian origin. Rurality was defined by postcode, with market towns classified as urban.

Case summaries were structured in a uniform manner, assisting in the process of thematic analysis and enabling content analysis to be undertaken utilising software designed for this purpose (Strix, 1985).
2.3 DELIBERATE SELF-HARM PATIENTS

Older adults (aged 65 and over) who had deliberately harmed themselves were prospectively studied. They were identified as referrals to the Leicester Deliberate Self-Harm and Liaison Psychiatry services (DSH Team). Fortunately very few elderly patients are discharged home directly from A&E departments (Owens, Dennis, Jones et al 1991; Dennis et al., 1997), and those that are have been interviewed by the DSH Team or on-call senior house officer in psychiatry. Deliberate self-harm was defined as 'an intentional self-injury (non fatal) or deliberate ingestion of more than a prescribed amount of medical substances, or deliberate ingestion of substances never intended for human consumption' (Morgan 1979).

Immediately following their routine clinical assessment by the DSH team, the DSH team nurse specialist asked the patient whether they would be prepared to take part in the study. If they respond in the affirmative, the team member either:

1. Obtained informed written consent and gave the patient an information sheet (Appendix 1). They then administered the: Beck Depression (BDI; Beck et al., 1979); Hopelessness Scale (BHS; Beck et al., 1988); Suicide Intent scale (Beck et al., 1974); and the 15 item Geriatric Depression Scale (GDS-15; Sheikh & Yesavage 1986). These scales appear in Appendix 3

or,

2. Contacted the research psychiatrist (myself) so that the patient was interviewed within the next few days if it was felt more appropriate not to proceed with further questioning at that time.
Patients were then interviewed by myself in a semi-structured manner utilising a number of rating scales. I have many years' research experience, and hold an Honorary Consultant Psychiatrist position. Before conducting the interview written, informed consent was obtained if this had not already been done (in scenario 2, above) and the subject given an information sheet (Appendix 1). An ICD 10 psychiatric diagnosis was recorded, and cognitive status assessed using Folstein's Mini-mental State Examination (MMSE; 1975). If not already done, the BDI, BHS, GDS-15, and Suicide Intent Scale were administered. A detailed history of the events surrounding the attempt was recorded, along with medical and psychiatric history, current active medical problems, and contacts with the primary health care services (Appendix 2). In addition the motivational reasons for the episode of deliberate self-harm were recorded according to a list based upon the research of Bancroft and Hawton (Bancroft et al., 1979; Hawton et al., 1982; Appendix 2). Levels of social support were also assessed in a standardised manner utilising an instrument designed specifically for the study (Social Contact Schedule; SCS; Appendix 4). A social network type was determined from the information obtained in the clinical history, SCS, and the subsequent LEDS interview (see below). The classification of social network used for the study was the same as that described by Wenger (1997; Appendix 5). In addition the subject was asked to rate their satisfaction of the level of support they were receiving form the statutory and voluntary agencies, and from family and friends on a visual analogue scale (Appendix 4). If the individual was unable to understand the concept of the scale, they were asked to rate their satisfaction out of a maximum score of 10. The psychiatrist's rating of the subject's personality was also recorded according to the Prince Henry Hospital 5 point scale (Appendix 6; Brodaty et al., 1993).

On-call psychiatry senior house officers' covering the A&E department out of normal working hours were also informed about the study. If, during their on-call duties, they
assessed any elderly persons who had self-harmed, they were requested to obtain verbal consent from the patient to be approached by myself. I then arranged to see the patient as soon as practicable, and after obtaining written consent assessed the patient in the manner outlined previously.

At a further interview 1-2 weeks following the DSH event, environmental effects were studied by the Life Events and Difficulty Schedule (LEDS-2, Bifulco et al., 1989). Either an experienced G grade community psychiatric nurse, or a research associate conducted this interview. The reference point for life events was the date of DSH, rather than onset of concurrent depression, and events and difficulties were recorded for six months prior to this date.

All life events and difficulties reported by the DSH subjects were rated at consensus meetings by the research team. The research psychiatrist (myself), community psychiatric nurse (Caroline Molloy), and research associate (Penny Wakefield) had all been trained by Tirril Harris at Bedford Square in London in the use of the Life Events and Difficulties Schedule. At the consensus meetings Dr Harry Andrews joined the team. Dr Andrews had also received training in the use of the LEDS, and had the experience of being previously involved in life events' research. Dr Andrews, and either Caroline Molloy or Penny Wakefield was blind to the subject's group. All life events were rated on a four-point severity scale developed by Brown & Harris with reference to their life event dictionary and accompanying supplementary manual for older adults. Events were also rated according to: focus (depending on whether the events happened to the subject, or another person); independence (whether the event was independent, or possibly related to the presence of mental disorder); and a measure of possible loss, humiliation and entrapment that may accompany a severely threatening event. If, on rare occasions the group could not reach a clear consensus, or there was no guidance from the events manuals, then the event was summarised and T Harris was
asked to provide a rating. Life difficulties were rated on a six-point scale, which was collapsed into major and minor difficulties.

2.4 DEPRESSED COMPARISON GROUP.

The comparison group consisted of older adults referred to local community mental health teams for the elderly with an ICD 10 diagnosis of either F 32 (Depressive episode), F 33 (Recurrent depressive disorder) or F 31 (Bipolar affective disorder). Exclusion criteria for this group were as follows:

- Previous DSH
- Non-English speaking
- MMSE less than 24
- Non-consent

When a member of the community mental health team or consultant psychiatrist for the elderly saw a new patient who satisfied the inclusion criteria they would give a brief explanation of the study and then ask permission for the person to be approached by the research psychiatrist. If the patient gave permission, then I made an arrangement to see the patient in his or her own home, or in hospital depending upon their location. Before interviewing the patient, the nature and purpose of the study was explained, the patient given an information sheet and written consent obtained (Appendix 1).

I conducted a standard psychiatric interview in order to confirm the presence of depression, and categorised this in terms of an ICD 10 diagnosis. The patient had to be still suffering from a depressive episode (F 31-33) to be included in the comparison group; patients that had recovered from depression were excluded. By recruiting new referrals to teams it was hoped
that the onset of the depression would be relatively recent. Clinical information relating to medical problems and treatment were recorded in a similar manner to the DSH group, and the BDI, BHS, GDS-15, and MMSE administered. As before, either the research community psychiatric nurse or research associate conducted the LEDS interview separately some weeks later. The reference point for life events was the onset of the current depressive episode, and events and difficulties recorded for six months prior to this date.

If, during the course of the study, the patient subsequently self-harmed they were excluded from the comparison group and included in the DSH group.

2.5 SAMPLE SIZE

Power analysis was difficult to accurately determine, as there are no comparable studies in the literature. However, a power analysis based solely on the possible expected findings for life events was performed. This analysis used Murphy's (1982) study of life events in the elderly, which found that 48% of depressed cases had severe life events compared to 23% of normal controls. This indicates that 80 patients in each group will have 90% power to detect this degree of difference as statistically significant at the 5% level of significance. However this may not be appropriate, as we are comparing DSH subjects with a depressed control group.

Using different life events methodology, Paykel and colleagues (1975) found life events of all types four times as frequently among parasuicide patients compared to the general population, and one and a half times as frequently as depressives. If we look at the results for a ‘major upsetting’ event (roughly equivalent to a ‘severe’ life event in the LEDS) we find that one or more of this category of event was present in 36 of 53 of the self-harm group, and 24 of 53 in the depressed group. When recalculating the sample size (90% power, significance level set
at 5%) based upon these findings 80 subjects in each group are still required. Paykel and colleagues' study (ibid), however, involved young adults, who have higher rates of life events than the elderly.

These power analysis calculations are based upon the nomogram produced by Altman (1991).

2.6 STATISTICAL ANALYSIS

Analyses were performed utilising SPSS for Windows (SPSS Inc). The majority of the data for the suicide study is descriptive, but with a comparison with younger suicides using the Pearson chi-squared test for categorical data (two-tailed). Data for the DSH group is again descriptive, but with inter-group comparison of non-depressed and depressed DSH subjects. For the case control study of DSH subjects and depressed controls, demographic details, risk factors and categorical data are expressed as percentages within groups, and compared with the Pearson chi-squared test (two-tailed) or Fisher’s Exact test if appropriate. Interval data (rating instruments) and ordinal data are analysed non-parametrically throughout with the Mann-Whitney U test.

In addition binary logistic regression analysis is used. Logistic regression is a multivariate regression procedure that uses maximum likelihood estimation for analysing relationships between multiple independent variables and a categorical dependent variable. In this study logistic regression is used to examine possible confounding influences on variables found to be significant on bivariate analysis.

Discriminant analysis is a method used to determine variables that may help to distinguish between groups. It is particularly useful to find a combination of several variables that have a good probability of correctly classifying a large proportion of subjects into appropriate
diagnostic/disease groupings (Altman, 1991). In this study discriminant analysis was used to help determine which questions on the BHS would correctly classify patients into the DSH and depressed control groups, and the results presented as discriminant correlations.

The results for statistical tests were regarded as significant at or below the 5% probability level.

2.7 FUNDING

Different sections of the project have been funded by different sources:

1. Research into Ageing; descriptive study of DSH in the elderly and Case-control study (£10445)

2. Leicestershire Health; descriptive study of elderly suicides (as part of a retrospective audit of suicides in Leicestershire; £40000)

2.8 INSTRUMENTS USED

Beck Depression Inventory (BDI)

The original Beck Depression Inventory was based upon clinical observation and descriptions of symptoms frequently given by depressed patients (Beck et al., 1961). The BDI has become one of the most widely accepted instruments in clinical psychology and psychiatry for assessing the intensity of depression in psychiatric patients (Piotrowski et al., 1985), and for detecting depression in normal populations (Steer et al., 1985).
For this study we used the revised BDI (Beck et al., 1979). This was designed to assess the severity of depression in psychiatrically diagnosed patients. It is usually self-administered, though can be administered orally by a clinician. It takes approximately 5-10 minutes to complete when self-administered, and 15 minutes when administered orally (sometimes much longer with elderly people). I obtained special permission from The Psychological Corporation to reproduce the BDI and Beck Hopelessness Scale in large print for use in the study (Appendix 3). This is because many elderly persons have impaired visual acuity. The instrument consisted of 21 symptoms and attitudes, which could be rated on a 4-point scale ranging from 0-3 in terms of severity. If a subject has chosen more than one statement within a group, the statement with the highest rating is used to calculate the score. Scores of 0-9 are considered within the minimal range; scores of 10-16 indicate mild depression; scores 17-29 indicate moderate depression; and scores of 30-63 indicate severe depression (Beck & Steer, 1993). Because a BDI score only provides an estimate of the overall severity of depression, it is important to consider individual item response. Particular symptoms of importance both clinically, and in particular from the research perspective for this study are those symptoms relevant to suicide ideation. Beck et al., (1985) have found that the BDI’s pessimism item was nearly as predictive of eventual suicide in 211 suicide ideators as the Hopelessness Scale.

The revised BDI has been shown to have good reliability, and content, construct, concurrent and factorial validity (Beck & Steer, 1993). Although the BDI explores somatic and vegetative symptoms, considerable emphasis is given to cognitive and affective symptoms of depression; for this reason the BDI may be particularly useful in the elderly with physical co-morbidity (Dennis et al., 1992). Beck & Steer (1993) suggest that a cognitive-affective sub-scale can be employed with medical patients whose vegetative/somatic symptoms may be mistaken for depression; a score greater than 10 on the cognitive-affective sub-scale was
indicative of depression. Overall the revised BDI is not meaningfully related to gender and age (Beck & Steer; 1993).

**Beck Hopelessness Scale (BHS)**

The Beck Hopelessness Scale (BHS; Beck *et al.*, 1974) is a 20 item scale for measuring the extent of negative attitudes about the future (pessimism). It was developed by Beck and colleagues at the Centre for Cognitive Therapy to measure pessimism in psychiatric patients thought to at risk of suicide. It has since been used in adolescents, and normal populations (Greene, 1981). Hopelessness is a psychological construct thought to underlie a variety of mental health disorders; the BHS links with Stotland’s (1969) philosophy of hopelessness. Hopeless individuals believe: that nothing will turn out right for them; that they will never succeed at what they attempt to do; that their important goals can never be achieved; and that their worst difficulties will never be overcome. This definition of hopelessness corresponds closely to ‘a negative view of the future’, the third statement of Beck’s triad in his cognitive model of depression (1967).

Unfortunately there are some questions in the Hopelessness Scale that are clearly inappropriate for a very elderly population, such as ‘I can’t imagine what my life would be like in 10 years’ and ‘I have enough time to accomplish the things I most want to do’. For this reason an abbreviated 10-item version of the scale (BHS-10) with better face validity was piloted for use in a number of DSH subjects. The questions comprising the BHS-10 appear in Table 3.7.4., and the background is further discussed on page 135 (section 4.3.b.5).
Geriatric Depression Scale (15 item – GDS-15)

The Geriatric Depression Scale (GDS) was originally a 30 item self-rating instrument specifically designed to avoid most of the problems associated with the measurement of depression in the elderly (Yesavage et al., 1983). It is a useful screening instrument for depression in the elderly, and has been validated in a wide number of settings (Katona, 1994). Because of the problems associated with assessing depression in frail elderly people, such as fatigue, and poor concentration a shorter 15-item scale (GDS-15) has been derived from the original (Sheikh & Yesavage, 1986). This shorter version of the GDS has been validated in psychiatric outpatients. A cut-off score of 5/6 demonstrated a sensitivity of 85%, and specificity of 74% (Herrman et al., 1996). The GDS-15 has also been validated for use in the primary health care setting, where a lower cut-off point of 4/5 D’Ath et al., (1994), or even 3/4 (Arthur et al., 1998) may be appropriate for identifying possible depression.

Suicide Intent Scale

Beck and colleagues’ devised the Suicide Intent Scale in 1974. It was designed to record information concerning the intensity of the self-harm attempter’s wish to die. The items were selected on the basis of Beck’s own clinical investigation, and from the literature on suicide. The scale is divided into three sections, and consists of three alternative statements graded in intensity from 0-2. After carefully interviewing the patient concerning their deliberate self-harm attempt, the clinician selects the alternative that applies best. The total score consists of the summed score for each item. The first section of the scale deals with the circumstances surrounding the episode of DSH, the second section concerns the patient’s thoughts and
feelings at the time of the episode, and the third section, which is unscored, records information concerning the patient’s feelings about the attempt, and use of alcohol. The higher the score on the Suicide Intent Scale, the higher the suicide intent associated with the episode of self-harm. The scale is widely used in clinical practice, and has good inter-rater reliability and internal consistency (Beck et al., 1974).

**Mini-Mental State Examination**

The Mini-Mental State Examination (MMSE; Folstein et al., 1975) is one of the most widely used instruments for assessing cognitive function. It comprises 11 cognitive tasks covering memory, orientation, attention, language and praxis. The maximum score is 30, and the recommended cut-off score for cognitive impairment is 23/24. Reliability and validity are well established, but as with many instruments used for assessing cognitive function, age, socio-economic status, and educational level all influence the score (Dennis et al., 1992). It takes 5-10 minutes to administer, and has good subject acceptability.

**Social Contact Schedule (SCS)**

The Social Contact Schedule was designed specifically for use in this particular study. It records in some detail the frequency and nature of the individual’s social contacts (Appendix 4). There is some overlap with the information recorded in the demographic schedule of the LEDS interview. The first section records basic details concerning type of domicile, marital status, whether the individual receives domiciliary services, or attends any form of day care. Data entered refers to either contacts prior to CMHT involvement, or the DSH event. The second section records in detail the frequency of contacts with family, and friends.
Social Networks

Social support networks are discussed in Section 1.6. Wenger’s research in this particular area has established five distinct types of network and in this study patient’s social networks were categorised according to the Wenger Support Network Typology (1997). Essentially a judgement concerning network type was made on the basis of the information obtained in the clinical history, SCS and LEDS interview. In particular the demographic questions of the LEDS records frequency of visual and non-visual contacts with relatives, friends and acquaintances (including neighbours), and their location. The SCS also records information concerning contacts with friends, and family as well as frequency of contacts with statutory services, attendance at day centres, and local groups and clubs.

A summary of the five types of network is described below, and a more detailed description appears in Appendix 5 (Wenger, 1994). Three types are based on the presence of local kin, and the other two types the absence of local kin.

1. *Local family dependent support network*: Reliance on local family; some neighbour contact. Low levels of community group support.

2. *Locally integrated support network*: Most common and robust support network. Informal help to and from local family, friends and neighbours. Involvement in community groups.

3. *Local self-contained support network*: Reliance primarily on neighbours, but involvement of kin more than five miles distant. Privatised life-style. Involvement with community groups low key.
4. **Wider-community focused support network**: Absence of local kin. Informal help to and from friends: some involvement with neighbours; contact with family more than 50 miles away. High level of involvement in community groups.

5. **Private restricted support network**: Absence of local kin (other than in some cases spouse). No local source of informal support. Little contact with community. May rely on distant kin. Two distinct sub-types: independent married couples, and dependent elderly persons who have withdrawn or become isolated from local involvement.

The networks can be dichotomised into poorly integrated (local family dependent, local self-contained, or private restricted) and well integrated (locally integrated, or wider community focused).

**Life Events and Difficulties Schedule**

The Life Events and Difficulties Schedule (LEDS; Brown & Harris, 1978) has gained popularity as one of the most reliable methods of identifying major life events and chronic difficulties - its development and use has already been extensively discussed in section 1.5 of the thesis. Briefly the advantages of the LEDS are: that it allows for the significance of events and difficulties to be rated contextually and by consensus; events are rated on a scale of independence from any possible contaminating psychiatric factors; and the probing style of the interview by a trained researcher results in a good rate of detection of significant events.

The interview itself is semi-structured in nature, designed specifically to obtain important demographic and background information concerning the individual (important for obtaining a contextual framework for ratings), and a lengthy series of questions devised to probe for life...
events and difficulties. The version of the LEDS used for this study was the LEDS-2 (Volume 1 - Life Events; Volume 2 - Difficulties & various appendices; Bilufco et al., 1989). These manuals also contain a dictionary of events and difficulties to assist raters. As many of the descriptions are of events in a younger population, we frequently used the LEDS-2 Elderly Supplement (Brown & Frank, 1991). This supplement has a dictionary of ratings for events when the LEDS has been used in studies involving elderly patient groups, i.e: Goodmayes Hospital, London (Murphy, 1982); the Bloomsbury and Islington Elderly Depression Study (Evans & Katona, 1993); and the Oxfordshire Community Stroke project (House et al., 1990).

The first section of the LEDS interview concerns important demographic information. Besides the usual information on age, gender, marital status, current or previous occupation, questions are also asked concerning social contacts and household members. In addition any important friends or relatives that can be described as a ‘confidant’ are recorded. A confidant is a person identified by the subject as someone to whom personal problems and crises can be confided in.

The second part of the interview is again semi-structured and comprises of an extensive set of questions covering a number of important domains (i.e. health, work, and relationships). The questions are designed to identify potential life events and difficulties. It is also frequently required of the interviewer to create their own probes in order to establish the full story of what has occurred.

The core LEDS consists of 5 scales central to the rating of events: classification; temporal status of event; focus; independence/illness related; and threat. There are 4 scales relating to difficulties: classification; independence/illness related; severity; and health/non-health. In
addition to these core scales there are a variety of optional extra dimensions relevant to the study of depression and anxiety namely loss and danger (Brown et al., 1989).

There are 95 possible classifications for the type of an event that may occur for an individual. These are in 9 possible areas: education; work; reproduction; housing; money/possessions; crime/legal; health/treatment/accidents; marital/partner relationship; other relationships including children; and miscellaneous and death. Clearly some of these categories are much more relevant to the elderly than others. For simplicity and the purposes of research in the elderly events can be further categorised into 4 main areas, namely: death; health-self; health-other; and non-health (Davies, 1993). The ‘temporal’ status of an event refers to whether an event is prior to, or after a change in the environment i.e. an actual change in circumstances and environment as opposed to a change at an emotional/cognitive level such as decision making, receiving news, a disclosure or revelation etc. The focus rating identifies whether the subject or another person is mainly involved in the event.

As has been debated in the introduction, one problem with much of the checklist type of research in life events work has been that events may occur as a result of the insidious development of a mental disorder or the measurement of an event may be influenced by the individual trying to come to terms emotionally with the disorder. To overcome these difficulties the LEDS includes ‘independence scales’. The ‘illness-related’ scale highlights whether the event is known to be related to an actual mental disorder i.e. the loss of a job as a result of psychotic symptoms. The second scale in this section concerns ‘independence’ to a hypothetical disorder i.e. it assumes that every person studied is suffering from depression. In the LEDS, events are therefore identified which are clearly independent from the disorder being studied.
The measurement of the severity of threat associated with life events is of vital importance, and this is where the glossary of events described in the Life Events and Difficulties manual (volume 1; Bifulco et al., 1989) is of great assistance to the researcher. The key to rating events is the concept of contextual threat, namely the significance to the individual is considered in the light of the information obtained concerning their background, social and other circumstances. A rating is made of short-term threat (the day of the event, and following few days), and long-term threat (from 10-14 days after the event). It is the long-term contextual threat that has been found to be important in precipitating depression (Brown & Harris, 1978). In addition to the consensus rating of contextual threat made by the research team, the interviewer will also rate the short and long term threat based on the subject's account of how the event was actually experienced, the 'reported' threat.

The scale for long term threat is:
1. Marked threat/unpleasantness
2. Moderate threat/unpleasantness
3. Some threat/unpleasantness
4. Little or no threat/unpleasantness

It is only events rated 'severe' (1 or 2 on the above scale) that have been found to be aetiologically significant in the development of depression (Brown & Harris, 1978; Emmerson et al., 1989). The record of life events ratings is included as Appendix 7.

Difficulties are defined as problematic situations or conditions that last a minimum of 4 weeks. The categories of difficulties are very similar to events, though there are no subcategories and bereavement is separated from miscellaneous. Independence and illness related status of the difficulty is also measured in a similar manner. The severity or
unpleasantness of the difficulty is, however, rated on a six point scale (contextual and reported):

1. High marked
2. Low marked
3. High moderate
4. Low moderate
5. Mild
6. Very mild
7. Not/no longer a difficulty

Difficulties rated 1-3 would be classified as major, and 4-6 minor. The only scale that is unique to difficulties, is the health/non-health scale. This scale is only relevant to difficulties rated in the health domain and that are classified as major difficulties. This scale distinguishes between ill-health which has consequences solely on the physical well-being of individual from that which involves changes in the role of the subject, caring responsibilities, or major stigma/embarrassment. Health difficulties are common in the elderly (Murphy, 1992), and therefore for the sake of simplicity minor health difficulties will all be subsumed under the heading of a mixed health difficulty. In the case of more than one major health difficulties, if the problems are particularly significant, and involve health and non-health consequences, then separate record sheets will be completed. An example of a difficulties record sheet is contained in Appendix 7.

Many of the early LEDS interviews were audiotaped, this was for supervision purposes from colleagues at Bedford Square (Tirril Harris). When interviews were audiotaped further written informed consent was obtained from the subject. In view of the secretarial time
required to transcribe the interviews, many of the later interviews were not taped. In the case of the subject refusing permission for audiotaping, or for the later interviews the researcher made short notes during the interview, and then typed a longer version from the notes and memory soon afterwards. For most subjects the interview would take between 1 and 1 1/2 hours to complete. Because of fatigability of subjects and the frequently physically frail nature of the subject group, the interview was frequently conducted over two visits.

We decided for the purposes of our study that we would be interested in identifying life events and difficulties for the 6-month period prior to the DSH episode (DSH group) or onset of depression (depressed comparison group). This is because it has been established in younger age groups that an excess of life events compared to the general population occur in the month preceding an episode of self-harm (Paykel et al., 1975; Farmer & Creed, 1989), whereas in depression the excess of life events appears to be in the 3 months prior to onset of the illness (Brown & Harris, 1978; Emmerson et al., 1989). To allow for periods of uncertainty concerning dating the onset of depression and for any ‘unexpected’ results the choice of a six-month period would therefore appear a prudent one.

Brown and Harris have discussed the reliability and validity of the LEDS in detail in their seminal book on the social origins of depression (1978). In that study, a relative was interviewed as well as the subject for the first 50 cases; there was 79% agreement about the occurrence of particular events in the 12 months before onset of depression. There was 92% agreement about the occurrence of a severe event. The level of agreement for rating of long-term contextual threat was 0.85. The results concerning validity have been confirmed by other researchers (Brown & Harris, 1986; Brown, 1989). Parry and colleagues (1981) found inter-rater agreement of 0.84 and 0.81 (using weighted kappa) for short and long term contextual threat respectively. The reliability of the LEDS has also been established with
older people. Murphy (1992) interviewed the next of kin for the first 20 subjects in her depression study, and found an agreement of 81% for all events, and 100% for severe events. Wilkinson et al. (1986) also found good inter-rater and test-retest reliability for long-term contextual threat of life events and difficulties, in particular when the ratings were based on consensus methodology. There are some particular concerns relating to the rating of life events in the elderly, in particular when raters are from a different generation to subjects; these issues have been debated at length in the introduction (section 1.5).

**Prince Henry Hospital Personality Criteria**

Personality was rated by myself at the time of the initial psychiatric interview according to a five point scale devised by Brodaty and colleagues (1993; Appendix 6). Each point has specific criteria, ranging from 0 (healthy personality) through to 4 (DSM-III defined personality disorder). Unfortunately there is no data concerning the validity or reliability of this scale (Brodaty, personal communication). The choice of the Prince Henry Hospital Scale is discussed in Section 4.3.b.2 (page132).

**2.9 ETHICAL CONSIDERATIONS**

The study received the full ethical approval of the Leicestershire Ethics Committee (Appendix 8). The Committee scrutinised the protocol, patient information and consent form as part of the approval process.

An information sheet (Appendix 1) was provided for the patients to read, this was produced in large print for those with eyesight difficulties. If the patient was unable to read the
information sheet, then this was read to them. All patients then had the opportunity to ask questions, and my telephone number was provided which the subject was urged to use should they have any other queries or concerns about the project. It was made clear that the patient may withdraw at any stage, and that the study did not involve or affect their treatment in any way. In the process of obtaining consent the purpose and nature of the study was explained to them, they were then asked to read the information sheet. If they then wished to be involved in the study they were asked to read and sign the consent form (Appendix 1). Care was always taken to ensure informed consent was obtained. If the patient was unable to give informed consent, i.e. in cases of severe depression with associated cognitive impairment then obviously they would be excluded.

If a patient under the care of myself was a potential subject for the depressed comparison group, then the study was explained to them, and then they were approached some days later and asked if they would consider consenting to take part. This was to ensure that the patient did not feel obliged to be involved, and they had the opportunity to consider their decision more carefully.

In order to minimise the inconvenience to the patient they were seen either in their own homes, or wherever they happened to be at the time of their recruitment into the study.

The psychiatric assessment performed by myself was essentially an extended routine clinical assessment. Indeed, a number of the rating instruments, namely the GDS-15, BDI, and MMSE are used in normal clinical practice. If information concerning the recent clinical application of these instruments was already available in the patients’ case notes or nursing records, they were not repeated. However a psychiatric assessment would also be performed
in order to derive a standardised ICD 10 diagnosis for the patient. This part of the assessment could not, therefore be deemed to be too onerous or stressful for the individual.

The LEDS interview which is detailed and semi-structured, was performed by trained research staff. The LEDS has been shown to be well accepted by patients from the many previous studies that have used this instrument. One of the LEDS interviewers was a G-grade Community Psychiatric Nurse (CM) who is the team leader of a Community Mental Health Team. The other was a very experienced research associate (PW) who has been involved in projects with direct patient and carer contact previously. Both staff were supervised by myself. For a proportion of cases these LEDS interviews were taped, additional written informed consent was always obtained to do this, and the tape erased once an anonymised transcription had been made, or life events ratings were completed. The transcriptions, and any notes made at the time of the LEDS interview were all kept in the subjects research file. All information concerning the subjects were kept in research files which were stored in a locked cabinet. When information was entered into the SPSS and SIR databases subject code numbers were used, so as to ensure anonymity and comply with data protection legislation.

If the psychiatric assessment revealed a significant element of risk, or other clinical concerns which were not addressed by the current treatment regime, then (usually with the permission of the patient) the general practitioner, or Consultant/Community Team key worker were contacted.
CHAPTER 3

RESULTS

3.1 EPIDEMIOLOGY OF SUICIDES (ALL AGES)

Details of a total of 998 deaths from the Leicestershire mortality list were examined during the six-year period 1988-1993. Psychiatric case records were identified for 199 persons (20%). Primary health care records were also examined for deaths from 1991-1993, records prior to 1991 having been destroyed. Primary health care records were located for 130 of 478 deaths for that period (27%). Eighty-two of the 373 persons aged 65 and over had general hospital records (22%).

Of the 998 total deaths obtained from the Mortality Statistics, 420 were coded by the panel as definite suicides, and 46 as probable suicide. In 63 cases suicide was thought to be unlikely, and definitely not suicide in a further 469. Coroners recorded 384 suicides, and 89 open verdicts; Table 3.1.1 illustrates their verdicts for the 466 cases coded as definite and probable suicide. There were 347 males, and 119 females (male: female ratio = 3:1); the male to female ratio recorded by the coroner was even higher (4:1). The 82 deaths coded by the research team as definite and probable suicides, but not so considered by coroners had a higher proportion of females (Pearson chi-square = 6.4, d.f = 1, P = 0.01). Deaths by drowning were over represented in the group of additional suicides, in particular among women (there were 11 additional suicides by drowning, seven were female).

The mean age of definite and probable suicides was 44.5 years. The overall rate of suicide in Leicestershire for the period 1988-93 calculated from the study group was 9/100 000 population/year, 13.6/100 000 for males, and 4.5/100 000 for females. Age specific rates
appear in Figure 3.1, the rates being highest for males aged 25-34 years, and for females over 75 years. Rates for males declined after 25-34 years, whereas rates for women rose with increasing age. Rates for rural areas (11.1/100,000/year) were higher than urban (7.8/100,000/year). The overall rate for South-Asians was 8/100,000/year (males 11.2/100,000/year, and females 4.9/100,000/year). There were no elderly South-Asian suicides.

The methods of suicide by gender and domicile are shown in Table 3.1.2.

A third (160 - 35%), of those categorised as definite or probable suicide had previous or current contact with psychiatric services. For 155, psychiatric case records were identified, and in addition a further five patients were identified from primary health care records as having had psychiatric contact. Only 44 (8%) of the group classified as neither definite nor probable suicide (532) were identified as having previous psychiatric contact.

The data concerning the epidemiology of suicides (all ages) has been published previously (Dennis et al., 2001).
<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suicide</td>
<td>384</td>
</tr>
<tr>
<td>Open</td>
<td>63</td>
</tr>
<tr>
<td>Misadventure</td>
<td>13</td>
</tr>
<tr>
<td>Accidental</td>
<td>4</td>
</tr>
<tr>
<td>Self-neglect</td>
<td>1</td>
</tr>
<tr>
<td>Addiction to drugs</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>466</strong></td>
</tr>
</tbody>
</table>

Table 3.1.1. Definite and Probable Suicides (all ages): Coroners' Verdicts
<table>
<thead>
<tr>
<th>Method</th>
<th>Gender</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td></td>
<td></td>
<td>Urban</td>
<td>Rural</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>P Value</td>
<td>NS</td>
<td>N</td>
</tr>
<tr>
<td>Hanging</td>
<td>108</td>
<td>31</td>
<td>18</td>
<td>15</td>
<td>0.001</td>
<td>75</td>
<td>51</td>
</tr>
<tr>
<td>Overdose</td>
<td>48</td>
<td>14</td>
<td>56</td>
<td>47</td>
<td>&lt;0.001</td>
<td>66</td>
<td>38</td>
</tr>
<tr>
<td>Carbon Monoxide</td>
<td>90</td>
<td>26</td>
<td>4</td>
<td>3</td>
<td>&lt;0.001</td>
<td>48</td>
<td>46</td>
</tr>
<tr>
<td>Drowning</td>
<td>8</td>
<td>2</td>
<td>12</td>
<td>10</td>
<td>&lt;0.001</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Self immolation</td>
<td>7</td>
<td>2</td>
<td>7</td>
<td>6</td>
<td>NS*</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>Firearms</td>
<td>18</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>0.04*</td>
<td>4</td>
<td>15</td>
</tr>
<tr>
<td>Other</td>
<td>68</td>
<td>20</td>
<td>21</td>
<td>18</td>
<td>NS</td>
<td>53</td>
<td>36</td>
</tr>
<tr>
<td>Total</td>
<td>347</td>
<td>100</td>
<td>119</td>
<td>100</td>
<td>271</td>
<td>195</td>
<td>466</td>
</tr>
</tbody>
</table>

All P values for Pearson Chi-square, apart from those marked by * when Fisher's Exact test was used. NS = not significant.
**Figure 3.1:** Suicide in Leicestershire 1988-93: Age Specific Rates

![Bar chart showing suicide rates in Leicestershire 1988-93 by age group. The rates are given per 100,000 people per year.]
3.2. ELDERLY SUICIDES

There were a total of 85 deaths aged 65 or over classified as definite, or probable suicide by the research panel of experts for the six year period 1988-93. This compared to 172 definite or probable suicides for those aged 15-35, and 209 for those aged 36-64. The mean age of the 85 elderly definite, or probable suicides was 73.5 years, the majority (49), were aged 65-74, 32 were 75-84 years, and only four were aged 85 or over. The coroner recorded 71 suicide verdicts in elderly people during the six year period; the 14 additional suicides defined as definite (9), or probable (5) suicide by the researchers had been given a variety of verdicts (Table 3.2.1).

<table>
<thead>
<tr>
<th>Verdict</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>suicide</td>
<td>71</td>
</tr>
<tr>
<td>misadventure</td>
<td>3</td>
</tr>
<tr>
<td>open</td>
<td>10</td>
</tr>
<tr>
<td>self-neglect</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>85</td>
</tr>
</tbody>
</table>

Hanging was the most popular method of suicide (26; 31%), followed by overdose (22; 26%), drowning (10; 12%), and carbon monoxide poisoning (8; 9.5%). Other less frequent methods were self-lacerations, firearms, self-immolation, and falling from high buildings. There were substantial sex differences in the method of suicide in the elderly (Table 3.2.2), with hanging and carbon monoxide poisoning being predominantly male methods of suicide, and overdose a female method of suicide. Primary health care records were identified for 10 suicides, 39
(46%) had general hospital medical records, and psychiatric case notes were identified in 31 cases (36%). Nineteen definite, or probable suicides had both general hospital, and mental health services records.

Of the 288 elderly persons coded as ‘suicide unlikely’, or ‘definitely not suicide’ only 21 had mental health records, and this was a significantly smaller proportion compared to definite or probable suicides (Pearson chi-square = 47, df = 1, P <0.0001).

The primary psychiatric diagnoses of the 31 suicides with mental health services records are shown in Table 3.2.3. This is not the diagnosis quoted in the records for the contact prior to the suicide event, but one derived from a longitudinal review of the patients case records by the study team.

A total of 16 elderly suicides had contact with the specialist psychiatric services within 90 days of death (19%), and of these eight (9%) were within 1 week. The nature of contact of these suicides is described in table 3.2.4. The two suicides whose last contact was as an in-patient had been discharged from hospital at the time of their death.

Of the 31 elderly suicides known to the mental health services: nine were living alone; 21 lived within an urban setting; eight had a family history of mental disorder; and two had a family history of suicide.
### Table 3.2.2. Method of Elderly Suicides by Gender

<table>
<thead>
<tr>
<th>Method</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hanging</td>
<td>21</td>
<td>5</td>
<td>26</td>
<td>0.002</td>
</tr>
<tr>
<td>Overdose</td>
<td>5</td>
<td>17</td>
<td>22</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>CO poisoning</td>
<td>8</td>
<td>0</td>
<td>8</td>
<td>0.008*</td>
</tr>
<tr>
<td>Drowning</td>
<td>4</td>
<td>6</td>
<td>10</td>
<td>NS</td>
</tr>
<tr>
<td>Self-immolation</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>NS</td>
</tr>
<tr>
<td>Firearms</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>NS</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>9</td>
<td>16</td>
<td>NS</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>47</td>
<td>38</td>
<td>85</td>
<td></td>
</tr>
</tbody>
</table>

NS = non significant
* = Fisher's Exact Test, all other P values Pearson Chi-square
<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>ICD10</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delirium</td>
<td>F05.9</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>(3%)</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>F20</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>(3%)</td>
</tr>
<tr>
<td>Bi-polar affective disorder</td>
<td>F31</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>(3%)</td>
</tr>
<tr>
<td>Depressive episode</td>
<td>F32</td>
<td>5</td>
<td>6</td>
<td>11</td>
<td>(36%)</td>
</tr>
<tr>
<td>Recurrent depression</td>
<td>F33</td>
<td>3</td>
<td>8</td>
<td>11</td>
<td>(36%)</td>
</tr>
<tr>
<td>Persistent mood disorder</td>
<td>F34</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>(6%)</td>
</tr>
<tr>
<td>Neurotic disorders</td>
<td>F40-F48</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>(10%)</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>(3%)</td>
</tr>
</tbody>
</table>
Table 3.2.4. Last Psychiatric Contact of Elderly Definite and Probable Suicides within 3 Months of Death

<table>
<thead>
<tr>
<th>Contact type</th>
<th>0 - 7 days</th>
<th>8 - 28 days</th>
<th>29 - 90 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-patient</td>
<td>2</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Absconded from ward</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>On leave from hospital</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Day hospital / CMHT*</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Out-patients</td>
<td>3</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>8</strong></td>
<td><strong>3</strong></td>
<td><strong>5</strong></td>
</tr>
</tbody>
</table>

* CMHT = Community Mental Health Team for the Elderly
Case summaries of elderly suicides known to psychiatric services

In terms of possible prevention of suicides in elderly patients known to psychiatric services it is important to audit the last episode of care for that individual. The case summaries assist in this process, and these were scrutinised in particular for the patients who died within three months of their last contact with the specialist services (n=16).

In many cases care appeared to be of a high standard with adequate, and clearly specified follow-up arrangements, and good communication between agencies that were involved. There were inevitably instances, which suggested alternative management strategies, or where more persistence in follow-up may have improved outcome.

Depression was the primary psychiatric diagnosis of all but two of the 16 patients. Three patients failed to keep outpatient appointments, and two patients who had been seen on domiciliary visits had refused an informal admission to hospital. One patient also failed to attend the day hospital, after only recently being discharged from hospital. Another patient refused an informal admission offered to her in clinic, and committed suicide within 7 days of her out-patient appointment.

Content analysis of this group of patients dying within 3 months of contact with mental health services also revealed some interesting themes, confirming many facts elucidated by other researchers. Poor compliance with antidepressant medication was noted in three cases, and five suicides were after an admission following a serious episode of DSH. The majority of patients suffered from recurrent depression, though in five cases this was the only episode. Recent life events and difficulties were particularly prominent; two patients were bereaved; five were carers; and two had serious physical illness. Recurrent thoughts of suicide were
recorded in the case notes of three patients prior to their most recent hospital admission. Relationship difficulties were apparent in only two cases, personality difficulties in two cases and problem drinking in one.

**Contacts with General Practitioners**

Of the 37 elderly suicides occurring during 1991-3, the primary health care records were only identified for 10 persons. Of these five were seen within a week of death, two contacts were as a result of depression, and two because of a malignancy. All 10 patients had seen their general practitioner (G.P.) within the 3 months preceding suicide, and four cases this was because of depression. In all, six of 10 suicides had a depressive illness diagnosed by their G.P., but only three were receiving antidepressants at the time of death.

**Contacts with General Hospitals**

Thirty-nine elderly suicides had records with one or more of the three local general hospitals (46%). In three cases suicides died in hospital as a direct result of their actions prior to admission (multiple injuries following a fall, paraquat poisoning, and other overdose); two of these patients had previously been admitted to a general hospital following self-harm.

Three patients committed suicide within one week of discharge from a general hospital ward, a further eight within a month, and another three within 3 months. Therefore, 14 patients died from suicide within 3 months of discharge from a general hospital, representing 16% of all elderly suicides.
The three patients who killed themselves within one week of discharge were not known to psychiatric services; two were blind and one had a diagnosis of depression. Of the 11 other elderly suicides that died within 3 months of a general hospital contact, six had been identified as suffering from depression by medical staff, but none of these were in recent contact with psychiatric services.

Deliberate self-harm had occurred in nine suicides presenting to general hospitals; in four cases of deliberate self-harm the patients were discharged without a mental health specialist assessment or follow-up. In one case the patient went on to kill themselves within two weeks; depression had also been identified in this patient.

The medical problems identified in the 39 patients with general hospital records appear in Table 3.2.5.
Table 3.2.5. Medical problems identified in elderly suicides with general hospital contacts

<table>
<thead>
<tr>
<th>Problem</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>13</td>
<td>33</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td>Hearing difficulties</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Poor visual acuity</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>Arthritis</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>Falls</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>Diabetes</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Anaemia</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Malignancy</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>Gastrointestinal</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>Infections</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Prostatism</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Other</td>
<td>15</td>
<td>38</td>
</tr>
</tbody>
</table>

Deliberate Self-Harm

Mental health, and/or general hospital, and/or primary health care records were identified for a total of 54 (64%) of elderly suicides. It is likely that the record search identified most elderly with either general hospital and/or mental health contacts. Clearly the primary health care record search was much less reliable. However, it is likely that most elderly who had at
sometime self-harmed have psychiatric and/or general hospital case records; very few elderly persons are not admitted directly to a medical ward following an episode of self-harm (Dennis et al., 1997). Of the 54 cases with records of any type, 20 (23.5% of elderly suicides) had a history of self-harm, and seven (8% of suicides) of these were within 3 months of the actual suicide.

3.3 A COMPARISON OF ELDERLY AND YOUNG ADULT SUICIDES

A comparison of suicide in young adults (aged 15-35, n = 172) and elderly (aged 65 and over, n = 85) was performed for: sex; domicile; method of suicide; psychiatric history and diagnosis; and history of DSH.

The elderly group comprised of 47 males and 38 females, with a significantly higher proportion of females than the younger adults (143 males, 29 females; Pearson chi-square = 23, df = 1, P < 0.001). There was no significant difference in the ratio of urban to rural dwellers, with over 60% of suicides in both groups living in an urban environment (Pearson chi-square = 0.04, df = 1, P = 0.84). Thirty-six percent of elderly and 27% of young adult suicides had contact with mental health services but these differences were not significant (Pearson chi-square = 2.3, df = 1, P = 0.13). There were noticeable differences in the primary psychiatric diagnoses, in the elderly depression was by far the commonest mental health problem, though in the younger age group a variety of problems were present (Table 3.3.1)
Table 3.3.1. Simplified primary psychiatric diagnosis of elderly and young adult suicides known to mental health services

<table>
<thead>
<tr>
<th>Simplified Diagnosis</th>
<th>Age Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15-35</td>
</tr>
<tr>
<td>Depression</td>
<td>14</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>16</td>
</tr>
<tr>
<td>Personality disorder</td>
<td>6</td>
</tr>
<tr>
<td>Other</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>46</td>
</tr>
</tbody>
</table>

There was no difference in the proportions of younger and elderly suicides that had a history of DSH (Pearson chi-square = 0.65, df = 1, P = 0.4), or DSH within 3 months of suicide (Pearson chi-square = 0.03, df = 1, P = 0.87). However it is quite probable that the episodes of DSH in younger persons have not been identified, as a substantial proportion of younger patients attending A&E departments are discharged directly home (Dennis et al., 1997).

Interestingly there were considerable differences in the method of suicide between age groups (Figure 3.2). Carbon monoxide poisoning was a significantly more common method of suicide in younger persons (Pearson chi-square = 5.8, df = 1, P = 0.02), and drowning significantly more common in the elderly (Pearson chi-square = 14.4, df = 1, P <0.001).
Figure 3.2 A comparison of method of suicide between elderly and young adults

- Hanging
- OD
- CO poisoning
- Drowning
- Self-immolation
- Firearms
- Other

Method

- 15-35
- 65+
3.4 DELIBERATE SELF-HARM GROUP

Seventy-six elderly subjects (42 women, 34 men) were recruited into the deliberate self-harm (DSH) group between November 1996 and September 2001. Of these only 70 (90%) were seen by the research psychiatrist (six withdrew from the study prior to psychiatric assessment), and only 48 (63%) agreed to the Life Events and Difficulties interview (LEDS). At least another 34 were asked either by a DSH team member, or the research psychiatrist to participate in the study, but declined.

The DSH subjects had a wide age range (65-92), with a mean of 77 years (S.D. 7.9), and median of 76 (inter-quartile range 70-84). Forty-three were widowed (26 female, 17 male), 18 married, eight single, and six divorced or separated (details missing on one subject). Seventy percent (49) were living alone, 15 with their spouse, five with other family members, and only one patient lived in a nursing home. Over a quarter (20/70; 29%) had seen their G.P. within one week of the DSH episode, and 32/70 (46%) within one month.

The Deliberate Self-Harm Episode

The methods of self-harm appear in Table 3.4.1. The majority of patients (55) involved only one method of DSH, 13 two, six subjects three, and one subject four different methods. The substance taken by the subject was unspecified in one case. By far the most popular method of self-harm was overdose, in particular involving paracetamol or benzodiazepines. Twenty (26%) were known to have had a previous episode of DSH.

Following their assessment by the DSH team, over half were admitted to a psychiatric ward for further assessment (51; 68%), a further 21 (28%) were discharged home with psychiatric
follow-up (out-patient or community mental health team), and only three (4%) were discharged without any after-care.

Table 3.4.1. Methods of DSH

<table>
<thead>
<tr>
<th>Method</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paracetamol O.D.</td>
<td>26</td>
<td>25</td>
</tr>
<tr>
<td>Benzodiazepine O.D.</td>
<td>23</td>
<td>22</td>
</tr>
<tr>
<td>Aspirin/NSAID O.D.</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>SSRI O.D.</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Tricyclic O.D.</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Other psychotropic O.D.</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Other O.D.</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Wrist cutting/other self-injury</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Hanging</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>CO poisoning</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Other DSH</td>
<td>1</td>
<td>7</td>
</tr>
</tbody>
</table>

Total 103* -

- Multiple methods of DSH were employed by 20 persons.
- O.D. = overdose

Alcohol was reported to have been taken at the same time as 20 (26%) of DSH episodes. Suicide intent scores were available for 70 cases (92%); the mean was 13.6, S.D. 7, median 14, inter-quartile range 9-19, and range of 0-28. Fifty percent of cases scored 14 or more indicating significant suicide intent. The individual’s subjective reaction to the attempt was diverse, 28 were sorry they self-harmed, 28 were ambivalent, and 14 regretted the fact they were alive. In 44 cases (58%) the researcher felt the subject wished to die at the time of their
DSH episode, in 16 cases it was felt that the patient was ambivalent concerning suicide, and in 14 cases did not want to die. The researcher was unable to classify the subjects' wish to die in two instances. Besides recording an impression of whether the subject had intended to die as consequence of their self-harm, the researcher also recorded what they thought may be other motives for the self-harm episode in accordance with a classification devised by Hawton and colleagues from their work with adolescents (1982). This is included in Table 3.4.2.

**Psychiatric Diagnosis**

The primary ICD 10 psychiatric diagnoses of the 70 cases of DSH according to the research psychiatrist's interview are recorded in Table 3.4.3. In six cases a secondary diagnosis was also recorded: alcohol dependence (three cases); Alzheimer's disease (one case); manic episode (one case); and anankastic personality disorder (one case). There were 48 patients suffering from depression; for 30 this was their first episode. Thirteen patients had no psychiatric disorder at the time of their DSH episode.
Table 3.4.2. Objective assessment of motives for DSH episode

<table>
<thead>
<tr>
<th>Motive</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>To escape from an intolerable situation</td>
<td>39</td>
<td>27</td>
</tr>
<tr>
<td>To gain relief from an unbearable state of mind</td>
<td>45</td>
<td>31</td>
</tr>
<tr>
<td>To make other people understand how desperate the person was feeling</td>
<td>16</td>
<td>11</td>
</tr>
<tr>
<td>To seek help</td>
<td>13</td>
<td>9</td>
</tr>
<tr>
<td>To influence other people</td>
<td>13</td>
<td>9</td>
</tr>
<tr>
<td>To make other people feel sorry</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>To find if somebody cared for the person</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>To show how much the person loved someone</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>143*</td>
<td></td>
</tr>
</tbody>
</table>

*completed for 74 cases, many patients rated as having multiple motives
Table 3.4.3. Primary ICD 10 diagnosis of DSH cases

<table>
<thead>
<tr>
<th>Psychiatric diagnosis</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depressive episode</td>
<td>30</td>
<td>43</td>
</tr>
<tr>
<td>Recurrent depression</td>
<td>17</td>
<td>24</td>
</tr>
<tr>
<td>Bipolar affective disorder (depressive episode)</td>
<td>1</td>
<td>1.5</td>
</tr>
<tr>
<td>Adjustment disorder</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Acute Stress Reaction</td>
<td>1</td>
<td>1.5</td>
</tr>
<tr>
<td>Alzheimer's disease</td>
<td>1</td>
<td>1.5</td>
</tr>
<tr>
<td>Organic personality disorder</td>
<td>1</td>
<td>1.5</td>
</tr>
<tr>
<td>Alcohol dependence</td>
<td>2</td>
<td>2.5</td>
</tr>
<tr>
<td>Mental disorder not otherwise specified</td>
<td>1</td>
<td>1.5</td>
</tr>
<tr>
<td>No psychiatric disorder</td>
<td>13</td>
<td>19</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>70</td>
<td>100</td>
</tr>
</tbody>
</table>

**Psychiatric Rating Instruments**

The mean Mini-Mental State Examination (MMSE) score was 27.5 (SD 2.2), with a median of 28 (inter-quartile range 26.25-30). Only four subjects scored 23 or less on the MMSE, indicating cognitive impairment, the primary clinical ICD 10 diagnoses for these subjects were Alzheimer’s disease, depressive episode, recurrent depression and mental disorder not otherwise specified. With the 15-item GDS the DSH subjects had a mean score of 7.4 (SD 4),
and median of 8 (inter-quartile range 4-10). 44/63 subjects scored 5 or above on the GDS (70%), and 37/63 7 or more (59%). The Beck Depression Inventory (BDI) mean score was 19.5 (SD 11.9), with a median of 18 (inter-quartile range 9-29). Of the 65 subjects who completed the BDI, 48 (74%) scored 10 or more indicating probable depression. In 13 of the 61 cases who completed the Beck Hopelessness Scale (BHS), an abbreviated 10 item version (BHS-10) was used (this had been piloted for use in the elderly). The results for the BHS are therefore expressed as a percentage score. The median percentage BHS score was 45 (inter-quartile range 15-75); this would correspond to a score of 9/20.

When comparing DSH subjects who were depressed (ICD 10 F 32, 33, 34) with the non-depressed, depressed DSH subjects were: more likely to be female (Pearson chi-square = 8.4, df =1, P = 0.004); had higher BHS percentage scores (Mann Whitney U = 100, Z = -4 P<0.001); and higher intent scores (Mann Whitney U = 259.5, Z= -2.7, P = 0.008). When intent to die was rated by the researcher there was a trend for depressed subjects to be rated as wanting to die rather than ambivalent or not wanting to die (Pearson chi-square = 3.2, df = 1, P = 0.07). The motives for self-harm for both depressed and non-depressed DSH subjects are recorded in Table 3.4.4.
Table 3.4.4. Objective assessment of motives for DSH episode: Depressed versus non-depressed subjects

<table>
<thead>
<tr>
<th>Motive</th>
<th>Depressed</th>
<th>Non-depressed</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>To escape from intolerable situation</td>
<td>24 50</td>
<td>12 57</td>
<td>0.6*</td>
</tr>
<tr>
<td>To gain relief from unbearable state of mind</td>
<td>33 69</td>
<td>9 43</td>
<td>0.04*</td>
</tr>
<tr>
<td>To make others understand how desperate</td>
<td>10 21</td>
<td>4 19</td>
<td>0.9#</td>
</tr>
<tr>
<td>the person was feeling</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To seek help</td>
<td>9 19</td>
<td>3 14</td>
<td>0.7#</td>
</tr>
<tr>
<td>To influence other people</td>
<td>6 13</td>
<td>6 29</td>
<td>0.2#</td>
</tr>
<tr>
<td>To make other people feel sorry</td>
<td>3 6</td>
<td>5 24</td>
<td>0.05#</td>
</tr>
<tr>
<td>To find if somebody cared for the person</td>
<td>3 6</td>
<td>3 14</td>
<td>0.4*</td>
</tr>
<tr>
<td>Total</td>
<td>88 42</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Completed for 69 cases (48 depressed, 21 non-depressed), many cases have multiple motives

* = Fisher's Exact Test

# = Fisher's Exact Test

* = Pearson chi-square
Medical problems

Current medical problems were plentiful in the group of DSH subjects. Only 10 subjects of the 70 interviewed had no problems, the majority (44) had more than one. Indeed, 25 subjects had 3 or more problems. The maximum number of problems recorded for one person was ten. A summary of the main medical problems found in the DSH subjects appears in table 3.6.3.

Pharmacological treatments

Only six of the 70 patients interviewed by the research psychiatrist were not receiving drug treatment of some type at the time of their DSH episode. The most commonly prescribed drugs were cardiovascular, or psychotropic medications. Thirty-one patients were receiving antidepressant medication at the time of the DSH episode (44%). Hypnotics, and anxiolytics were also commonly taken drugs in this group of persons. Only 16 of the 30 patients experiencing their first episode of depression were on antidepressants at the time of their DSH episode compared to 11/18 that suffered from recurrent depression (Pearson chi-square = 0.4, df = 1, P = 0.5). Fifteen depressed patients were known to be reviewed by their GP within a week of the DSH episode; six of these were not receiving antidepressant medication. Similarly, 24 depressed subjects were seen by their GP within one month of the self-harm episode, of which 17 were receiving antidepressants.
Social networks and contacts

The majority of DSH subjects had an isolated life style. A social network could be determined for 67 DSH subjects (88%). In 48 cases the network was poorly integrated (72%): 23 had a local family dependent support network; six a local self-contained network; and 19 a private restricted support network (10 living with spouse). A total of 19 had well integrated networks (28%): 16 a locally integrated network (the most robust support system); and three a wider-community focused network.

There were very few contacts with health, social services or voluntary sector care workers/professionals per week, with mean of 1.7/week (SD 3.6), median 0 (inter-quartile range 0-2). However, contacts with friends and family were much more common with a mean of 6/week (SD 4.6) and median of 7/week (inter-quartile range 2-7). The mean total number of contacts was 7.8/week (SD 5.7), with a median of 7 (inter-quartile range 2.8-11). In addition DSH subjects' own perception of the support they were receiving was rated significantly lower for community support (median 60, inter-quartile range 19-92) than support from family and friends (median 85, inter-quartile range 50-99.5; Wilcoxon signed ranks test $Z = -2.13, P = 0.03$). The depressed DSH subjects were no more likely to rate community support, or support from friends and family negatively than the non-depressed DSH subjects (Mann-Whitney $U = 85.5, P = 0.2$; and Mann-Whitney $U = 150, P = 0.9$ respectively).
**Personality Criteria**

The Prince Henry Hospital Personality Criteria proved particularly difficult to use. In 22 (31%) cases the psychiatrist did not, or was unable to rate personality. In the other 48 DSH subjects, 22 were rated as having a healthy personality, 13 mild, 11 moderate, and one severe abnormal personality traits. Only one DSH subject was rated as having an ICD 10 definable personality disorder.

For the purpose of analysis, personality was dichotomised into ‘normal’ (22), or ‘abnormal’ (accentuated traits or disorder; n=26). There was no relationship between personality and: gender (Pearson chi-square = 0.8, df = 1, P = 0.37); BHS percentage score (Mann-Whitney U = 131, Z = -1.2 P = 0.23); and perceived level of support from the community (Mann-Whitney U = 76.5, Z = -1.5, P = 0.14) and family/friends (Mann-Whitney U = 103, Z = -1.2, P = 0.23). In addition DSH subjects with ‘abnormal’ personality were no less likely to be diagnosed as depressed (Pearson chi-square = 0.02, df =1, P = 0.9). There were also no differences in actual contacts with family/friends (Mann-Whitney 214, Z = -1.5, P = 0.14), community services (Mann-Whitney 271, Z = -0.4, P = 0.7), or total contacts (Mann-Whitney 229, Z = -1.1, P = 0.24). However, those with ‘abnormal’ personality were more likely to have a poorly integrated social network (Pearson chi-square = 8, df = 1, P = 0.005), and lower suicide intent (Mann-Whitney U = 117, Z = -3, P = 0.003).
Life Events and Difficulties

Although the LEDS interview was conducted in 48 patients, the quality of the history allowed ratings to be completed for 47 DSH subjects (17 male, 30 female). The mean age of the subjects was 76.7 years (SD 8), median 76 (inter-quartile range 70 – 84). All the results quoted below, and also in subsequent sections refer to the long-term contextual threat, i.e. consensus rating for events.

Thirty-three subjects (70%) had experienced a life event in the six months prior to the self-harm episode, and in 31 cases (66%) they experienced an event classified as independent. Twenty-one DSH subjects experienced a severe life event in the six months prior to the DSH episode (45%), and in 20 (43%) this was an independent severe life event. The most common life events experienced by subjects were: bereavement (nine persons; 19%); own health (17 persons; 36%); other's health (eight persons; 17%). Other miscellaneous independent events were experienced by 12 persons (26%). In six subjects (13%) the bereavement/s experienced were classified as severe events, and in seven subjects (15%) the health event (self) was classified as severe.

As expected there was a high proportion of events occurring within one month of the episode of self-harm. Eighteen DSH subjects (38%) experienced a life event in the month prior to the DSH episode, and in 14 (30%) the episodes were classified as independent. Severe life events had occurred in 10 subjects (21%), independent in eight persons (17%) in the month before the DSH episode. These severe independent life events were principally relating to the subjects health (six persons; 13%).
Chronic difficulties (major + minor) were very common in the DSH group, occurring in 44 (94%) of DSH subjects. A high proportion experienced difficulties with their own health (37; 78%). Relationship difficulties (nine subjects; 19%), and others’ health problems (eight subjects; 17%) were also common. Financial difficulties were a relatively rare problem (three subjects; 6%). Importantly, 20 DSH subjects had chronic major difficulties (43%), and the most common major difficulty concerned the subjects' health (13; 28%) though major relationship difficulties were also frequent (seven subjects, 15%).

Tables 3.9.1, 2, 3, describe the life events and difficulties experienced by the DSH subjects in more detail, with a comparison with the depressed control group.

3.5. DEPRESSED COMPARISON GROUP

Fifty patients were recruited from community mental health teams into the depressed comparison group (30 female, 20 male). The median age was 76 (inter-quartile range 70.75-81). Twenty patients were married, 24 widowed, 4 separated/divorced, and only 2 single. The majority (29; 58%) were living alone, 18 lived with their spouse, 2 with other family members, and 1 in a nursing home.

For the majority (29; 58%) of the depressed group this was their first depressive episode (F32). Eighteen were categorised as having recurrent depression (F33), and three bipolar affective disorder (F31.3). Most were described as having a healthy personality (27; 54%), 15 mildly abnormal and four moderately abnormal personality traits. It was not possible to ascribe a personality rating in four cases.
In 26 patients the social network was poorly integrated: 12 with a locally family dependent network; two with a local self-contained network; and 12 with a private restricted network (seven with spouse). Twenty-four patients had well integrated networks: 20 locally integrated; and four a wider community network.

The social contact schedule was completed for all depressed controls, the BDI and GDS in 48 (96%), and BHS in 47 (94%).

Thirty-seven of the depressed control group were interviewed with the LEDS (74%; 16 male, 21 female), with a mean age 76 (SD 5.4), median age 76 (inter-quartile range 71.5 – 80). Details concerning the LEDS data for the depressed control group are contained in Tables 3.8.1, 2, 3, 4, in Section 3.8 comparing life events and difficulties between groups.

### 3.6. COMPARISON OF DSH SUBJECTS AND DEPRESSED GROUP

Importantly there were no significant differences between the DSH subjects and depressed control group for the important demographic variables of age (Mann-Whitney U = 1889, P = 0.96) and gender (Pearson chi-square = 0.28, P = 0.6). Tables 3.6.1,2, compare the characteristics of the two groups. The main differences were the lower rates of contact with statutory/voluntary agencies, and the higher frequency of poorly integrated social networks for the DSH subjects.

Although the number of medical problems experienced by both groups were similar, it was felt important to explore the data in more detail, in particular for conditions of recent stroke, malignancy, arthritis, hearing/eyesight difficulties, cardiovascular disease, and respiratory
problems. There were no significant differences for any of these disease categories (Table 3.6.3).
<table>
<thead>
<tr>
<th></th>
<th>DSH Subjects</th>
<th>Depressed Controls</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>76 (70 - 83.75)</td>
<td>76 (70.75 - 81)</td>
<td>0.96</td>
</tr>
<tr>
<td>Total Medical Problems</td>
<td>2 (1 - 3)</td>
<td>2 (1 - 3)</td>
<td>0.85</td>
</tr>
<tr>
<td>MMSE</td>
<td>28 (26.25 - 30)</td>
<td>29 (26 - 30)</td>
<td>0.34</td>
</tr>
<tr>
<td>Perceived community support</td>
<td>60 (19 - 92)</td>
<td>80 (50 - 100)</td>
<td>0.06</td>
</tr>
<tr>
<td>Perceived support from family &amp; friends</td>
<td>85 (50 - 99.5)</td>
<td>90 (72 - 100)</td>
<td>0.25</td>
</tr>
<tr>
<td>No. of contacts with stat./voluntary services</td>
<td>0 (0 - 2)</td>
<td>1 (0 - 3.3)</td>
<td>0.008**</td>
</tr>
<tr>
<td>No. of contacts with family &amp; friends</td>
<td>7 (2 - 8)</td>
<td>4 (1 - 7)</td>
<td>0.09</td>
</tr>
<tr>
<td>Total number of contacts</td>
<td>7 (2.8 - 11)</td>
<td>6 (3.4 - 11)</td>
<td>0.72</td>
</tr>
<tr>
<td>GDS – 15</td>
<td>8 (4 - 10)</td>
<td>9 (6 - 10)</td>
<td>0.22</td>
</tr>
<tr>
<td>BDI</td>
<td>18 (9 - 29)</td>
<td>20 (14 - 26)</td>
<td>0.64</td>
</tr>
<tr>
<td>Cognitive – affective subscale</td>
<td>9 (3.5 – 17)</td>
<td>12 (8 – 17)</td>
<td>0.37</td>
</tr>
<tr>
<td>Somatic – vegetative subscale</td>
<td>8 (5 – 11.5)</td>
<td>8 (6 – 11)</td>
<td>0.75</td>
</tr>
<tr>
<td>BHS (%)</td>
<td>45 (15 – 75)</td>
<td>50 (30 – 70)</td>
<td>0.58</td>
</tr>
<tr>
<td>BHS – 10 item</td>
<td>4.5 (1 – 7)</td>
<td>4 (2 – 7)</td>
<td>0.7</td>
</tr>
<tr>
<td>BHS – 20 item</td>
<td>9 (4 – 15)</td>
<td>10 (6 – 13)</td>
<td>0.74</td>
</tr>
</tbody>
</table>

** = P < 0.01
Table 3.6.2. A Comparison of DSH subjects and depressed controls – categorical data

<table>
<thead>
<tr>
<th></th>
<th>DSH subjects</th>
<th>Depressed Controls</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>% female</td>
<td>55</td>
<td>60</td>
<td>0.6</td>
</tr>
<tr>
<td>% living alone</td>
<td>71</td>
<td>59</td>
<td>0.18</td>
</tr>
<tr>
<td>% normal personality</td>
<td>46</td>
<td>59</td>
<td>0.2</td>
</tr>
<tr>
<td>% poorly integrated social network</td>
<td>72</td>
<td>52</td>
<td>0.03*</td>
</tr>
</tbody>
</table>

* = P < 0.05

Table 3.6.3. A comparison of specific medical problems between DSH subjects and depressed controls

<table>
<thead>
<tr>
<th>Problem</th>
<th>DSH subjects</th>
<th>Dep. controls</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Arthritis</td>
<td>19</td>
<td>27</td>
<td>11</td>
</tr>
<tr>
<td>Impairment of hearing and/or vision</td>
<td>10</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>23</td>
<td>33</td>
<td>20</td>
</tr>
<tr>
<td>Respiratory</td>
<td>7</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>Malignancy</td>
<td>8</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>Recent stroke</td>
<td>4</td>
<td>6</td>
<td>1</td>
</tr>
</tbody>
</table>

P values refer to Pearson chi-square apart from # = Fisher’s Exact test
Regression analysis

To clarify some of the results outlined previously it was felt important to perform a regression analysis. In particular it is possible that age, gender, and whether or not the patient was living alone could influence the provision of visits by health and social services, and also the voluntary sector. A logistic regression controlling for age, gender and domicile was performed, with age grouped into three categories (65-74, 75-84, and 85+), and visits by statutory/voluntary agencies dichotomised into contact or no contact. This analysis indicated that the DSH group were significantly less likely to have contact with health/social/voluntary services (Wald = 10.6, P = 0.001). The DSH group was no more likely to be living alone than depressed patients after controlling for age and sex (Wald = 2.5, P = 0.12). In addition visits from family and friends were dichotomised into 0 – 3 visits per week, and more than 3 visits per week, and then a logistic regression analysis was then performed controlling for the influences of age, gender and domicile. No significant difference was found between the two groups (Wald = 0.14, P = 0.7).

Both age and gender are also likely to exert an influence on social networks, and therefore a further logistic regression analysis was performed to clarify this. When controlling for these factors DSH subjects remained more likely to have a restricted social network (Wald = 4.9, P = 0.03).
3.7 COMPARISON OF DEPRESSED DSH SUBJECTS AND DEPRESSED CONTROLS

In order to be able to assist mental health professionals in identifying elderly persons at a high risk of suicide and self-harm it is important to compare elderly DSH subjects who were depressed with the depressed comparison group. Tables 3.7.1 & 2 show this comparison of the 48 depressed DSH subjects with the control group.

Again the two groups appear to match themselves closely for age and gender. The only significant differences between groups relate to perceived levels of community support (lower in DSH depressed subjects), the 10 item BHS (higher in DSH depressed subjects), and social networks (DSH subjects more poorly integrated).

There was a very similar proportion of patients suffering from first episode depression compared to recurrent depression/bipolar affective disorder in both the depressed control groups and the DSH depressed subjects (Pearson chi-square = 0.2, df = 1, P = 0.65). The depressed control group, however, were more likely to be receiving antidepressant medication than the DSH depressed subjects (Pearson chi-square = 9, df = 1, P = 0.003).

The number of medical problems was similar in both groups, and there were also no differences for the proportions with specific disease categories (Table 3.7.3).
<table>
<thead>
<tr>
<th></th>
<th>Depressed DSH Subjects</th>
<th>Depressed Controls</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td>77 (70 – 83.75)</td>
<td>76 (70.75 – 81)</td>
<td>0.85</td>
</tr>
<tr>
<td><strong>Total Medical Problems</strong></td>
<td>2 (1 – 3)</td>
<td>2 (1 – 3)</td>
<td>0.99</td>
</tr>
<tr>
<td><strong>MMSE</strong></td>
<td>27 (26 – 29)</td>
<td>29 (26 – 30)</td>
<td>0.19</td>
</tr>
<tr>
<td><strong>Perceived community support</strong></td>
<td>50 (10 – 90)</td>
<td>80 (50 – 100)</td>
<td>0.025*</td>
</tr>
<tr>
<td><strong>Perceived support from family &amp; friends</strong></td>
<td>80 (41 – 100)</td>
<td>90 (72 – 100)</td>
<td>0.20</td>
</tr>
<tr>
<td><strong>No. of contacts with statutory services</strong></td>
<td>0 (0 – 2)</td>
<td>1 (0 – 3.3)</td>
<td>0.06</td>
</tr>
<tr>
<td><strong>No. of contacts with family &amp; friends</strong></td>
<td>7 (3 – 8)</td>
<td>4 (1 – 7)</td>
<td>0.06</td>
</tr>
<tr>
<td><strong>Total number of contacts</strong></td>
<td>7.25 (5 – 10)</td>
<td>6 (3.4 – 11)</td>
<td>0.46</td>
</tr>
<tr>
<td><strong>GDS – 15</strong></td>
<td>9 (7 – 11.5)</td>
<td>9 (6 – 10)</td>
<td>0.32</td>
</tr>
<tr>
<td><strong>BDI</strong></td>
<td>23 (15 – 33)</td>
<td>20 (14 – 26)</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Cognitive – affective subscale</strong></td>
<td>12 (8.5 – 20.5)</td>
<td>12 (8 – 17)</td>
<td>0.36</td>
</tr>
<tr>
<td><strong>Somatic – vegetative subscale</strong></td>
<td>11 (6 – 13.5)</td>
<td>8 (6 – 11)</td>
<td>0.14</td>
</tr>
<tr>
<td><strong>BHS (%)</strong></td>
<td>60 (39 – 85)</td>
<td>50 (30 – 70)</td>
<td>0.08</td>
</tr>
<tr>
<td><strong>BHS – 10 item</strong></td>
<td>7 (3 – 8.5)</td>
<td>4 (2 – 7)</td>
<td>0.047*</td>
</tr>
<tr>
<td><strong>BHS – 20 item</strong></td>
<td>12 (6.25 – 17)</td>
<td>10 (6 – 13)</td>
<td>0.21</td>
</tr>
</tbody>
</table>

* = P < 0.05
Table 3.7.2. A comparison of depressed DSH subjects and depressed controls – categorical data

<table>
<thead>
<tr>
<th></th>
<th>DSH subjects</th>
<th>Depressed Controls</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>% female</td>
<td>65</td>
<td>60</td>
<td>0.6</td>
</tr>
<tr>
<td>% living alone</td>
<td>71</td>
<td>59</td>
<td>0.2</td>
</tr>
<tr>
<td>% normal personality</td>
<td>47</td>
<td>59</td>
<td>0.3</td>
</tr>
<tr>
<td>% poorly integrated social network</td>
<td>76</td>
<td>52</td>
<td>0.02*</td>
</tr>
</tbody>
</table>

* = P < 0.05

Table 3.7.3. A comparison of specific medical problems between depressed DSH subjects and depressed controls

<table>
<thead>
<tr>
<th>Problem</th>
<th>Dep. DSH subjects</th>
<th>Dep. controls</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Arthritis</td>
<td>12</td>
<td>26</td>
</tr>
<tr>
<td>Impairment of hearing and/or vision</td>
<td>8</td>
<td>17</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>14</td>
<td>30</td>
</tr>
<tr>
<td>Respiratory</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Malignancy</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Recent stroke</td>
<td>3</td>
<td>7</td>
</tr>
</tbody>
</table>

P values refer to Pearson chi-square apart from # = Fisher's Exact test
Regression analysis

As previously a logistic regression analysis was performed to control for the influence of age, gender and domicile (whether living alone) on contacts with social/heath/voluntary services. The depressed DSH subjects were less likely to have contact with statutory services (Wald = 5.5, P = 0.02). In addition, when controlling for age and gender, the depressed DSH subjects were more likely to have a poorly integrated social network (Wald = 5.5, P = 0.02).

Depressed DSH subjects were no more likely to be living alone then depressed patients after controlling for age and gender (Wald = 1.4, P = 0.24). Also there was no difference for visits from family and friends when this was categorised into 0-3 visits per week or more than 3 visits per week and controlling for age, gender and domicile (Wald = 0.3, P = 0.6).

A comparison of individual items on the BDI, Hopelessness Scale and GDS-15 between depressed DSH subjects and depressed controls

In order to assist clinicians further in the risk assessment process the responses on individual items of the psychiatric rating instruments used for depression and in particular hopelessness were explored further.

For the majority of questions of the GDS–15 there were no significant differences in responses between the depressed DSH subjects and depressed controls. However, there were two notable exceptions. Firstly depressed DSH subjects were much more likely to respond ‘yes’ to the question ‘do you feel your situation is hopeless?’ (Pearson chi-square = 7.3, df = 1, P = 0.007). Secondly, the depressed DSH subjects were also more likely to respond ‘no’
to the question 'do you think it is wonderful to be alive now?' (Pearson chi-square = 3.8, df = 1, P = 0.05).

The results for the BDI showed some interesting differences, though on the whole the majority of depressive symptoms were rated similarly in the two groups. As we might expect, the depressed DSH subjects were more likely to score higher on thoughts of suicide and self-harm than depressed controls (Pearson chi-square = 11.6, df = 3, P = 0.009). Interestingly DSH depressed subjects were also more likely to rate themselves more sad (Pearson chi-square = 1.5, df = 3, P = 0.04), but less likely to cry (Pearson chi-square = 9.2, df = 3, P = 0.03) than depressed controls.

Results for the Beck Hopelessness Scale are included in Table 3.7.4. In addition, a discriminant analysis (see Section 2.6) was performed for the BHS, and as expected the results were concordant with the bivariate analysis. The items on the BHS-10 with the highest correlations for differentiating between the DSH and depressed control groups were: 'I might as well give up because I can't make things better for myself' (0.57); 'When things are going badly, I am helped by knowing they can't stay that way forever' (0.42); 'It is unlikely that I will get any real satisfaction in the future' (0.33); and 'When I look ahead to the future, I expect I will be happier than I am now' (0.32). The only item included on the full BHS with a discriminant correlation of similar magnitude to these BHS-10 questions was 'All I can see ahead of me is unpleasantness rather than pleasantness' (0.32).
Table 3.7.4. A comparison of responses on the Beck Hopelessness Scale for depressed DSH subjects and depressed controls

<table>
<thead>
<tr>
<th>Question</th>
<th>DSH depressed</th>
<th>Depressed controls</th>
<th>P +</th>
</tr>
</thead>
<tbody>
<tr>
<td>#I look forward to the future with hope and enthusiasm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>True</td>
<td>15</td>
<td>22</td>
<td>0.5</td>
</tr>
<tr>
<td>False</td>
<td>22</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>#I might as well give up because I can’t make things better for myself</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>True</td>
<td>22</td>
<td>12</td>
<td>0.002**</td>
</tr>
<tr>
<td>False</td>
<td>15</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>#When things are going badly, I am helped by knowing they can’t stay that way forever</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>True</td>
<td>23</td>
<td>38</td>
<td>0.06</td>
</tr>
<tr>
<td>False</td>
<td>14</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>I can’t imagine what my life would be like in 10 years</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>True</td>
<td>26</td>
<td>34</td>
<td>0.24</td>
</tr>
<tr>
<td>False</td>
<td>4</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>I have enough time to accomplish the things I most want to do</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>True</td>
<td>22</td>
<td>27</td>
<td>0.24</td>
</tr>
<tr>
<td>False</td>
<td>8</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>In the future, I expect to succeed it what concerns me most</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>True</td>
<td>18</td>
<td>28</td>
<td>0.94</td>
</tr>
<tr>
<td>False</td>
<td>12</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>#My future seems dark to me</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>True</td>
<td>22</td>
<td>25</td>
<td>0.64</td>
</tr>
<tr>
<td>False</td>
<td>15</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>I expect to get more of the good things in life than the average person</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>True</td>
<td>8</td>
<td>5</td>
<td>0.08</td>
</tr>
<tr>
<td>False</td>
<td>22</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>I just can’t get the breaks and there’s no reason to believe I will in the future</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>True</td>
<td>20</td>
<td>23</td>
<td>0.18</td>
</tr>
<tr>
<td>False</td>
<td>10</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>My past experiences have prepared me well for the future</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>True</td>
<td>17</td>
<td>31</td>
<td>0.28</td>
</tr>
<tr>
<td>False</td>
<td>13</td>
<td>14</td>
<td></td>
</tr>
</tbody>
</table>

** = P<0.01

+ = Pearson chi-square test

# = 10 and 20 item scale
Table 3.7.4. A comparison of responses on the Beck Hopelessness Scale for depressed DSH subjects and depressed controls- continued

<table>
<thead>
<tr>
<th>Question</th>
<th>DSH depressed</th>
<th>Depressed controls</th>
<th>P*</th>
</tr>
</thead>
<tbody>
<tr>
<td>All I can see ahead of me is unpleasantness rather than pleasantness</td>
<td>True 19</td>
<td>21</td>
<td>0.31</td>
</tr>
<tr>
<td></td>
<td>False 11</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>I don’t expect to get what I really want</td>
<td>True 22</td>
<td>31</td>
<td>0.58</td>
</tr>
<tr>
<td></td>
<td>False 8</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>#When I look ahead to the future, I expect I will be happier than I am now</td>
<td>True 21</td>
<td>31</td>
<td>0.32</td>
</tr>
<tr>
<td></td>
<td>False 16</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>#Things just won’t work out the way I want them to</td>
<td>True 27</td>
<td>29</td>
<td>0.28</td>
</tr>
<tr>
<td></td>
<td>False 10</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>#I have great faith in the future</td>
<td>True 13</td>
<td>23</td>
<td>0.17</td>
</tr>
<tr>
<td></td>
<td>False 24</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>I never get what I want so it’s foolish to want anything</td>
<td>True 11</td>
<td>15</td>
<td>0.72</td>
</tr>
<tr>
<td></td>
<td>False 19</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td>#My future seems dark to me</td>
<td>True 31</td>
<td>39</td>
<td>0.92</td>
</tr>
<tr>
<td></td>
<td>False 6</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>#It is very unlikely that I will get any real satisfaction in the future</td>
<td>True 22</td>
<td>19</td>
<td>0.08</td>
</tr>
<tr>
<td></td>
<td>False 15</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td># I can look forward to more good times than bad times</td>
<td>True 21</td>
<td>27</td>
<td>0.86</td>
</tr>
<tr>
<td></td>
<td>False 16</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>There’s no use really trying to get something I want because I probably won’t get it</td>
<td>True 17</td>
<td>25</td>
<td>0.84</td>
</tr>
<tr>
<td></td>
<td>False 13</td>
<td>21</td>
<td></td>
</tr>
</tbody>
</table>

+ = Pearson chi-square test

# = 10 and 20 item scale
3.8. LIFE EVENTS AND DIFFICULTIES: A COMPARISON BETWEEN GROUPS

The LEDS interview was rated for 47 DSH subjects and 37 depressed controls. There was no difference between the groups for age (Mann-Whitney U = 842, Z = -0.25, P = 0.8), both had a median age of 76. The groups were also well matched for gender (Pearson chi-square = 0.4, df = 1, P = 0.5). Patients in both groups usually had a confidant, 34/47 in the DSH group and 32/37 in the depressed comparison group, there was no difference in the proportions (Pearson chi-square = 1.9, df = 1, P = 0.16). The table 3.8.1 gives rates of life events and difficulties per 100 patients for the two groups, DSH subjects and depressed controls. It includes comparative statistics (Mann-Whitney U), and is for the major categories of life events and difficulties. All ratings quoted in this table, and for all life events results are for long-term contextual threat i.e. consensus ratings only, and for either the six-month period prior to DSH or onset of depression or within one month of DSH/onset depression. Table 3.8.2 gives a more detailed breakdown of life events, listing the proportion of each group experiencing events and comparing the proportions between groups. Table 3.8.3 gives similar data for chronic difficulties.

As previously the results are also presented for the sub-group of DSH depressed subjects, compared with the depressed control group (Table 3.8.4).

The sample size was felt to be insufficient to adequately explore the dimensions of danger, loss, humiliation and entrapment. Analysis of reported ratings for events are beyond the scope of the thesis and will be conducted at a later date.
<table>
<thead>
<tr>
<th></th>
<th>DSH group (n=47)</th>
<th>Depressed controls (n=37)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>All LE</td>
<td>145</td>
<td>127</td>
<td>0.7</td>
</tr>
<tr>
<td>All independent LE</td>
<td>126</td>
<td>119</td>
<td>0.9</td>
</tr>
<tr>
<td>All severe independent LE</td>
<td>64</td>
<td>62</td>
<td>0.98</td>
</tr>
<tr>
<td>All severe independent LE within 1/12</td>
<td>23</td>
<td>27</td>
<td>0.7</td>
</tr>
<tr>
<td>All difficulties</td>
<td>147</td>
<td>116</td>
<td>0.048*</td>
</tr>
<tr>
<td>All health difficulties</td>
<td>83</td>
<td>70</td>
<td>0.2</td>
</tr>
<tr>
<td>All major difficulties</td>
<td>51</td>
<td>30</td>
<td>0.1</td>
</tr>
<tr>
<td>All major health difficulties</td>
<td>28</td>
<td>14</td>
<td>0.1</td>
</tr>
<tr>
<td>All major relationship difficulties</td>
<td>17</td>
<td>3</td>
<td>0.06</td>
</tr>
</tbody>
</table>

* = P < 0.05
Table 3.8.2. Proportion of patients in DSH and depressed groups experiencing life events (LE), with comparative statistics (Pearson chi-square/Fisher's Exact test)

<table>
<thead>
<tr>
<th>Event Type</th>
<th>DSH</th>
<th>Depressed</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>% any LE</td>
<td>70</td>
<td>70</td>
<td>1.0</td>
</tr>
<tr>
<td>% any independent LE</td>
<td>66</td>
<td>70</td>
<td>0.7</td>
</tr>
<tr>
<td>% any death LE</td>
<td>19</td>
<td>32</td>
<td>0.2</td>
</tr>
<tr>
<td>% any health (self) LE</td>
<td>36</td>
<td>32</td>
<td>0.7</td>
</tr>
<tr>
<td>% any health (other) LE</td>
<td>17</td>
<td>19</td>
<td>0.8</td>
</tr>
<tr>
<td>% any other independent LE</td>
<td>26</td>
<td>19</td>
<td>0.5</td>
</tr>
<tr>
<td>% any severe LE</td>
<td>45</td>
<td>41</td>
<td>0.7</td>
</tr>
<tr>
<td>% any independent severe LE</td>
<td>43</td>
<td>41</td>
<td>0.9</td>
</tr>
<tr>
<td>% any severe death LE</td>
<td>13</td>
<td>24</td>
<td>0.2</td>
</tr>
<tr>
<td>% any severe health (self) LE</td>
<td>15</td>
<td>22</td>
<td>0.4</td>
</tr>
<tr>
<td>% any severe health (other) LE</td>
<td>13</td>
<td>8</td>
<td>0.7*</td>
</tr>
<tr>
<td>% any other severe independent LE</td>
<td>9</td>
<td>0</td>
<td>0.1*</td>
</tr>
<tr>
<td>% any LE within 1 month (1/12)</td>
<td>38</td>
<td>38</td>
<td>1.0</td>
</tr>
<tr>
<td>% any independent LE within 1/12</td>
<td>30</td>
<td>38</td>
<td>0.4</td>
</tr>
<tr>
<td>% any severe LE within 1/12</td>
<td>21</td>
<td>22</td>
<td>0.9</td>
</tr>
<tr>
<td>% any severe independent LE within 1/12</td>
<td>17</td>
<td>22</td>
<td>0.6</td>
</tr>
</tbody>
</table>

* = Fisher's exact test
Table 3.8.3. Proportion of patients in DSH and depressed groups experiencing chronic difficulties, with comparative statistics (Pearson chi-square/Fisher’s Exact Test)

<table>
<thead>
<tr>
<th></th>
<th>DSH (n=47)</th>
<th>Depressed (n=37)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>% any difficulty</td>
<td>94</td>
<td>84</td>
<td>0.1</td>
</tr>
<tr>
<td>% any health difficulty (self)</td>
<td>79</td>
<td>65</td>
<td>0.2</td>
</tr>
<tr>
<td>% any health difficulty (other)</td>
<td>17</td>
<td>30</td>
<td>0.2</td>
</tr>
<tr>
<td>% any relationship difficulty</td>
<td>19</td>
<td>11</td>
<td>0.3</td>
</tr>
<tr>
<td>% any financial difficulty</td>
<td>6</td>
<td>0</td>
<td>0.3*</td>
</tr>
<tr>
<td>% any major difficulty</td>
<td>43</td>
<td>27</td>
<td>0.1</td>
</tr>
<tr>
<td>% any major health difficulty (self)</td>
<td>28</td>
<td>14</td>
<td>0.1</td>
</tr>
<tr>
<td>% any major health difficulty (other)</td>
<td>4</td>
<td>14</td>
<td>0.2*</td>
</tr>
<tr>
<td>% any major relationship difficulty</td>
<td>15</td>
<td>3</td>
<td>0.07</td>
</tr>
<tr>
<td>% any major financial difficulty</td>
<td>2</td>
<td>0</td>
<td>1.0*</td>
</tr>
</tbody>
</table>

* = Fisher's exact test
Table 3.8.4. Proportion of depressed DSH subjects and patients in depressed group experiencing life events (LE) and difficulties with comparative statistics (Pearson chi-square/Fisher’s Exact test)

<table>
<thead>
<tr>
<th></th>
<th>DSH (n=33)</th>
<th>Depressed (n=37)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>% any LE</td>
<td>70</td>
<td>70</td>
<td>1.0</td>
</tr>
<tr>
<td>% any independent LE</td>
<td>67</td>
<td>70</td>
<td>0.7</td>
</tr>
<tr>
<td>% any severe LE</td>
<td>46</td>
<td>41</td>
<td>0.7</td>
</tr>
<tr>
<td>% any independent severe LE</td>
<td>42</td>
<td>41</td>
<td>0.9</td>
</tr>
<tr>
<td>% any severe death LE</td>
<td>12</td>
<td>24</td>
<td>0.2</td>
</tr>
<tr>
<td>% any severe health (self) LE</td>
<td>9</td>
<td>22</td>
<td>0.2</td>
</tr>
<tr>
<td>% any severe health (other) LE</td>
<td>15</td>
<td>8</td>
<td>0.5+</td>
</tr>
<tr>
<td>% any difficulty</td>
<td>94</td>
<td>84</td>
<td>0.2</td>
</tr>
<tr>
<td>% any health (self) difficulty</td>
<td>80</td>
<td>65</td>
<td>0.2</td>
</tr>
<tr>
<td>% any major difficulty</td>
<td>36</td>
<td>27</td>
<td>0.4</td>
</tr>
<tr>
<td>% any major health (self) difficulty</td>
<td>24</td>
<td>14</td>
<td>0.2</td>
</tr>
</tbody>
</table>

+ = Fisher’s exact test
CHAPTER 4

DISCUSSION

4.1 SUICIDES

By examining the Leicestershire mortality statistics it was possible to identify deaths that had been given suicide verdicts, and also other deaths that represented probable suicide. This methodology gave more reliable rates of suicide than relying upon coroners’ verdicts (Health Advisory Service, 1994; O'Donnell & Farmer, 1995; Dennis et al., 2001), and helped to identify all possible elderly suicides during the study period.

Official statistics for suicides and undetermined death have shown recent changes: rates for women are generally declining; there was a substantial increase in the figures for younger males (15-35 years) in the late 1980s; and men outnumber women by almost 2:1 (Department of Health, 1993). More recently it has been shown that males aged 25-44 now have the highest age specific rates (McClure, 2000; Charlton, 1996), though there has been an overall decrease in the suicide rates for both genders since 1990 (McClure 2000; Kelly & Bunting, 1998). Our results confirm the findings of McClure (2000) who found that males aged 25-64 now have higher rates of suicide than elderly males. Indeed, in this study the lowest rates of male suicide were found in the elderly, though because of the small numbers involved we cannot exclude the possibility that the comparative low rates for the very old (75 years and over) were a statistical artefact. Also in this study the results confirm female rates showing the familiar pattern of increasing with age, but overall male suicide now outnumbering female by 3:1. However, there appears to be a substantial narrowing of the sex ratio with increasing
Suicide rates in Leicestershire have traditionally been marginally below the national average, and our results are concordant with this trend. This study indicates that hanging is now the most popular method of suicide in the elderly, previous studies have found overdose to be more common (Lindesay, 1986). This also contrasts with the recent findings of Harwood et al. (2000) who found overdose was still the most popular method of suicide in their psychological autopsy study of elderly suicides in central England. Men use more violent methods, particularly hanging, this is consistent with previous findings from both the U.K. and other European countries (Cattell, 1988; Pitkala et al., 2000; Harwood et al., 2000).

The rate of contact with psychiatric services (36%) was little different to suicide in the general population (34%; Dennis et al., 2001 ). This is surprising, and it may indicate that elderly suicides may occur during a first episode of depression in later life, and a reticence by General Practitioners to treat or refer to specialist services. This theory is given further support from psychological autopsy studies in Finland (Pitkala et al., 2000) and studies of coroners' records in London and Manchester (Cattell, 1988; Cattell & Jolley, 1995) indicating high rates of untreated depression in elderly suicides. In addition, depression had been identified in seven of the 14 patients who died within 3 months of discharge from general medical wards, but none of the patients had recent contact with mental health services.

Of those that did have a psychiatric history, affective disorder (principally depression) was by far the most common primary psychiatric diagnosis, accounting for 81% of cases. This is consistent with psychological autopsy studies (Barraclough, 1971; Conwell et al., 1991; Henriksson et al., 1995; Harwood et al., 2001).
The audit of involvement of psychiatric services showed that the care patients received had been of a good standard, but 16 suicides occurred within 3 months of contact with services, 8 within one week (usually recent discharge from hospital). Inevitably more caution in planning discharge, or more persistence in follow-up may have resulted in a less tragic outcome. The content analysis elucidated important factors reported by other researchers, in particular poor compliance with medication, recent DSH, life events and poor physical health. It is likely that some patients showed symptomatic improvement whilst in hospital, but this was a temporary response in the protective milieu of the hospital environment; on leaving hospital these patients returned to the same circumstances and stressors responsible for their original hopelessness and depression. Most suicides actually take place when risk was thought to be low (Confidential Inquiry, 1999). It is also well known that risk may increase when a patient is recovering from a severe depressive episode, continually monitoring suicidal ideation during the course of a hospital admission is therefore imperative (Morgan & Stanton, 1997). Special care needs to be taken with patients who have recently self-harmed and bereaved (Powell et al., 2000). It is important to establish a close rapport with patients at risk, with a prudent and well-planned approach to periods of leave and discharge (Dennis et al., 2001). The use of day hospitals to provide close supervision of this group could be an important strategy.

Since the collection of data on the suicide group there have been considerable changes in the style of service delivery and after-care arrangements. Psychiatric services are now much more orientated to providing comprehensive care in the community with multi-disciplinary teams. The Care Programme Approach (CPA; Department of Health, 1990) is now fully implemented, and should ensure care planning with co-ordinated and appropriate discharge policies. Other changes in guidance - the Supervision Register (Department of Health, 1994),
and legislation – Supervised Discharge (Section 25) – should also encourage the provision of better supervision and support following hospital admission for a small sub-group of patients. The effect of the CPA however, may have been over-emphasised (Dennis et al., 2001), and concentrating on other groups of elderly patients may have greater potential for reduction in suicide in the elderly (Section 4.5).

Some of the most striking findings from the examination of the suicide victims in this study relate not to the involvement of psychiatric services but recent admission to general hospital wards. Nearly half had contact with at least one of the local district general hospitals, also emphasising the importance of physical ill health as an important aetiological factor in suicidal behaviour. Eleven patients committed suicide within one month of discharge from a general hospital ward and 14 within 3 months (16% of all elderly suicides). The study identified that 7 of these patients had a depression identified by medical staff, but they were not referred to a psychiatrist. More worryingly in four cases of suicide the hospital admission had been precipitated by an episode of DSH but the patient did not receive a psychiatric assessment during the course of their admission. In our study nearly a quarter of elderly suicides had a history of previous self-harm, this was comparable with the study of Cattell & Jolley (1995) who found 31% of elderly suicides had a history of DSH. In their study 14% of suicides had self-harmed in the 12 months before death, and we found 8% of all suicides occurred within 3 months of an episode of self-harm.

These findings raise two main issues: firstly general medical staff need to be better at identifying and treating depression in the elderly; secondly elderly patients who present to general hospitals following an episode of DSH need an adequate risk assessment. There is a strong need for a close liaison between psychiatric services and general hospital wards, and improved education and training of health service staff on medical wards. One component of
the 'Defeat Depression' campaign run by the Royal Colleges of Psychiatry and General Practice has been to improve training of non-psychiatric staff in identifying and managing depression. Issues concerning training of general hospital staff, screening for depression, the mandatory requirement that older adults presenting with self-harm receive a specialist mental health risk assessment, and the development of liaison psychiatry services in general hospitals are all discussed in section 4.5 (b).

4.2 DELIBERATE SELF-HARM DESCRIPTIVE AND CASE-CONTROL STUDY

One important hypothesis relating to our study was that DSH in the elderly is frequently a failed suicide attempt. Unless this is true then no valid conclusions can be drawn from studies of DSH concerning suicidal behaviour in the elderly. Two important findings from the descriptive study of DSH subjects support the hypothesis: firstly the relatively high suicide intent scores with 50% of cases scoring 14 or more on the intent scale; and secondly 58% were rated by the researchers as wanting to die at the time of the episode. It was not inevitable that patients who harmed themselves wanted to die. In 16 cases the researchers felt the patient was ambivalent, and in 14 cases the patient did not want to die.

When comparing the basic demography of the suicide and DSH groups there are some clear differences. The mean age of the DSH group was greater than the suicide group (77 versus 73.5 years); there were more men in the suicide group, and more women in the DSH group; and by far the most popular method of DSH was overdose whereas hanging was the most common method of suicide. These differences in gender and methods are well known (Dennis, 1998). As has been previously stated, however, the differences in the gender ratios are much less pronounced than for younger people.
Why are the differences found? One possible reason is that women use less violent means of suicide (mainly overdose) and are therefore more likely to be discovered. Women also visit their doctors more frequently than men (Nathanson, 1977) and therefore probably have greater access to prescribed medication to take as an overdose (Lindesay, 1986). In addition being widowed is frequently an unexpected experience for men who expect to be outlived by their spouse, the distress related to widowhood within the contemporary cohort in older men is greater than among older women (Manton, et al., 1987). Battegay and Mullejans (1992) have also described the helplessness and despair that older men may feel when they are no longer able to work and carry out activities that are valued by society.

The most common objectively rated motives for the DSH attempt were to escape from an intolerable situation, or gain relief from an unbearable state of mind. To seek help, influence others, to make people understand how desperate they were, and to make others feel sorry however, were all frequently recorded motives. When comparing depressed DSH subjects with the non-depressed, to gain respite from an unbearable state of mind was clearly associated with depression, and to make people feel sorry was apparent in non-depressed subjects.

Uni-polar depression (nearly 70%) was the most commonly encountered mental disorder in the DSH group. However 19% were classified as having no mental disorder – this is much higher than comparable studies (Merrill & Owens, 1990; Pierce, 1987; Nowers, 1993). Our second hypothesis, namely that depression is invariably present in elderly persons who harm themselves is therefore not necessarily the case. There could be a number of reasons for this finding, firstly ICD 10 criteria were very stringently applied when diagnosing mental disorder; secondly other studies are biased towards in-patient samples; and thirdly this study relates to a more recent cohort of elderly patients. The first explanation is unlikely, as
although the mean scores for the BDI and GDS in the DSH group were 19.5 and 7.4 respectively, only 70% were above a cut-off of 9/10 on the BDI, and 4/5 on the GDS.

The depressed DSH subjects appeared to be at particularly high risk, this was emphasised by significantly higher intent scores than the non-depressed DSH subjects, with accompanying significantly higher degrees of hopelessness as measured on the BHS.

Importantly, 30 DSH subjects (43%) were experiencing their first episode of depression, and 14 of these were not receiving antidepressants at the time of the self-harm episode. In these circumstances it is easy to criticise primary health care physicians; however 11/15 patients suffering from depression who saw their G.P. within one week of the DSH episode were receiving antidepressant medication. Similarly, 17/24 patients suffering from depression who saw the G.P. within one month of self-harm were also on antidepressants. These treatment figures could be interpreted two ways; they are less than ideal, but on the other hand substantially better than treatment figures reported in some community studies of depression (Macdonald, 1986; Copeland et al., 1987)

Current and recent medical problems were very common in the DSH group (over 80%), these rates are higher than comparable studies (Merrill & Owens, 1990; Pierce, 1987; Nowers, 1993). Cardiovascular disorder, arthritis, sensory difficulties, and malignancy were particularly common.

Social isolation was prominent in the DSH group, with very limited support from the statutory services (health, social, voluntary sector), and the groups overall perception of support from these organisations reflected this finding. In addition a substantial proportion of older adults who self-harmed were living alone (70%), and widowed (61%). This compares with general
population data from the city and county of Leicester from the 1991 census that showed that only 36% of the elderly population were widowed, and 35% living alone. One could hypothesize from these findings that improved levels of support from health and social services and the voluntary sector to isolated elderly, with poor physical health and possible concurrent depression may have an influence in reducing the risk of suicide (section 4.5 b).

The fact that social isolation is so noticeable, and that clearly some DSH subjects did not suffer from depression gives support for Durkheim's sociological model of egotistic suicide. In addition, the lack of clear norms for older adults associated with changes of roles in ageing could lead to hypothesizing an excess of anomie type suicide in the elderly (McIntosh, 1992).

Despite the fact that only 70% of the DSH group were depressed according to ICD 10, there were no differences when comparing BDI and GDS scores with the depressed comparison group. In addition, there were no differences in Hopelessness scale (BHS) scores between the groups. Even when comparing the depressed DSH subjects with depressed controls there were no significant differences on the depression rating instruments. This tells us that the two groups were closely matched for severity of depression, as well as for age and gender. The fact that there was very little difference in depressive symptomatology between depressed DSH subjects and controls when comparing individual items on the GDS-15 and BDI gives further emphasis to the importance of asking specific questions concerning suicide ideation in the clinical setting. The major differences in symptomatology between groups were specifically in regard to questions concerning hopelessness, tedium vitae and suicidal thoughts. Suicidal ideation is closely linked to psychiatric disorder (Harwood & Jacoby, 2000). In a study of 225 healthy, and 120 mentally ill patients all aged 85, Skoog and colleagues (1996) found that 9% of the mentally healthy had occasional thoughts that life was not worth living and some wished for death, but none had seriously considered suicide. However, in the mentally ill group, 66% had thoughts that life was not worth living or wished
for death, 9% had thoughts of suicide and 1.7% had seriously considered ending their life. This study indicates that any thoughts of death in the elderly depressed should be taken seriously, and the nature of the thoughts enquired about further. In contrast to this Weissman and colleagues (1989), reported the frequency of suicidal thoughts and history of self-harm among participants of the ECA studies. Among those not meeting diagnostic criteria for any psychiatric disorder, 15% ‘thought a lot about death’, 4% ‘felt so low they had thought about committing suicide’, 3% ‘felt like they wanted to die’, and 1% reported a previous self-harm attempt. This may therefore indicate a lesser role for depression in the aetiology of suicidal ideation. Methodological shortcomings, in particular case finding for depression could have influenced these findings in the ECA studies (Kennedy et al., 1996). In a study by Szanto and colleagues (1996) of elderly patients with depression, they found that patients might change from ‘passive ideators’ to ‘active ideators’ during the course of their illness. The implications of this are that clinicians need to be vigilant should patient’s ideation change; regular reassessment of patients for the presence of suicidal ideation is recommended.

Although there was no significant difference between groups for the full 20 item BHS, interestingly the depressed DSH patients scored significantly higher on the abbreviated 10 item BHS (BHS-10). The BHS-10 has much better face validity in the elderly than the full scale (sections 2.8 & 4.3 b). The difference in responses between depressed controls and depressed DSH subjects for a number of individual questions almost reached significance; a larger group size may well have clarified these differences. One particular question, ‘I might as well give up because I can’t make things better for myself’ was much more likely to be replied as true by the depressed DSH subjects. These results confirm the importance of pessimism and hopelessness as an aetiological factor in suicidal behaviour in depressed elderly. Rifai and colleagues (1994) showed that a high degree of hopelessness persisting after remission of depression is associated with a history of suicidal behaviour. However, an
extensive literature search failed to detect any further studies of hopelessness as a determinant of suicidal behaviour in the elderly.

There were some important negative findings when comparing the DSH group (and sub-group of depressed DSH subjects) and depressed control subjects. Importantly the number of medical problems between groups was similar, and there were no differences in the proportion of patients suffering from stroke, cancer, and arthritis (the commonest condition causing pain in later life). Stroke, cancer, and chronic pain have all previously been described as common in studies of suicide and DSH in older adults (Dennis, 1998), though these studies frequently lack suitable control groups. In addition, there were no differences between the groups for conditions causing sensory deprivation, cardiovascular, and respiratory disorders. Respiratory disease has been found to be associated with late life depression (Denihan et al., 2002). Interestingly there was no significant difference for the presence of personality difficulties between groups, but there were problems with the rating of personality that are discussed at length in section 4.3 b.

The descriptive analysis of the DSH group illustrated the importance of sociological factors in suicidal behaviour. The comparison of DSH subjects with the depressed control group gives further emphasis to Durkheim’s observations on social integration. There are no norms for social networks for the elderly in Leicestershire, but the comparative analysis between the DSH group and depressed controls allows us to hypothesise on the importance of network types. The DSH patients were more likely to have a poorly integrated social network than depressed controls, this difference remained when a logistic regression analysis was performed to control for the influences of gender and age. Similarly the sub-group of depressed DSH patients were more likely to have a poorly integrated network than the depressed control group, and again this difference remained after controlling for confounding
factors. Unfortunately the power of the study was not sufficient to examine the role of the individual support networks, though the most common network in the DSH group was a local family dependent network (poorly integrated), and for the depressed control group a locally integrated network. Wenger (1994d) showed that a locally integrated network was the most common (47%) for ‘well’ elderly living in Liverpool, a family dependent network was found in 22%, local self-contained and private restricted in 11% respectively, and a wider community focused network in 4%. The other significant difference relating to social factors was the lower frequency of visits from the statutory/voluntary sector for the DSH group. When dichotomised into contact or no contact with statutory/voluntary services these differences remained after controlling for potential confounders such as age, gender and domicile for both the DSH group, and sub-group of depressed DSH subjects. Loneliness, lack of support from services, and poor integration in the community therefore appear important factors in determining suicidal behaviour in older adults. The role of these potentially amplifying factors in risk of suicide is discussed further in sections 4.4 & 4.5.

The perceived support from community services was unsurprisingly lower for the DSH than control group, and this reached statistical significance for the sub-group of depressed DSH subjects. In view of the fact that the contact with health/social/voluntary organisations was so low in the DSH subjects it is difficult to attribute any meaning to this finding. Interestingly, the DSH subjects perceived the level of support they were receiving from family and friends to be poorer than the depressed control group, despite evidence to the contrary.

The life event findings were of particular interest. Both groups had similar rates of life events, and the rate of approximately 40% in each group experiencing severe life events during the six-month study period is comparable with other U.K. studies. Murphy (1982), Lam et al. (1987), and Evans & Katona (1993) all found severe life events to be present in
approximately 50% of depressed patients, though these studies used a 12-month study period. Although we have no normal reference population, it is unlikely that a sample of older Leicestershire adults would be much different to the majority of U.K. studies i.e., 20-30% experiencing a severe independent life event (Murphy, 1982; Lam et al., 1987; Emmerson et al., 1989; Evans & Katona, 1993). Life events are important therefore in the aetiology of depression and DSH, but there is no excess of events in the DSH compared to depressed patients. The finding of no difference at one month is also surprising, and we can conclude that life events do not act alone as precipitating factors for self-harm in depressed elderly patients.

There were no notable differences in chronic difficulties between the two groups. The DSH group had a significantly higher rate of 'all difficulties' but not for other categories of difficulty. However, there were trends towards a higher proportion of the DSH group experiencing a major difficulty (in particular concerning their own health). Forty-three percent of the DSH group experienced a major difficulty compared to 27% of depressed controls, and 28% of DSH subjects had a major health difficulty compared to 14% of depressed controls. These results need to be seen in the context of the low power of the LEDS component of the study, this is debated further in section on 4.3 b. The findings are different to other U.K. studies, in particular the proportion of depressed controls experiencing major difficulties is lower than depressed patients' in the studies of Murphy (1982) and Lam et al. (1987). The DSH group had a similar proportion of patients experiencing major difficulties compared to depressed patients' in these studies (ibid.). In conclusion, the study highlights the importance of major difficulties, in particular the subjects' health, in the aetiology of self-harm. When comparing the sub-group of depressed DSH subjects with the depressed control group again there were no differences for major difficulties or major health difficulties, but as before a type II error cannot be excluded.
The implication is that life events may act as precipitating factors in particularly predisposed individuals, and that their role is in interaction with other factors. Why do life events in the elderly depressed clearly act as important factors in the development of the illness, but are not found in excess in the DSH group? The DSH patients, for some reason, act in self-destructive way to severe events unlike the depressed control group. There are a variety of factors which influence the effects of life events (see table 1.5.1). Of particular relevance could be: vulnerability in the individual's background (Brown & Harris, 1978); co-existing chronic problems (Davies et al., 1988); how the individual evaluates the meaning of the event (Brewin, 1990); the individual's dispositional resiliency (Wieber & Williams, 1992); coping strategies of the individual (Brewin, 1990); presence or absence of social support (Brewin, 1990); and bio-genetic factors (Plomin et al., 1990). These potential mediators of life events are discussed in turn.

The one vulnerability factor originally described by Brown & Harris (1978) that has been substantiated to be of importance in older adults is the lack in confiding relationship (Murphy, 1982; Emmerson et al., 1989; Evans & Katona, 1993). In our study there were relatively high rates of confiding relationships in both groups (74% in DSH group versus 86% in depressed control group), with no evidence of an excess or absence of confiding relationships in the DSH group. Co-existing chronic problems, however, could be particularly important, especially chronic ill health as illustrated by the findings discussed previously. Likewise, social support appears to be a very influential factor, emphasised by the findings of more poorly integrated social networks in the DSH group, with fewer visits from the statutory services. Biogenetic factors have not been explored in this study, though we might expect a higher proportion of patients in the DSH group to have a history of previous depression than the control group if this influence was particularly strong, and this was not the case. How the
individual evaluates a particular event may be important, in particular in relation to their previous life experiences. The importance of considering life events in the context of the individual's life history is emphasised in the care of patients' at high risk of suicide (Dennis et al., 2001). The advantage of the LEDS rating of events is the concept of contextual threat, namely the significance to the individual is considered in the light of information obtained concerning their background, social and other circumstances. This is subtly different to the patient's own evaluation; one problem with using the LEDS in the elderly may be the difficulty of assuming that the severity of a threat is generalisable across subjects. The patients' reported severity of events was recorded as part of the LEDS interview, though this is more a measure of affectivity than subjective meaning. The LEDS, though not perfect in it's ability to attribute meaning to events, is better than other available instruments. The individual's resiliency has not been assessed in this study and there were particular difficulties in measuring personality which are discussed at length in section 4.3 b. One interesting observation was that the depressed patients were more likely to cry than the DSH subjects. Are the DSH subjects therefore more prone to externalise their emotion in an action directed to the self, and the depressed patients more likely to internalise these emotions?

Rather than personality factors, coping styles and abilities may be more specifically relevant to suicidal behaviour in the elderly. Unfortunately it was beyond the remit of this project to study these particular factors. In understanding the response to life events and chronic life difficulties, coping mechanisms intuitively appear to be of great importance. The three major facets of coping, namely affectivity, problem solving and help-seeking are all influenced by ageing (Quayhagen & Quayhagen, 1982), and require further evaluation in at risk patient groups.
4.3. METHODOLOGICAL STRENGTHS, LIMITATIONS AND DIFFICULTIES.

a) Suicide study

The suicide study was based upon the Leicestershire Health District, this was the largest in England with a population of over 900,000. Mental Health services were provided by a single NHS trust enabling a substantial sample to be examined retrospectively over a comparatively short period of time, and facilitating the collection of psychiatric case records. The methodology deployed, in particular using the Leicestershire mortality list to identify possible suicides, and then obtaining further information from a variety of sources to clarify the nature of the death enabled an accurate determination of definite and probable suicide cases. Others (Health Advisory Service, 1994; Morgan & Priest, 1991) have recommended this methodology.

Unfortunately a number of difficulties were encountered; in particular the problems obtaining primary health care records. Records prior to 1991 were destroyed, and the records for 1991-93 were frequently missing. The absence of a psychiatric case register, although a barrier to determining previous psychiatric care, was not insurmountable. The individual hospital medical record departments were all searched for patient's notes, and in many instances community teams and consultant secretaries contacted.

The suicide study, however, took place some years before the DSH case control study and the findings must be reviewed with this in mind. In particular, many service improvements have taken place since that time, such as the development of district wide community mental health teams for the elderly, the specialist DSH team, and the advent of initiatives such as the care programme approach.
b) Deliberate Self-Harm case control study

1. Case identification and recruitment

By recruiting through the specialist Deliberate Self-Harm team it was hoped that case capture would be maximised. This method of recruitment is seen as a considerable strength of the project, as many previous studies have concentrated on patients admitted to hospital and referred to mental health services (Pierce, 1987; Hepple & Quinton, 1997; Hawton & Fagg, 1990).

Recruitment to the study was not as complete as was hoped for a variety of reasons. As the DSH team works from 9am – 9pm, urgent referrals from the Accident and Emergency department out of hours would be to the on-call psychiatry SHO. Although many of the on-call SHO's during the period of the study were aware of the project's existence, few referred patients. In any case, most elderly patients who self-harm are admitted either to a medical ward, or directly to a psychiatric unit (Dennis et al., 1997) and so could have been recruited later. It is still likely, however, that for one reason or another many patients were not approached to enter the study. Continuing personnel changes to the DSH team, and junior doctors were all likely to compound the difficulties in recruitment despite efforts to meet staff and advertise the study. The question must be asked if low recruitment rates bias the population studied in any way. As no particular type of patient was likely to be missed by using a recruitment strategy principally reliant upon the DSH team it was felt that this was unlikely to be the case.

Besides the recruitment difficulties discussed above, there are the patients who refused consent. Do non-consenters differ from those recruited into the study in any way and
therefore affects the generalisability of the findings? It is possible that those who were severely depressed may not have been recruited for two reasons; either they declined to take part because of apathy and indifference, or they were unable to give valid consent. It is well known that patients suffering from severe depression, in particular with psychomotor retardation may experience suicidal ideation, but lack the motivation and energy to act upon these thoughts. A subjective impression was that it was more likely for those feeling angry (with motives more directed to distressing others) to refuse to take part in the study; it may be that this group could potentially have either a lower incidence of psychiatric disorder, or personality difficulties. This study, however, showed lower rates of mental disorder than previous studies of DSH in the elderly (Pierce, 1987; Merrill & Owens, 1990).

Another significant problem was patients’ in both groups declining to take part in the LEDS interview. Patients had already been assessed by myself and in the case of the DSH subjects by the DSH team as well. This meant that, in addition to routine clinical assessment by their respective teams they may have already completed a variety of psychiatric rating instruments and been interviewed in a semi-structured manner to determine an ICD 10 diagnosis. It is not surprising, therefore that many patients did not relish the thought of a further 1 – 1 ½ hours interview. This was particularly a problem with the DSH group; as the LEDS interview was conducted some weeks after the initial assessment subjects frequently gave the reason that they would ‘rather forget’ what had happened and a further interview would remind them of the recent event.

The depression control group was particularly difficult to recruit to. Despite visiting most community mental health teams for the elderly (CMHT) in Leicestershire on a number of occasions, sending reminders to local consultants, and regular phone calls to the CMHTs by the research associate, referrals to the control group was slow.
Were the criteria for the depressed control group too stringent? Certainly by excluding previous DSH and those scoring <24 on the MMSE reduced the numbers of potential depressed control subjects considerably. It was felt important to exclude previous DSH, as this is a well-proven risk factor for both suicide and repetition in both younger adults and the elderly (Owens et al., 1994; Owens & House, 1995; Hepple & Quinton, 1997). Unfortunately many depressed patients can also score lower than 24 on the MMSE as a result of concentration and memory deficits without evidence of organic cognitive decline, however the presence of these mild cognitive difficulties would impair their ability to complete some of the psychiatric rating instruments. In particular the BDI and Hopelessness scale may be difficult to complete with significant impairment of concentration, attention and memory. The GDS-15 is likely to be more reliable in these circumstances. Unless impairments of memory and concentration improved by the time the LEDS interview was performed the reliability of this would be adversely affected. The exclusion criteria would therefore appear appropriate.

One of the major problems in recruitment to the depressed comparison group was refusal by patients who fulfilled the inclusion criteria, this was a substantial proportion of those asked to take part. There is obviously no solution to this particular difficulty.

As study patients were new referrals to the community teams there was a substantial proportion who were experiencing their first episode of depression, this mirrored the DSH group, aiding a valid comparison of groups. Understandably there was a minority of patients with a more chronic depressive illness, or recovering from depression. As patients recovering from depression are a known high-risk group, having some patients still satisfying criteria for depression but clinically improved was a useful component of the comparison group.
2. Measurement of Personality

The Prince Henry Hospital scale was used as measure of personality, this categorises personality on a five-point scale depending upon abnormal traits/personality. The research psychiatrist found it difficult to categorise a significant number of patients using this rather subjective instrument. This scale has yet to be properly validated, and therefore any conclusions concerning the role of personality must be viewed with a degree of suspicion. Ideally it would have been more meaningful to use an established and valid personality assessment instrument such as the Eysenck Personality Inventory (Eysenck & Edwards, 1964) or the Personality Assessment Schedule (Tyrer & Alexander, 1979). However using an instrument such as these would have lengthened the interview process considerably; already a significant proportion of patients dropped out before the LEDS interview. There clearly needed to be a balance between duration of assessment and amount of data collected. Why attempt to rate personality at all? Personality factors are frequently quoted as be important determinants of suicidal behaviour (section 1.2) so it was felt necessary to attempt some sort of assessment, if only to give indication of possible future areas of research.

3. Choice of comparison group

The choice of comparison group is both an advantage, and disadvantage. One of the principle objectives of the project was to elucidate risk factors which would help specialists working within the field of elderly mental health identify those at high risk of suicide. In particular this refers to patients referred to community teams with depression, or already being managed by the specialist services. Clearly, therefore, the best-suited comparison group for this objective is patients with depressive disorder referred to specialist services. Inevitably there are going to be considerable similarities between depressed DSH subjects and the depressed comparison group. This is clearly illustrated by the results, with similar scores for the GDS-
15 and BDI and the patients well matched for age and gender. These similarities give further emphasis to the importance of the differences between groups, in particular the lack of support from services, poorly integrated social networks, and higher scores on the abbreviated BHS found in the DSH depressed subjects.

Unfortunately depressed patient referrals from primary health care to specialist mental health services are not truly reflective of depression in the community (Costello, 1990). Indeed, one of the reasons these patients may have been referred could be because of concern about suicide risk. The choice of depressed group recruited from primary health would have yielded important information for GPs managing depression in the elderly. However, although depression in primary health care is more akin to depression in an elderly community population it may not be identical; unfortunately depression in the elderly is under recognised and under treated in primary health care (Macdonald, 1986; Copeland et al., 1987). The recruitment of a depressed community sample as a comparison group would be an extensive undertaking involving screening a large population of elderly. Another possibility would have been to use a non-depressed comparison group of elderly, matched for age and gender, recruited from either general practitioner lists, or general hospital outpatients. This approach would have yielded a broader range of risk factors, many of which are already well known, and of very low positive predictive value. Although again this may be useful for primary health care workers and general hospital specialists, but little of importance would be identified for the mental health professionals' risk assessment.

These potential alternative comparison groups are important considerations for further research (section 4.7).
4. **Type I and Type II error**

The original power analysis was based upon Murphy's life event study in the elderly (1982), and the work of Paykel *et al.*, (1975) in younger self-harm patients. This indicated that 80 patients were required in each group. Unfortunately, for reasons already discussed, this target was not reached in relation to patients completing the LEDS interview. However, the life events analysis suggests that even considerably more patients would not have shown any significant differences (in particular for severe life events). A type II error is possible for chronic difficulties, with a clear trend of the DSH group having a higher proportion experiencing major difficulties. However, the rates of major difficulties in the DSH group are similar to other studies of depression in the elderly (Murphy, 1982; Lam *et al*., 1987); the rates of difficulties in the depressed patients in this study may therefore be spuriously low.

In relation to other variables, there are also some other trends that may well have proved significant given larger group size. In particular, some individual items on the BDI, GDS-15, BHS, and domicile and specific social networks.

Conversely were any of the findings spurious? The rate of contact for both the depressed comparison and DSH groups with health/social/voluntary workers was very low, but significantly lower in the DSH group. One interpretation could be that the depressed control group, because they had been referred to mental health teams were more likely to have input from these services. Contact with statutory services was however recorded only for the period prior to referral to mental health teams. Another interpretation could be that these patients may have been receiving services set up during previous episodes of depression. However, this is again unlikely as the ratio of recurrent: first episode depression is similar in both groups.
5. Psychiatric Rating Instruments

The Beck Depression Inventory was well tolerated by subjects in the study, with no major difficulties encountered in its use. The BDI is not related to gender or age (Beck & Steer, 1993). As we would expect, the GDS-15 was similarly well tolerated and received by subjects in the study.

The use of the Beck Hopelessness Scale (BHS) was however, more problematic. Although Beck & Steer (1993) state that the correlation between BHS scores and age are only small for single episode Major Depression thereby requiring no adjustments for age and gender their study population contained few elderly. The age range of the depressed population used to validate the instrument was 18-80 years, but with a mean of 36 (SD = 11.8) for single episode major depression, and 39 (SD = 14) for recurrent depression. The median ages of the subjects in this study are clearly much higher, and the face validity of many items for persons in their late 70s and 80s dubious. Indeed comments from subjects reflected many of these doubts. An extensive literature search failed to reveal any other studies incorporating the BHS involving elderly populations. An abbreviated 10 item version of the scale with good face validity in the over 65 population had been piloted locally by psychologists, and further piloting was performed in this study. Subjects better received this abbreviated version (‘BHS-10’), and although not previously validated, this study showed that depressed DSH subjects had significantly higher scores than depressed controls. It was noted that it was very important for the examiner to closely monitor elderly patients completing the BHS in case one type of response (i.e. true or false) was perseverated. In the case of a perseverative response set the patient was told that people are seldom alike with respect to every response and perhaps he or she might wish to reconsider some of the answers.
The Social Contact Schedule (SCS) had been designed specifically for the study, and no major difficulties were encountered. The average total number of visits on a weekly basis was calculated from the SCS for: friends/family, and health/social/voluntary organisations. A more detailed form for friends and family may have assisted the recording of pertinent data; however invariably additional information was recorded on the sheet indicating the precise relationship to the patient and geographical proximity of the visitor.

The decision to study networks was made after piloting, and as the interview process was already lengthy with a risk of subject fatigue it was felt inappropriate to include the 8 operationalized questions devised by Wenger (1991). With the benefit of hindsight it may have been advantageous to include the 8 questions however there are strong arguments to support its omission. Firstly all the important information for deriving networks was already recorded in either the SCS, clinical history or LEDS interview. In particular the demographic questions of the LEDS records frequency of visual and non-visual contacts with relatives, friends and acquaintances (including neighbours), and their location. The SCS also records information concerning contacts with friends, and family as well as frequency of contacts with statutory services, and attendance at day centres and local clubs. In addition the psychiatric interview and the LEDS have added important qualitative information such as the nature of relationships and confidant status. Overall therefore, the quantitative and qualitative information is of much more detailed nature than the 8 specific questions. Only information concerning attendance at religious meetings was not specifically recorded; this maybe less relevant to the population in our study and is by far the least discriminating factor in the determination of network type (Wenger, 1994d). Secondly, in the original work of Clare Wenger, assessors made decisions concerning network type on the basis of a lengthy interview. Subsequently (to assist in clinical practice and epidemiological studies) the identification of network type was operationalized for identification on the basis of the
answers to eight questions. Assessors using the lengthy interview technique are able to make a judgement on network type in almost all cases, whereas using the 8 questions results in only 70% of cases unequivocally identified (Wenger, 1994d).

The depressed control group had fewer visits from family and friends than DSH subjects (non-significant), despite a significantly greater proportion having a well-integrated social network. On first impression this may appear surprising, however this finding is in fact concordant with the distribution of networks across groups, the DSH subjects were more likely to have a family dependent support network, or local self-contained network. They were therefore highly dependent upon regular visits from local family, or neighbours who they classified as friends. In addition they may well be more restricted by chronic physical health difficulties reinforcing their dependency on family and neighbours. The depressed control group's interaction with friends, though less frequent may be of better quality, involving more organised social activities within the community.

A visual analogue scale was used to record the patients' subjective satisfaction with the support received from family/friends and the statutory/voluntary sectors. This visual analogue scale proved a difficult concept for many elderly to comprehend; a score out of ten was more universally accepted.

6. Definition of DSH

We used Morgan's (1979) well-accepted definition of DSH for the purposes of this study. Although there is no problem with this, the full range of suicidal behaviour in the elderly has not been studied. In particular, the groups of behaviours described as 'indirect self-destructive behaviour' (Nelson & Farberow, 1980; ISDB) have not been considered. These
subtle, covert, indirect and perhaps subconscious methods of suicide exist at all ages, but are probably more common in the elderly (McIntosh, 1992). Common examples of ISDB in the elderly would be refusal of food or medication, and continuing to smoke against medical advice. ISDB may be significantly more common than DSH (Osgood et al., 1991), and is commonest in institutional settings (Nelson & Farberow, 1980). The examination of the aetiology of ISDB is an area in need of future research.

4.4 MODEL OF SUICIDE IN THE ELDERLY

The clear implication that many of the DSH subjects in the study were 'failed suicides' allows us to postulate on models of suicide in the elderly.

Although, as previously discussed the strength of the findings concerning social networks gives weight to Durkheim's (1951) sociological theories of suicide, the close association with depression counteract this. The significance of depressive illness is illustrated by the majority of DSH subjects suffering from a depressive disorder, and the sub-group of DSH subjects with depression having significantly higher scores of intent and hopelessness. Any model of depression therefore needs to incorporate both social and psychological factors. Indeed, the model needs to be more complex than this; a multi-factorial approach is required to explain suicide in older adults (McIntosh, 1992). This study gave particular emphasis to poor physical health. Life events also appear to be important from the high rates reported in the study, though their effects may be as a result of interaction with other factors. Other possible agents need to be added to this model, many of these have been discussed in chapter 1 but were given less emphasis in this particular study, such as neurobiological factors, personality factors and individual coping resources.
Plutchik and colleagues (1996) describe a model of suicide in later life with depression, total life problems and hopelessness as the forces directing a generated aggressive impulse towards the self thereby leading to a risk of suicide. The impulse is attenuated or amplified by countervailing forces. Our findings would concur with this model, with life problems referring particularly to chronic physical health difficulties. The salient amplifying forces in our study would be social isolation with poorly integrated social networks, life events, lack of support from services, and physical disability. Possible attenuators could be integration within the community, adequate medical and social care, and presence of spouse. Other potential amplifiers not explored by this study but of importance could be personality factors, especially anankastic or anxiety traits/disorder (Harwood et al., 2001), poor coping resources and problem solving skills, and bio-genetic factors. Unexplored potential attenuators could include religious faith, good coping resources and problem solving skills, and other personality factors.

The multiple factors involved in the aetiology of suicide in older adults imply that effective prevention and the reduction of future risk involve interventions aimed at different factors and levels of health care.
4.5 PREVENTATIVE IMPLICATIONS OF THIS STUDY

There are many different potential preventative strategies for suicide in the elderly, and Dennis & Lindesay (1995) and De Leo & Scocco (2000) have written comprehensive reviews. Dennis & Lindesay (ibid) described five key areas, all of which were highly pertinent to health care in the U.K. These areas for prevention are: the early identification and adequate treatment of mental disorder (in particular depression); adequate assessment of ‘at risk’ elderly; removal of the means of suicide; improved organisation of services; and clinical audit. De Leo & Scocco (ibid) describe three levels of prevention, namely primary, secondary and tertiary. Primary concerns healthy individuals, secondary those that are already ill, and tertiary concerns the clinical-therapeutic control of diseases. A version of De Leo & Scocco’s targets for suicide prevention appears in table 4.5.1, this has been modified to be more relevant to the U.K.
Table 4.5.1. Stages and targets for suicide prevention in the elderly

**Primary Prevention**
- Economic issues and welfare
- General health care
- Retirement planning
- Social support networks

**Secondary Prevention**
- Detection of suicidal feelings
- Help-lines
- Community support programmes
- Access to mental health services
- Educational programmes, including health professionals
- Treatment of depression
- Treatment of psychological and psychiatric consequences of physical illness

**Tertiary Prevention**
- Care of suicide attempters
- Maintenance treatment of depression
- Planned aftercare, care programme approach
- Crisis intervention
- Educational programmes, including health professionals
- Psychotherapy; CBT, IPT, Problem solving
- Self-help resocialisation groups
To discuss all of these areas is beyond the scope of this thesis. However, the findings of the study have given strong evidence to support particular strategies of prevention. These will be discussed in the following sections, starting in reverse order i.e. with tertiary prevention (mental health care). Mental health care will be considered first as an inevitable consequence of the case-control study is that the most robust conclusions refer to this area. Not only will the care of patients who have self-harmed be discussed, but also vulnerable depressed patients under the care of mental health services. Important observations concerning primary and secondary prevention can also be drawn from the descriptive studies, as well as from the case-control study.

a) Mental Health Specialists

Broadly speaking this can be divided into acute care of patients following an episode of self-harm, depressed patients at high risk of suicide, and after-care. The research indicates that elderly patients who are depressed and have self-harmed are at particular high risk, though elderly with other mental disorders should not be forgotten.

The retrospective audits of suicides within Leicestershire highlighted some important principles, both from the quantitative analysis and qualitative examination of cases known to psychiatric services. The unfortunate death of patients when on leave, or shortly after discharge emphasises the importance of the careful planning of discharge and leave periods. There is a need to review the availability of social support, and mental health service follow-up in the leave and immediate post discharge period. The care-programme approach (CPA; Department of Health, 1990) has been introduced to facilitate this process, though its effects have been over-emphasised (Dennis et al., 2001). Before leave and discharge are planned very careful consideration needs to be given to whether this is an appropriate course of action.
at that time; this is a multi-disciplinary decision involving members of the ward team. The ward team need to undertake a continuing assessment process; assessment is not just confined to a time-limited period following admission. Suicidal ideation needs to monitored continually (Morgan & Stanton, 1997; Dennis et al., 2001), and may change during the course of depression (Szanto et al., 1996). As has been emphasised previously temporary improvement may occur in the protective environment of a hospital, but on leaving hospital these patients returned to the same circumstances and stressors responsible for their original hopelessness and depression. Special care needs to be taken with patients who have recently self-harmed (Powell et al., 2000), in particular because of their high risk of subsequent suicide (Nowers, 1993; Hepple & Quinton, 1997). Recent life events and difficulties need to be considered within their social context, and as a sequence of events in an individual’s life.

The case-control study gives further weight to many of the conclusions reached above. The depressed DSH subjects and depressed control patients were closely matched for age, gender and severity of depression but there were important differences. The importance to ask directly concerning thoughts of self-harm and tedium vitae is given emphasis by the different responses to specific questions incorporated in the rating scales. Hopelessness is an important discriminator for those at high risk, as illustrated by the differences on the BHS-10, and GDS-15. Use of an abbreviated BHS in clinical practice may assist in the risk assessment process. On-going chronic physical health problems, in particular with impairment of daily living skills may be associated with additional risk.

The strengths of the findings concerning social factors have particular pertinence to the provision of after-care. The DSH group and depressed DSH subjects had fewer contacts with services, and were socially isolated. After-care requires close follow-up from health services and also the provision of support from social and voluntary services where necessary. Many
may have chronic physical health difficulties and would benefit from additional care at home, not just for the basic assistance with activities of daily living but also from the social aspects of regular visits. The use of day hospitals not only to provide close supervision, but also to provide groups aimed at stimulating re-socialisation for elderly patients at risk could be an important strategy. Mental health workers are not able to create new networks, but at least provision of services can provide a compensatory support framework. Personality factors were not fully explored, but those with isolated networks are more likely to have difficulties in socialising with others, therefore engagement with the client and establishing a therapeutic rapport is particularly important - persistence is an important virtue for mental health workers! Besides the importance of maintenance antidepressant therapy (OADIG, 1993, Flint & Rifat, 1997), the provision of cognitive behavioural therapy and problem solving (Wilson et al., 1995; Heard, 2000; Scott, 2001) may have an important role in reducing relapse from depression and risk of subsequent suicide.

b) Other health care settings

The important health care settings to be discussed here are primary health care, and general hospital care. As 13% of successful suicides occurred within one month of a recent general hospital admission most of whom were depressed, it is evident that there is a need for better education of hospital staff. Education needs to involve both medical and nursing staff; the provision of a specific older adult liaison psychiatry service to general hospitals would help to provide both education and advice on the management of individual patients. The recent National Service Framework for Older Persons should provide a stimulus for the development of this type of service provision. Screening of elderly medical admissions for depression, using an instrument such as the GDS-15 may be an important way of not only detecting
unrecognised depression but monitoring response to treatment (Dennis & Lindesay, 1995; Dennis, 1998).

The second major issue concerning the general hospital’s role in reducing elderly suicides is the requirement for an adequate risk assessment following an episode of DSH. It was unfortunate that in 4 cases of suicide the patient had recently presented to a general hospital with an episode of DSH, but was not referred to a mental health specialist for assessment. This observation has to be seen in the context of the suicide study examining deaths between 1988–93. Since then there has been the development of a local specialist service for the assessment of patients presenting with DSH, but it still remains the responsibility of the medical team to refer the patient. In recognition of the high suicide risk presented by DSH in the elderly a Royal College of Psychiatrists’ council report (1994) has recently recommended that specialist mental health staff assess all elderly patients presenting to general hospitals following DSH. In Leicester, as part of junior medical staff’s induction to working in Accident & Emergency they attend a seminar on the psychosocial assessment of patients presenting to the department. In addition they are encouraged to complete a semi-structured assessment pro-forma (Dennis et al., 2001). The seminar, checklist, and management flow charts displayed in the department all emphasise the importance of elderly patients receiving a specialist mental health assessment. A recently conducted audit of patients presenting to the Accident & Emergency department at the Leicester Royal Infirmary thankfully indicates that elderly patients that self-harm are now invariably referred for a specialist assessment (Dennis et al., 1997; Dennis et al., 2001). Although junior medical staff on medical and surgical admission wards do not, as yet receive the same formal training they are encouraged to use the checklist, and follow a protocol both of which state clearly that elderly patients should be referred for a specialist assessment.
The third important issue for general hospitals concerns after-care. Many depressed elderly patients are discharged from general hospitals with obvious chronic physical health problems, and disability. They are not subject to the Care Programme Approach, but clearly warrant similar provisions of after-care. The important principles highlighted in the previous section on tertiary care apply particularly the social needs of individuals where close liaison with the hospital social services department is imperative.

The frequency of recent contact with the general practitioner for patients in the DSH group highlights the important role of the primary health care physician in the reduction of elderly suicides. However, the majority of DSH subjects with a recent visit to their G.P., and who were suffering from depression were on antidepressant treatment. One particular concern is that despite this high rate of contact between the G.P. and DSH subjects, there is a paucity of regular contact with other health professionals, social services, and the voluntary sector. Although there are issues concerning recognition and treatment of depression, the more significant concerns relate to assessment of risk and referral to specialist services. In addition, the G.P. needs to think more broadly in relation to the social support, and involvement of other services for these patients. Education concerning assessment of risk, highlighting the important factors elucidated in research needs to be incorporated into the continuing medical education of primary health care physicians. The interface between primary health care, community mental health teams, and consultant psychiatrists' needs consideration. Services need to be friendly, approachable, flexible, and above all responsive. There is also a role for teams to be involved in the continuing education of the primary health care team.

There were still a substantial number of DSH subjects who had not recently seen their G.P. These patients may well have been: depressed, had physical health problems, were poorly integrated in the community, and living alone. Unfortunately they may have no contact with
other health professionals, social services or the voluntary sector. It may be that some of their isolation was resultant of life-long difficulties in forming relationships, or integrating within the community. How are these people best reached? The first approach concerns more assertive identification of older adults at risk. The mandatory health screening of persons over the age of 75 years offers an opportunity in this area. An instrument such as the GDS-15 to screen for depression (Dennis, 1998; Arthur et al., 1998) could be added to the health check, this in combination with physical health problems would identify an important group of at risk patients. The positive predictive value of such a screening would be low, but the sensitivity good. A positive response to the question ‘do you feel that your situation is hopeless’ combined with a score of 5 or more on the GDS-15 and accompanying physical health problems may improve the specificity thereby alerting the screener to the need to ask more specific questions concerning suicidal ideation.

The second approach requires the involvement of laypersons to identify those at risk, and act as ‘gate-keepers’ for the statutory and voluntary sectors. This strategy overlaps with primary prevention, as the population as a whole need to be better educated in relation to those at risk of suicide and self-harm. The work of the voluntary sector charities is particularly important, and Age Concern and Help the Aged already have policies for the dissemination of important research findings, and a range of self-help literature for carers. Gatekeeper programmes have been piloted in the U.S.A., not only to help in identification of cognitively impaired (Florio et al., 1998), but also those at risk of suicide (McIntosh, et al., 1994). The ‘Gatekeepers Program and Elderly Service’ recently established in the U.S.A. involves collaboration with businesses and other organisations, whose employees are in frequent contact with older adults, especially isolated ones. These employees are given special training in the recognition of signs and symptoms associated with a need for help and refer cases to elderly services (McIntosh et al., 1994). Another important mechanism to help improve access to appropriate
services are telephone help-lines, unfortunately the elderly are less likely to call agencies such as the Samaritans or crisis services (McIntosh et al., 1994). However, there are examples of successful telecommunication based crisis services for the elderly, particularly the 'TeleHelp/Telecheck Service' in the Veneto region of Italy (De Leo et al., 1995) and the 'Center for Elderly Suicide Prevention and Grief Related Service' in the U.S.A. (McIntosh et al., 1994). In the latter, a 'Friendship Line' offers a 24-hour crisis intervention, as well as referral and information for elderly who call or those who call on their behalf. Home visits, and telephone contact is provided to isolated and housebound elderly. Whether the new NHS help-line, NHS Direct, will be utilised by at risk elderly needs to be seen. Befriending schemes, organised by voluntary agencies, need to be directed to those at most risk such as those known to be socially isolated and/or recently discharged from general hospitals.

c) The community

Economic issues and welfare are beyond the scope of this thesis, but the importance of other areas of primary prevention, such as general health care and retirement planning have some relevance to the findings of the study. The topic given most emphasis from the study is that of social networks. The social integration of many elderly needs to be improved, with the opportunity for older adults to have wider access to recreational facilities and form relationships with peers. Such changes involve large-scale intervention, with cultural change. Integrated within such changes are better societal planning for retirement, systematic monitoring of physical health, and the reinforcement of social support networks (De Leo & Scocco, 2000).
4.6 SUMMARY OF MAJOR FINDINGS

Suicides

- The highest age-specific rates for males were for the 25-44 years age group, and for females over 75 years.
- Much narrower male: female ratio (1.5:1) in older adults compared to younger age groups (3:1).
- Hanging was the most popular method of suicide for elderly males, and overdose for females.
- 36% of elderly suicides had previous contact with psychiatric services (predominantly for depression), 24% previous history of DSH.
- Qualitative research methods examining psychiatric case records of those committing suicide within 3 months of contact with specialist services showed poor compliance with care, and recent life events (bereavement and the caring role) were important.
- Fourteen patients killed themselves within 3 months of discharge from a general hospital, and 11 within one month. Depression was frequently identified in patients with recent general hospital contact, but rarely referred to a psychiatrist.
Deliberate Self-Harm in the elderly: case control study

- Overdose most popular method of DSH in older adults.
- Majority of elderly who self-harm had high suicide intent as measured on Beck Intent scale, and in 58% researcher classified the episode as a 'failed suicide'.
- Nearly 70% of DSH subjects classified as depressed according to ICD 10, but 19% had no psychiatric disorder.
- Depressed DSH subjects were more likely to be female, and had higher intent and hopelessness scores than non-depressed DSH subjects.
- Over a quarter (29%) of DSH subjects had seen their G.P. within one week of the episode, and 46% within one month.
- DSH subjects frequently lived alone, with isolated life styles and poor physical health.
- DSH subjects were significantly more likely to have a poorly integrated social network than depressed controls, and fewer contacts with health/social/voluntary services.
- Depressed DSH subjects similarly had poorer integration within the community compared to depressed controls, and less likely to receive any visits from statutory/voluntary services than depressed controls.
- Hopelessness appears to be an important determinant of suicidal behaviour in depressed elderly; BHS-10 item scores significantly greater in depressed DSH subjects than depressed controls.
- High rates of recent severe life events for both DSH group and depressed controls.
- DSH subjects have higher rates of major life difficulties, in particular concerning their own health (not statistically significant).
4.7 CONCLUSIONS

- The examination of the care of elderly suicides known to psychiatric services suggests careful planning of care and a process of continual risk assessment may help to reduce suicides.

- Elderly suicides have frequently had a recent admission to a general hospital. Improved recognition and management of depression in this group is an important strategy for reducing suicide. Improved education and liaison with general hospitals by specialist mental health services would undoubtedly help in this respect. A mandatory specialist mental health assessment of all elderly who have self-harmed is recommended.

- The elderly who have self-harmed, are usually 'failed suicides' with high intent scores. This makes them a useful group to study suicidal behaviour.

- Elderly who have had an episode of DSH are frequently but not invariably depressed, this is often a first episode of depression and may be untreated. Many have recent contact with primary health care services.

- There are a small sub-group of DSH subjects who may have no psychiatric disorder and lower suicide intent.

- The elderly who have self-harmed have high rates of poor physical health, and are frequently socially isolated with little support from health or social services.
The DSH and depressed control groups were similar in many respects, in particular in relation to the depressed DSH subjects who displayed great similarity in relation to severity of depression and symptomatology. Hopelessness however, maybe an important factor in discriminating elderly depressed at high risk of self-harm. There is no substitute for careful questioning and monitoring of suicidal ideation in elderly patients.

High rates of life events in both DSH and depressed control groups may suggest that individual personality attributes or ‘coping resources’ are important in determining whether an individual resorts to self-destructive behaviour when faced with particular circumstances.

Suggestions for further research

1. The recruitment of patients into two further comparison groups i.e. non-depressed and a depressed group from general practice. This would allow important conclusions to be reached concerning prevention in the community/primary health care setting (section 4.3.b.3).

2. A similar designed study, concentrating principally on the role of personality factors, and the individual’s ‘coping’ resources. In particular it would be important to explore the roles of anxiety and anankastic traits/disorder, and coping styles. Elderly that self-harm may have significant ‘neurotic’ anxiety traits, rigidity and lack appropriate coping mechanisms. Work of this type could assist in the introduction of appropriate therapies for vulnerable elderly patients, in particular problem solving and other cognitive behavioural approaches.

3. A long-term follow-up study of an extensively researched group of elderly DSH subjects could yield important information concerning those at highest risk of subsequent suicide.
ACKNOWLEDGEMENTS

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• Dr H Andrews for his help with life events ratings.
• Dr R Zafar & Dr S. Kavi for preparing the Case Summaries on suicides known to psychiatric services, and data collection for the suicides with general hospital contacts.
• Caroline Molloy for performing LEDS interviews.
• The DSH team for their assistance in recruiting DSH subjects and the community mental health teams for the elderly in recruiting depressed control subjects.
• Penny Wakefield for the LEDS interviews she performed, and data entry.
• Nicky Spiers for statistical advice.
• And Marian Woodcock for her assistance in the formatting of the final manuscript.

In addition I would like to express my thanks to the following organisations:

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• Research into Ageing and Help the Aged
• The Leicestershire and Rutland Health Care NHS Trust

I would also like to thank Tracey Flannaghan for her encouragement, constant support, and patience. Finally I would like to express my gratitude to all the patients who volunteered for the study.
This thesis is dedicated to the memory of my mother, Joyce Marie Dennis.
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INFORMATION SHEET FOR PARTICIPANTS

Nature of Study

The study has been set up to identify factors involved in depression in people over the age of 65 years. It is hoped that this will lead to the development of services which will be more sensitive to the needs of this population group.

Voluntary Consent to Participants in the Study

A consent form will be given to you after you have read this sheet, and if you are willing to continue you will be asked to sign the sheet. Even if you do sign the consent form you can withdraw from the study at any time as your participation is voluntary.

Participation in the Study

An interview will be completed. It will take place either in the hospital or at the person’s home. The interview will include questionnaires focusing on the person’s mood, life stresses, and social network. Participating in the study will not affect treatments you are currently receiving.

General Information

Please remember that your participation in this study is voluntary throughout. If you wish to withdraw at any time this will not affect any current or future treatment offered by the National Health Service. The information about individual participants will not be made available to others, unless the individual requests it. Information will be stored on computer in such a way that the participant cannot be identified. Findings from the study will be presented in a way that protects the participants anonymity.

Please keep this sheet for your information. If you have any questions, please do not hesitate to contact the following:

Dr Mick Dennis, Consultant Psychiatrist/Senior Lecturer
Division of Psychiatry for the Elderly, Leicester General Hospital
Telephone: 0116 258 4597
CONSENT FORM

I (full name)

.................................................................
of (address)

.................................................................
.................................................................
.................................................................

hereby fully and freely consent to participate in a research study set up to identify factors involved in depression in people over the age of 65 years. I have been given an information sheet, which I have read and understood, and which I can keep for future reference. I have also been given the opportunity to discuss any questions arising from the information sheet.

I understand that I may withdraw my consent at any stage in the study.

Signed .................................................................

Name (please print in capitals) .................................................................

Name of Interviewer .................................................................

Profession .................................................................

Date .................................................................
Appendix 2: Data Collection sheets

PSYCHIATRIC ASSESSMENT. Study No. [ ] [ ] [ ]

Name .................................................................................................................. Sex: [ ]

D.o.B. [ ] [ ] [ ] [ ] [ ] [ ] Domicile [ ]

Date of assessment [ ] [ ] [ ] [ ] [ ] [ ]

Marital Status (please circle): married/divorced or separated/widowed/single [ ]

Group: DSH/Depression/Control.

Psychiatric Diagnosis (ICD 10)

1. .........................................................................................................................
2. .........................................................................................................................
3. .........................................................................................................................

Date of onset of primary psychiatric disorder (if present) [ ] [ ] [ ] [ ] [ ]

Degree of certainty of onset (weeks) [ ] [ ] [ ] [ ] [ ]

Medical Problems (Active):

1. ........................................................................................................................
2. ........................................................................................................................
3. ........................................................................................................................
4. ........................................................................................................................
5. ........................................................................................................................
6. ........................................................................................................................
**Current Treatment:**

1. ..............................................................................................................
2. ............................................................................................
3. ....................................................................................
4. ................................................................................................
5. ................................................................................................
6. ...........................................................................................

**Contacts with G.P. (of assessment date):** (please tick)

Has patient seen GP within 1 week

Has patient seen GP within 1 month

**MMSE**

Adequacy of personality

0  Healthy personality
1  Mildly abnormal personality traits
2  Moderately abnormal personality traits
3  Severe abnormal personality traits
4  ICD 10 define personality
Previous DSH (three most recent)

1. ................................................................................................................
   M M Y Y

2. ................................................................................................................
   M M Y Y

3. ................................................................................................................
   M M Y Y

Any other comments: (circumstances surrounding the event)
................................................................................................................
................................................................................................................
................................................................................................................

Motives: (from your objective assessment please tick - you may have more than one)

To escape from an intolerable situation  

To gain relief from an unbearable state of mind  

To make other people understand how desperate the person was feeling  

To seek help  

To influence other people  

To make other people sorry  

To find if someone cared for the person  

To show how much the person loved someone  

Do you think that the patient (please tick)

Wanted to die  

Not wanted to die  

Ambivalent
## INTENT SCALE

### Circumstances Related to Suicide Attempt

*To be completed by assessor*

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<tr>
<td>1. ISOLATION</td>
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</tr>
<tr>
<td>0</td>
<td>Somebody present</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Somebody nearby or in contact (as by phone)</td>
<td></td>
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<tr>
<td>2</td>
<td>No one nearby or in contact</td>
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<td>2. TIMING</td>
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<tr>
<td>()</td>
<td>Does not apply</td>
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<tr>
<td>0</td>
<td>Timed so that intervention is probable</td>
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</tr>
<tr>
<td>1</td>
<td>Timed so that intervention is not likely</td>
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<tr>
<td>2</td>
<td>Timed so that intervention is highly unlikely</td>
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<tr>
<td>3. PRECAUTIONS AGAINST DISCOVERY AND/OR INTERVENTION</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>No precautions</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Passive precautions, such as avoiding others but doing nothing to prevent their intervention (alone in room with unlocked door)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Active precautions (locked door)</td>
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<td>4. ACTING TO GAIN HELP DURING/AFTER ATTEMPT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>()</td>
<td>Does not apply</td>
<td></td>
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<tr>
<td>0</td>
<td>Notified potential helper regarding attempt</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Contacted but did not specifically notify potential helper regarding attempt</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Did not contact or notify potential helper</td>
<td></td>
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<tr>
<td>5. FINAL ACTS IN ANTICIPATION OF DEATH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Patient thought about making or made some arrangements in anticipation of death</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Definite plans made (changes in will, giving gifts, taking out insurance)</td>
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<tr>
<td>6. DEGREE OF PLANNING FOR SUICIDE ATTEMPT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>No preparation</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Minimal or moderate preparation</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Extensive preparation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SUICIDE NOTE</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>--------------</td>
<td>---</td>
</tr>
<tr>
<td>0</td>
<td>Absence of note</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Presence of note</td>
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<thead>
<tr>
<th></th>
<th>OVERT COMMUNICATION OF INTENT BEFORE ACT</th>
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<tbody>
<tr>
<td>0</td>
<td>None</td>
<td>1</td>
<td>Equivocal communication</td>
</tr>
<tr>
<td>2</td>
<td>Unequivocal communication</td>
<td></td>
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<th></th>
<th>PURPOSE OF ATTEMPT</th>
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<tbody>
<tr>
<td>0</td>
<td>Mainly to change or manipulate environment</td>
<td>1</td>
<td>Components of “0” and “2”</td>
</tr>
<tr>
<td>2</td>
<td>Mainly to remove self from environment</td>
<td></td>
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<tr>
<th></th>
<th>SELF REPORT</th>
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<tr>
<th></th>
<th>EXPECTATIONS REGARDING FATALITY OF ACT</th>
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<tbody>
<tr>
<td>0</td>
<td>Patient thought that death was unlikely or didn’t think about it</td>
<td>1</td>
<td>Patient thought that death was possible but not probable</td>
</tr>
<tr>
<td>2</td>
<td>Patient thought that death was probable or certain</td>
<td></td>
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<tr>
<th></th>
<th>CONCEPTIONS OF METHOD’S LETHALITY</th>
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<tbody>
<tr>
<td>0</td>
<td>Patient did less to himself than he thought would be lethal, or didn’t think about it</td>
<td>1</td>
<td>Patient wasn’t sure or thought what he did might be lethal</td>
</tr>
<tr>
<td>2</td>
<td>Act exceeded or equalled what patient thought was lethal</td>
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<tr>
<th></th>
<th>SERIOUSNESS OF ATTEMPT</th>
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<tbody>
<tr>
<td>0</td>
<td>Patient did not consider act to be a serious attempt to end his life</td>
<td>1</td>
<td>Patient was uncertain whether act was a serious attempt to end his life</td>
</tr>
<tr>
<td>2</td>
<td>Patient considered act to be serious attempt to end his life</td>
<td></td>
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<tr>
<th></th>
<th>AMBIVALENCE TOWARD LIVING</th>
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<tbody>
<tr>
<td>0</td>
<td>Patient did not want to die</td>
<td>1</td>
<td>Patient did not care whether he lived or died</td>
</tr>
<tr>
<td>2</td>
<td>Patient wanted to die</td>
<td></td>
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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

---

**NOT SCORED**

16. **REACTION TO ATTEMPT**

a  Sorry made attempt
b  Accepts both attempt and fact he’s still alive
c  Regrets he’s alive
BECK DEPRESSION INVENTORY

On this questionnaire are groups of statements. Please read each group of statements carefully. Then pick out the one statement in each group which best describes the way you have been feeling the PAST WEEK. INCLUDING TODAY! Circle the number beside the statement you picked. If several statements in the group seem to apply equally well, circle each one. Be sure to read all the statements in each group before making your choice.

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

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

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

4.  
   0  I get as much satisfaction out of things as I used to  
   1  I don't enjoy things the way I used to  
   2  I don't get real satisfaction out of anything anymore  
   3  I am dissatisfied or bored with everything
5.
0. I don’t feel particularly guilty
1. I feel guilty a good part of the time
2. I feel quite guilty most of the time
3. I feel guilty all of the time

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

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

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

9.
0. I don’t have any thoughts of killing myself
1. I have thoughts of killing myself but I would not carry them out
2. I would like to kill myself
3. I would kill myself if I had the chance
10.  
0.  I don't cry any more than usual  
1.  I cry more now than I used to  
2.  I cry all the time now.  
3.  I used to be able to cry but now I can't cry even though I want to

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

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

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

14.  
0.  I don't feel I look any worse than I used to  
1.  I am worried that I am looking old or unattractive  
2.  I feel that there are permanent changes in my appearance and they make me look unattractive  
3.  I believe that I look ugly
15.  
0 I can work about as well as before  
1 It takes extra effort to get started at doing something  
2 I have to push myself very hard to do anything  
3 I can't do any work at all  

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

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

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

19.  
0 I haven't lost much weight, if any, lately  
1 I have lost more than 5 pounds  
2 I have lost more than 10 pounds  
3 I have lost more than 15 pounds (I am purposely trying to lose weight by eating less, YES/NO)
20.  
0  I am no more worried about my health than usual  
1  I am worried about physical problems such as aches and pains or upset stomach or constipation  
2  I am very worried about physical problems and it's hard to think of much else  
3  I am so worried about my physical problems that I cannot think about anything else  

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

For each question please indicate by circling the correct response, whether the following are true or false. Think about how you have been feeling over the past few days.

1. I look forward to the future with hope and enthusiasm. True/False
2. I might as well give up because I can’t make things better for myself. True/False
3. When things are going badly, I am helped by knowing they can’t stay that way forever. True/False
4. I can’t imagine what my life would be like in 10 years. True/False
5. I have enough time to accomplish the things I most want to do. True/False
6. In the future, I expect to succeed in what concerns me most. True/False
7. My future seems dark to me. True/False
8. I expect to get more of the good things in life than the average person. True/False
9. I just can’t get the breaks, and there’s no reason to believe I will in the future. True/False
10. My past experiences have prepared me well for my future. True/False
11. All I can see ahead of me is unpleasantness rather than pleasantness. True/False
12. I don’t expect to get what I really want. True/False
13. When I look ahead to the future, I expect I will be happier than I am now. True/False
14. Things just won’t work out the way I want them to. True/False
15. I have great faith in the future. True/False
16. I never get what I want so it’s foolish to want anything. True/False
17. It is very unlikely that I will get any real satisfaction in the future. True/False
18. The future seems vague and uncertain to me. True/False
19. I can look forward to more good times than bad times. True/False
20. There’s no use really trying to get something I want because I probably won’t get it. True/False
GERIATRIC DEPRESSION SCALE

Please choose the answer that best describes how you have felt over the last week.

Please answer all the following questions by ringing either “Yes” or “No”

1. Are you basically satisfied with your life? Yes/No
2. Have you dropped many of your activities and interests? Yes/No
3. Do you feel that your life is empty? Yes/No
4. Do you often get bored? Yes/No
5. Are you in good spirits most of the time? Yes/No
6. Are you afraid that something bad is going to happen to you? Yes/No
7. Do you feel happy most of the time? Yes/No
8. Do you often feel helpless? Yes/No
9. Do you prefer to stay at home, rather than going out and doing new things? Yes/No
10. Do you feel you have more problems with memory than most? Yes/No
11. Do you think it is wonderful to be alive now? Yes/No
12. Do you feel pretty worthless the way you are now? Yes/No
13. Do you feel full of energy? Yes/No
14. Do you feel that your situation is hopeless? Yes/No
15. Do you think that most people are better off than you are? Yes/No
Appendix 4: Social Contact Schedule

SOCIAL CONTACT SHEET

Patient’s details: Name ........................................ Study No. □□□

Date of Admission .................. Date of Birth ............... Sex: Male □ Female □

Where does patient usually live: At home - on own □
At home - with spouse □
At home - with other family member or friend □
Social Services residential home □
Private residential home □
Nursing home - psychogeriatric (EMI registered) □
Nursing home - non-psychogeriatric □

Home Care (Private or Social Services) Yes/No
Frequency per week □
Frequency per day □
Duration of visit (hrs)
   a) morning □
   b) lunchtime/afternoon □
   c) evening □

District Nurse Yes/No
Frequency per week □
Frequency per day □
Duration of visit (hrs)
   a) morning □
   b) lunchtime/afternoon □
   c) evening □

Other formal carer Yes/No
Frequency per week □
Frequency per day □
Duration of visit (hrs)
   a) morning □
   b) lunchtime/afternoon □
   c) evening □

Who .................................................................
<table>
<thead>
<tr>
<th>Service</th>
<th>Frequency</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day Hospital</td>
<td>Days per week</td>
<td>□</td>
</tr>
<tr>
<td>Day Centre</td>
<td>Days per week</td>
<td>□</td>
</tr>
<tr>
<td>Other, i.e. voluntary agency</td>
<td>Days per week</td>
<td>□</td>
</tr>
<tr>
<td>club/centre</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If in sheltered accommodation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Centre</td>
<td>Yes/No</td>
<td></td>
</tr>
<tr>
<td>Attendance at Centre</td>
<td></td>
<td>□</td>
</tr>
<tr>
<td>Meals on Wheels</td>
<td>frequency per week</td>
<td>□</td>
</tr>
<tr>
<td>Community Mental Health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team Worker</td>
<td>frequency per month</td>
<td>□</td>
</tr>
</tbody>
</table>
**CONTACT WITH FAMILY/FRIENDS.**

Regular contact (> weekly)

Infrequent contact (weekly/monthly)

1. **Friends**
   - Regular
   - Infrequent
   - None

2. **Close Relatives (1st degree)**
   - Regular
   - Infrequent
   - None

3. **Other Relatives**
   - Regular
   - Infrequent
   - None
PERCEIVED SATISFACTION WITH SOCIAL CONTACT

a) Community Support

\[0 \quad \cdots \quad 10\]

b) Family and Friends support.

\[0 \quad \cdots \quad 10\]
Appendix 5: The Wenger Support Network Typology

1. The local family dependent support network has primary focus on close local family ties with few peripheral friends and neighbours; it is often based on shared household with, or close to, an adult child, usually a daughter. Community involvement is generally low. These networks tend to be small and the elderly people are more likely to be widowed, older and in less than good health.

2. The locally integrated support network includes close relationships with local family, friends and neighbours. Many friends are also neighbours. It is usually based on long-term residence and active community involvement in church and voluntary organisations in the present or recent past. Networks tend to be larger on average than others.

3. The local self-contained support network typically has arm’s length relationships or infrequent contact with at least one relative living in the same or adjacent community, usually a sibling, niece of nephew. Childlessness is common. Reliance is focused on neighbours but respondents with this type of network adopt a household focused lifestyle and community involvement, if any, tends to be low key. Networks tend to be smaller than average.

4. The wider community focused support network is typified by active relationships with distant relatives, usually children, and high salience of friends and neighbours. The distinction between friends and neighbours is maintained. Respondents with this type of network are generally involved in community or voluntary organisations. This type of network is frequently associated with retirement migration and is commonly middle-class or skilled working-class adaptation. Networks are larger than average. Absence of local kin is typical.

5. The private restricted support network is typically associated with absence of local kin, other than in some cases a spouse; although a high proportion are married. Contact with neighbours is minimal; there are few nearby friends and a low level of community contacts or involvements. The type subsumes two sub-types: independent married couples and dependent elderly persons who have withdrawn or become isolated from local involvement. Networks are smaller than average.
Appendix 6: Prince Henry Hospital Personality Scale

0 Healthy adaptation – no evidence of personality difficulties. The patient shows evidence of healthy interpersonal relationships based on trust and mutuality. The patient functions well at home/work. Leisure time is used constructively. The patient is able to express emotions openly. Ego defences are mature.

1 Minor personality traits – the patient appears to function in a similar way to those with a healthy adaptation, however the patient has minor neurotic personality traits which (a) do not cause distress, or (b) do not interfere with normal functioning.

2 Personality traits – personality traits which cause the patient distress but do not interfere with normal functioning. Patient has healthy interpersonal relationships and normal social functioning.

3 Severe personality traits – the patient does not fulfil criteria for personality disorder, however personality traits are of such a degree that they do not permit healthy adaptation and contribute towards patient’s depression. These personality traits may be in the area of disturbed object relations centred around dependency.

4 Personality disorder – the patient now fulfils criteria for personality disorder. Personality traits are enduring, pervasive and maladaptive. On a hierarchical system, personality disorder would rate higher than neurotic depression.
## Appendix 7

### LIFE EVENTS SCHEDULE: E RECORD

#### SUMMARY DESCRIPTION & THREAT

<table>
<thead>
<tr>
<th>Study Number</th>
<th>Event Number: E1</th>
<th>Date of event: E2a</th>
<th>Range of uncertainty of date: (total period in weeks) E2b</th>
</tr>
</thead>
</table>

**Classification - A**

### 0 - EDUCATION

<table>
<thead>
<tr>
<th>Event</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Selection Interviews</td>
</tr>
<tr>
<td>1</td>
<td>Starting/leaving school/university/courses</td>
</tr>
<tr>
<td>2</td>
<td>Exams/results</td>
</tr>
<tr>
<td>3</td>
<td>Other crises (excl. Conduct probs &amp; referrals)</td>
</tr>
</tbody>
</table>

### 1 - WORK

<table>
<thead>
<tr>
<th>Event</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Job interview/rejections</td>
</tr>
<tr>
<td>11</td>
<td>Start job (1st/new/resume)</td>
</tr>
<tr>
<td>12</td>
<td>Time off sick/maternity/strikes &gt; 4 wks</td>
</tr>
<tr>
<td>13</td>
<td>Promotion/demotion/structural change or prob</td>
</tr>
<tr>
<td>14</td>
<td>Work relationship crises</td>
</tr>
<tr>
<td>15</td>
<td>Redundancy/dismissal</td>
</tr>
<tr>
<td>16</td>
<td>Retirement/giving up wk</td>
</tr>
<tr>
<td>17</td>
<td>Solicitor/court/tribunal re work</td>
</tr>
</tbody>
</table>

### 2 - REPRODUCTION (to 2 wks after birth)

<table>
<thead>
<tr>
<th>Event</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>Infertility</td>
</tr>
<tr>
<td>21</td>
<td>Pregnancy</td>
</tr>
<tr>
<td>22</td>
<td>Complications preg</td>
</tr>
<tr>
<td>23</td>
<td>Miscarriage</td>
</tr>
<tr>
<td>24</td>
<td>Induced abortion</td>
</tr>
<tr>
<td>25</td>
<td>Birth</td>
</tr>
<tr>
<td>26</td>
<td>Stillbirth</td>
</tr>
<tr>
<td>27</td>
<td>Contraception/sterilisn</td>
</tr>
</tbody>
</table>

### 3 - HOUSING

<table>
<thead>
<tr>
<th>Event</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>Rent paym/threat eviction</td>
</tr>
<tr>
<td>31</td>
<td>Rented housing event</td>
</tr>
<tr>
<td>32</td>
<td>Buying/selling house</td>
</tr>
<tr>
<td>33</td>
<td>Residence change</td>
</tr>
<tr>
<td>34</td>
<td>Other crises e.g. neighbs</td>
</tr>
</tbody>
</table>

### 4 - MONEY/POSSESSIONS

<table>
<thead>
<tr>
<th>Event</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>Financial crises/debts</td>
</tr>
<tr>
<td>41</td>
<td>Financial gains</td>
</tr>
<tr>
<td>42</td>
<td>Loss, damage, threat to property (excl theft)</td>
</tr>
<tr>
<td>43</td>
<td>Financial obligations</td>
</tr>
</tbody>
</table>

### 5 - CRIME/LEGAL

<table>
<thead>
<tr>
<th>Event</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>44</td>
<td>Solicitor re: possessions</td>
</tr>
<tr>
<td>50</td>
<td>Offence against person (mugging, rape, assault)</td>
</tr>
<tr>
<td>51</td>
<td>Offence against property (theft, burglary, vandalism)</td>
</tr>
<tr>
<td>52</td>
<td>Other offence (drugs, drive)</td>
</tr>
</tbody>
</table>

### 6 - HEALTH/TREATMENT/ACCIDENTS

<table>
<thead>
<tr>
<th>Event</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>53</td>
<td>Police contact (not 50-2)</td>
</tr>
<tr>
<td>54</td>
<td>Court case/inquest/prison (include S's release)</td>
</tr>
<tr>
<td>55</td>
<td>Solicitor contact</td>
</tr>
<tr>
<td>60</td>
<td>Accident</td>
</tr>
<tr>
<td>61</td>
<td>Accident &amp; hospital</td>
</tr>
<tr>
<td>62</td>
<td>Physical illness</td>
</tr>
<tr>
<td>63</td>
<td>Physical illness &amp; hospital</td>
</tr>
<tr>
<td>64</td>
<td>Operation</td>
</tr>
<tr>
<td>65</td>
<td>Suicide attempt</td>
</tr>
</tbody>
</table>

### 7 - MARTIAL/PARTNER RELATIONSHIP

<table>
<thead>
<tr>
<th>Event</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>66</td>
<td>Psycholog ref/substance misuse/child guidance/psychiat disorder</td>
</tr>
<tr>
<td>67</td>
<td>Hospital discharge</td>
</tr>
<tr>
<td>68</td>
<td>Solicitor re: health</td>
</tr>
<tr>
<td>70</td>
<td>1st sexual intercourse</td>
</tr>
<tr>
<td>71</td>
<td>New rein/resuming one</td>
</tr>
<tr>
<td>72</td>
<td>S engagement/marriage</td>
</tr>
<tr>
<td>73</td>
<td>start cohabitation</td>
</tr>
</tbody>
</table>

### 8 - OTHER RELNISHIPS include CHILD

<table>
<thead>
<tr>
<th>Event</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>74</td>
<td>Increase/decrease interaction</td>
</tr>
<tr>
<td>75</td>
<td>Crisis/ breakdown in rein</td>
</tr>
<tr>
<td>76</td>
<td>Violence/rape - partner</td>
</tr>
<tr>
<td>77</td>
<td>Separation/divorce</td>
</tr>
<tr>
<td>78</td>
<td>Solicitor - divorce/custody</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Event</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>Increase/dec interaction</td>
</tr>
<tr>
<td>81</td>
<td>Arrival/depart household</td>
</tr>
<tr>
<td>82</td>
<td>Engagement/marriage/divorce of other</td>
</tr>
<tr>
<td>83</td>
<td>Child conduct/truancy/delinquency</td>
</tr>
<tr>
<td>84</td>
<td>Crisis breakdown rein</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>85</td>
<td>Break bad news-close tie</td>
</tr>
<tr>
<td>86</td>
<td>Violence/pestering by relative/key tie</td>
</tr>
<tr>
<td>87</td>
<td>Contact police/solicitor/social worker re above</td>
</tr>
<tr>
<td>9</td>
<td>MISCELLANEOUS (include pets) AND DEATH</td>
</tr>
<tr>
<td>90</td>
<td>Meeting key person/learning key fact about past</td>
</tr>
<tr>
<td>91</td>
<td>Break bad news to less close tie</td>
</tr>
<tr>
<td>92</td>
<td>Ceremonies</td>
</tr>
<tr>
<td>93</td>
<td>Pet events</td>
</tr>
<tr>
<td>94</td>
<td>Other miscellaneous crises</td>
</tr>
<tr>
<td>95</td>
<td>Death/bereavement</td>
</tr>
</tbody>
</table>

E3a
**TEMPORAL STATUS OF EVENT**

*Classification - B*

Whether the event involves actual change/occurrence of event or is of a more cognitive nature and prior (as with decisions or forecast) or later in time (as with news, revelation or disclosure).

0  Decision by S to do something  
1  Forecast of change to come  
2  News that change has happened  
3  Revelation (by other to S)  
4  Disclosure (by S to other)  
5  Actual change (none of above)

**ILLNESS RELATED STATUS OF EVENT**

Extent to which event is related to actual episode of depression (or relevant dependent variable). All events rated 1-3 should be *excluded* from analyses.

0  Not illness related (most events)  
1  Possibly illness related (no actual evidence)  
2  Definitely illness related, but to previous episode  
3  Definitely illness related, current episode

**INDEPENDENCE OF EVENT**

Extent to which the occurrence of the event is likely to be independent of any hypothetical presence of disorder.

*Independent*

1  Totally independent  
2  Nearly totally independent  
3  Possible influence from S, but unlikely  
4  Independent, involves S's physical illness  
5  Compliance of S with external situation

*Possibly independent*

6  Intentional act by S  
7  Probable negligence/carelessness on S’s part  
8  Arguments/tension, end contact  
9  End contact, no argument  
10  S’s love/sex events  
11  Partner’s love/sex events
FOCUS

Event to which the event is focused on S or on others.

S focused
1  Subject focused
2  Joint focused with other(s)

O focused
1  Focused on a possession or pet
2  Focused on another person(s)

THREAT/UNPLEASANTNESS OF EVENT

The degree of unpleasantness i.e. ongoing negative feelings associated with the event and threat i.e. uncertainty and anticipation of difficult consequences associated with the event.

1  Marked threat/unpleasantness
2  Moderate threat /unpleasantness
3  Some threat/unpleasantness
4  Little/no threat/unpleasantness

A SHORT-TERM

Threat/unpleasantness, rate peak in first few days after start of event.

CONTEXTUAL

Interviewer judgement based on all relevant factual information.

REPORTED

S's response to event and style of reporting it.

B LONG-TERM

Threat/unpleasantness, rate peak in 10-14 days after start of event.

CONTEXTUAL

REPORTED
NEW CLASSIFICATION OF THREAT (a/b)

If event is 2 on long-term contextual threat and S or J focused, then rate 'a' or 'b'.

1  Upper moderate threat (a)
2  Lower moderate threat (b)
-1  Not a 2S or J event

CONTAMINATION OF THREAT BY S's COPING

The extent to which S’s immediate reactions has an impact on the long-term contextual threat.

0  No contamination
1  Possibly ) S reduced the threat (from ‘1 or 2’ to ‘3’ or below)
2  Probably)
3  Possibly ) S reduced the threat (from ‘3 or 4’ to ‘2’ or below)
4  Probably)

DATE OF NEUTRALISATION OF EVENT

Give date at which severe event is neutralised/reduced in threat to 3 or 4.
-1 N/A: event never severe, or not neutralised

RELATIONSHIP BEFORE EVENT (of other to S)

-1  No other involved
0  Parent
1  Child
2  Spouse/cohabeete
3  Girl/boyfriend
4  Sibling
5  Other relative/spouse’s relatives
6  Confidant (if not above)
7  Ex-partner
8  Other friend/neighbor/workmate
9  Casual acquaintance/stranger
10  Key person from past

RATE OF CONTACT BEFORE EVENT

-1  Only S involved
0  Household member
1  Seen daily/weekdays
2  Seen weekly or more
3  Seen two-weekly or more
4  Seen monthly or more
5  Seen 6 monthly or more
6  Seen once per year
7  Seen less than once per year/never before
ADDITIONAL DIMENSION FOR AFFECTIVE DISORDER - E RECORD

Rate only for events rated ‘1 - marked’ or ‘2 - moderate’ long-term contextual threat. All scales are rated contextually on the long-term period of 10-14.

LOSS

The amount of loss for S involved in the event (e.g. by death or separation from other, of material possessions, employment or loss of ‘cherished idea’.).

1  Marked
2  Moderate
3  Some
4  Little/none

E15.................

IRREVERSIBILITY OF LOSS

The possibility that the loss (recorded above) can be regained.

-1 No loss rated
1 Irreversible loss
2 less irreversible loss
3 Distinct possibility of lost object being restored

E16.................

DANGER

The degree of unpleasantness of a specific future crisis that might occur as a result of the event, and the likelihood of such a crisis (e.g. potential loss by death or separation, potential loss of employment, material possessions, health or miscellaneous potential losses).

1  Marked
2  Moderate
3  Some
4  Little/none

E17.................

INEVITABILITY OF DANGER

This scale reflects whether the danger recorded in the scale is inevitable or not.

-1 No danger rated
1 The anticipated event is almost certainly inevitable
2 Other events

E18.................
**HUMILIATION/ENTRAPMENT**

1. Humiliation/separation
2. Humiliation - other delinquency
3. Humiliation - put down
4. Entrapment
5. Death
6. Separation - subject initiated
7. Other key loss
8. Lesser loss
9. Danger alone*
   - Optional 3 extra points
10. Humiliation - separation/trapped = 1 + 4
11. Humiliation - other's delinquency/trapped
    = 2 + 4
12. Humiliation - put down/trapped
    = 3 + 4

**MATCHING 'D' EVENT**

Does the event match a prior difficulty of 1-3 level of severity (excluding purely health difficulties) present for 6 months continuously.

If yes: give difficulty number:
If no: rate -1

difficulty no. E20A.................
difficulty no. E20B.................

**FRESH START COMPLEX**

0. None
1. Delogjamming but not 2 or 3
2. Potential fresh start
3. Fresh start
4. Fresh start - reconciliation
5. Rewarding status change only

E21.................
DIFFICULTY SCHEDULE: D RECORD
(All difficulties must last a minimum of 4 weeks)

Summary description:

Severity and course:

Study number: Difficulty number: D1

Classification

0  Education
1  Work
2  Reproduction
3  Housing
4  Money/possessions
5  Crime/legal
6  Health
7  Marital/partner rein
8  Other relationships (include children)
9  Miscellaneous
10 Bereavement

D2.................

RELATIONSHIP INVOLVED (of other to S)

-1 No other involved
0  Parent
1  Child
2  Spouse/cohabitee
3  Girl/boyfriend
4  Sibling
5  Other relative/spouse's relative
6  Confidant
7  Ex-partner
8  Other friend/neighbour/workmate
9  Casual acquaintance/stranger
10 Key person from past

D3.................

HEALTH/NON-HEALTH ASPECT OF DIFFICULTY
rate only if the difficulty is rated '6 health' on D2
HEALTH/NON-HEALTH (1-3 contextual severity in study period only)

1. Major changes in role involved (e.g. giving up job)
2. Major caring responsibility (e.g. constant care/supervision required)
3. Major stigma/embarrassment involved (e.g. severe mental handicap, AIDS)

HEALTH

4. Moderate caring responsibility or changes in role (e.g. daily visiting to do housework; unable to go out alone because of illness)
5. Purely health difficulties; and those rated 4-6 on contextual severity
   -1 N/A not a ‘health - 6’ difficulty

   D4........................
   Diffics rated 4 or 5 are not eligible as major difficulties

(Rate the following scales on the W record)

SEVERITY OF DIFFICULTY

Marked difficulties

1. High marked
2. Low marked
3. High moderate
4. Low moderate

Minor difficulties

5. Mild
6. Very mild
7. Not/no longer a difficulty

ILLNESS RELATED STATUS OF DIFFICULTY

Extent to which difficulty is related to actual episode of depression (or relevant dependant variable).

All difficulties rated 1-3 should be excluded from an onset analysis.

0. Not illness related (most difficulties)
1. Possibly illness related (no clear evidence)
2. Definitely illness related, but to previous episode
3. Definitely illness related, to current episode
INDEPENDENCE OF DIFFICULTY
from hypothetical disorder (i.e. dependent variable)

Independent

1  Totally independent
2  Nearly totally independent
3  Possible, but unlikely, influence from S
4  Independent - S’s illness
5  Compliance of S with external situation

Possibly independent

6  Intentional act by S
7  Probable negligence by S
8  Arguments/tension/end contact
9  End contact no quarrel
10 S’s love/sex difficulties (not above)
11 Partner’s love/sex difficulties (not above)

CHANGES TO DIFFICULTY: W RECORD

Record each change in level of severity from its beginning (even when this is outside the study period), recording each date of change, new severity rating and independence.

<table>
<thead>
<tr>
<th>ID</th>
<th>Diff No</th>
<th>Date of change</th>
<th>Contextual severity</th>
<th>Report severity</th>
<th>Illness related</th>
<th>independence</th>
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</table>
Dear Dr. Dennis,

Suicide and Deliberate Self-Harm in the Elderly: an examination of risk factors with implications for prevention

Further to your application dated 28th April, 1993, you will be pleased to know that the Ethical Committee at its meeting held on the 4th June, 1993 approved your request to undertake the above-mentioned research subject to the patients being informed that the interview was part of a research project. It was also assumed that trial patients would not be subjected to a further intervention.

I would remind you, however, that your research project has been given approval only in relation to its acceptability from an ethical point of view. If, subsequently, departure from the methodology outlined in your protocol is contemplated, the Ethical Committee must be advised in order that the proposed changes may be approved. Also a report should be made to the Ethical Committee if any significant adverse reactions are noted during the course of the study.

In addition, any NHS resource implications of your project must be discussed with the appropriate Chief Executive/Unit General Manager. Similarly, it may be that the research project has implications for other disciplines and, if so, you are advised to discuss them with the appropriate departmental manager. Researchers should also be able to assure the Ethical Committee that satisfactory arrangements have been made for the labelling, safe storage and dispensation of drugs and pharmaceutical staff are always willing to provide advice on this.

Researchers' attention is also drawn to correspondence from the Regional Director of Public Health dated 28th January, 1991 relating to Clinical Trials which sets out revision of the procedures to be followed, and the Clinical Trials Indemnity Letter and Deed of Guarantee. Researchers should ensure that these indemnity arrangements have been complied with.

Researchers intending to study selective groups of patients in the community are reminded that their first approach should be to the individual patient's general practitioner to ascertain whether the particular patient was suitable for inclusion in the study. Equally, when the researcher contacts the patient it should be emphasised that the approach is made with the knowledge of the General Practitioner, with whom the patient may discuss this research, if the patient so wished.

Yours sincerely,

G. M. Morgan
Director of Public Health and District Medical Officer.

Dr. Michael Dennis,  
Senior Lecturer/Hon. Consultant Psychiatrist,  
Leicester General Hospital.
17 July 1996

Dr M Dennis
Senior Lecturer
Department of Psychiatry
Division of Psychiatry for the Elderly
Leicester General Hospital

Dear Dr Dennis

Deliberate Self Harm in the Elderly: a prospective examination of risk factors and implications for prevention - our ref. no. 2963

Thank you for your letter dated 24 May, 1996.

The Leicestershire Ethics Committee at its meeting held on the 5 July 1996 approved the changes to the protocol for the above study.

Yours sincerely

M. Sursham

For Director of Public Health