

Non-fatal suicidal behaviour among prisoners

Report based on secondary analysis of the ONS survey of psychiatric morbidity among prisoners in England and Wales carried out in 1997 for the Department of Health

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It is generally recognised that the problems of suicidal behaviour in prison settings, including police lock ups, jails and other correctional institutions has been a relatively neglected topic in both the penological and suicidological literature. There are almost no studies focusing on (non-fatal) attempted suicide.

A J F M Kerkhof (1990)

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Contents

Page

List of tables and figures

vi

Notes

viii

Summary

1

1	Background and aims of the secondary analysis	4
2	Concepts and methods in assessing non-fatal suicidal behaviour	8
3	Sociodemographic factors	9
4	Penal or criminal characteristics	16
5	Psychiatric disorders	22
6	Use of psychiatric services	31
7	General health and lifestyle	37
8	Social and situational factors	43
9	Life events as risk factors	54

References

62

Appendices

A	The prevalence of suicidal ideation and suicide attempts among prisoners (reproduced from Singleton <i>et al</i> , (1998) <i>Psychiatric Morbidity among Prisoners in England and Wales</i> , TSO: London)	65
B	Analysis of data using multi-level modelling techniques	75

List of tables and figures

	<i>Page</i>		<i>Page</i>
Figure 1.1 Prevalence of suicide attempts by prisoner type	4	5.7 Generalised Anxiety Disorder by suicide attempts by prisoner type and sex	27
Chapter 3 Sociodemographic factors		5.8 Phobia by suicide attempts by prisoner type and sex	27
3.1 Age group by suicide attempts by prisoner type and sex	11	5.9 Obsessive Compulsive Disorder by suicide attempts by prisoner type and sex	28
3.2 Ethnic group by suicide attempts by prisoner type and sex	11	5.10 Panic Disorder by suicide attempts by prisoner type and sex	28
3.3 Country of birth by suicide attempts by prisoner type and sex	12	5.11 Mixed Anxiety and Depressive Disorder by suicide attempts by prisoner type and sex	29
3.4 Current marital status by suicide attempts by prisoner type and sex	12	5.12 Number of mental disorders by suicide attempts by prisoner type and sex	29
3.5 Change in marital status by prison by suicide attempts by prisoner type and sex	13	5.13 Psychiatric disorder correlates of non-fatal suicidal behaviour by prisoner type and sex	30
3.6 Family type by suicide attempts by prisoner type and sex	13	Chapter 6 Use of psychiatric services	
3.7 Age left school by suicide attempts by prisoner type and sex	14	6.1 Help received in the year before prison by suicide attempts by prisoner type and sex	33
3.8 Educational qualifications by suicide attempts by prisoner type and sex	14	6.2 Help received in prison by suicide attempts by prisoner type and sex	33
3.9 Sociodemographic correlates of non-fatal suicidal behaviour by prisoner type and sex	15	6.3 Current medication by suicide attempts by prisoner type and sex	34
Chapter 4 Penal or criminal characteristics		6.4 Whether has been admitted to mental hospital or ward by suicide attempts by prisoner type and sex	34
4.1 Type of (alleged) offence by suicidal attempts by prisoner type and sex	18	6.5 Whether stayed in locked ward of a psychiatric hospital or a secure ward by suicide attempts by prisoner type and sex	35
4.2 Type of prison by suicide attempts by prisoner type and sex	18	6.6 Whether stayed in mental hospital for 6 months by suicide attempts by prisoner type and sex	35
4.3 Current location by suicide attempts by prisoner type and sex	19	6.7 Psychiatric service correlates of non-fatal suicidal behaviour by prisoner type and sex	36
4.4 Sentence length (grouped) by suicide attempts by prisoner type and sex	19	Chapter 7 General health and lifestyle	
4.5 Time spent in prison by suicide attempts by prisoner type and sex	20	7.1 Self-assessment of current health by suicide attempts by prisoner type and sex	38
4.6 Whether had previous criminal convictions by suicide attempts by prisoner type and sex	20	7.2 Reported long-standing illness by suicide attempts by prisoner type and sex	38
4.7 Penal correlates of non-fatal suicidal behaviour by prisoner type and sex	21	7.3 Physical complaint by suicide attempts by prisoner type and sex	39
Chapter 5 Psychiatric disorders		7.4 Cigarette smoking by suicide attempts by prisoner type and sex	39
5.1 Personality Disorder by suicide attempts by prisoner type and sex	24	7.5 Frequency of drinking in the 12 months before prison by suicide attempts by prisoner type and sex	40
5.2 Probability of psychosis (from lay interview) by suicide attempts by prisoner type and sex	24	7.6 Whether used drug in the past year by suicide attempts by prisoner type and sex	40
5.3 Alcohol dependence by suicide attempts by prisoner type and sex	25	7.7 General health and lifestyle correlates of non-fatal suicidal behaviour by prisoner type and sex	41
5.4 Type of drug dependence by suicide attempts by prisoner type and sex	25		
5.5 Neurotic psychopathology by suicide attempts by prisoner type and sex	26		
5.6 Depressive episode by suicide attempts by prisoner type and sex	26		

	<i>Page</i>		<i>Page</i>
Chapter 8 Social and situational factors		9.5 Stressful event in past 6 months by suicide attempts by prisoner type and sex	58
8.1 Whether shares cell/room/dormitory by suicide attempts by prisoner type and sex	45	9.6 Whether attended a special school by suicide attempts by prisoner type and sex	58
8.2 Hours in cell yesterday by suicide attempts by prisoner type and sex	45	9.7 Whether in LA care as a child (recorded) by suicide attempts by prisoner type and sex	59
8.3 Hours locked in cell yesterday by suicide attempts by prisoner type and sex	46	9.8 Risk factor correlates of non-fatal suicidal behaviour by prisoner type and sex	60
8.4 Whether had a spell in solitary by suicide attempts by prisoner type and sex	46		
8.5 Whether had been held in stripped conditions by suicide attempts by prisoner type and sex	47	Appendix A Prevalence of self harm by various characteristics	
8.6 Whether attended educational classes by suicide attempts by prisoner type and sex	47	A1 Prevalence of self harm by prisoner type and sex	66
8.7 Whether currently working by suicide attempts by prisoner type and sex	48	A2 Prevalence of self harm by age, prisoner type and sex	67
8.8 Size of primary support group by suicide attempts by prisoner type and sex	48	A3 Prevalence of self harm by ethnicity, prisoner type and sex	68
8.9 Perceived social support by suicide attempts by prisoner type and sex	49	A4 Prevalence of self harm by marital status, prisoner type and sex	69
8.10 Victimization by suicide attempts by prisoner type and sex	49	A5 Prevalence of self harm by qualifications, prisoner type and sex	70
8.11 Letters received by suicide attempts by prisoner type and sex	50	A6 Prevalence of self harm by time spent in prison, prisoner type and sex	71
8.12 Telephone calls received by suicide attempts by prisoner type and sex	50	A7 Prevalence of self harm by length of sentence, prisoner type and sex	72
8.13 Visits received by suicide attempts by prisoner type and sex	51	A8 Prevalence of self harm by type of prison, prisoner type and sex	73
8.14 External contacts by suicide attempts by prisoner type and sex	51	A9 Prevalence of self harm by (alleged) offence, prisoner type and sex	74
8.15 Social and situational correlates of non-fatal suicidal behaviour by prisoner type and sex	52		
Chapter 9 Life events as risk factors		Appendix B Analysis of data using multi-level modelling techniques	
9.1 Key events (personal) by suicide attempts by prisoner type and sex	56	B1 Suicide attempt during past year by prisoner type and sex	77
9.2 Key events (loss) by suicide attempts by prisoner type and sex	56	B2 Multi-level models for attempted suicide (past year) risk factors by prisoner type and sex	78
9.3 Key events (educational/economic) by suicide attempts by prisoner type and sex	57	B3 Odds ratios and confidence intervals for attempted suicide (past year) risk factors by prisoner type and sex	79
9.4 Number of stressful life events by suicide attempts by prisoner type and sex	57		

Notes

1 Tables showing percentages

The row or column percentages may add to 99% or 101% because of rounding.

The varying positions of the percentage signs and bases in the tables denote the presentation of different types of information. Where there is a percentage sign at the head of a column and the base at the foot, the whole distribution is presented and the individual percentages add to between 99% and 101%. Where there is no percentage sign in the table and a note above the figures, the figures refer to the proportion of people who had the attribute being discussed, and the complementary proportion, to add to 100%, is not shown in the table.

Standard errors are shown in round brackets beside percentages in the tables.

The following conventions have been used within tables:

- no cases
- 0 values less than 0.5%
- .. data not available

2 Small bases

Very small bases have been avoided wherever possible because of the relatively high sampling errors that attach to small numbers. Often where the numbers are not large enough to justify the use

of all categories, classifications have been condensed. However, an item within a classification is occasionally shown separately, even though the base is small, because to combine it with another large category would detract from the value of the larger category. In general, percentage distributions are shown if the base is 30 or more. Where the base is slightly lower, actual numbers are shown in square brackets. For tables containing means or medians, data are not provided for sub-groups for which the base is less than 30.

3 Significant differences

The bases for some sub-groups presented in the tables were small such that the standard errors around estimates for these groups are biased. Confidence intervals which take account of these biased standard errors were calculated and, although they may not be presented in the tables, they were used in testing for statistically significant differences.

4 Tables showing Odds Ratios

In the analysis for this report, odds ratios were calculated when logistic regression was carried out. The logistic regression identified, from a range of variables, those which were independently related to specific symptoms/disorders/events. Odds ratios (ORs) were produced only for those variables where a significant relationship was identified.

Summary

Background and purpose

- This report presents the results from secondary analysis of the data on suicide attempts from the ONS survey of psychiatric morbidity among prisoners (Singleton *et al*, 1998).
- The survey of psychiatric morbidity in prisons in England and Wales showed that over a quarter of male remand prisoners had attempted suicide in their lifetime, and one sixth in the last year. For female remand prisoners the figures were even higher, with nearly one half having attempted suicide in their lifetime and over a quarter in the past year.
- The proportions of male and female sentenced prisoners who had tried to kill themselves was less than in the remand population (one twelfth of male and one sixth of female sentenced prisoners had tried to kill themselves in the last year) but nonetheless much higher than in the general population living in their own homes.
- In this report, data are presented on the relationship between non-fatal suicidal behaviour and sociodemographic factors; penal, custodial and criminal characteristics; the presence of psychiatric disorders, life events and social support, and places them in the context of the existing literature.

Assessing non-fatal suicidal behaviour

- The ONS survey of psychiatric morbidity among prisoners in England and Wales included four questions to assess self-harm with suicidal intent, based on the work of Paykel *et al* (1974) and Salmons and Harrington (1984).
- The questions asked of all prisoners were: Have you ever thought that life was not worth living? Have you ever wished that you were dead? Have you ever thought of taking your life, even though you would not actually do it? Have you ever made an attempt to take your life, by taking an overdose of tablets or in some other way? Any positive response lead to a follow up question on timing: in the last week, last year, or at another time.
- The main survey did not ask precisely when the last suicide attempt took place. Thus, whether the suicide attempt took place in prison or not is not known with the exception of sentenced prisoners who had been inmates for a year or more.

Sociodemographic characteristics of prisoners who make suicide attempts

- Prisoners who attempted suicide tended to be young, white, single, born in the UK and to have left school early and be poorly educated. Ethnicity and age were the most significant of these relationships.
- Female prisoners who attempted to kill themselves were more likely than other prisoners to be without children.

Penal or criminal characteristics

- The prisoners current location within the prison was highly significant, with between a quarter and a sixth of those who had attempted suicide being in particular units (hospital wings, vulnerable-rule 43 units, and segregation units.)

Psychiatric factors

- Personality Disorder was extremely common among prisoners, its prevalence was much higher in prisoners who had attempted suicide than in those who had not.
- Psychosis was much less common than Personality Disorder in prisoners generally, being present in about 5% of the non-suicidal group, but the prevalence was substantially increased to between a quarter and a half of those who had attempted suicide in the last year.
- Neurotic disorder and alcohol abuse, while both being fairly common among prisoners were both much more common in prisoners who had tried to kill themselves in the last year. The presence of moderately severe neurosis (CIS-R score of 30+) increased the odds of having attempted suicide by 11.26 in male sentenced prisoners, by 5.55 in female prisoners and 7.93 in male remand prisoners.
- The suicidal group were four or five times more likely to have extensive comorbidity (i.e. four or five categories of disorder simultaneously) compared with those who had not tried to kill themselves.
- Previous psychiatric treatment before entering prison was four times as common in male prisoners and three times as common in female prisoners who had attempted suicide in the previous year than in those who had not.
- Current psychotropic medication was three times more likely in male prisoners and two to three times more likely in female prisoners who had attempted suicide in the previous year.
- Previous admission to a mental hospital was two to three times more likely in male prisoners and five to six times more likely in female prisoners who had attempted suicide in the previous year.

General health and lifestyle

- Suicidality in the prisons was associated with poor general health: 28% of those who had tried to kill themselves in the last year rated their general health as bad or very bad, compared to 9% of those who hadn't. Similarly, 76% of those who had tried to kill themselves in the last year reported a longstanding illness compared with 43% of the non-suicidal group.
- Suicide attempters were twice as likely to be heavy smokers than those never attempting suicide, but there were no marked differences in drinking and drug use.

Social and situational factors

- Suicide attempters were more likely to have very small primary support groups and to have a severe lack of social support.
- Those who had tried to commit suicide in the last year were slightly more likely to have experienced victimisation, particularly being threatened with violence. For example, two fifths of male remand prisoners who had tried to kill themselves in the last year had been threatened with violence compared with less than one fifth of the never attempted suicide group.

Life events

- Suicide attempters were also much more likely to have experienced a variety of adverse life events, both in the last six months and particularly over the course of their lifetime, particularly violence or sexual abuse.
- Women on remand who had attended special school were four times as likely to attempt suicide as women who had not attended special school.
- Having been in Local Authority (LA) care was a common antecedent to prison and between a third and a quarter of all prisoners had been in LA care. However prisoners who had attempted suicide in the last year were twice as likely to have been placed in care as a child than the non-suicidal group.

Background and aims of the secondary analysis

1.1 Background

The report on the ONS survey of psychiatric morbidity among inmates of all prisons in England and Wales (Singleton *et al*, 1998) presented data on the prevalence of suicidal ideation and suicidal attempts in the past week, the past year and during their lifetime. Figure 1.1 shows that among male remand prisoners 27% had attempted suicide during their lifetime, 15% in the past year and 2% during the week prior to interview. For female remand prisoners the proportions were even higher with 44% ever having attempted suicide and 27% in the past year. The corresponding proportions for male and female sentenced prisoners were significantly less: 7% of male and 15% of female sentenced prisoners had tried to kill themselves in the twelve months prior to being interviewed.

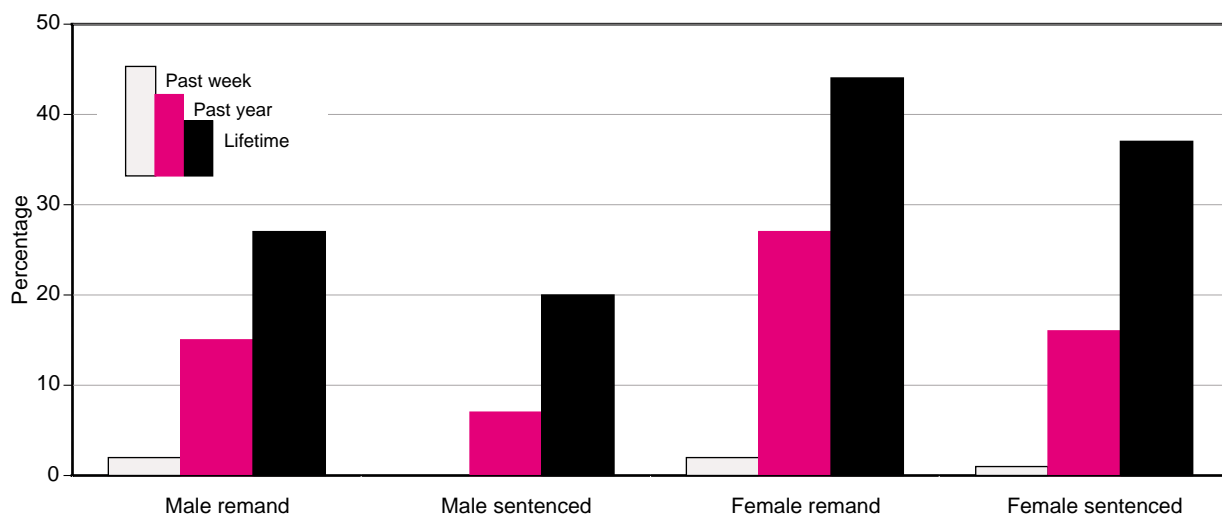
The report goes on to look at the prevalence of suicidal ideation and attempts by personal characteristics (age, ethnicity, marital status and qualifications) and custodial characteristics (time spent in prison, length of sentence, type of prison and type of alleged offence. These data are reproduced in Appendix A.

1.2 Review of previous research

Liebling (1992) carried out a comprehensive review of the literature on suicides and suicide attempts among prisoners and within this review she highlights the factors which have emerged from several studies as highly associated with prisoner suicide. The factors most frequently cited in relation to suicide are: age, gender, ethnicity, marital status, family background, penal history, psychiatric history, and environmental or situational factors (location, overcrowding, time in sentence etc.). However, there is far less evidence looking at the sociodemographic and situational correlates of suicide attempts, mainly as a result of definitional problems and poor recording. (See Chapter 2)

In November 1993, a specialist conference on attempted suicide was held in the Netherlands with representatives from Europe, USA and Canada. The papers from this conference were collated into a publication entitled *Attempted Suicide in Europe: Findings from the Multicentre Study on Parasuicide* by the WHO Regional Offices for Europe (Kerkhof *et al*, 1994). Although none of the papers covered the

Figure 1.1 Prevalence of suicide attempts by prisoner type



epidemiology of attempted suicide in prisons, a paper by Schmidtke *et al* (1994) summarised the sociodemographic characteristics of suicide attempters in Europe – suicide attempters were predominantly men, aged 25–34, single, with poor educational attainment and in the lowest social class. The most frequent psychiatric disorders among men who attempt suicide were adjustment disorders followed by substance and alcohol disorders. For women, the most common mental disorder was also adjustment disorder, followed by personality disorder without neurotic depression and then neurotic depression.

Within the UK, Wool and Dooley (1987) analysed one hundred and eleven consecutive suicide reports on prisoners in the Midlands and the South West of England in 1983/4 and reported that a high risk of attempted suicide was associated with being young, being on remand or recently sentenced, and having a history of mental and physical illness.

Winkler (1992) has reviewed the risk factors specific to the jail population in the USA. He identified three high risk elements: intoxication, isolation and the initial 24 hours of incarceration. Two other factors which he cites as being regarded as fairly reliable predictors statistically are arrest for a non-violent crime and a plan or attempt of hanging. Finally, he suggests that four general suicide risk factors would also be relevant for inmates at the onset of incarceration: coping ability, loss of significant others, recent losses and hopelessness.

In the Netherlands, Kerkhof *et al* (1990) examined the registration files of 198 attempted suicides of inmates between 1980 – 1984. In the second phase of their study all non-fatal suicidal acts in 13 jails and prisons within a six month period were monitored with the help of penitentiary medical services. From the inspection of the registration files, the significant characteristics of those attempting suicide compared with a control group were: younger (mean age 27), more likely to be of non-Dutch origin, more likely to be charged with murder or manslaughter, had a sentence of a year or longer, more likely to be using prescribed psychotropic medications and more frequent visitors to the doctor. From personal interviews with 25 inmates from the second part of their study, 17 were addicted to alcohol or drugs. From the interviews with inmates, Kerkhof *et al* (1990) identified four major types of problems: problems with relatives or of relatives, e.g. illness; concern over the legal process (as most were on

remand); difficult relationships with staff and inmates; and problems associated with drug use. The researchers conclude:

In suicide prevention, the first days and weeks of incarceration are of major importance. Extensive screening of all individuals entering the institution for their potential to commit suicide is needed. We suggest that psychological screening, which should include items on depression and prior psychiatric treatment should be standard.

Within the last five years efforts have been made to produce screening instruments to identify prisoners who are most susceptible to attempting suicide. Ivanoff *et al* (1994) aimed to develop a brief form of Linehan's (1983) Reasons for Living Inventory appropriate for clinical use and to examine the predictive validity of this brief measure to distinguish non-suicidal from suicidal prison inmates. Their 12-item questionnaire comprised two items in each of six sections: survival and coping beliefs, responsibility to family, child-related concerns, fear of suicide, fear of social disapproval and moral objections. Their results indicate that their measure was as good as the Beck Depression Inventory or the Beck Hopelessness Scale.

Wu K K *et al* (1996) constructed The Emotionality and Suicidal Tendency Scale (ESTS) to assess the emotional states and suicidal tendency of 1,655 male remand prisoners in Lai Chi Kok Detention Centre in Hong Kong. Their 35-item self-completion questionnaire consisted of five subscales: present suicidal ideation, previous suicidal experience, worries about family, general coping pattern and emotional support and institutional adjustment. They concluded that the ESTS was a good screening instrument for assessing an inmate's suicidal risk .

However, Inch *et al* (1995) suggests that examining the institutional and psycho-social factors behind the phenomenon of suicides and self harm in prisons is an important counterweight to the opposite and more traditional approach of screening and risk identification. They interviewed 25 inmates who had self-harmed in a Young Offenders Institution in the UK either with suicidal or with no suicidal intent. The results showed that the most common reason for self-harm was bullying, followed by feelings of being locked in, banged up or claustrophobic and family and relationship worries: losing contact, being disowned, relationships ending and family's feelings.

1.3 Focus of the secondary analysis

In the analysis presented in this report, suicidal attempts within the past year become the independent variable and we examine what are the key factors which can distinguish those who have attempted suicide and those who have not in the last year. The analysis is done in stages. The initial analysis consists of crosstabulations where groups of characteristics which are conceptually related are examined one at a time.

Socio-demographic characteristics

Age
Ethnicity
Country of Birth
Marital status
Family type
Age left school
Educational qualifications

Penal or criminal characteristics

Type of prison
Time spent in prison for current offence
Type of offence
Previous convictions
Sentence length
Location in prison

Present state of mental health

Personality disorder
Psychosis
Neurosis
Hazardous and harmful drinking
Drug dependence
Depression
Generalised Anxiety Disorder
Phobia
Obsessive Compulsive Disorder
Mixed Anxiety and Depressive Disorder

Use of psychiatric services and psychiatric treatment

Psychiatric help from prison doctor
Psychiatric help from other psychiatric professional in prison
Other psychiatric support in prison
Taking prescribed hypnotics or anxiolytics
Taking prescribed anti-psychosis drugs
Taking prescribed antidepressants
Help from GP before prison
Psychiatric help from other psychiatric professional before prison
Other psychiatric support before prison

Admitted to mental hospital
Stayed in secure psychiatric ward

General and physical health

Self-assessed general health
Self-assessed longstanding health problem
Physical complaint

Living conditions in prison

Sole or multiple occupants of cell
Hours in cell yesterday
Hours locked in cell yesterday
Been in solitary confinement
Held in stripped conditions

Social and economic functioning in prison

Working in prison
Attended educational classes in prison
Victimisation
Threatened with violence
Victim of violence
Had things stolen
Intimidated
Unwanted sexual attention
Forced sexual attention

Key life events

Suffered bullying
Suffered violence at work
Suffered violence at home
Suffered sexual abuse
Suffered serious illness
Taken into care as a child
Attended a special school
Expelled from school
Ran away from home
Sacked or made redundant
Been homeless
Had serious money problems
Separation or marital breakdown
Death of spouse or child
Death of parent or sibling
Death of close friend or other relative
Suffered stillbirth

The second stage of the analysis looks at each group of factors by inserting all the individual items in a logistic regression model. The third stage puts all the significant factors from all groups into one logistic regression analysis. Finally, multi-level modelling techniques are used to look at the relationship between all the significant factors.

The results of this analysis are used to suggest the elements of a new screening instrument to identify those prisoners most susceptible to trying to kill themselves.

One of the problems of carrying out secondary analysis on a pre-existing source of data is that the dataset does not always include all the factors of relevance for a more detailed investigation of a specific area. Information on some of the key factors which have emerged from the literature review of attempted suicide was not collected in the original survey. Two key factors on which information is not available were the date of the last suicide attempt and a history of suicidal behaviour. Although we know if a suicide was attempted in the past year and we know how long each inmate has been in prison we do not know, for prisoners who have been inside for less than 12 months, whether the suicide attempt occurred before coming to prison or during the present prison term. Nearly all remand prisoners and most sentenced prisoners had been in prison for less than a year when they were interviewed. All the previous research has shown prisoners are most vulnerable to suicide attempts during the initial period of incarceration.

In all the analyses carried out for this report, data are always presented by type of prisoner and sex. The two main reasons for this are that in the original survey the prisoners were sampled disproportionately so, without weighting, the data for each of the four groups can not be aggregated. Secondly, there is always the possibility that different factors influence suicidal behaviour in men and women and in remand and sentenced prisoners.

2

Concepts and methods in assessing non-fatal suicidal behaviour

2.1 Suicide attempts and parasuicide

In his review of suicide and suicidal behaviour among adolescents, Diekstra *et al* (1995) refers to the work of Kreitman (1977) who originally proposed the term, parasuicide to encompass a whole range of behaviour, from suicidal gestures to manipulative attempts to serious but unsuccessful attempts to kill oneself. However there is no international agreement on the precise definition of parasuicide. Many American authors, for example, Spirito (1989) use the term, attempted suicide which includes the element of suicidal intention.

In their introduction to the WHO multicentre study, Bille-Brahe *et al* (1994) quotes an earlier reference to Kreitman relating to the definitional problems with the term, parasuicide:

The problem of nomenclature in so called studies of attempted suicide has certain affinities with migraine: both are recurrent, are associated with headaches and induce difficulties in focusing clearly. The only point on which everyone seems to be agreed is that the existing term, attempted suicide, is unsatisfactory, for the excellent reason that the great majority of patients so designated are not in fact attempting suicide.

2.2 Measuring non-fatal suicidal behaviour

To overcome many of these definitional problems, the ONS survey of psychiatric morbidity among prisoners in England and Wales included four questions to assess self-harm with suicidal intent, based on the work of Paykel *et al* (1974) and Salmons and Harrington (1984)

1. Have you ever thought that life was not worth living?
(If YES, in the last week, last year, or at another time)

2. Have you ever wished that you were dead?
(If YES, in the last week, last year, or at another time)
3. Have you ever thought of taking your life, even though you would not actually do it?
(If YES, in the last week, last year, or at another time)
4. Have you ever made an attempt to take your life, by taking an overdose of tablets or in some other way?
(If YES, in the last week, last year, or at another time)

Responses to question 3 were used to assess suicidal ideation and those to question 4 for non-fatal suicidal behaviour.

To measure deliberate self-harm without the intention of suicide, respondents were asked an additional question.

5. Since you have been in prison, have you deliberately harmed yourself in anyway but not with the intention of killing yourself?

Respondents who answered yes to this question were then asked a series of questions about how they had harmed themselves and for what reasons.

Definitions of all mental disorders and the instruments used to measure them can be found in the report of the main survey (Singleton *et al*, 1998)

3

Sociodemographic factors

3.1 Age

A comparison of the age profile of prisoners who had attempted suicide in the past year compared with those who had not shows that suicide attempters were slightly more likely to be under 30 years old. This difference though only slight was evident for both male and female, remand and sentenced prisoners. (*Table 3.1*)

Comparing the mean age of those who had attempted to kill themselves with their respective comparison groups shows that the lowest mean age of suicide attempters are female remand prisoners (Mean age = 26.1 compared with 30.0 for their non-suicidal counterparts). Female sentenced prisoners had the highest mean age of suicide attempters. (Mean age = 28.3 compared with 31.2 for their equivalent non-suicidal inmates) (*Table 3.1*)

3.2 Ethnicity and country of birth

Comparing the ethnicity of those never having attempted suicide with those who had made an attempt in the 12 months before interview shows a far greater proportion of whites than non-whites had tried to kill themselves in the 12 months prior to interview. Proportionally, the greatest difference was found among male sentenced prisoners. Within this group, 19% of those who had never tried to commit suicide were non-white compared with just 4% of those who had exhibited suicidal behaviour in the past year. (*Table 3.2*)

A similar pattern was found in the analysis of country of birth. A far greater proportion of those born abroad, as distinct from those born in the UK, were in the never attempted suicide group. The most striking example can be seen in the female remand population. Twenty seven per cent of female remand prisoners who had never attempted suicide were born outside the UK compared with 2% of those who had tried to kill themselves in the past year. (*Table 3.3*)

3.3 Marital status and family type

Previous research on the family background of suicide attempters in prison suggest they are more likely to be single. In the ONS survey, the proportion of single men and women in the group who had tried to commit suicide (at the time of interview) was slightly higher than in the non-suicidal group but this was not statistically significant. (*Table 3.4*)

Change in marital status since entering prison did not seem to be a distinguishing characteristic between the profile of suicidal and non-suicidal prisoners. (*Table 3.5*)

Among remand and sentenced female prisoners, those with children had a greater representation in the non-suicidal than the suicidal group. (*Table 3.6*)

3.4 Educational factors

No large differences were evident between the educational profile of suicide attempters and non-attempters. There is some indication that those who had tried to kill themselves tended to have left school earlier and were more poorly educated. This fits in with results found by Kerkhof *et al* (1992). (*Tables 3.7, 3.8*)

3.5 Logistic regression

When age, ethnicity, country of birth, marital status, family type, educational qualifications and age left full time education were entered into a logistic regression analysis, the two main factors which were found to be significantly independently associated with a suicide attempt in the last year were ethnicity and age.

The single factor with the greatest association with non-fatal suicidal behaviour was ethnicity, in particular, whether the prisoner was white rather

than black, i.e. attempting suicide was far more prevalent among white than black inmates. The odds ratios for white, male remand inmates was 2.99 rising to 6.54 for white, male sentenced prisoners compared with the equivalent black groups. Among women prisoners the odds ratio was 4.09.

Age had the next greatest association. The odds of attempting suicide were two to three times higher among the 21–29 age group (compared with the 40+ age group) among male remand and all female prisoners.

Table 3.1 Age group by suicide attempts

by prisoner type and sex

Age group	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
16-20	7	28	28	25
21-24	26	16	19	19
25-29	25	27	19	21
30-34	26	12	15	16
35-39	7	10	8	8
40-44	4	5	5	5
45+	4	2	6	5
Mean age	28.9	26.6	27.4	27.5
<i>Base</i>	150	187	913	1250
Male sentenced				
16-20	5	29	17	16
21-24	20	23	20	20
25-29	27	16	22	22
30-34	22	19	14	16
35-39	10	5	10	10
40-44	8	5	7	7
45+	7	3	10	9
Mean age	31.1	26.6	29.0	30.0
<i>Base</i>	151	75	896	1122
Female remand				
16-20	10	20	12	14
21-24	16	31	16	20
25-29	16	26	33	28
30-34	32	10	21	20
35-39	3	8	6	6
40-44	19	6	4	7
45+	3	8	5	
Mean age	30.7	26.1	30.1	28.5
<i>Base</i>	31	51	105	187
Female sentenced				
16-20	11	14	15	14
21-24	12	23	12	14
25-29	26	25	22	23
30-34	19	23	20	21
35-39	16	7	10	11
40-44	7	3	9	8
45+	10	5	12	10
Mean age	31.3	28.3	31.2	30.7
<i>Base</i>	121	96	366	583

Table 3.2 Ethnic group by suicide attempts

by prisoner type and sex

Ethnic group	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
White	95	88	76	80
Black	2	5	16	13
Other	3	6	8	7
<i>Base</i>	150	187	913	1250
Male sentenced				
White	95	96	80	83
Black	1	3	13	11
Other	4	1	6	6
<i>Base</i>	151	75	896	1122
Female remand				
White	94	88	67	77
Black	6	6	25	17
Other	-	6	9	6
<i>Base</i>	31	51	105	187
Female sentenced				
White	83	86	70	75
Black	11	7	24	18
Other	7	6	7	6
<i>Base</i>	121	96	366	583

Table 3.3 Country of birth by suicide attempts by prisoner type and sex

Country of birth	Suicide attempts			All
	Lifetime (excluding past year)	Past year	Never attempted suicide	
	%	%	%	%
Male remand				
UK	97	94	86	89
Elsewhere	3	6	14	11
<i>Base</i>	<i>150</i>	<i>186</i>	<i>913</i>	<i>1249</i>
Male sentenced				
UK	93	95	90	90
Elsewhere	7	5	10	10
<i>Base</i>	<i>151</i>	<i>75</i>	<i>896</i>	<i>1122</i>
Female remand				
UK	94	98	73	83
Elsewhere	6	2	27	17
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
UK	91	92	80	84
Elsewhere	9	8	20	16
<i>Base</i>	<i>121</i>	<i>96</i>	<i>366</i>	<i>583</i>

Table 3.4 Current marital status by suicide attempts by prisoner type and sex

Current marital status	Suicide attempts			All
	Lifetime (excluding past year)	Past year	Never attempted suicide	
	%	%	%	%
Male remand				
Married	5	12	11	10
Cohabiting	30	27	30	30
Single	49	49	50	50
Widowed/divorced/separated	16	12	8	10
<i>Base</i>	<i>150</i>	<i>186</i>	<i>909</i>	<i>1245</i>
Male sentenced				
Married	7	10	15	14
Cohabiting	23	24	27	26
Single	50	57	48	48
Widowed/divorced/separated	20	10	11	12
<i>Base</i>	<i>149</i>	<i>72</i>	<i>892</i>	<i>1113</i>
Female remand				
Married	13	10	11	11
Cohabiting	27	26	36	32
Single	47	53	38	44
Widowed/divorced/separated	13	12	14	14
<i>Base</i>	<i>30</i>	<i>51</i>	<i>104</i>	<i>185</i>
Female sentenced				
Married	10	8	12	11
Cohabiting	23	28	26	26
Single	44	52	42	44
Widowed/divorced/separated	23	12	20	19
<i>Base</i>	<i>119</i>	<i>94</i>	<i>364</i>	<i>577</i>

Table 3.5 Change in marital status by prison by suicide attempts
by prisoner type and sex

Marital status changed after entering prison	Suicide attempts			All
	Lifetime (excluding past year)	Past year	Never attempted suicide	
	%	%	%	%
Male remand				
Yes	16	18	12	13
No	84	82	88	87
<i>Base</i>	<i>150</i>	<i>186</i>	<i>911</i>	<i>1247</i>
Male sentenced				
Yes	35	29	23	25
No	65	71	77	75
<i>Base</i>	<i>150</i>	<i>73</i>	<i>894</i>	<i>1117</i>
Female remand				
Yes	32	16	11	16
No	68	84	89	84
<i>Base</i>	<i>31</i>	<i>51</i>	<i>104</i>	<i>186</i>
Female sentenced				
Yes	31	23	23	25
No	69	77	77	75
<i>Base</i>	<i>119</i>	<i>94</i>	<i>365</i>	<i>578</i>

Table 3.6 Family type by suicide attempts
by prisoner type and sex

Family type	Suicide attempts			All
	Lifetime (excluding past year)	Past year	Never attempted suicide	
	%	%	%	%
Male remand				
Living alone	32	19	20	21
Living with other adults only	41	50	52	50
Living with children	21	28	27	27
Other	5	3	2	2
<i>Base</i>	<i>150</i>	<i>187</i>	<i>913</i>	<i>1250</i>
Male sentenced				
Living alone	20	24	17	18
Living with other adults only	48	49	50	49
Living with children	30	27	32	32
Other	1	-	1	1
<i>Base</i>	<i>151</i>	<i>74</i>	<i>896</i>	<i>1121</i>
Female remand				
Living alone	16	22	10	14
Living with other adults only	48	43	49	47
Living with children	32	26	41	35
Other	3	10	1	4
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
Living alone	13	20	14	15
Living with other adults only	38	41	39	39
Living with children	46	36	46	44
Other	3	3	1	2
<i>Base</i>	<i>121</i>	<i>96</i>	<i>366</i>	<i>583</i>

**Table 3.7 Age left school by suicide attempts
by prisoner type and sex**

Age left school	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
13 or less	7	10	9	9
14 or 15 years	42	45	39	40
16 years	44	41	41	42
17 or older	7	4	10	9
At school when convicted	-	-	-	-
<i>Base</i>	150	187	912	1249
Male sentenced				
13 or less	5	16	8	8
14 or 15 years	45	36	41	41
16 years	42	36	42	41
17 or older	8	11	10	10
At school when convicted	-	1	1	1
<i>Base</i>	151	75	894	1120
Female remand				
13 or less	10	12	9	10
14 or 15 years	39	41	27	33
16 years	42	37	43	41
17 or older	10	10	22	17
At school when convicted	-	-	-	-
<i>Base</i>	31	51	105	187
Female sentenced				
13 or less	11	6	4	6
14 or 15 years	51	45	36	40
16 years	31	38	41	38
17 or older	8	10	19	15
At school when convicted	-	-	0	0
<i>Base</i>	120	96	366	582

**Table 3.8 Educational qualifications by suicide attempts
by prisoner type and sex**

Educational qualifications	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
A level or higher	14	10	12	12
GCSE/O level	23	16	22	21
Other qualifications	14	19	15	15
No qualifications	49	56	52	52
<i>Base</i>	149	187	910	1246
Male sentenced				
A level or higher	13	8	15	14
GCSE/O level	26	25	26	26
Other qualifications	17	13	12	13
No qualifications	43	53	46	46
<i>Base</i>	150	75	896	1121
Female remand				
A level or higher	13	6	17	13
GCSE/O level	26	39	29	31
Other qualifications	16	10	10	11
No qualifications	45	45	44	44
<i>Base</i>	31	51	105	187
Female sentenced				
A level or higher	8	6	17	13
GCSE/O level	25	22	22	22
Other qualifications	12	14	18	16
No qualifications	56	58	43	48
<i>Base</i>	120	95	365	580

Table 3.9 Sociodemographic correlates of non-fatal suicidal behaviour

by prisoner type and sex

Variable	Male remand		Male sentenced		All female prisoners	
	Adjusted Odds ratio	95% C.I.	Adjusted Odds ratio	95% C.I.	Adjusted Odds ratio	95% C.I.
Age						
40+	1.00	-	1.00	-	1.00	-
30-39	1.70	(0.85-3.40)	1.72	(0.67-4.42)	2.64 **	(1.21-5.79)
21-29	2.08 *	(1.07-4.04)	1.40	(0.55-3.56)	2.79 **	(1.33-5.84)
16-20	1.89	(2.93-3.87)	2.48	(0.90-6.81)	1.50	(0.64-3.55)
Ethnicity						
Black	1.00	-	1.00	-	1.00	-
White	2.99 **	(1.51-5.93)	6.54*	(1.53-27.84)	4.09 **	(1.90-8.81)
Other	2.41	(0.98-5.92)	1.09	(0.35-3.36)	3.30 *	(1.15-9.49)
Country of birth						
Non-UK	1.00	-	1.00	-	1.00	-
UK	1.49	(0.74-3.00)	1.26	(0.41-3.89)	1.74	(0.76-3.94)
Marital Status						
Married/cohabiting	1.00	-	1.00	-	1.00	-
Single	0.99	(0.67-1.84)	1.33	(0.73-2.45)	1.46	(0.93-2.28)
Widowed/divorced/sep	2.03 *	(1.13-3.66)	1.28	(0.50-3.27)	0.90	(0.47-1.72)
Family type						
Has children	1.00	-	1.00	-	1.00	-
No children	0.90	(0.59-1.37)	1.10	(0.59-2.08)	1.43	(0.92-2.23)
Educational quals						
A level or higher	1.00	-	1.00	-	1.00	-
GCSE O level	0.61	(0.31-1.20)	1.48	(0.53-4.12)	2.53 *	(1.11-5.80)
Other qualifications	1.16	(0.60-2.27)	1.83	(0.59-5.67)	1.53	(0.61-3.85)
No qualifications	0.92	(0.50-1.67)	2.04	(0.77-5.42)	2.40 *	(1.05-5.50)
Age left FT education						
17 or older	1.00	-	1.00	-	1.00	-
16 years old	1.62	(0.74-3.54)	0.39 *	(0.17-0.94)	0.92	(0.25-3.39)
14 or 15 years old	1.74	(0.78-3.87)	0.34 *	(0.14-0.84)	1.43	(0.66-3.07)
13 or less	1.50	(0.59-3.82)	0.91	(0.33-2.50)	1.46	(0.53-4.04)

* = p <0.05; ** p <0.01

4

Penal or criminal characteristics

4.1 Type of offence

One category of offence stands out in comparing the proportions of inmates in each offence category according to whether or not they had tried to commit suicide in the last year and that is drug offences. For both male and female, remand and sentenced prisoners those never attempting suicide included a far greater proportion in the drug offence category than those who had tried to kill themselves in the past year. The differences were greater for female prisoners. Among female remand prisoners, 6% of those who had tried to kill themselves in the past year were alleged to have committed drug offences compared with 37% of the never-attempted suicide group. The corresponding proportions for female sentenced prisoners were 17% for the suicidal and 42% for the non-suicidal sample. (Table 4.1)

4.2 Type of prison

Whether prisoners are male or female, or remand or sentenced determines the type of prison they go to. For example, most remand prisoners are in local prisons with a small percentage of male remand prisoners in young offender institutions whereas the majority of sentenced prisoners are in category C prisons. Nevertheless, within each type-of-prisoner group (male remand, male sentenced, female remand, female sentenced) the type-of-prison profile of those who had or had not tried to kill themselves does not vary to a significant extent. (Table 4.2)

4.3 Current location in prison

Whereas most of the prisoners who had never attempted suicide were in “a normal location”, one in four to one in six prisoners who had attempted suicide in the past year were in particular units. Looking first at male remand prisoners who had tried to kill themselves about a quarter were equally divided

between hospital wings (12%) and vulnerable/rule 43 units (12%). Among the corresponding group of male sentenced prisoners, 7% were in hospital wings, 7% in rule 43 units and 5% in segregation units. Of the 28% of female remand prisoners who had attempted suicide in the past year nearly all of them were in hospital wings. Fifteen percent of female sentenced prisoners with suicidal behaviour were not in normal prison accommodation: 9% in hospital wings, 3% in segregation units and 2% in a rule 43 unit. (Table 4.3)

4.4 Sentence length

Analysis by sentence length can only be carried out on sentenced prisoners. Table 4.4 shows that there does not appear to be an association between length of sentence and whether the prisoners had previously attempted suicide. (Table 4.4)

4.5 Time spent in prison for current offence and previous convictions

All the previous research has shown that that prisoners are most vulnerable to suicide attempts during the first few days of incarceration. Unfortunately, the original survey did not collect precise data on the last suicide attempt. The only group which gives an indication of this association is female remand prisoners. Fifty five per cent of this group of inmates who had tried to kill themselves in the past year had been in prison for less than a month compared with thirty per cent of the never attempted suicide group. Whether the prisoner had any previous convictions did not show any association with suicidal behaviour. (Tables 4.5, 4.6)

4.6 Logistic Regression

Four penal characteristics were entered in a logistic regression model: location, type of offence, time in prison and previous convictions, with the two significant sociodemographic factors, age and

ethnicity. As might be predicted being in a hospital wing or segregation unit as distinct from a normal room, cell or dormitory was highly correlated with a previous suicide attempt. The odds of having attempted suicide in the past year were increased by 2.82 for male sentenced prisoners, 3.97 for female prisoners and 5.18 for male prisoners on remand.

Type of offence was significantly correlated with suicidal behaviour among male remand and women prisoners. The odds of being in the sample that had tried to kill themselves in the past year was two and a half to three a half times greater among those with (alleged) violent or acquisitive offences compared with drug offenders. The real question may be why suicidal behaviour is far less prevalent among drug offenders rather than why there are increased odds for those charged or sentenced for other offences. (*Table 4.7*)

Table 4.1 Type of (alleged) offence by suicide by prisoner type and sex

Type of (alleged) offence	Suicide attempts			All
	Lifetime (excluding past year)	Past year	Never attempted suicide	
	%	%	%	
Male remand				
Violence	23	20	18	19
Sex offence	7	7	4	5
Burglary	20	18	20	19
Robbery	8	9	10	10
Theft	9	17	14	14
Drug offence	12	5	15	13
Other	13	20	15	15
Not known/holding warrant	7	4	6	6
<i>Base</i>	<i>150</i>	<i>187</i>	<i>913</i>	<i>1250</i>
Male sentenced				
Violence	26	16	21	22
Sex offence	7	11	8	8
Burglary	15	22	17	17
Robbery	18	22	12	14
Theft	4	4	8	8
Drug offence	12	10	17	16
Other	16	12	14	14
Not known/holding warrant	2	4	3	3
<i>Base</i>	<i>151</i>	<i>74</i>	<i>897</i>	<i>1122</i>
Female remand				
Violence	32	18	11	17
Sex offence	-	2	0	1
Burglary	6	6	5	5
Robbery	3	6	4	4
Theft	13	31	23	24
Drug offence	23	6	37	26
Other	13	18	13	14
Not known/holding warrant	10	14	6	9
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
Violence	26	20	14	18
Sex offence	1	1	0	0
Burglary	7	8	5	6
Robbery	8	10	5	7
Theft	16	14	18	17
Drug offence	25	17	42	34
Other	16	25	12	15
Not known/holding warrant	1	5	3	3
<i>Base</i>	<i>121</i>	<i>96</i>	<i>366</i>	<i>583</i>

Table 4.2 Type of prison by suicide attempts by prisoner type and sex

Type of prison	Suicide attempts			All
	Lifetime (excluding past year)	Past year	Never attempted suicide	
	%	%	%	
Male remand				
Local prison	93	81	77	80
Dispersal	3	3	3	3
Category B trainer	-	-	-	-
F or Category C trainer	-	-	-	-
Open or Category D prison	-	-	1	1
YOIs (all types)	4	16	19	16
<i>Base</i>	<i>150</i>	<i>187</i>	<i>913</i>	<i>1250</i>
Male sentenced				
Local prison	26	42	30	30
Dispersal	8	7	5	6
Category B trainer	10	4	8	8
F or Category C trainer	44	18	35	35
Open or Category D prison	8	5	7	7
YOIs (all types)	4	24	14	13
<i>Base</i>	<i>151</i>	<i>74</i>	<i>896</i>	<i>1121</i>
Female remand				
Local prison	97	100	96	97
Dispersal	-	-	-	-
Category B trainer	-	-	-	-
F or Category C trainer	-	-	4	2
Open or Category D prison	3	-	-	0
YOIs (all types)	-	-	-	-
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
Local prison	22	34	30	29
Dispersal	-	-	-	-
Category B trainer	-	-	-	-
F or Category C trainer	54	51	43	46
Open or Category D prison	23	15	28	25
YOIs (all types)	-	-	-	-
<i>Base</i>	<i>121</i>	<i>96</i>	<i>366</i>	<i>583</i>

Table 4.3 Current location by suicide attempts by prisoner type and sex

Current location	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
Normal	83	73	92	88
Vulnerable/Rule 43 unit	8	12	3	5
Special supergrass unit	-	1	1	1
Hospital wing	3	12	2	4
Segregation: own protection	4	2	1	1
Segregation: good order/discipline	1	1	0	0
Segregation: punishment	-	-	0	0
Segregation: other reason	1	-	0	1
<i>Base</i>	<i>150</i>	<i>187</i>	<i>913</i>	<i>1250</i>
Male sentenced				
Normal	87	81	93	52
Vulnerable/Rule 43 unit	10	7	4	5
Special supergrass unit	-	-	-	-
Hospital wing	1	7	0	1
Segregation: own protection	2	3	1	1
Segregation: good order/discipline	-	-	1	0
Segregation: punishment	-	1	1	1
Segregation: other reason	1	1	0	0
<i>Base</i>	<i>151</i>	<i>74</i>	<i>896</i>	<i>1121</i>
Female remand				
Normal	97	72	95	89
Vulnerable/Rule 43 unit	-	-	-	9
Special supergrass unit	-	-	-	-
Hospital wing	3	24	3	-
Segregation: own protection	-	2	-	1
Segregation: good order/discipline	-	-	1	1
Segregation: punishment	-	2	1	1
Segregation: other reason	-	-	-	-
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
Normal	94	85	94	93
Hostel	2	-	2	1
Mother and baby unit	1	-	2	1
Vulnerable/Rule 43 unit	2	2	0	1
Special supergrass unit	-	-	-	-
Hospital wing	-	9	1	2
Segregation: own protection	1	-	1	0
Segregation: good order/discipline	-	-	0	0
Segregation: punishment	-	2	-	0
Segregation: other reason	-	1	0	0
<i>Base</i>	<i>121</i>	<i>96</i>	<i>366</i>	<i>583</i>

Table 4.4 Sentence length (grouped) by suicide attempts by prisoner type and sex

Sentence length	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male sentenced				
Less than 3 months	3	4	1	2
3 - 5 months	3	5	5	5
6 - 11 months	4	8	8	8
1 - 3 years	40	53	42	42
4 - 9 years	33	22	30	30
10 years +	3	5	8	7
Life sentence	14	3	6	7
<i>Base</i>	<i>150</i>	<i>76</i>	<i>879</i>	<i>1105</i>
Female sentenced				
Less than 3 months	2	1	2	2
3 - 5 months	6	10	5	6
6 - 11 months	7	15	14	13
1 - 3 years	46	49	42	44
4 - 9 years	27	18	27	26
10 years +	2	1	5	3
Life sentence	10	6	4	6
<i>Base</i>	<i>121</i>	<i>96</i>	<i>366</i>	<i>583</i>

Table 4.5 Time spent in prison by suicide attempts by prisoner type and sex

Time spent in prison	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
Less than 1 month	31	37	29	30
1-2 months	32	34	36	36
3-5 months	21	19	22	22
6-11 months	10	9	10	10
1 year but less than 2 years	5	1	2	2
2 years or more	-	-	-	-
<i>Base</i>	150	185	907	1242
Male sentenced				
Less than 1 month	3	9	6	6
1-2 months	8	17	14	13
3-5 months	13	28	17	18
6-11 months	22	20	21	21
1 year but less than 2 years	23	13	22	22
2 years or more	31	12	19	20
<i>Base</i>	152	75	896	1123
Female remand				
Less than 1 month	39	55	30	38
1-2 months	29	29	35	33
3-5 months	19	16	20	19
6-11 months	10	-	10	8
1 year but less than 2 years	3	-	1	1
2 years or more	-	-	4	2
<i>Base</i>	31	51	105	187
Female sentenced				
Less than 1 month	5	10	8	8
1-2 months	14	22	20	19
3-5 months	15	21	18	18
6-11 months	24	23	23	23
1 year but less than 2 years	18	8	18	16
2 years or more	24	16	13	16
<i>Base</i>	121	96	366	583

Table 4.6 Whether had previous criminal convictions by prisoner type and sex

Had previous criminal convictions	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
Yes	91	84	80	82
No	9	16	20	18
<i>Base</i>	150	187	913	1250
Male sentenced				
Yes	86	80	80	80
No	14	20	20	20
<i>Base</i>	150	75	896	1121
Female remand				
Yes	64	76	62	66
No	36	24	38	34
<i>Base</i>	31	51	105	187
Female sentenced				
Yes	69	65	42	51
No	31	35	58	49
<i>Base</i>	121	96	366	583

Table 4.7 Penal correlates of non-fatal suicidal behaviour
by prisoner type and sex

Variable	Male remand		Male sentenced		All female prisoners	
	Adjusted Odds ratio	95% C.I.	Adjusted Odds ratio	95% C.I.	Adjusted Odds ratio	95% C.I.
Location						
Normal room/cell/dorm	1.00	-	1.00	-	1.00	-
Hosp. wing or seg. unit	5.18**	(3.23-8.28)	2.82**	(1.29-6.14)	3.97**	(2.07-7.59)
Type of offence						
Drug offence	1.00	-	1.00	-	1.00	-
Violence	2.65 *	(1.24-5.67)	1.32	(0.47-3.72)	3.20**	(1.60-6.41)
Sex offences	1.81	(0.66-4.96)	2.08	(0.60-7.14)	2.38	(0.27-20.54)
Acquisitive offences	2.21 *	(1.08-4.52)	1.89	(0.74-4.84)	2.31**	(1.23-4.33)
Other/Not known	2.80**	(1.33-5.90)	1.74	(0.62-4.89)	4.94**	(2.57-9.50)
Time in prison						
3 months or more	1.00	-	1.00	-	1.00	-
Less than 3 months	1.29	(0.89-1.86)	1.42	(0.79-2.55)	1.28	(0.83-1.98)
Previous conviction						
No	1.00	-	1.00	-	1.00	-
Yes	1.00	(0.61-1.64)	0.91	(0.46-1.81)	1.78 *	(1.13-2.81)
Age						
40+	1.00	-	1.00	-	1.00	-
30-39	2.38 *	(1.14-4.98)	2.08	(0.80-5.40)	2.84**	(1.29-6.26)
21-29	2.58**	(1.29-5.18)	1.91	(0.75-4.89)	3.64**	(1.72-7.69)
16-20	2.35 *	(1.12-4.92)	3.47 *	(1.29-9.35)	2.66 *	(1.13-6.23)
Ethnicity						
Black	1.00	-	1.00	-	1.00	-
White	3.05**	(1.53-6.10)	5.89 *	(1.40-24.79)	2.54 *	(1.20-5.35)
Other	2.23	(0.88-5.65)	1.00	(0.09-11.40)	2.45	(0.86-6.96)
Age left FT education						
17 or older	1.00	-	1.00	-	1.00	-
16 years old	1.82	(0.83-4.00)	0.51	(0.22-1.19)	1.10	(0.54-2.22)
14 or 15 years old	2.15	(0.97-4.81)	0.48	(0.20-1.13)	1.80	(0.88-3.73)
13 or less	1.58	(0.61-4.14)	1.13	(0.41-3.13)	1.81	(0.67-4.90)

V = p < 0.05; ** = < 0.01.

5

Psychiatric disorders

5.1 Personality disorder

Among all types of prisoners, particularly women, the proportion of inmates with a personality disorder was far greater among the group that had attempted suicide in the past 12 months compared with those who had never attempted to kill themselves. For example among remand female prisoners 98% of those who had attempted suicide in the past year had a personality disorder compared with 76% who had not. The corresponding proportions for sentenced female prisoners were 93% and 67%. (*Table 5.1*)

5.2 Psychosis assessment

There was a very marked association between a diagnosis of psychosis and non-fatal suicidal behaviour. Among all types of prisoner, male and female, remand and sentenced, hardly any of the non-suicidal group were assessed as having a psychotic disorder, 5% or less, whereas among those who had attempted suicide in the past year, between a quarter and a half had a psychotic disorder: about a quarter of male sentenced prisoners; a third of male remand and female sentenced prisoners and over a half of the female, remand population. (*Table 5.2*)

5.3 Harmful and hazardous drinking

Harmful and hazardous drinking in the year before entering prison was measured by AUDIT – Alcohol Use Disorder Identification Test. Among male prisoners, both remand and sentenced, there was little difference between the suicidal and non-suicidal group in proportions who had no alcohol problem: about 42% of remand and 37% of sentenced male prisoners had AUDIT scores between zero and seven. However, those who had tried to kill themselves in the past year had much more severe alcohol problems (AUDIT scores of 16+) than those who had not.

Comparing alcohol misuse of suicidal and non-suicidal female prisoners indicates that the former category were more likely to have had alcohol-related problems with a greater severity. (*Table 5.3*)

5.4 Drug dependence

The relationship between drug dependence and suicidal behaviour varied by the type of drug under consideration. Looking at any type of drug dependence (cannabis, opiates, stimulants etc.) the proportions of those who had and had not attempted suicide who were drug dependent were not significantly different. However, among the suicidal and non-suicidal groups the proportions dependent on stimulants, either alone or with opiates, were markedly different particularly among women. In the female remand sample 30% of those never having tried to kill themselves were dependent on stimulants compared with 59% of the group who had tried to commit suicide in the past year. The equivalent proportions for female sentenced prisoners were 20% and 44%. (*Table 5.4*)

5.5 Neurotic psychopathology

There was a very clear trend in the relationship between suicidal behaviour and the presence of neurotic disorders. Table 5.5 shows suicidal behaviour in terms of never, past year and lifetime (excluding past year) and neurotic psychopathology, measured by the overall score on the CIS-R which relates to the past seven days. Prisoners who tried to kill themselves in the past year were far more likely than those who had never attempted suicide to have neurotic symptoms and distinctly, more severe neurotic symptoms.

Those attempting suicide in the past 12 months were around three times more likely to have a CIS-R score of 24 or more than those who had never shown suicidal behaviour. (*Table 5.5*)

Tables 5.6 to 5.11 show how the distribution of six neurotic disorders, assessed by diagnostic algorithms applied to the CIS-R data, vary by suicidal behaviour. Taking for example, male remand prisoners, those who had tried to kill themselves in the previous year, compared with the never attempted suicide group, were about three times more likely to have: a depressive episode (36% cf 12%); Generalised Anxiety Disorder (22% cf 8%); Phobia (22% cf 6%) and Obsessive-Compulsive Disorder (25% cf 7%).

5.55 and 7.93. This suggests that some form of measure of psychotic and neurotic psychopathology are essential in screening prisoners for suicide risk. (*Table 5.13*)

5.6 Number of mental disorders

As a relatively crude measure of comorbidity, the presence of each of the five groups of mental disorders described above (personality disorder, psychosis, hazardous drinking, drug dependence and neurosis) were summed to give an overall score. This overall measure, not surprisingly, highlights the considerable difference in the mental functioning between those prisoners who had tried to commit suicide in the past twelve months and those who had not, given the high rate of psychiatric morbidity among all prisoners. The suicidal group were four to five times more likely to have four or five disorders than the non-suicidal group. The respective proportions among the four groups of prisoners were 43% and 15% for remand males, 40% and 10% among sentenced males, 57% and 12% for remand females and 43% and 10% among sentenced females. (*Table 5.12*)

5.7 Logistic regression

The five psychiatric disorders (personality disorder, psychosis, hazardous drinking, drug dependence and neurosis) were entered in a logistic regression model with the four factors previously found to show significant odds ratios: age, ethnicity, type of offence and location. For all groups of prisoners, psychosis and neurosis were highly correlated with a previous suicide attempt. The odds of having attempted suicide in the past year for those with psychosis were increased by 13.53 for male sentenced prisoners, 8.01 for female prisoners and 7.54 for male prisoners on remand. The corresponding odds ratios for a CIS-R score of 30+ compared with the sub-threshold category of 0-11 were 11.26,

Table 5.1 Personality Disorder by suicide attempts by prisoner type and sex

Personality disorder groups	Suicide attempts			All
	Lifetime (excluding past year)	Past year	Never attempted suicide	
	%	%	%	%
Male remand				
No disorder	9	8	24	20
Antisocial only	9	7	21	18
Antisocial + other	63	59	36	43
Other only	18	27	18	20
<i>Base</i>	<i>150</i>	<i>187</i>	<i>913</i>	<i>1250</i>
Male sentenced				
No disorder	17	13	30	27
Antisocial only	19	11	24	22
Antisocial + other	45	56	31	35
Other only	18	20	16	16
<i>Base</i>	<i>150</i>	<i>75</i>	<i>896</i>	<i>1121</i>
Female remand				
No disorder	10	2	24	16
Antisocial only	10	6	10	9
Antisocial + other	42	63	26	38
Other only	39	29	40	37
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
No disorder	14	7	36	26
Antisocial only	12	3	10	9
Antisocial + other	43	49	21	30
Other only	31	41	33	34
<i>Base</i>	<i>121</i>	<i>96</i>	<i>366</i>	<i>583</i>

Table 5.2 Probability of psychosis (from lay interview) by suicide attempts by prisoner type and sex

Psychosis assessment	Suicide attempts			All
	Lifetime (excluding past year)	Past year	Never attempted suicide	
	%	%	%	%
Male remand				
Unlikely psychotic	83	68	97	91
Probable psychotic	17	32	3	9
<i>Base</i>	<i>150</i>	<i>187</i>	<i>913</i>	<i>1250</i>
Male sentenced				
Unlikely psychotic	87	77	98	96
Probable psychotic	13	23	2	4
<i>Base</i>	<i>150</i>	<i>75</i>	<i>896</i>	<i>1121</i>
Female remand				
Unlikely psychotic	74	47	95	79
Probable psychotic	26	53	5	21
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
Unlikely psychotic	86	67	98	90
Probable psychotic	14	33	2	10
<i>Base</i>	<i>121</i>	<i>96</i>	<i>366</i>	<i>583</i>

Table 5.3 Alcohol dependence by suicide attempts by prisoner type and sex

Grouped AUDIT scores	Suicide attempts			All
	Lifetime (excluding past year)	Past year	Never attempted suicide	
	%	%	%	%
Male remand				
0-7	41	41	43	43
8-15	25	15	30	27
16+	33	44	27	30
<i>Base</i>	<i>150</i>	<i>187</i>	<i>913</i>	<i>1250</i>
Male sentenced				
0-7	36	32	37	37
8-15	23	30	35	33
16+	41	38	28	30
<i>Base</i>	<i>151</i>	<i>74</i>	<i>896</i>	<i>1121</i>
Female remand				
0-7	55	51	73	64
8-15	16	20	13	16
16+	29	29	13	20
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
0-7	50	46	69	61
8-15	21	18	21	20
16+	29	36	11	19
<i>Base</i>	<i>121</i>	<i>96</i>	<i>366</i>	<i>583</i>

Table 5.4 Type of drug dependence by suicide attempts by prisoner type and sex

Type of drug dependence	Suicide attempts			All
	Lifetime (excluding past year)	Past year	Never attempted suicide	
	%	%	%	%
Male remand				
No dependence	40	42	52	49
Cannabis only	7	7	10	9
Stimulants only	23	18	15	17
Opiates + stimulants	16	22	13	15
Opiates only	15	11	10	10
<i>Base</i>	<i>150</i>	<i>187</i>	<i>913</i>	<i>1250</i>
Male sentenced				
No dependence	51	36	59	57
Cannabis only	9	15	8	8
Stimulants only	19	27	15	16
Opiates + stimulants	13	16	9	10
Opiates only	8	5	9	8
<i>Base</i>	<i>150</i>	<i>74</i>	<i>897</i>	<i>1121</i>
Female remand				
No dependence	55	29	51	46
Cannabis only	3	2	2	2
Stimulants only	-	14	12	11
Opiates + stimulants	26	35	18	24
Opiates only	16	20	16	17
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
No dependence	54	42	65	59
Cannabis only	7	7	4	5
Stimulants only	16	21	9	12
Opiates + stimulants	12	24	11	13
Opiates only	11	6	12	10
<i>Base</i>	<i>121</i>	<i>96</i>	<i>366</i>	<i>583</i>

Table 5.5 Neurotic psychopathology by suicide attempts

by prisoner type and sex

CIS-R scores (12+ = neurotic disorder)	Suicide attempts			All
	Lifetime (excluding past year)	Past year	Never attempted suicide	
	%	%	%	
Male remand				
0-11	20	12	52	42
12-17	17	14	16	16
18-23	23	21	14	16
24-29	13	16	9	11
30+	27	37	9	16
<i>Base</i>	<i>150</i>	<i>187</i>	<i>913</i>	<i>1250</i>
Male sentenced				
0-11	49	21	67	61
12-17	16	16	14	14
18-23	14	16	8	9
24-29	10	17	7	8
30+	11	29	5	7
<i>Base</i>	<i>152</i>	<i>75</i>	<i>896</i>	<i>1123</i>
Female remand				
0-11	13	10	35	25
12-17	16	12	16	15
18-23	23	8	16	15
24-29	19	26	16	19
30+	29	45	16	26
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
0-11	28	12	48	38
12-17	22	16	18	18
18-23	16	19	18	17
24-29	16	19	9	12
30+	19	34	8	14
<i>Base</i>	<i>121</i>	<i>96</i>	<i>366</i>	<i>583</i>

Table 5.6 Depressive episode by suicide attempts

by prisoner type and sex

Depressive episode	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
Present	24	36	12	17
Absent	76	64	88	83
<i>Base</i>	<i>50</i>	<i>187</i>	<i>913</i>	<i>1250</i>
Male sentenced				
Present	12	20	6	8
Absent	88	80	94	92
<i>Base</i>	<i>150</i>	<i>75</i>	<i>896</i>	<i>1121</i>
Female remand				
Present	22	35	14	21
Absent	78	65	86	79
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
Present	23	26	10	15
Absent	77	74	90	85
<i>Base</i>	<i>121</i>	<i>96</i>	<i>366</i>	<i>583</i>

Table 5.7 Generalised Anxiety Disorder by suicide attempts**by prisoner type and sex**

Generalised Anxiety Disorder	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
Present	18	22	8	11
Absent	82	78	92	89
<i>Base</i>	150	187	913	1250
Male sentenced				
Present	13	20	6	8
Absent	87	80	94	92
<i>Base</i>	150	75	896	1121
Female remand				
Present	16	16	8	11
Absent	84	84	92	89
<i>Base</i>	31	51	105	187
Female sentenced				
Present	16	21	7	11
Absent	84	79	93	89
<i>Base</i>	121	96	366	583

Table 5.8 Phobia by suicide attempts by prisoner type and sex

Phobia	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
Present	17	22	6	10
Absent	83	78	94	90
<i>Base</i>	150	187	913	1250
Male sentenced				
Present	10	22	3	5
Absent	90	78	97	95
<i>Base</i>	150	75	896	1121
Female remand				
Present	16	22	16	18
Absent	84	78	84	82
<i>Base</i>	31	51	105	187
Female sentenced				
Present	18	21	6	11
Absent	82	79	94	89
<i>Base</i>	121	96	366	583

Table 5.9 Obsessive Compulsive Disorder by suicide attempts by prisoner type and sex

Obsessive Compulsive Disorder	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
Present	14	25	7	10
Absent	86	75	93	90
<i>Base</i>	<i>150</i>	<i>187</i>	<i>913</i>	<i>1250</i>
Male sentenced				
Present	14	23	5	7
Absent	86	77	95	93
<i>Base</i>	<i>150</i>	<i>75</i>	<i>896</i>	<i>1121</i>
Female remand				
Present	13	24	7	12
Absent	87	76	93	88
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
Present	12	12	4	7
Absent	88	88	96	93
<i>Base</i>	<i>121</i>	<i>96</i>	<i>366</i>	<i>583</i>

Table 5.10 Panic Disorder by suicide attempts by prisoner type and sex

Panic Disorder	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
Present	5	8	5	6
Absent	95	92	95	94
<i>Base</i>	<i>150</i>	<i>187</i>	<i>913</i>	<i>1250</i>
Male sentenced				
Present	3	11	2	3
Absent	97	89	98	97
<i>Base</i>	<i>150</i>	<i>75</i>	<i>896</i>	<i>1121</i>
Female remand				
Present	6	8	4	5
Absent	94	92	96	95
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
Present	5	9	2	4
Absent	95	91	98	96
<i>Base</i>	<i>121</i>	<i>96</i>	<i>366</i>	<i>583</i>

Table 5.11 Mixed Anxiety and Depressive Disorder by suicide attempts**by prisoner type and sex**

Mixed Anxiety and Depressive Disorder	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
Present	34	28	24	26
Absent	66	72	76	74
<i>Base</i>	<i>150</i>	<i>187</i>	<i>913</i>	<i>1250</i>
Male sentenced				
Present	20	26	18	19
Absent	80	74	82	81
<i>Base</i>	<i>150</i>	<i>75</i>	<i>896</i>	<i>1121</i>
Female remand				
Present	45	39	31	36
Absent	55	61	69	64
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
Present	30	36	31	31
Absent	70	64	69	69
<i>Base</i>	<i>121</i>	<i>96</i>	<i>366</i>	<i>583</i>

Table 5.12 Number of mental disorders by suicide attempts**by prisoner type and sex**

Number of mental disorders	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
0	1	0	6	5
1	4	3	18	14
2	24	16	31	28
3	37	37	30	32
4	29	32	14	19
5	5	11	1	3
<i>Base</i>	<i>150</i>	<i>187</i>	<i>913</i>	<i>1250</i>
Male sentenced				
0	5	3	10	8
1	13	5	22	20
2	25	12	30	28
3	37	40	27	30
4	14	32	10	12
5	6	8	0	2
<i>Base</i>	<i>150</i>	<i>75</i>	<i>895</i>	<i>1120</i>
Female remand				
0	-	-	8	4
1	6	2	21	13
2	29	4	29	22
3	36	37	31	34
4	23	45	9	21
5	6	12	3	6
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
0	2	-	15	10
1	12	6	25	19
2	33	16	29	28
3	27	35	20	24
4	21	31	10	15
5	5	12	0	3
<i>Base</i>	<i>121</i>	<i>96</i>	<i>366</i>	<i>583</i>

Table 5.13 Psychiatric disorder correlates of non-fatal suicidal behaviour
by prisoner type and sex

Variable	Male remand		Male sentenced		All female prisoners	
	Adjusted Odds ratio	95% C.I.	Adjusted Odds ratio	95% C.I.	Adjusted Odds ratio	95% C.I.
Personality disorder						
No disorder	1.00	-	1.00	-	1.00	-
Anti-social PD only	1.00	(0.42-2.40)	0.56	(0.19-1.64)	1.47	(0.43-5.01)
Anti-social + other PD	1.98	(0.98-4.03)	1.15	(0.48-2.75)	3.90**	(1.56-9.76)
Other PD only	2.67*	(1.31-5.46)	1.35	(0.51-3.56)	3.50**	(1.43-8.53)
Psychotic disorder						
Unlikely	1.00	-	1.00	-	1.00	-
Probable	7.54**	(4.29-13.26)	13.53**	(4.97-36.88)	8.01**	(3.79-16.91)
AUDIT score						
0-7	1.00	-	1.00	-	1.00	-
8-15	0.59*	(0.35-1.00)	1.04	(0.51-2.09)	1.44	(0.59-2.22)
16+	1.09	(0.69-1.72)	0.90	(0.44-1.85)	1.57	(0.85-2.92)
Drug dependence						
No dependence	1.00	-	1.00	-	1.00	-
Cannabis only	0.54	(0.25-1.16)	2.25	(0.86-5.84)	1.51	(0.46-4.94)
Stimulants only	0.90	(0.50-1.61)	1.87	(0.83-4.20)	2.09	(0.98-4.44)
Opiates and stimulants	1.47	(0.81-2.65)	2.16	(0.84-5.55)	2.56*	(1.19-5.53)
Opiates only	1.12	(0.55-2.25)	1.28	(0.40-4.07)	1.02	(0.48-2.72)
CIS-R score						
0-11	1.00	-	1.00	-	1.00	-
12-17	2.95**	(1.54-5.64)	3.05**	(1.31-7.13)	1.99	(0.89-4.44)
18-23	4.75**	(2.58-8.76)	6.31**	(2.61-15.26)	2.08	(0.93-4.63)
24-29	4.28**	(2.18-8.40)	7.29**	(3.02-15.57)	3.65**	(1.61-8.29)
30+	7.93**	(4.30-14.60)	11.26**	(4.66-27.19)	5.55**	(2.55-12.07)
Location						
Normal room/cell/dorm	1.00	-	1.00	-	1.00	-
Hosp. wing or seg. unit	3.38**	(1.95-5.87)	2.08	(0.85-5.09)	1.75	(0.73-4.22)
Type of offence						
Drug offence	1.00	-	1.00	-	1.00	-
Violence	1.79	(0.76-4.25)	1.45	(0.42-4.98)	2.34*	(1.02-5.42)
Sex offences	1.65	(0.53-5.11)	2.57	(0.62-10.66)	*****	*****
Acquisitive offences	1.42	(0.63-3.20)	1.80	(0.61-5.30)	1.95	(0.96-3.99)
Other/Not known	1.67	(0.71-3.93)	1.93	(0.58-6.40)	5.01**	(2.35-10.67)
Age						
40+	1.00	-	1.00	-	1.00	-
30-39	2.30*	(1.00-5.27)	1.54	(0.53-4.43)	1.51	(0.54-4.48)
21-29	2.80**	(1.26-6.27)	1.27	(0.44-3.69)	1.84	(0.72-4.67)
16-20	3.62**	(1.53-8.53)	2.87	(0.91-8.98)	1.56	(0.24-80.01)
Ethnicity						
Black	1.00	-	1.00	-	1.00	-
White	2.70**	(1.28-5.68)	6.69*	(1.48-30.16)	3.01*	(1.30-6.96)
Other	1.63	(0.57-4.61)	1.72	(0.14-21.03)	2.49	(0.76-8.17)

* p < 0.05; ** p = < 0.01.

***** Base size too small-calculate OR

6

Use of psychiatric services

6.1 Receipt of psychiatric services in year prior to entering prison

Questions on services received before entering prison were only asked of prisoners who had been in prison for less than two years, i.e. all remand prisoners and 90% of sentenced prisoners. The answers to these receipt of services questions, shown in Table 6.1, reinforce the findings from the previous chapter that psychiatric problems, are the key correlates of suicidal behaviour. Among male prisoners, both remand and sentenced, 50% of those who had tried to commit suicide in the past year had received psychiatric treatment before entering prison, nearly four times the proportion (13%) of the never attempted suicide group. Among all female prisoners nearly two thirds had sought psychiatric help either from their GP or a psychiatric health professional prior to coming into prison, about three times the proportions for those who had never tried to kill themselves. (Table 6.1)

6.2 Receipt of psychiatric services in prison

In prison, differences in the receipt of psychiatric services in prison by suicidal behaviour seemed to be related more to the prisoners remand versus sentenced status rather than gender. For both male and female remand prisoners about a third of those who had attempted suicide in the past year had received psychiatric help or support, about three or four times the proportion among the never attempted suicide group. Whereas, among the sentenced sample, about a half of those had tried to kill themselves in the past year had received psychiatric help in prison. However, this may simply be a function of the fact that, on average, sentenced prisoners have spent longer in prison than remand prisoners and thus have had greater opportunities of receiving psychiatric help in prison. (Table 6.2)

6.3 Current medication for psychiatric problems

For the analysis of current medication by suicidal behaviour, three groups of medication were chosen –

hypnotics and anxiolytics, psychosis related drugs and antidepressants – all three coming under the general heading of drugs affecting the central nervous system. Among male prisoners about a third of those who had exhibited suicidal behaviour in the past year were currently taking one of these three types of drugs; the majority, 22% overall were prescribed antidepressants. Among the never attempted suicide group ten per cent or less were prescribed any of the three drugs, about half taking anxiolytics or hypnotics.

Between a half and two thirds of female prisoners with suicide attempts in the past 12 months were taking at least one of the three specified CNS groups of drugs, reflecting the higher rate of psychiatric morbidity among this group. This rate was two to three times that found among those who had never attempted suicide indicating that treatment support was being given to prisoners with suicidal tendencies. (Table 6.3)

6.4 Ever admitted to a mental hospital

About 1 in 10 male prisoners and 1 in 5 female prisoners had at one time been admitted to a mental hospital. Just over a quarter of male prisoners who had ever tried to kill themselves had been an inpatient of a mental hospital whereas having a spell in a psychiatric institution was rare among those who had never tried to kill themselves. The difference was more pronounced among women prisoners with 5-6% of the non-suicidal group having been admitted to a mental hospital compared with 33% of female sentenced and 47% of female remand prisoners. (Table 6.4)

A large proportion of prisoners who had spent six months in a psychiatric hospital or had been in low or medium secure psychiatric facilities had at one time in their lives tried to commit suicide. (Tables 6.5, 6.6)

6.5 Logistic regression

Four factors relating to psychiatric services (any help for mental health problem in prison, having

been an inpatient in a mental hospital, having a stay in a locked or secure ward and medication for mental disorders) were entered in a logistic regression model with the six factors previously found to show significant odds ratios: age, ethnicity, type of offence and location, psychotic disorder and CIS-R score. For all groups of prisoners, getting help for a mental health problem in prison was highly correlated with a previous suicide attempt. The odds of having attempted suicide in the past year for those who had received psychiatric help in prison (compared with those who had not) was 2.41 for male sentenced prisoners, 2.88 for female prisoners and 1.82 for male prisoners on remand. Having been an inpatient in a mental hospital increased the odds of being in the past year suicidal group by 5.84 for male sentenced prisoners and 3.55 for female prisoners. The use of medication for psychiatric problems was also a significant factor but just for male remand prisoners who had a two-fold increase in odds of having tried to kill themselves in the past twelve months. (*Table 6.7*)

Table 6.1 Help received in the year before prison by suicide attempts
by prisoner type and sex

Help received in the year before prison	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
<i>Proportion receiving each type of help</i>				
Male remand				
Help from GP in year before prison	25	32	8	14
Psychiatric health professional	17	32	4	10
Other support before prison	12	23	6	9
Any help before prison	33	51	13	21
No help in year before prison	67	49	87	79
<i>Base</i>	150	187	912	1249
Male sentenced				
Help from GP in year before prison	24	38	9	13
Psychiatric health professional	18	28	4	7
Other support before prison	15	18	7	9
Any help before prison	34	50	13	28
No help in year before prison	66	50	87	82
<i>Base</i>	104	66	723	892
Female remand				
Help from GP in year before prison	58	35	16	28
Psychiatric health professional	26	41	6	19
Other support before prison	26	33	10	19
Any help before prison	61	65	22	40
No help in year before prison	39	35	78	60
<i>Base</i>	31	51	101	183
Female sentenced				
Help from GP in year before prison	47	51	21	31
Psychiatric health professional	22	33	10	16
Other support before prison	20	32	9	15
Any help before prison	58	64	28	40
No help in year before prison	42	36	72	60
<i>Base</i>	92	81	317	490

Table 6.2 Help received in prison by suicide attempts
by prisoner type and sex

Help received in prison	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
<i>Proportion receiving each type of help</i>				
Male remand				
Help from prison doctor	18	26	6	11
Psychiatric health professional	9	17	3	6
Other support in prison	11	15	3	6
Help for mental problem in prison	25	35	9	15
No help in prison	75	65	91	85
<i>Base</i>	150	187	913	1250
Male sentenced				
Help from prison doctor	19	33	7	10
Psychiatric health professional	16	29	4	7
Other support in prison	17	22	5	8
Help for mental problem in prison	29	48	11	16
No help in prison	71	52	89	84
<i>Base</i>	151	75	896	1121
Female remand				
Help from prison doctor	23	24	10	16
Psychiatric health professional	10	29	5	12
Other support in prison	10	20	8	11
Help for mental problem in prison	26	39	14	13
No help in prison	74	61	86	77
<i>Base</i>	31	51	105	187
Female sentenced				
Help from prison doctor	20	38	13	18
Psychiatric health professional	24	35	7	15
Other support in prison	19	29	10	15
Help for mental problem in prison	38	55	20	30
No help in prison	62	45	80	70
<i>Base</i>	121	96	366	583

Table 6.3 Current medication by suicide attempts

by prisoner type and sex

Current medication	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
<i>Proportion taking each type of medication</i>				
Male remand				
Current hypnotic anxiolytics	7	16	5	7
Current psychosis-related drugs	6	13	2	4
Current anti-depressants	11	22	4	8
Any of the above	19	37	10	15
None of the above	81	63	90	85
<i>Base</i>	<i>150</i>	<i>187</i>	<i>913</i>	<i>1250</i>
Male sentenced				
Current hypnotic anxiolytics	4	5	3	3
Current psychosis-related drugs	6	8	1	2
Current anti-depressants	11	22	4	6
Any of the above	16	28	7	10
None of the above	84	72	93	90
<i>Base</i>	<i>151</i>	<i>75</i>	<i>896</i>	<i>1121</i>
Female remand				
Current hypnotic anxiolytics	36	39	22	29
Current psychosis-related drugs	6	35	6	14
Current anti-depressants	36	39	11	23
Any of the above	52	65	29	42
None of the above	48	35	71	58
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
Current hypnotic anxiolytics	15	27	7	12
Current psychosis-related drugs	8	26	3	8
Current anti-depressants	31	44	12	21
Any of the above	39	56	19	29
None of the above	61	44	81	71
<i>Base</i>	<i>121</i>	<i>96</i>	<i>366</i>	<i>583</i>

Table 6.4 Whether has been admitted to mental hospital or ward by suicide attempts

by prisoner type and sex

Admitted to mental hospital or ward	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
Yes	29	26	4	11
No	71	74	96	89
<i>Base</i>	<i>150</i>	<i>187</i>	<i>913</i>	<i>1250</i>
Male sentenced				
Yes	25	29	3	8
No	75	71	97	92
<i>Base</i>	<i>150</i>	<i>75</i>	<i>896</i>	<i>1121</i>
Female remand				
Yes	36	47	6	22
No	64	53	94	78
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
Yes	31	33	5	15
No	69	67	95	85
<i>Base</i>	<i>121</i>	<i>96</i>	<i>365</i>	<i>582</i>

Table 6.5 Whether stayed in locked ward of a psychiatric hospital or a secure ward by suicide attempts by prisoner type and sex

Stayed in locked ward or secure ward	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
Yes	12	12	2	5
No	88	88	98	95
<i>Base</i>	<i>150</i>	<i>187</i>	<i>913</i>	<i>1250</i>
Male sentenced				
Yes	13	11	1	3
No	87	89	99	97
<i>Base</i>	<i>151</i>	<i>75</i>	<i>896</i>	<i>1122</i>
Female remand				
Yes	19	24	2	11
No	81	76	98	89
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
Yes	8	20	1	6
No	92	80	99	94
<i>Base</i>	<i>120</i>	<i>96</i>	<i>366</i>	<i>582</i>

Table 6.6 Whether stayed in mental hospital for 6 months by suicide attempts by prisoner type and sex

6 months stay in mental hospital	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
Yes	3	3	1	1
No	97	97	99	99
<i>Base</i>	<i>150</i>	<i>187</i>	<i>912</i>	<i>1249</i>
Male sentenced				
Yes	7	4	1	2
No	93	96	99	98
<i>Base</i>	<i>151</i>	<i>75</i>	<i>896</i>	<i>1122</i>
Female remand				
Yes	10	18	0	6
No	90	82	100	94
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
Yes	8	6	1	3
No	92	94	99	97
<i>Base</i>	<i>121</i>	<i>96</i>	<i>365</i>	<i>582</i>

**Table 6.7 Psychiatric service correlates of non-fatal suicidal behaviour
by prisoner type and sex**

Variable	Male remand		Male sentenced		All female prisoners	
	Adjusted Odds ratio	95% C.I.	Adjusted Odds ratio	95% C.I.	Adjusted Odds ratio	95% C.I.
Any help for mental health problem in prison						
No	1.00	-	1.00	-	1.00	-
Yes	1.82*	(1.13-2.93)	2.41**	(1.25-4.63)	2.88**	(1.64-5.07)
Inpatient in mental hospital or ward						
No	1.00	-	1.00	-	1.00	-
Yes	2.03	(0.92-4.49)	5.84**	(2.23-15.29)	3.55**	(1.55-8.13)
Stay in locked/secure ward						
No	1.00	-	1.00	-	1.00	-
Yes	1.10	(0.36-3.38)	2.98	(0.57-15.49)	0.91	(0.25-3.27)
Medication (anxiolytics or hypnotics or anti-psychosis drugs or antidepressants)						
No	1.00	-	1.00	-	1.00	-
Yes	2.00**	(1.20-3.34)	1.90	(0.87-4.16)	1.48	(0.83-2.61)
Psychotic disorder						
Unlikely	1.00	-	1.00	-	1.00	-
Probable	3.90**	(2.09-7.27)	5.54**	(1.92-15.97)	4.96**	(2.13-11.58)
CIS-R score						
0-11	1.00	-	1.00	-	1.00	-
12-17	3.85**	(2.02-7.35)	3.37**	(1.38-8.25)	2.03	(0.92-4.51)
18-23	5.68**	(3.08-10.48)	5.99**	(2.36-15.21)	2.53*	(1.15-5.60)
24-29	5.50**	(2.83-10.71)	6.95**	(2.76-17.50)	4.10**	(1.83-9.22)
30+	11.07**	(16.10-20.09)	14.12**	(5.64-35.33)	7.30**	(3.39-15.51)
Location						
Normal room/cell/dorm	1.00	-	1.00	-	1.00	-
Hosp. wing or seg. unit	2.19**	(1.23-3.92)	2.01	(0.77-5.20)	1.61	(0.66-3.93)
Type of offence						
Drug offence	1.00	-	1.00	-	1.00	-
Violence	1.57	(0.66-3.73)	0.89	(0.27-2.96)	2.21	(0.95-5.15)
Sex offences	1.61	(0.50-5.06)	1.93	(0.47-7.94)		
Acquisitive offences	1.45	(0.65-3.23)	1.87	(0.40-3.52)	2.38*	(1.15-4.94)
Other/Not known	1.73	(0.74-4.02)	1.23	(2.36-4.15)	5.13**	(2.36-11.15)
Age						
40+	1.00	-	1.00	-	1.00	-
30-39	2.30*	(1.00-5.29)	1.46	(0.48-4.46)	2.04	(0.75-5.53)
21-29	3.19**	(1.43-7.13)	1.70	(0.58-4.96)	3.49**	(1.35-9.01)
16-20	4.45**	(1.87-10.58)	4.78**	(1.51-15.10)	3.92*	(1.37-11.20)
Ethnicity						
Black	1.00	-	1.00	-	1.00	-
White	3.15**	(1.49-6.65)	7.15*	(1.43-35.69)	2.68*	(1.14-6.29)
Other	2.32	(0.81-6.69)	1.70	(0.11-25.20)	2.99	(0.78-11.52)

* = p <0.05; ** p< 0.01.

7

General health and lifestyle

7.1 Self assessment of current health

There was very little difference between the self-perceived general health of prisoners between sample groups: 70% of male and female, remand and sentenced prisoners rated their general health as good or fair. However, those who had tried to kill themselves in the past year had a higher proportion in the bad or very bad categories compared with the never attempted suicide group – 28% compared with 9% among male remand and 11% compared with 4% among male sentenced prisoners; 22% compared with 11% for female remand and 20% compared to 10% of female sentenced prisoners. (Table 7.1)

7.2 Self-reported longstanding illness

About 40% of male prisoners and 50% of female prisoners reported a long standing illness which could have been a mental or physical complaint. In terms of its relation to suicidal behaviour the largest difference was found among the female remand population: 76% of those who had tried to commit suicide in the last year reported a longstanding illness nearly twice the proportion, 42%, of the non-suicidal group. (Table 7.2)

When the illnesses reported by the prisoners were coded into mental and physical complaints, the differences between the suicidal and non-suicidal group for physical illness for all types of prisoner were far less than the overall differences. For example, among the female sentenced prisoners who had tried to kill themselves in the past year 47% reported a physical complaint whereas the equivalent proportion among those who had never attempted suicide was 33%. (Table 7.3)

7.3 Lifestyle behaviours

In general, there were no marked differences in the smoking, drinking and drug use distributions

between those exhibiting non fatal suicidal behaviour in the past year and those who had never attempted suicide. The exception to this was smoking among female prisoners. The suicide attempters were twice as likely as those never attempting suicide to be heavy smokers: 53% compared with 29% for the remand sample and 58% compared with 26% for the sentenced population. (Tables 7.4 – 7.6)

7.4 Logistic regression

The two main significant findings from the logistic regression analysis were that among male sentenced prisoners the odds of being in the suicidal group were increased by 6.13 for those with a longstanding illness and among female prisoners the odds of having tried to commit suicide in the past year were nearly three times higher among heavy smokers when the reference group were the never regular smokers. (Table 7.7)

Table 7.1 Self-assessment of current health by suicide attempts
by prisoner type and sex

Self-assessment of current health	Suicide attempts			All
	Lifetime (excluding past year)	Past year	Never attempted suicide	
	%	%	%	%
Male remand				
Very good	13	10	20	18
Good	32	28	42	39
Fair	39	33	28	30
Bad	14	22	7	10
Very bad	1	6	2	3
<i>Base</i>	<i>150</i>	<i>187</i>	<i>911</i>	<i>1248</i>
Male sentenced				
Very good	20	12	25	23
Good	34	45	46	45
Fair	34	32	23	25
Bad	11	11	4	6
Very bad	1		1	1
<i>Base</i>	<i>151</i>	<i>74</i>	<i>893</i>	<i>1118</i>
Female remand				
Very good	6	4	18	12
Good	32	34	36	35
Fair	36	40	35	36
Bad	19	14	9	12
Very bad	6	8	2	4
<i>Base</i>	<i>31</i>	<i>50</i>	<i>104</i>	<i>185</i>
Female sentenced				
Very good	12	7	22	17
Good	31	42	40	38
Fair	45	31	28	32
Bad	12	18	7	10
Very bad	1	2	3	2
<i>Base</i>	<i>121</i>	<i>96</i>	<i>365</i>	<i>582</i>

Table 7.2 Reported long-standing illness by suicide attempts
by prisoner type and sex

Reported long-standing illness	Suicide attempts			All
	Lifetime (excluding past year)	Past year	Never attempted suicide	
	%	%	%	%
Male remand				
Long-standing illness	61	59	35	42
No long-standing illness	39	41	65	58
<i>Base</i>	<i>150</i>	<i>187</i>	<i>913</i>	<i>1250</i>
Male sentenced				
Long-standing illness	54	53	32	37
No long-standing illness	46	47	68	63
<i>Base</i>	<i>151</i>	<i>75</i>	<i>895</i>	<i>1121</i>
Female remand				
Long-standing illness	68	76	42	56
No long-standing illness	32	24	58	44
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
Long-standing illness	64	59	43	50
No long-standing illness	36	41	57	50
<i>Base</i>	<i>121</i>	<i>96</i>	<i>365</i>	<i>582</i>

Table 7.3 Physical complaint by suicide attempts
by prisoner type and sex

Physical complaint	Suicide attempts			All
	Lifetime (excluding past year)	Past year	Never attempted suicide	
	%	%	%	%
Male remand				
Present	41	41	30	33
Absent	59	59	70	67
<i>Base</i>	<i>150</i>	<i>187</i>	<i>913</i>	<i>1250</i>
Male sentenced				
Present	44	37	31	33
Absent	56	63	69	67
<i>Base</i>	<i>151</i>	<i>75</i>	<i>895</i>	<i>1121</i>
Female remand				
Present	45	47	33	39
Absent	55	53	67	61
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
Present	50	43	40	42
Absent	50	57	69	58
<i>Base</i>	<i>121</i>	<i>96</i>	<i>365</i>	<i>582</i>

Table 7.4 Cigarette smoking by suicide attempts
by prisoner type and sex

Cigarette smoking	Suicide attempts			All
	Lifetime (excluding past year)	Past year	Never attempted suicide	
	%	%	%	%
Male remand				
Heavy	47	44	25	31
Moderate	33	34	37	36
Light	14	12	20	18
Ex-regular	2	3	5	4
Never regular	3	6	12	10
<i>Base</i>	<i>147</i>	<i>184</i>	<i>904</i>	<i>1235</i>
Male sentenced				
Heavy	35	28	22	24
Moderate	39	33	34	34
Light	9	18	21	19
Ex-regular	7	7	8	8
Never regular	9	14	15	14
<i>Base</i>	<i>150</i>	<i>72</i>	<i>884</i>	<i>1106</i>
Female remand				
Heavy	60	53	29	40
Moderate	23	31	34	31
Light	10	8	12	11
Ex-regular	-	2	4	3
Never regular	7	6	21	15
<i>Base</i>	<i>30</i>	<i>51</i>	<i>104</i>	<i>185</i>
Female sentenced				
Heavy	36	58	26	34
Moderate	36	26	32	32
Light	17	10	16	16
Ex-regular	2	-	5	3
Never regular	9	5	20	15
<i>Base</i>	<i>121</i>	<i>96</i>	<i>363</i>	<i>580</i>

Table 7.5 Frequency of drinking in the 12 months before prison by suicide attempts by prisoner type and sex

Frequency of drinking	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
Never	19	19	15	16
Monthly or less often	13	20	15	16
2 to 4 times a month	18	9	15	14
2 to 3 times a week	18	15	23	21
4 or more times a week	31	38	31	32
<i>Base</i>	<i>150</i>	<i>187</i>	<i>913</i>	<i>1250</i>
Male sentenced				
Never	12	12	10	11
Monthly or less often	13	16	12	13
2 to 4 times a month	15	27	17	17
2 to 3 times a week	26	11	28	26
4 or more times a week	34	34	33	33
<i>Base</i>	<i>150</i>	<i>74</i>	<i>895</i>	<i>1119</i>
Female remand				
Never	23	26	30	28
Monthly or less often	23	20	23	22
2 to 4 times a month	19	10	14	14
2 to 3 times a week	6	18	19	17
4 or more times a week	29	28	13	20
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
Never	16	18	22	20
Monthly or less often	21	17	22	21
2 to 4 times a month	12	14	20	17
2 to 3 times a week	22	21	20	21
4 or more times a week	29	31	17	22
<i>Base</i>	<i>120</i>	<i>96</i>	<i>366</i>	<i>582</i>

Table 7.6 Whether used drug in the past year by suicide attempts by prisoner type and sex

Used drug in past year	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
Yes	90	88	85	86
No	10	12	15	14
<i>Base</i>	<i>133</i>	<i>163</i>	<i>750</i>	<i>1046</i>
Male sentenced				
Yes	78	93	82	82
No	22	7	18	18
<i>Base</i>	<i>130</i>	<i>60</i>	<i>712</i>	<i>902</i>
Female remand				
Yes	90	93	82	87
No	10	7	18	13
<i>Base</i>	<i>20</i>	<i>43</i>	<i>79</i>	<i>142</i>
Female sentenced				
Yes	80	85	79	80
No	20	15	21	20
<i>Base</i>	<i>93</i>	<i>74</i>	<i>230</i>	<i>397</i>

Table 7.7 General health and lifestyle correlates of non-fatal suicidal behaviour

by prisoner type and sex

Variable	Male remand		Male sentenced		All female prisoners	
	Adjusted Odds ratio	95% C.I.	Adjusted Odds ratio	95% C.I.	Adjusted Odds ratio	95% C.I.
Self-rated general health						
Very good	1.00	-	1.00	-	1.00	-
Good	1.33	(0.68-2.58)	1.20	(0.47-3.04)	2.01	(0.77-5.29)
Fair	1.23	(0.63-2.42)	0.89	(0.32-2.51)	1.21	(0.43-3.41)
Bad	1.72	(0.77-3.84)	1.35	((0.34-5.31)	2.01	(0.59-6.84)
Very bad	1.14	(0.36-3.62)	*****	*****	*****	*****
Any longstanding illness						
No	1.00	-	1.00	-	1.00	-
Yes	0.92	(0.46-1.83)	6.13**	(1.85-20.35)	1.16	(0.46-2.93)
Physical complaint						
Absent	1.00	-	1.00	-	1.00	-
Present	1.49	(0.75-2.97)	0.25*	(0.07-0.85)	1.13	(0.46-2.80)
Smoking						
Never regular	1.00	-	1.00	-	1.00	-
Ex-regular	1.43	(0.44-4.62)	0.92	(0.31-2.71)	0.17	(0.01-2.92)
Light	1.28	(0.54-3.03)	0.99	(0.34-2.88)	1.44	(0.45-5.80)
Moderate	1.28	(0.59-2.79)	1.18	(0.37-3.75)	1.00	(0.36-2.81)
Heavy	1.88	(0.85-4.13)	1.85	(0.46-7.44)	2.92*	(1.09-7.83)
Any help for mental health problem in prison						
No	1.00	-	1.00	-	1.00	-
Yes	2.00**	(1.73-3.23)	2.77**	(1.44-5.34)	3.37**	(1.91-5.94)
Inpatient in mental hospital or ward						
No	1.00	-	1.00	-	1.00	-
Yes	2.23*	(1.13-4.40)	6.56**	(2.72-15.85)	3.69**	(1.75-7.78)
Psychotic disorder						
Unlikely	1.00	-	1.00	-	1.00	-
Probable	4.67**	(2.47-8.84)	6.71**	(2.20-20.45)	8.72**	(3.68-20.69)
CIS-R score						
0-11	1.00	-	1.00	-	1.00	-
12-17	3.47**	(1.80-6.67)	3.32*	(1.30-8.48)	2.04	(0.89-4.64)
18-23	5.14**	(2.77-9.54)	6.86**	(2.58-18.25)	2.33*	(1.02-5.20)
24-29	5.06**	(2.55-9.91)	6.48**	(2.29-16.85)	3.72**	(1.56-8.04)
30+	8.92**	(4.71-16.88)	13.01**	(4.75-35.65)	6.53**	(2.00-15.25)

Table 7.7 (continued) General health and lifestyle correlates of non-fatal suicidal behaviour
by prisoner type and sex

Variable	Male remand		Male sentenced		All female prisoners	
	Adjusted Odds ratio	95% C.I.	Adjusted Odds ratio	95% C.I.	Adjusted Odds ratio	95% C.I.
Location						
Normal room/cell/dorm	1.00	-	1.00	-	1.00	-
Hosp. wing or seg. unit	2.48**	(1.39-4.41)	3.13*	(0.38-10.30)	1.40	(0.55-3.56)
Type of offence						
Drug offence	1.00	-	1.00	-	1.00	-
Violence	1.92	(0.80-4.60)	0.80	(0.23-2.82)	2.32	(0.96-5.62)
Sex offences	2.18	(0.69-6.92)	1.44	(0.32-6.55)	*****	*****
Acquisitive offences	1.68	(0.74-3.79)	1.12	(0.36-3.48)	2.78**	(1.29-6.02)
Other/Not known	2.07	(0.88-4.90)	1.37	(0.39-4.81)	5.18**	(2.28-11.74)
Age						
40+	1.00	-	1.00	-	1.00	-
30-39	2.50*	(1.07-5.87)	1.76	(0.54-5.77)	1.75	(0.62-4.98)
21-29	3.57**	(1.57-8.13)	2.22	(0.69-7.18)	2.56	(0.94-7.00)
16-20	4.51**	(1.87-10.86)	4.89*	(1.40-17.03)	3.37*	(1.11-10.19)
Ethnicity						
Black	1.00	-	1.00	-	1.00	-
White	2.73*	(1.27-5.89)	6.17*	(1.15-33.01)	2.21	(0.89-5.47)
Other	1.98	(0.68-5.76)	1.66	(0.01-26.24)	2.92	(0.53-16.19)

* = p < 0.05; ** = p < 0.01.

***** Base too small-calculate ORS.

8

Social and situational factors

8.1 Prison conditions

The national survey of psychiatric morbidity among prisoners included five questions on prison conditions: shared or sole occupancy of cell, hours in cell and hours locked in cell on the day before interview, and whether had a spell in solitary or held in stripped conditions. The one factor which had a very clear relationship with suicidal behaviour was whether the prisoner had been held in stripped conditions. Considering that one of the primary purposes of stripped conditions is to remove from the prisoner all items which could possibly be used for self harm it is not surprising that about a third of male and female sentenced prisoners and a quarter of male remand prisoners who had tried suicide in the last year had been held within stripped conditions. The corresponding proportions for the non-suicidal inmates were 11% of female remand prisoners and 6% of male remand and female sentenced inmates. (Tables 8.1- 8.5)

8.2 Work and study

It was hypothesised that, among all groups of prisoners, those who occupied some of their time working or attending educational classes would be less likely than non-attenders to have tried to commit suicide even though there is a lack of specific data in the survey on when and where events actually took place: when exactly the last suicide attempt was made, whether the inmate was in prison, when s/he started work or educational classes. However, for all groups of prisoners, the proportions of those working or attending educational classes were very similar in the groups who had and had not tried to kill themselves: about two thirds of all sentenced prisoners, a half of the female and a third of the male remand sample were working or studying in prison. (Tables 8.6, 8.7)

8.3 Social functioning

The two measures of social functioning created from the survey data were the size of the primary

support group, i.e. the number of people they felt close to, and perceived social support - severe, moderate or no lack. Among male and female, remand and sentenced prisoners, those who had tried to kill themselves in the past year were 1.5 to 2 times more likely to have the smallest primary support group and to have a severe lack of social support. For example among male remand prisoners 34% had the smallest primary support group of 0–3 people compared with 17% of those who had never attempted suicide. The corresponding proportions for the same group of prisoners in terms of a severe lack of social support were 42% compared with 25%. (Tables 8.8, 8.9)

8.4 Victimisation

Prisoners were asked about six experiences of victimisation in prison:

- Threatened with violence
- Victim of actual violence
- Had belongings stolen
- Been intimidated to hand over belongings
- Received unwanted sexual attention
- Victim of forced sexual attention

Forty six per cent of sentenced prisoners had been subject to some victimisation, as were 41% of female remand and 34% of male remand prisoners. Those who had tried to commit suicide in the last year were slightly more likely to have experienced any form of victimisation, for example 52% compared with 29% of male remand prisoners and 55% compared with 32% of the female remand sample.

The victimisation item which showed marked differences in prevalence rates in relation to suicidal behaviour was being threatened with violence. Focusing on male remand prisoners, 41% of those who had tried to kill themselves in the past twelve months reported that they had been threatened with violence whereas the equivalent proportion among the never

attempted suicide group was 17%. The corresponding proportions for female remand prisoners was 24% and 9%. (*Table 8.10*)

8.5 External contacts

Prisoners were asked about three methods of contact with family and friends: the receipt of letters, telephone calls and visits. Among all groups of prisoners, about 6% at the most had no contact with family and friends. However, among male remand prisoners who had attempted suicide in the last year, 12% reported no contact at all with family or friends, and 20% overall, had no contact with any family members. The corresponding proportion of male female prisoners who had never attempted suicide were 4% and 12% respectively. (*Tables 8.11 – 8.14*)

8.6 Logistic regression

There were two statistically significant external contact correlates with suicidal behaviour among women prisoners when all the previously significant sociodemographic, penal and psychiatric factors had been entered in the model: attending educational classes in prison and the size of the primary support group. In both cases the odds of having tried to commit suicide were increased by approximately 2.5 for those who were not attending classes (compared with attenders) and with a support group of 4–9 people (compared with 0–3 people).

Among male remand prisoners the odds of having exhibited suicidal behaviour in the last year was increased by 2.75 for those who had no contact with family or friends compared with those who had received letters, telephone calls or visits from both groups. (*Table 8.15*)

Table 8.1 Whether shares cell/room/dormitory by suicide attempts by prisoner type and sex

Whether shares cell/ room/dormitory	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
No, alone in cell	23	25	26	25
Yes, shares	77	75	74	75
<i>Base</i>	<i>150</i>	<i>187</i>	<i>913</i>	<i>1250</i>
Male sentenced				
No, alone in cell	67	59	58	59
Yes, shares	33	41	42	41
<i>Base</i>	<i>150</i>	<i>75</i>	<i>895</i>	<i>1120</i>
Female remand				
No, alone in cell	71	61	77	72
Yes, shares	29	39	23	28
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
No, alone in cell	67	54	63	62
Yes, shares	33	46	37	38
<i>Base</i>	<i>121</i>	<i>96</i>	<i>366</i>	<i>583</i>

Table 8.2 Hours in cell yesterday by suicide attempts by prisoner type and sex

Hours in cell yesterday	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
0-14 hours	16	10	14	14
15-18 hours	20	18	25	23
19-22 hours	35	33	36	36
23-24 hours	29	39	24	27
<i>Base</i>	<i>148</i>	<i>185</i>	<i>911</i>	<i>1244</i>
Male sentenced				
0-14 hours	32	28	41	39
15-18 hours	37	22	30	30
19-22 hours	20	25	19	20
23-24 hours	11	25	10	12
<i>Base</i>	<i>150</i>	<i>76</i>	<i>895</i>	<i>1121</i>
Female remand				
0-14 hours	23	18	25	22
15-18 hours	48	35	40	40
19-22 hours	19	43	30	32
23-24 hours	10	4	5	5
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
0-14 hours	46	32	54	49
15-18 hours	39	35	29	32
19-22 hours	11	23	12	14
23-24 hours	5	9	4	5
<i>Base</i>	<i>121</i>	<i>96</i>	<i>366</i>	<i>583</i>

Table 8.3 Hours locked in cell yesterday by suicide attempts
by prisoner type and sex

Hours locked in cell yesterday	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
0-14 hours	18	15	19	18
15-18 hours	19	16	23	21
19-22 hours	36	36	35	35
23-24 hours	27	34	24	25
<i>Base</i>	<i>148</i>	<i>185</i>	<i>912</i>	<i>1245</i>
Male sentenced				
0-14 hours	50	36	50	49
15-18 hours	26	20	24	24
19-22 hours	16	24	17	17
23-24 hours	8	20	9	10
<i>Base</i>	<i>151</i>	<i>75</i>	<i>894</i>	<i>1120</i>
Female remand				
0-14 hours	32	18	29	26
15-18 hours	48	35	43	42
19-22 hours	13	45	25	28
23-24 hours	6	2	4	4
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
0-14 hours	70	56	72	69
15-18 hours	25	26	19	21
19-22 hours	3	12	7	7
23-24 hours	2	5	2	2
<i>Base</i>	<i>121</i>	<i>96</i>	<i>366</i>	<i>583</i>

Table 8.4 Whether had a spell in solitary by suicide attempts
by prisoner type and sex

Had a spell in solitary	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
Yes	19	21	17	18
No	81	79	83	82
<i>Base</i>	<i>150</i>	<i>187</i>	<i>912</i>	<i>1249</i>
Male sentenced				
Yes	43	36	31	33
No	57	64	69	67
<i>Base</i>	<i>150</i>	<i>75</i>	<i>896</i>	<i>1121</i>
Female remand				
Yes	13	18	16	16
No	87	82	84	84
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
Yes	34	38	17	24
No	66	62	83	76
<i>Base</i>	<i>121</i>	<i>96</i>	<i>366</i>	<i>583</i>

Table 8.5 Whether had been held in stripped conditions by suicide attempts**by prisoner type and sex**

Been held in stripped conditions	Suicide attempts			All
	Lifetime (excluding past year)	Past year	Never attempted suicide	
	%	%	%	%
Male remand				
Yes	10	26	6	9
No	90	74	95	91
<i>Base</i>	<i>149</i>	<i>187</i>	<i>912</i>	<i>1248</i>
Male sentenced				
Yes	21	37	11	14
No	79	63	89	86
<i>Base</i>	<i>150</i>	<i>75</i>	<i>895</i>	<i>1120</i>
Female remand				
Yes	6	14	3	6
No	94	86	97	94
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
Yes	16	30	6	12
No	84	70	94	88
<i>Base</i>	<i>121</i>	<i>95</i>	<i>365</i>	<i>581</i>

Table 8.6 Whether attended educational classes by suicide attempts**by prisoner type and sex**

Whether attended educational classes	Suicide attempts			All
	Lifetime (excluding past year)	Past year	Never attempted suicide	
	%	%	%	%
Male remand				
Yes	35	34	35	35
No	65	66	65	65
<i>Base</i>	<i>150</i>	<i>187</i>	<i>913</i>	<i>1250</i>
Male sentenced				
Yes	67	57	62	63
No	33	43	38	37
<i>Base</i>	<i>150</i>	<i>75</i>	<i>896</i>	<i>1121</i>
Female remand				
Yes	48	47	59	54
No	52	53	41	46
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
Yes	68	57	69	67
No	32	43	31	33
<i>Base</i>	<i>121</i>	<i>96</i>	<i>366</i>	<i>583</i>

Table 8.7 Whether currently working by suicide attempts
by prisoner type and sex

Currently working	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
Yes	25	23	28	27
No	75	77	72	73
<i>Base</i>	150	187	913	1250
Male sentenced				
Yes	63	51	61	61
No	37	49	39	39
<i>Base</i>	150	74	896	1120
Female remand				
Yes	45	35	47	43
No	55	65	53	57
<i>Base</i>	31	51	105	187
Female sentenced				
Yes	71	56	64	64
No	29	44	36	36
<i>Base</i>	121	96	366	583

Table 8.8 Size of primary support group by suicide attempts
by prisoner type and sex

Size of primary support group	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
0-3	31	34	17	21
4-8	30	29	30	30
9+	39	37	53	49
<i>Base</i>	150	187	913	1250
Male sentenced				
0-3	19	28	13	15
4-8	30	33	28	28
9+	51	39	59	57
<i>Base</i>	151	75	896	1122
Female remand				
0-3	36	31	22	27
4-8	45	33	29	33
9+	19	35	50	41
<i>Base</i>	31	51	105	187
Female sentenced				
0-3	19	21	12	15
4-8	38	46	33	36
9+	43	33	56	49
<i>Base</i>	121	96	366	583

Table 8.9 Perceived social support by suicide attempts
by prisoner type and sex

Perceived social support	Suicide attempts			All
	Lifetime (excluding past year)	Past year	Never attempted suicide	
	%	%	%	%
Male remand				
Severe lack	38	42	25	29
Moderate lack	28	31	34	33
No lack	34	27	40	38
<i>Base</i>	146	186	902	1234
Male sentenced				
Severe lack	32	39	23	25
Moderate lack	32	38	32	32
No lack	36	23	45	42
<i>Base</i>	149	74	889	1112
Female remand				
Severe lack	34	43	19	28
Moderate lack	24	29	36	32
No lack	41	28	45	40
<i>Base</i>	29	51	102	182
Female sentenced				
Severe lack	29	26	17	21
Moderate lack	30	42	31	33
No lack	41	32	52	46
<i>Base</i>	120	95	362	577

Table 8.10 Victimization by suicide attempts
by prisoner type and sex

Victimisation	Suicide attempts			All
	Lifetime (excluding past year)	Past year	Never attempted suicide	
	<i>Proportions experiencing victimisation</i>			
Male remand				
Threatened with violence	33	41	17	22
Victim of actual violence	15	14	8	10
Had belongings stolen	25	26	15	18
Been intimidated to hand over belongings	9	14	4	6
Received unwanted sexual attention	3	2	1	1
Victim of forced sexual attention	-	-	0	0
Any victimisation	43	52	29	34
No victimisation	57	48	71	66
<i>Base</i>	150	187	912	1249
Male sentenced				
Threatened with violence	42	54	26	30
Victim of actual violence	22	19	12	14
Had belongings stolen	41	35	27	30
Been intimidated to hand over belongings	12	23	5	7
Received unwanted sexual attention	13	4	2	4
Victim of forced sexual attention	3	1	0	1
Any victimisation	64	63	42	46
No victimisation	36	37	58	54
<i>Base</i>	151	75	896	1121
Female remand				
Threatened with violence	13	24	9	13
Victim of actual violence	6	8	5	6
Had belongings stolen	26	28	24	25
Been intimidated to hand over belongings	3	6	3	4
Received unwanted sexual attention	6	8	11	10
Victim of forced sexual attention	3	8	1	3
Any victimisation	45	55	32	41
No victimisation	55	45	68	59
<i>Base</i>	31	51	105	187
Female sentenced				
Threatened with violence	23	29	12	17
Victim of actual violence	15	7	5	8
Had belongings stolen	46	40	31	36
Been intimidated to hand over belongings	8	8	2	5
Received unwanted sexual attention	17	12	8	11
Victim of forced sexual attention	3	2	-	1
Any victimisation	56	57	40	46
No victimisation	44	43	60	54
<i>Base</i>	121	96	365	582

Table 8.11 Letters received by suicide attempts
by prisoner type and sex

Letters received from:	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
Friends and family	34	38	51	47
Family only	32	25	23	25
Friends only	15	15	12	13
Anyone	81	78	86	84
No one	19	22	14	16
<i>Base</i>	150	187	913	1250
Male sentenced				
Friends and family	57	56	66	64
Family only	22	25	21	22
Friends only	13	12	7	8
Anyone	92	93	94	94
No one	8	7	6	6
<i>Base</i>	151	75	894	1120
Female remand				
Friends and family	55	45	51	50
Family only	19	22	24	22
Friends only	16	16	12	14
Anyone	90	82	88	87
No one	10	18	12	13
<i>Base</i>	31	51	105	187
Female sentenced				
Friends and family	75	69	71	71
Family only	15	20	17	17
Friends only	8	8	9	9
Anyone	98	97	96	97
No one	2	3	4	3
<i>Base</i>	120	96	365	581

Table 8.12 Telephone calls received by suicide attempts
by prisoner type and sex

Telephone calls received from:	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
Friends and family	30	35	49	45
Family only	32	26	23	24
Friends only	10	9	8	9
Anyone	72	70	80	78
No one	28	30	20	22
<i>Base</i>	149	187	913	1249
Male sentenced				
Friends and family	48	38	57	55
Family only	30	35	27	28
Friends only	5	11	6	6
Anyone	84	84	90	88
No one	16	16	10	12
<i>Base</i>	151	74	895	1120
Female remand				
Friends and family	45	22	48	40
Family only	32	33	34	34
Friends only	6	12	6	8
Anyone	84	67	88	81
No one	16	33	12	19
<i>Base</i>	31	51	105	187
Female sentenced				
Friends and family	53	43	58	55
Family only	29	38	26	29
Friends only	6	7	7	6
Anyone	88	88	91	90
No one	12	12	9	10
<i>Base</i>	120	96	365	581

Table 8.13 Visits received by suicide attempts

by prisoner type and sex

Visits received from:	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
Friends and family	20	26	38	34
Family only	38	32	30	32
Friends only	10	9	11	10
Anyone	68	66	79	76
No one	32	34	21	24
<i>Base</i>	150	187	913	1250
Male sentenced				
Friends and family	33	21	43	40
Family only	29	33	31	31
Friends only	7	9	7	7
Anyone	69	63	81	78
No one	31	37	19	22
<i>Base</i>	150	76	896	1122
Female remand				
Friends and family	26	20	37	30
Family only	36	41	25	31
Friends only	10	4	11	9
Anyone	71	65	73	71
No one	29	35	27	29
<i>Base</i>	31	51	105	187
Female sentenced				
Friends and family	32	23	38	34
Family only	35	42	33	35
Friends only	12	12	9	10
Anyone	80	76	80	79
No one	20	24	20	21
<i>Base</i>	120	96	365	581

Table 8.14 External contacts by suicide attempts

by prisoner type and sex

External contacts with:	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
Friends and family	55	56	70	66
Family only	27	24	18	20
Friends only	9	9	8	8
Anyone	92	88	96	94
No one	8	12	4	6
<i>Base</i>	150	187	913	1250
Male sentenced				
Friends and family	70	63	80	77
Family only	18	25	15	16
Friends only	9	7	3	4
Anyone	97	95	98	98
No one	3	5	2	2
<i>Base</i>	151	76	894	1121
Female remand				
Friends and family	71	53	77	70
Family only	13	28	13	17
Friends only	10	16	6	9
Anyone	94	96	96	96
No one	6	4	4	4
<i>Base</i>	31	51	105	187
Female sentenced				
Friends and family	84	79	84	83
Family only	11	12	12	12
Friends only	5	7	4	5
Anyone	100	99	100	100
No one	0	1	0	0
<i>Base</i>	120	96	365	581

Table 8.15 Social and situational correlates of non-fatal suicidal behaviour by prisoner type and sex

Variable	Male remand		Males sentenced		All female prisoners	
	Adjusted Odds ratio	95% C.I.	Adjusted Odds ratio	95% C.I.	Adjusted Odds ratio	95% C.I.
Living conditions						
Shares a cell/room	1.00	-	1.00	-	1.00	-
Alone in cell/ room	0.82	(0.52-1.31)	1.23	(0.64-2.37)	0.59	(0.33-1.03)
Hours in cell yesterday						
0-14	1.00	-	1.00	-	1.00	-
15-18	0.97	(0.47-1.99)	0.57	(0.25-1.31)	1.44	(0.76-2.74)
19-22	0.95	(0.48-1.89)	0.94	(0.39-2.27)	1.06	(0.50-2.25)
23-24	1.15	(0.56-2.36)	1.40	(0.53-3.75)	0.43	(0.12-1.58)
Attends education class in prison						
Yes	1.00	-	1.00	-	1.00	-
No	0.87	(0.56-1.35)	1.19	(0.61-2.33)	2.23**	(1.26-3.97)
Working in prison						
No	1.00	-	1.00	-	1.00	-
Yes	1.24	(0.75-2.05)	0.87	(0.44-1.75)	0.95	(0.52-1.74)
Primary support group size						
10 or more	1.00	-	1.00	-	1.00	-
4-9	1.15	(0.72-1.84)	1.79	(0.87-3.68)	2.28**	(1.23-4.20)
3 or less	1.63	(0.99-2.70)	1.73	(0.74-4.01)	1.75	(0.80-3.79)
Perceived social support						
No lack	1.00	-	1.00	-	1.00	-
Moderate lack	0.88	(0.54-1.44)	1.92	(0.89-4.17)	1.76	(0.95-3.26)
Severe lack	1.22	(0.72-2.06)	1.59	(0.69-3.69)	1.48	(0.73-2.99)
Any victimisation						
No	1.00	-	1.00	-	1.00	-
Yes	1.46	(0.96-2.23)	1.40	(0.72-2.74)	1.50	(0.87-2.57)
External contacts						
Family and friends	1.00	-	1.00	-	1.00	-
Family only	1.15	(0.69-1.90)	1.92	(0.90-4.14)	1.19	(0.56-2.53)
Friends only	1.08	(0.50-2.32)	1.10	(0.26-4.62)	1.30	(0.42-4.05)
No-one	2.75**	(1.32-5.72)	1.22	(0.22-6.80)	0.87	(0.13-6.05)
Longstanding illness						
No	1.00	-	1.00	-	1.00	-
Yes	1.41	(0.94-2.14)	1.87*	(1.00-3.52)	1.21	(0.69-2.14)
Any help for mental health problem in prison						
No	1.00	-	1.00	-	1.00	-
Yes	1.96**	(1.20-2.31)	3.02**	(1.54-5.91)	3.06**	(1.71-5.46)
Inpatient in mental hospital or ward						
No	1.00	-	1.00	-	1.00	-
Yes	2.15*	(1.10-4.23)	7.76**	(3.25-18.55)	3.69**	(1.73-7.86)

Table 8.15 (continued) Social and situational correlates of non-fatal suicidal behaviour

by prisoner type and sex

Variable	Male remand		Males sentenced		All female prisoners	
	Adjusted Odds ratio	95% C.I.	Adjusted Odds ratio	95% C.I.	Adjusted Odds ratio	95% C.I.
Psychotic disorder						
Unlikely	1.00	-	1.00	-	1.00	-
Probable	4.49**	(2.40-8.39)	6.60**	(2.17-20.05)	6.94**	(3.02-15.97)
CIS-R score						
0-11	1.00	-	1.00	-	1.00	-
12-17	3.48**	(1.80-6.71)	2.25	(0.89-5.68)	2.34	(1.00-5.50)
18-23	4.57**	(2.45-8.54)	4.16**	(1.57-11.03)	2.30*	(1.00-5.29)
24-29	4.54**	(2.28-8.54)	5.17**	(1.99-13.42)	3.56**	(1.53-8.28)
30+	7.94**	(4.16-15.15)	7.73**	(2.95-20.26)	6.22**	(2.67-14.52)
Location						
Normal room/cell/dorm	1.00	-	1.00	-	1.00	-
Hosp. wing or seg. unit	2.07*	(1.13-3.77)	2.04	(0.76-5.51)	2.39	(0.88-6.49)
Type of offence						
Drug offence	1.00	-	1.00	-	1.00	-
Violence	1.64	(0.68-3.94)	0.70	(0.20-2.40)	2.34	(0.98-5.60)
Sex offences	1.89	(0.59-6.05)	1.64	(0.37-7.25)	*****	*****
Acquisitive offences	1.43	(0.63-3.24)	0.88	(0.19-2.67)	2.26*	(1.05-4.90)
Other/Not known	1.71	(0.72-4.07)	0.92	(0.26-3.29)	4.82**	(2.09-11.11)
Age						
40+	1.00	-	1.00	-	1.00	-
30-39	2.57*	(1.09-6.07)	1.85	(0.59-5.76)	1.71	(0.59-4.95)
21-29	3.53**	(1.55-8.05)	2.34	(0.74-7.35)	2.90*	(1.05-7.98)
16-20	4.39**	(1.79-10.77)	6.40**	(1.77-23.15)	3.42*	(1.11-10.57)
Ethnicity						
Black	1.00	-	1.00	-	1.00	-
White	3.19 **	(1.52-6.72)	6.11*	(1.52-6.72)	3.92**	(1.52-10.14)
Other	2.23	(0.74-6.66)	0.63	(0.03-13.65)	3.96*	(1.09-14.48)

* = p < 0.05; ** = p < 0.01.

***** Base too small-calculate ORS.

9

Life events as risk factors

9.1 Key life events

All prisoners were asked whether they had experienced 15 key life events. They can broadly be categorised into three groups of five factors:

Personal	Relationships	Educational/ Economic
Bullying	Relationship breakdown	Expelled from school
Violence at work	Death of spouse or child	Sacked or redundancy
Violence at home	Death of parent or sibling	Ran away from home
Sexual abuse	Death of close friend	Been homeless
Serious illness	Stillbirth	Serious money problem

The proportions of prisoners who had experienced such events during their lifetime were nearly always greater among those who had attempted suicide compared with those who had not. The biggest differences for both men and women were found for the personal factors, particularly having suffered violence or sexual abuse. About two thirds of female prisoners, both remand and sentenced, who had tried to commit suicide in the last year had experienced violence in the home, and around a half had suffered sexual abuse – about twice the proportions of the non-suicidal samples. (Tables 9.1 – 9.3)

Table 9.4 shows the distribution of prisoners in terms of how many of the fifteen key life events they had suffered. Among male prisoners the proportion of those who had tried to kill themselves in the past year who had experienced seven or more events was nearly three times that of those who had never attempted suicide (44–47% compared with 16–17%). For female prisoners the corresponding ratio approached four to one (45–47% compared with 12–13%). (Table 9.4)

9.2 Stressful life events

Prisoners were also asked to report whether stressful life events occurred over the past six months. The

pattern of the results mirrored that for lifetime events but were less dramatic. The data for female remand prisoners showed the most marked relationship between suicidal behaviour and the experience of any stressful life event in the past six months. Two thirds of those who had attempted suicide in the past year had experienced at least one stressful life event in the past six months; practically three times the proportion of those who had never attempted suicide. (Table 9.5)

9.3 Childhood experiences

Although around a quarter of male prisoners had attended a special school, there were not large differences by suicidal behaviour. The corresponding data for the women prisoners do indicate considerable differences. Overall, one in six female remand prisoners had attended special school. However, the proportion among those who had attempted suicide in the past year with special school education was one in three compared with one in twelve of the non-suicidal group. For female sentenced prisoners the overall proportion was one in nine, with a one in four contribution from the past-year, suicidal group and one in twenty five of those who had never attempted suicide. (Table 9.6)

Between a third and a quarter of all prisoners had been in LA care, however, among women prisoners, the suicidal group were about twice as likely to have been placed in care as a child than the non-suicidal group (49% compared with 21% for remand prisoners and 40% compared with 17% for the sentenced sample. (Table 9.7)

9.4 Logistic regression

When the risk factors were added to the list of variables in the model the two additional significant odds ratios emerged. First, among male remand prisoners, the odds ratio for having attempted suicidal in the past year (compared with never

attempted) was 9.10 for those who had suffered 11 or more key life events (with none in the reference group). Second, among female prisoners the odds ratio for the equivalent comparison looking at attending versus not attending special school was 2.51. (*Table 9.8*)

Table 9.1 Key events (personal) by suicide attempts
by prisoner type and sex

Key events (personal)	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
<i>Proportions experiencing each event</i>				
Male remand				
Suffered bullying	53	49	22	30
Suffered violence at work	13	10	4	6
Suffered violence at home	41	49	22	28
Suffered sexual abuse	19	22	5	9
Suffered serious illness	30	26	14	18
Any of the above events	78	79	46	55
None of the above events	22	21	54	45
<i>Base</i>	150	187	912	1249
Male sentenced				
Suffered bullying	43	57	25	30
Suffered violence at work	13	10	5	6
Suffered violence at home	45	34	21	25
Suffered sexual abuse	25	17	4	8
Suffered serious illness	24	18	12	14
Any of the above events	75	78	46	52
None of the above events	25	22	54	48
<i>Base</i>	151	75	896	1121
Female remand				
Suffered bullying	13	35	16	21
Suffered violence at work	3	6	1	3
Suffered violence at home	71	65	38	51
Suffered sexual abuse	45	53	22	34
Suffered serious illness	26	18	11	16
Any of the above events	94	90	53	70
None of the above events	6	10	47	30
<i>Base</i>	31	51	105	187
Female sentenced				
Suffered bullying	35	43	18	26
Suffered violence at work	6	6	2	4
Suffered violence at home	66	62	38	48
Suffered sexual abuse	52	55	18	31
Suffered serious illness	17	21	10	13
Any of the above events	89	82	55	66
None of the above events	11	18	45	34
<i>Base</i>	121	96	366	583

Table 9.2 Key events (loss) by suicide attempts
by prisoner type and sex

Key events (loss)	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
<i>Proportions experiencing each event</i>				
Male remand				
Suffered separation due to marital difficulties or breakdown of steady relationship	59	57	36	42
Suffered death of spouse or child	11	10	5	6
Suffered death of parent or sibling	29	24	23	24
Suffered death of close friend or other relative	57	48	43	46
Suffered stillbirth	10	8	7	8
Any of the above events	85	84	72	75
None of the above events	15	16	28	25
<i>Base</i>	150	187	913	1250
Male sentenced				
Suffered separation due to marital difficulties or breakdown of steady relationship	60	49	42	45
Suffered death of spouse or child	12	8	5	6
Suffered death of parent or sibling	40	27	27	29
Suffered death of close friend or other relative	56	59	45	47
Suffered stillbirth	6	15	6	7
Any of the above events	87	77	77	79
None of the above events	13	23	23	21
<i>Base</i>	151	75	896	1121
Female remand				
Suffered separation due to marital difficulties or breakdown of steady relationship	64	43	42	46
Suffered death of spouse or child	26	22	11	17
Suffered death of parent or sibling	45	28	28	30
Suffered death of close friend or other relative	48	45	36	41
Suffered stillbirth	6	16	8	10
Any of the above events	94	82	80	83
None of the above events	6	18	20	17
<i>Base</i>	31	51	105	187
Female sentenced				
Suffered separation due to marital difficulties or breakdown of steady relationship	55	51	41	46
Suffered death of spouse or child	25	18	11	15
Suffered death of parent or sibling	39	30	28	30
Suffered death of close friend or other relative	47	53	45	47
Suffered stillbirth	21	15	7	11
Any of the above events	92	86	82	85
None of the above events	8	14	18	15
<i>Base</i>	121	96	366	583

Table 9.3 Key events (educational/economic) by suicide attempts**by prisoner type and sex**

Key events (educational/economic)	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
<i>Proportions experiencing each event</i>				
Male remand				
Expelled from school	60	63	52	55
Been sacked or made redundant	59	52	40	44
Ran away from home	72	66	44	51
Been homeless	71	67	39	47
Had serious money problems	74	73	48	55
Any of the above events	95	93	86	88
None of the above events	5	7	14	12
<i>Base</i>	<i>150</i>	<i>187</i>	<i>913</i>	<i>1250</i>
Male sentenced				
Expelled from school	53	56	48	49
Been sacked or made redundant	57	54	47	49
Ran away from home	68	64	43	47
Been homeless	54	62	32	37
Had serious money problems	55	68	47	50
Any of the above events	94	94	85	87
None of the above events	6	6	15	13
<i>Base</i>	<i>151</i>	<i>75</i>	<i>896</i>	<i>1121</i>
Female remand				
Expelled from school	39	59	32	41
Been sacked or made redundant	39	29	20	26
Ran away from home	71	88	41	59
Been homeless	61	71	41	52
Had serious money problems	55	65	41	50
Any of the above events	97	96	78	86
None of the above events	3	4	22	14
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
Expelled from school	41	42	27	33
Been sacked or made redundant	35	33	29	31
Ran away from home	70	70	39	50
Been homeless	47	50	26	34
Had serious money problems	50	62	44	48
Any of the above events	93	91	75	82
None of the above events	7	9	25	18
<i>Base</i>	<i>121</i>	<i>96</i>	<i>366</i>	<i>583</i>

Table 9.4 Number of stressful life events by suicide attempts**by prisoner type and sex**

Number of stressful life events	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
None	1	1	4	3
1-2	5	6	28	22
3-4	15	20	28	25
5-6	28	28	24	26
7-10	41	37	15	22
11+	9	7	1	3
<i>Base</i>	<i>150</i>	<i>187</i>	<i>913</i>	<i>1250</i>
Male sentenced				
None	1	1	4	4
1-2	7	7	24	20
3-4	20	19	32	29
5-6	29	27	23	24
7-10	41	43	16	21
11+	3	4	1	1
<i>Base</i>	<i>150</i>	<i>75</i>	<i>896</i>	<i>1121</i>
Female remand				
None	-	-	6	3
1-2	6	8	28	19
3-4	19	22	28	25
5-6	32	26	27	27
7-10	39	41	11	24
11+	3	4	1	2
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
None	-	2	4	3
1-2	7	6	28	20
3-4	16	28	34	30
5-6	36	17	21	23
7-10	36	41	12	22
11+	4	6	1	2
<i>Base</i>	<i>121</i>	<i>96</i>	<i>366</i>	<i>583</i>

Table 9.5 Stressful event in past 6 months by suicide attempts				
by prisoner type and sex				
Stressful event in past 6 months	Suicide attempts			All
	Lifetime (excluding past year)	Past year	Never attempted suicide	
	%	%	%	%
Male remand				
Yes	38	56	35	38
No	62	44	65	62
<i>Base</i>	<i>150</i>	<i>187</i>	<i>913</i>	<i>1250</i>
Male sentenced				
Yes	19	28	19	20
No	81	72	81	80
<i>Base</i>	<i>150</i>	<i>74</i>	<i>896</i>	<i>1120</i>
Female remand				
Yes	48	67	23	39
No	52	33	77	61
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
Yes	19	26	18	19
No	81	74	82	81
<i>Base</i>	<i>121</i>	<i>96</i>	<i>366</i>	<i>583</i>

Table 9.6 Whether attended a special school by suicide attempts				
by prisoner type and sex				
Attended a special school	Suicide attempts			All
	Lifetime (excluding past year)	Past year	Never attempted suicide	
	%	%	%	%
Male remand				
Yes	41	37	22	27
No	59	63	78	73
<i>Base</i>	<i>150</i>	<i>187</i>	<i>913</i>	<i>1250</i>
Male sentenced				
Yes	27	29	22	23
No	73	71	78	77
<i>Base</i>	<i>151</i>	<i>75</i>	<i>896</i>	<i>1122</i>
Female remand				
Yes	13	33	8	16
No	87	67	92	84
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
Yes	21	26	4	11
No	79	74	96	89
<i>Base</i>	<i>121</i>	<i>96</i>	<i>366</i>	<i>583</i>

Table 9.7 Whether in LA care as a child (recorded) by suicide attempts

by prisoner type and sex

Whether in LA care	Suicide attempts			
	Lifetime (excluding past year)	Past year	Never attempted suicide	All
	%	%	%	%
Male remand				
Yes	49	41	28	33
No	51	59	72	67
<i>Base</i>	<i>150</i>	<i>187</i>	<i>913</i>	<i>1250</i>
Male sentenced				
Yes	40	29	24	26
No	60	71	76	74
<i>Base</i>	<i>150</i>	<i>75</i>	<i>895</i>	<i>1120</i>
Female remand				
Yes	23	49	21	29
No	77	51	79	71
<i>Base</i>	<i>31</i>	<i>51</i>	<i>105</i>	<i>187</i>
Female sentenced				
Yes	37	40	17	25
No	63	60	83	75
<i>Base</i>	<i>121</i>	<i>96</i>	<i>366</i>	<i>583</i>

Table 9.8 Risk factor correlates of non-fatal suicidal behaviour by prisoner type and sex

Variable	Male remand		Male sentenced		All female prisoners	
	Adjusted Odds ratio	95% C.I.	Adjusted Odds ratio	95% C.I.	Adjusted Odds ratio	95% C.I.
Number of stressful life events						
None	1.00	-	1.00	-	1.00	-
1-2	1.09	(0.20-5.83)	0.57	(0.05-6.20)	0.28	(0.04-1.83)
3-4	1.78	(0.36-8.73)	0.81	(0.08-7.73)	0.93	(0.17-5.19)
5-6	2.74	(0.56-13.39)	0.94	(0.10-9.28)	0.55	(0.09-3.24)
7-10	4.62	(0.93-23.02)	2.05	(0.21-19.88)	1.43	(0.24-8.38)
11 or more	9.10 *	(1.31-63.38)	1.58	(0.09-29.20)	0.59	(0.06-6.05)
Was in LA care						
No	1.00	-	1.00	-	1.00	-
Yes	1.00	(0.64-1.58)	0.47	(0.21-1.06)	1.15	(0.61-2.16)
Attended special school						
No	1.00	-	1.00	-	1.00	-
Yes	0.80	(0.49-1.28)	1.36	(0.62-2.96)	2.51 *	(1.13-5.55)
Primary support group size						
10 or more	1.00	-	1.00	-	1.00	-
4-9	1.13	(0.70-1.81)	1.77	(0.85-3.70)	2.03 *	(1.10-3.74)
3 or less	1.50	(0.90-2.50)	1.65	(0.70-3.90)	1.93	(0.87-4.30)
Perceived social support						
No lack	1.00	-	1.00	-	1.00	-
Moderate lack	0.78	(0.47-1.28)	1.72	(0.80-3.73)	1.46	(0.78-2.72)
Severe lack	1.09	(0.64-1.84)	1.35	(0.59-3.09)	1.29	(0.62-2.68)
External contacts						
Family and friends	1.00	-	1.00	-	1.00	-
Family only	1.10	(0.66-1.83)	2.09	(1.00-4.60)	1.09	(0.51-2.34)
Friends only	1.10	(0.53-2.29)	1.16	(0.27-4.93)	1.08	(0.33-3.53)
No-one	2.48 *	(1.19-5.17)	1.16	(0.20-6.77)	0.89	(0.11-7.21)
Longstanding illness						
No	1.00	-	1.00	-	1.00	-
Yes	1.22	(0.80-1.86)	1.78	(0.95-3.36)	1.14	(0.65-2.03)
Any help for mental health problem in prison						
No	1.00	-	1.00	-	1.00	-
Yes	2.06 **	(1.21-3.38)	2.99 **	(1.46-5.70)	2.96 **	(1.64-5.33)
Inpatient in mental hospital or ward						
No	1.00	-	1.00	-	1.00	-
Yes	2.18 *	(1.12-4.23)	7.36 **	(3.10-17.49)	2.77 **	(1.29-5.93)

Table 9.8 (continued) Risk factor correlates of non-fatal suicidal behaviour

by prisoner type and sex

Variable	Male remand		Male sentenced		All female prisoners	
	Adjusted Odds ratio	95% C.I.	Adjusted Odds ratio	95% C.I.	Adjusted Odds ratio	95% C.I.
Psychotic disorder						
Unlikely	1.00	-	1.00	-	1.00	-
Probable	4.47 **	(2.37-8.42)	7.34 **	(2.34-22.99)	6.99 **	(3.00-16.33)
CIS-R score						
0-11	1.00	(1.77-6.53)	1.00	-	1.00	-
12-17	3.40 **	(2.20-7.71)	2.17	(0.85-5.52)	1.69	(0.71-4.03)
18-23	4.12 **	(1.81-6.96)	4.42 **	(1.67-11.71)	2.49 *	(1.07-5.81)
24-29	3.55 *	(1.81-6.96)	5.23 **	(2.01-13.59)	2.97 *	(1.25-7.09)
30+	7.03 **	(3.71-13.31)	6.50 **	(2.40-17.64)	5.70 **	(2.40-13.57)
Location						
Normal room/cell/dorm	1.00	-	1.00	-	1.00	-
Hosp. wing or seg. unit	2.17 *	(1.20-3.94)	2.17	(0.79-5.94)	1.99	(0.71-5.55)
Type of offence						
Drug offence	1.00	-	1.00	-	1.00	-
Violence	1.47	(0.61-3.58)	0.76	(0.22-2.61)	2.32	(0.94-5.71)
Sex offences	2.02	(0.62-6.63)	1.84	(0.41-8.30)	*****	*****
Acquisitive offences	1.25	(0.55-2.87)	0.91	(0.30-2.02)	2.41 *	(1.09-5.34)
Other/Not known	1.60	(0.67-3.88)	1.11	(0.31-3.92)	4.28 **	(1.81-10.14)
Age						
40+	1.00	-	1.00	-	1.00	-
30-39	2.25 *	(0.96-5.28)	1.68	(0.54-5.10)	1.60	(0.55-4.66)
21-29	3.31 **	(1.47-7.47)	2.38	(0.77-7.31)	2.63	(0.95-7.27)
16-20	4.55 **	(1.89-10.98)	7.58 **	(2.21-25.99)	2.94	(0.95-9.11)
Ethnicity						
Black	1.00	-	1.00	-	1.00	-
White	2.40 *	(1.11-5.19)	7.05 *	(1.42-34.09)	3.60 **	(1.37-9.45)
Other	2.10	(0.67-6.58)	1.22	(0.06-20.08)	4.46 *	(1.19-16.74)

* = $p < 0.05$; ** = $p < 0.01$.

***** Base too small-calculate OR.

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Appendices

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Appendix
A

The prevalence of suicidal ideation and suicide attempts among prisoners
(reproduced from Singleton *et al*, 1998, *Psychiatric Morbidity among Prisoners in England and Wales*)

A1: Prevalence of self harm by prisoner type and sex

	Male remand	Male sentenced	Female remand	Female sentenced
<i>Proportion (%) of population</i>				
Had suicidal thoughts				
Past week	12 (1)	4 (1)	23 (3)	8 (1)
Past year	35 (1)	20 (1)	50 (3)	34 (2)
Lifetime	46 (1)	37 (1)	59 (3)	52 (2)
Suicidal attempts				
Past week	2 (0)	0 (0)	2 (1)	1 (0)
Past year	15 (1)	7 (1)	27 (3)	16 (1)
Lifetime	27 (1)	20 (1)	44 (3)	37 (2)
Self harm (not suicide attempt) during current prison term	5 (1)	7 (1)	9 (2)	10 (1)
<i>Base</i>	1248	1120	187	583

A2: Prevalence of self harm by age, prisoner type and sex

	Age							All
	16-20	21-24	25-29	30-34	35-39	40-44	45+	
<i>Cumulative percentage in population (SE)</i>								
Male remand								
Had suicidal thoughts								
Past week	10 (2)	13 (2)	10 (2)	17 (3)	13 (3)	16 (5)	5 (3)	12 (1)
Past year	30 (3)	37 (3)	37 (3)	36 (3)	40 (5)	34 (6)	26 (5)	35 (1)
Lifetime	38 (3)	50 (3)	49 (3)	55 (4)	47 (5)	46 (6)	35 (6)	46 (1)
Suicidal attempts								
Past week	3 (1)	1 (1)	1 (1)	3 (1)	2 (1)	-	-	2 (0)
Past year	17 (2)	12 (2)	20 (2)	11 (2)	18 (4)	15 (5)	6 (3)	15 (1)
Lifetime	20 (2)	29 (3)	34 (3)	30 (3)	29 (4)	25 (6)	15 (4)	27 (1)
Self harm (not suicide attempt) during current prison term								
Base	314	242	261	202	102	61	66	1248
Male sentenced								
Had suicidal thoughts								
Past week	7 (2)	3 (1)	1 (1)	6 (2)	5 (2)	4 (2)	2 (1)	4 (1)
Past year	21 (3)	25 (3)	17 (2)	24 (3)	17 (4)	21 (5)	9 (3)	20 (1)
Lifetime	28 (3)	40 (3)	37 (3)	42 (4)	41 (5)	45 (6)	21 (4)	37 (1)
Suicidal attempts								
Past week	1 (1)	1 (1)	0 (0)	-	1 (1)	-	-	0 (0)
Past year	12 (2)	8 (2)	5 (1)	8 (2)	4 (2)	6 (3)	2 (1)	7 (1)
Lifetime	16 (3)	21 (3)	21 (3)	28 (3)	17 (4)	21 (5)	13 (3)	20 (1)
Self harm (not suicide attempt) during current prison term								
Base	179	224	251	174	113	76	103	1120
Female remand								
Had suicidal thoughts								
Past week	[8]	24 (6)	21 (5)	22 (6)	[1]	[6]	-	23 (3)
Past year	[14]	55 (7)	51 (6)	43 (7)	[8]	[7]	-	50 (3)
Lifetime	[15]	63 (6)	60 (5)	62 (7)	[9]	[7]	-	59 (3)
Suicidal attempts								
Past week	[1]	3 (2)	4 (2)	-	-	-	-	2 (1)
Past year	[10]	42 (7)	25 (5)	14 (5)	[4]	[3]	-	27 (3)
Lifetime	[13]	55 (7)	34 (5)	41 (7)	[5]	[9]	[1]	44 (3)
Self harm (not suicide attempt) during current prison term								
Base	26	38	53	37	11	13	9	187
Female sentenced								
Had suicidal thoughts								
Past week	5 (2)	10 (3)	8 (2)	8 (2)	11 (3)	9 (3)	8 (3)	8 (1)
Past year	33 (4)	40 (4)	39 (3)	31 (3)	25 (5)	31 (6)	34 (5)	34 (2)
Lifetime	51 (5)	53 (5)	56 (3)	48 (4)	51 (5)	56 (6)	51 (5)	52 (2)
Suicidal attempts								
Past week	-	5 (2)	1 (1)	1 (1)	2 (1)	-	2 (1)	1 (0)
Past year	16 (3)	27 (4)	18 (3)	18 (3)	11 (3)	7 (3)	8 (3)	16 (1)
Lifetime	32 (4)	44 (5)	41 (3)	38 (4)	44 (5)	24 (5)	29 (5)	37 (2)
Self harm (not suicide attempt) during current prison term								
Base	81	81	135	120	62	45	59	583

A3 Prevalence of self harm by ethnicity, prisoner type and sex

	Ethnicity			
	White	Black	Other	All
<i>Cumulative percentage in population (SE)</i>				
Male remand				
Had suicidal thoughts				
Past week	13 (1)	6 (2)	9 (3)	12 (1)
Past year	38 (2)	20 (3)	23 (4)	35 (1)
Lifetime	51 (2)	28 (4)	26 (5)	46 (1)
Suicidal attempts				
Past week	2 (0)	1 (1)	1 (1)	2 (0)
Past year	17 (1)	6 (2)	13 (4)	15 (1)
Lifetime	31 (1)	8 (2)	18 (4)	27 (1)
Self harm (not suicide attempt) during current prison term	5 (1)	1 (1)	4 (2)	5 (1)
<i>Base</i>	996	162	90	1248
Male sentenced				
Had suicidal thoughts				
Past week	4 (1)	4 (2)	4 (2)	4 (1)
Past year	21 (1)	12 (3)	15 (4)	20 (1)
Lifetime	39 (2)	24 (4)	28 (6)	37 (1)
Suicidal attempts				
Past week	1 (0)	-	-	0 (0)
Past year	8 (1)	2 (1)	1 (1)	7 (1)
Lifetime	23 (1)	3 (2)	11 (4)	20 (1)
Self harm (not suicide attempt) during current prison term	8 (1)	2 (1)	6 (3)	7 (1)
<i>Base</i>	935	122	63	1120
Female remand				
Had suicidal thoughts				
Past week	25 (3)	16 (5)	[2]	23 (3)
Past year	51 (3)	45 (7)	[5]	50 (3)
Lifetime	62 (3)	52 (7)	[5]	59 (3)
Suicidal attempts				
Past week	2 (1)	3 (3)	-	2(1)
Past year	31 (3)	10 (4)	[3]	27 (3)
Lifetime	51 (3)	16 (5)	[3]	44 (3)
Self harm (not suicide attempt) during current prison term	9 (2)	6 (4)	[1]	9 (2)
<i>Base</i>	144	31	12	187
Female sentenced				
Had suicidal thoughts				
Past week	9 (1)	7 (2)	8 (4)	8 (1)
Past year	38 (2)	20 (3)	32 (6)	34 (2)
Lifetime	57 (2)	33 (4)	42 (7)	52 (2)
Suicidal attempts				
Past week	2 (0)	1 (1)	-	1 (0)
Past year	19 (2)	7 (2)	16 (5)	16 (1)
Lifetime	42 (2)	19 (3)	37 (6)	37 (2)
Self harm (not suicide attempt) during current prison term	12 (1)	3 (1)	8 (4)	10 (1)
<i>Base</i>	438	107	38	583

A4 Prevalence of self harm by marital status, prisoner type and sex

	Marital Status				All
	Married	Cohabiting	Single	Widowed/ Divorced/Separated	
<i>Cumulative percentage for population (SE)</i>					
Male remand					
Had suicidal thoughts					
Past week	12 (3)	12 (2)	11 (1)	16 (3)	12 (1)
Past year	30 (4)	33 (2)	34 (2)	45 (5)	35 (1)
Lifetime	34 (4)	48 (3)	44 (2)	61 (4)	46 (1)
Suicidal attempts					
Past week	3 (2)	2 (1)	2 (1)	2 (1)	2 (1)
Past year	17 (3)	13 (2)	15 (1)	19 (4)	15 (1)
Lifetime	22 (4)	26 (2)	27 (2)	38 (4)	27 (1)
Self harm (not suicide attempt) during current prison term					
Base	129	372	620	122	1243
Male sentenced					
Had suicidal thoughts					
Past week	3 (1)	5 (1)	4 (1)	2 (1)	4 (1)
Past year	16 (3)	19 (2)	22 (2)	17 (3)	20 (1)
Lifetime	29 (4)	33 (3)	39 (2)	43 (4)	37 (1)
Suicidal attempts					
Past week	1 (1)	-	1 (0)	-	0 (0)
Past year	5 (2)	6 (1)	8 (1)	5 (2)	7 (1)
Lifetime	12 (3)	18 (2)	21 (2)	28 (4)	20 (1)
Self harm (not suicide attempt) during current prison term					
Base	155	287	539	133	1113
Female remand					
Had suicidal thoughts					
Past week	[3]	15 (4)	27 (4)	[9]	23 (3)
Past year	[5]	41 (5)	57 (4)	[17]	50 (3)
Lifetime	[8]	49 (5)	64 (4)	[19]	58 (3)
Suicidal attempts					
Past week	[1]	-	4 (2)	-	2 (1)
Past year	[5]	22 (4)	33 (4)	[6]	28 (3)
Lifetime	[9]	36 (5)	51 (5)	[10]	44 (3)
Self harm (not suicide attempt) during current prison term					
Base	20	59	81	25	185
Female sentenced					
Had suicidal thoughts					
Past week	9 (3)	6 (2)	10 (2)	8 (2)	8 (1)
Past year	37 (5)	33 (3)	36 (2)	28 (3)	34 (2)
Lifetime	54 (5)	53 (3)	50 (3)	52 (4)	52 (2)
Suicidal attempts					
Past week	-	1 (1)	2 (1)	2 (1)	1 (0)
Past year	13 (3)	18 (3)	19 (2)	10 (2)	16 (1)
Lifetime	31 (5)	36 (3)	40 (2)	35 (4)	37 (2)
Self harm (not suicide attempt) during current prison term					
Base	64	148	256	109	577

A5 Prevalence of self harm by qualifications, prisoner type and sex

	Educational qualifications				All
	A level or higher	GCSE/ O level	Other qualifications	No qualifications	
<i>Cumulative percentage in population (SE)</i>					
Male remand					
Had suicidal thoughts					
Past week	9 (2)	8 (2)	10 (2)	15 (1)	12 (1)
Past year	33 (4)	34 (3)	37 (3)	35 (2)	35 (1)
Lifetime	44 (4)	48 (3)	44 (4)	46 (2)	46 (1)
Suicidal attempts					
Past week	1 (1)	2 (1)	1 (1)	2 (1)	2 (0)
Past year	13 (3)	11 (2)	18 (3)	16 (1)	15 (1)
Lifetime	27 (4)	24 (3)	29 (3)	27 (2)	27 (1)
Self harm (not suicide attempt) during current prison term					
Base	144	264	191	646	1245
Male sentenced					
Had suicidal thoughts					
Past week	2 (1)	4 (1)	4 (2)	4 (1)	4 (1)
Past year	19 (3)	17 (2)	23 (3)	20 (2)	20 (1)
Lifetime	33 (4)	37 (3)	45 (4)	35 (2)	37 (1)
Suicidal attempts					
Past week	-	-	1 (1)	1 (0)	0 (0)
Past year	4 (1)	7 (1)	7 (2)	8 (1)	7 (1)
Lifetime	16 (3)	20 (2)	25 (4)	20 (1)	20 (1)
Self harm (not suicide attempt) during current prison term					
Base	162	292	147	519	1120
Female remand					
Had suicidal thoughts					
Past week	[7]	14 (4)	[8]	24 (4)	23 (3)
Past year	[12]	50 (5)	[11]	49 (4)	50 (3)
Lifetime	[15]	59 (5)	[12]	59 (4)	59 (3)
Suicidal attempts					
Past week	[1]	2 (1)	[1]	1 (1)	2 (1)
Past year	[3]	34 (5)	[5]	28 (4)	27 (3)
Lifetime	[7]	48 (5)	[10]	45 (4)	44 (3)
Self harm (not suicide attempt) during current prison term					
Base	25	58	21	83	187
Female sentenced					
Had suicidal thoughts					
Past week	4 (2)	8 (2)	8 (2)	10 (1)	8 (1)
Past year	23 (4)	35 (3)	34 (4)	36 (2)	34 (2)
Lifetime	41 (5)	52 (4)	52 (4)	55 (2)	52 (2)
Suicidal attempts					
Past week	-	2 (1)	2 (1)	1 (1)	1 (0)
Past year	8 (2)	16 (3)	14 (3)	20 (2)	16 (1)
Lifetime	19 (4)	39 (3)	29 (4)	44 (2)	37 (2)
Self harm (not suicide attempt) during current prison term					
Base	78	130	93	279	580

A6 Prevalence of self harm by time spent in prison, prisoner type and sex

	Time spent in prison						All
	Less than 1 month	1-2 months	3-5 months	6-11 months	1 year but less than 2 years	2 years or more	
<i>Cumulative percentage of population (SE)</i>							
Male remand							
Had suicidal thoughts							
Past week	18 (2)	11 (2)	7 (2)	6 (2)	[1]	-	12 (1)
Past year	39 (3)	34 (2)	31 (3)	30 (4)	[9]	-	35 (1)
Lifetime	50 (3)	45 (2)	44 (3)	38 (4)	[19]	-	46 (1)
Suicidal attempts							
Past week	3 (1)	2 (1)	1 (1)	1 (1)	-	-	2 (0)
Past year	18 (2)	14 (2)	13 (2)	13 (3)	[2]	-	15 (1)
Lifetime	30 (2)	25 (2)	25 (3)	25 (4)	[10]	-	27 (1)
Self harm (not suicide attempt) during current prison term							
Base	377	442	268	126	26	1	1240
Male sentenced							
Had suicidal thoughts							
Past week	16 (4)	4 (2)	3 (1)	4 (1)	2 (1)	2 (1)	4 (1)
Past year	24 (5)	22 (3)	24 (3)	20 (3)	18 (2)	14 (2)	20 (1)
Lifetime	36 (6)	30 (4)	35 (3)	35 (3)	37 (3)	43 (3)	37 (1)
Suicidal attempts							
Past week	-	2 (1)	0 (1)	-	-	-	0 (0)
Past year	11 (4)	9 (2)	11 (2)	6 (2)	4 (1)	4 (1)	7 (1)
Lifetime	17 (5)	17 (3)	21 (3)	21 (3)	18 (2)	24 (3)	20 (1)
Self harm (not suicide attempt) during current prison term							
Base	66	151	195	236	243	229	1120
Female remand							
Had suicidal thoughts							
Past week	32 (5)	13 (4)	23 (6)	[4]	-	-	23 (3)
Past year	65 (5)	33 (5)	51 (7)	[7]	[2]	-	50 (3)
Lifetime	69 (4)	44 (5)	63 (7)	[8]	[2]	[2]	59 (3)
Suicidal attempts							
Past week	3 (2)	3 (2)	-	-	-	-	2 (1)
Past year	39 (5)	25 (5)	23 (6)	-	-	-	27 (3)
Lifetime	56 (5)	39 (5)	40 (7)	[3]	[1]	-	44 (3)
Self harm (not suicide attempt) during current prison term							
Base	71	61	35	14	2	4	187
Female sentenced							
Had suicidal thoughts							
Past week	11 (4)	7 (2)	4 (2)	10 (2)	6 (2)	14 (3)	8. (1)
Past year	50 (6)	38 (4)	34 (4)	33 (3)	23 (4)	32 (4)	34 (2)
Lifetime	59 (6)	53 (4)	52 (4)	49 (4)	46 (4)	59 (4)	52 (2)
Suicidal attempts							
Past week	-	2 (1)	-	2 (1)	1 (1)	2 (1)	1 (0)
Past year	22 (5)	19 (3)	20 (3)	16 (3)	9 (2)	16 (3)	16 (1)
Lifetime	35 (6)	34 (4)	37 (4)	38 (3)	32 (4)	47 (4)	37 (2)
Self harm (not suicide attempt) during current prison term							
Base	46	113	102	135	94	93	583

**A7 Prevalence of self harm by length of sentence,
prisoner type and sex**

	Length of sentence			
	Short	Medium	Long	All
<i>Cumulative percentage of population (SE)</i>				
Male sentenced				
Had suicidal thoughts				
Past week	6 (1)	4 (1)	3 (1)	4 (1)
Past year	21 (3)	21 (2)	18 (2)	20 (1)
Lifetime	32 (3)	37 (3)	39 (2)	37 (1)
Suicidal attempts				
Past week	1 (1)	0	0	0
Past year	10 (2)	7 (1)	5 (1)	7 (1)
Lifetime	20 (3)	21 (2)	20 (2)	20 (1)
Self harm (not suicide attempt) during current prison term				
	5 (1)	5 (1)	9 (1)	7 (1)
<i>Base</i>	<i>248</i>	<i>342</i>	<i>511</i>	<i>1101</i>
Female sentenced				
Had suicidal thoughts				
Past week	7 (2)	4 (1)	11 (2)	8 (1)
Past year	41 (3)	34 (3)	29 (2)	34 (2)
Lifetime	57 (3)	49 (4)	50 (3)	52 (2)
Suicidal attempts				
Past week	1 (1)	1 (1)	2 (1)	1 (0)
Past year	23 (3)	15 (3)	13 (2)	16 (1)
Lifetime	38 (3)	36 (3)	37 (2)	37 (2)
Self harm (not suicide attempt) during current prison term				
	5 (1)	11 (2)	13 (2)	10 (1)
<i>Base</i>	<i>184</i>	<i>133</i>	<i>266</i>	<i>583</i>

A8 Prevalence of self harm by type of prison, prisoner type and sex

	Type of prison						All
	Local prison	Dispersal prison	Closed Category B prison	female or Cat C prison	Open or Cat D prison	Young Offender Institution	
<i>Cumulative percentage of population (SE)</i>							
Male remand							
Had suicidal thoughts							
Past week	12 (1)	10 (5)			[2]	11 (2)	12 (1)
Past year	35 (2)	37 (8)			[3]	30 (3)	35 (1)
Lifetime	48 (2)	44 (8)			[3]	37 (3)	46 (1)
Suicidal attempts							
Past week	2 (0)	-			-	3 (1)	2 (0)
Past year	15 (1)	15 (6)			-	14 (2)	15 (1)
Lifetime	29 (1)	24 (7)			-	17 (3)	27 (1)
Self harm (not suicide attempt) during current prison term							
Base	997	41	0	0	7	205	1248
Male sentenced							
Had suicidal thoughts							
Past week	5 (1)	-	4 (2)	3 (1)	4 (2)	5 (2)	4 (1)
Past year	24 (2)	18 (5)	20 (4)	17 (2)	12 (4)	22 (3)	20 (1)
Lifetime	40 (3)	44 (6)	39 (5)	37 (2)	26 (5)	29 (4)	37 (1)
Suicidal attempts							
Past week	1(1)	2 (2)	-	-	-	-	0
Past year	10 (2)	8 (3)	3 (2)	3 (1)	5 (2)	11 (3)	7 (1)
Lifetime	21 (2)	28 (6)	18 (4)	20 (2)	20 (4)	16 (3)	20 (1)
Self harm (not suicide attempt) during current prison term							
Base	334	61	98	389	86	158	1120
Female remand							
Had suicidal thoughts							
Past week	24 (3)			-	-		23 (3)
Past year	51 (3)			[1]	-		50 (3)
Lifetime	58 (3)			[3]	[1]		59 (3)
Suicidal attempts							
Past week	2 (1)			-	-		2 (1)
Past year	28 (3)			-	-		27 (3)
Lifetime	45 (3)			-	[1]		44 (3)
Self harm (not suicide attempt) during current prison term							
Base	182	0	0	4	1	0	187
Female sentenced							
Had suicidal thoughts							
Past week	11 (2)			10 (1)	3 (1)		8 (1)
Past year	38 (3)			37 (2)	23 (3)		34 (2)
Lifetime	54 (3)			55 (2)	43 (3)		52 (2)
Suicidal attempts							
Past week	2 (1)			2 (1)	-		1 (0)
Past year	20 (3)			18 (2)	10 (2)		16 (1)
Lifetime	36 (3)			42 (2)	29 (3)		37 (2)
Self harm (not suicide attempt) during current prison term							
Base	168	0	0	271	144	0	583

A9 Prevalence of self harm by (alleged) offence, prisoner type and sex

	(Alleged) Offence								All
	Violence	Sex offences	Burglary	Robbery	Theft	Drug offence	Other	Not known /Holding warrant	
<i>Proportion (percentage) of the population (SE)</i>									
Male remand									
Had suicidal thoughts									
Past week	11 (2)	21 (5)	13 (2)	11 (3)	12 (2)	8 (2)	15 (3)	6 (3)	12 (1)
Past year	36 (3)	44 (6)	35 (3)	31 (4)	36 (4)	23 (3)	41 (4)	31 (5)	35 (1)
Lifetime	48 (3)	58 (6)	50 (3)	42 (5)	44 (4)	36 (4)	48 (4)	46 (6)	46 (1)
Suicidal attempts									
Past week	2 (1)	2 (2)	3 (1)	1 (1)	3 (1)	1 (1)	2 (1)	-	2 (0)
Past year	16 (2)	21 (5)	14 (2)	14 (3)	18 (3)	6 (2)	19 (3)	11 (4)	15 (1)
Lifetime	31 (3)	39 (6)	26 (3)	24 (4)	26 (3)	17 (3)	30 (3)	27 (5)	27 (1)
Self harm (not suicide attempt) during current prison term									
Base	232	62	242	119	170	160	192	71	1248
Male sentenced									
Had suicidal thoughts									
Past week	4 (1)	4 (2)	2 (1)	4 (2)	3 (3)	3 (1)	7 (2)	-	4 (10)
Past year	20 (3)	23 (4)	24 (3)	24 (3)	13 (4)	12 (2)	20 (3)	[6]	20 (1)
Lifetime	41 (3)	38 (5)	39 (4)	45 (4)	22 (5)	27 (3)	35 (4)	[12]	37 (1)
Suicidal attempts									
Past week	-	-	1 (1)	-	-	-	1 (1)	-	0
Past year	5 (1)	9 (3)	8 (2)	11 (2)	3 (2)	4 (2)	6 (2)	[3]	7 (1)
Lifetime	21 (3)	22 (4)	20 (3)	28 (4)	11 (3)	14 (3)	21 (3)	[6]	20 (1)
Self harm (not suicide attempt) during current prison term									
Base	241	91	193	152	85	174	155	28	1120
Female remand									
Had suicidal thoughts									
Past week	39 (7)	-	[1]	[1]	25 (5)	12 (4)	[8]	[4]	23 (3)
Past year	68 (7)	-	[5]	[4]	64 (6)	29 (5)	[13]	[8]	50 (3)
Lifetime	81 (6)	-	[7]	[4]	68 (6)	37 (6)	[15]	[11]	59 (3)
Suicidal attempts									
Past week	6 (4)	-	-	-	2 (2)	2 (2)	-	-	2 (1)
Past year	29 (7)	[1]	[3]	[3]	36 (6)	6 (3)	[9]	[7]	27 (3)
Lifetime	61 (7)	[1]	[5]	[4]	45 (6)	20 (5)	[13]	[10]	44 (3)
Self harm (not suicide attempt) during current prison term									
Base	31	2	10	8	44	49	27	16	187
Female sentenced									
Had suicidal thoughts									
Past week	15 (3)	[2]	14 (5)	13 (4)	3 (1)	3 (1)	10 (3)	[3]	8 (1)
Past year	46 (4)	[2]	29 (6)	51 (7)	30 (4)	22 (2)	40 (4)	[10]	34 (2)
Lifetime	66 (4)	[3]	43 (7)	64 (6)	48 (4)	39 (3)	62 (4)	[13]	52 (2)
Suicidal attempts									
Past week	1 (1)	[1]	3 (2)	3 (2)	1 (1)	1 (0)	2 (1)	-	1 (0)
Past year	18 (3)	[1]	23 (6)	26 (3)	13 (3)	8 (2)	28 (4)	[5]	16 (1)
Lifetime	50 (4)	[2]	46 (7)	51 (7)	33 (4)	23 (2)	51 (4)	[6]	37 (2)
Self harm (not suicide attempt) during current prison term									
Base	103	3	35	39	97	201	87	[18]	583

Analysis of data using multi-level modelling techniques

Multi-level modelling is a commonly used technique to analyse data having hierarchical structure. The data from the psychiatric morbidity survey among prisoners in England and Wales fit neatly into this type, with prisons at the higher level (level 2) and prisoners at the lower level (level 1). Compared with the ordinary logistic models, the advantage of multi-level modelling is to apportion variance into two components: variation between prisons and variation between prisoners. It is commonly known that with such hierarchical data, ordinary logistic regression models under-estimate variance and consequently lead to narrower confidence intervals. Multi-level modelling should result in more realistic confidence intervals.

Binary Response Model

The multi-level model considered to be suitable for the PMS data is a binary response logistic model. In its simplest form, it assumes that the response variable y_{ij} follows the binomial distribution with π_{ij} as the probability of the occurrence of an event, i.e.

$$E(y_{ij}) = \pi_{ij} \quad \text{Var}(y_{ij}) = (\pi_{ij}(1 - \pi_{ij}))$$

Further, the function $\log(\pi_{ij}/(1 - \pi_{ij}))$, known as $\text{logit}(\pi_{ij})$, follows the regression model:

$$\text{logit}(\pi_{ij}) = \beta_{1j} + \sum_{k=2}^n \beta_{kx_{kij}}$$

$$\beta_{1j} = \beta_1 + u_{1j} \\ [u_{1j}] \sim N(0, \Omega_u)$$

Here the variables x_{kij} are the explanatory variables, the coefficients β_j are the fixed effects and the variance Ω_u is the higher level random effect. For further details of the binary response model, refer to Goldstein *et al* (1998).

In our case, the response variable y_{ij} is 'suicide attempted in the past year' and has two categories:

attempted suicide coded '1' or did not attempt suicide '0'. Therefore, y_{ij} may be regarded as having binomial distribution with π_{ij} as the probability of attempting suicide over the past year. The variance term Ω_u is the random prison effect. All our explanatory variables x_{kij} are either categorical or have been converted into categorical variables. The subscript i in the model refers to prisoners and the subscript j refers to prisons.

An examination of the crosstabulation between whether suicide attempted in past year and type of prisoner (male sentenced, female remand, female sentenced), shown in Table B1, revealed that there was significant variation in non-fatal suicide behaviour among the four categories of prisoners. Therefore, it was decided to fit separate binary response models to male remand, male sentenced and female prisoners. This is further supported by the fact that the survey used different sampling fractions for the three categories of the prisoners: for male remand prisoners (1 in 8), for male sentenced prisoners (1 in 34) and for female prisoners (1 in 3).

The data for female remand and female sentenced prisoners were merged to ensure that there were sufficient number of cases in this category. Also, data for some of the smaller prisons was combined to reduce sparsity of the data. When merging data for different prisons, care was exercised to combine prisons of the same category within a defined boundary to enable geographical area analysis, if required.

Selection of the explanatory variables

The significant correlates of suicidal behaviour have been identified in Chapters 3-9. For the multi-level modelling exercise the explanatory variables were chosen to be a subset of these variables taking into account:

- significance or importance of the variable
- interpretability
- variables not a close proxy of each other

Based on these considerations the following variables were selected for inclusion in the multi-level model:

- Age
- Ethnicity
- Psychotic disorder
- Neurosis severity
- Number of stressful life events
- Primary support group size
- Admitted to mental hospital
- Taking medication

Apart from the logistic modelling, there are other independent studies referred to in Chapter 2 which link suicidal behaviour to the above explanatory variables.

The multi-level models were fitted using the package MLwiN. The fitted models are shown in Table B2 and the odd ratios of the associated risk factors (explanatory variables), along with their 95% confidence intervals, are shown in Table B3. The confidence intervals for the odds ratios take into account the prison level variation Ω_u .

Discussion of the data and results

From Table B2 it can be easily seen that of the three models fitted – male remand, male sentenced and female, only the model for ‘male sentenced prisoners’ has non-zero Ω_u . Even in this case, when tested statistically, Ω_u is not significantly different from zero. Therefore, from all the three models fitted it can be safely concluded that there is no significant variation between prisons in respect of the suicidal behaviour. In terms of modelling this means that multi-level modelling results should be broadly similar to the ordinary logistic regression results.

From Table B3 it can be seen that ‘younger prisoners’ are progressively at a higher risk compared to the ‘older prisoners’. This is true of all the three categories of the prisoners although the impact of age is different for different categories of the prisoners. Also, white prisoners are relatively at a higher risk compared to the black prisoners and this is also true of all the three categories of the prisoners.

Perhaps the most important factor to determine suicidal behaviour is mental health as measured by probable psychosis and CIS-R scores. The higher the values of these scores, the more at risk

the prisoner is. This is further demonstrated by the odd ratios for the risk factors ‘in-patient in mental hospital’ and ‘current medication’. The male sentenced prisoners who have been previously admitted to a mental hospital are at a higher risk than the other male sentenced prisoners. Likewise, the male remand prisoners who are currently under medication for mental illness are at a higher risk than the other male remand prisoners.

Social history as measured by ‘the number of stressful events’, and social contact within and outside the prison as measured by ‘the primary support group size’ also play a significant role in determining the suicidal behaviour. The larger the size of the primary support network, the lower is the risk of suicide behaviour. For the number of stressful events, the higher the number of stressful events, the greater is the risk of suicide behaviour.

References

Goldstein H *et al* (1998). *A user's guide to MLwiN*. Institute of Education, University of London, UK.

B1: Suicide attempt during the last year by prisoner type and sex

	Suicide attempts in past year		
	Yes	No	Total
Prisoner type and sex			
Male remand	187	1063	1250
Male sentenced	74	1047	1121
Female remand	51	136	187
Female sentenced	96	487	583
<i>Base</i>	<i>408</i>	<i>2733</i>	<i>3141</i>

Pearson chi-square = 84.8 (3 degrees of freedom)

B2: Multi-level models for attempted suicide (past year) risk factors, by prisoner type and sex*

Fixed Variable	Male remand		Male sentenced		All female	
	Parameter	Standard error	Parameter	Standard error	Parameter	Standard error
Constant	-5.25	0.58	-6.90	1.06	-5.40	0.66
Age						
40+	0.00		0.00		0.00	
30-39	0.13	0.38	0.40	0.54	0.46	0.42
21-29	0.53	0.36	0.61	0.51	1.16	0.40
16-20	1.21	0.38	1.83	0.57	1.16	0.47
Ethnic group						
Black	0.00		0.00		0.00	
White	0.63	0.37	1.50	0.81	1.00	0.40
Other	0.59	0.51	0.27	1.36	1.19	0.57
Psychotic disorder						
Unlikely	0.00		0.00		0.00	
Probable	1.10	0.26	0.79	0.46	1.34	0.31
CIS-R Score						
0-11	0.00		0.00		0.00	
12-17	1.11	0.32	0.99	0.44	0.50	0.38
18-23	1.30	0.30	1.51	0.46	0.95	0.37
24-29	1.41	0.33	1.74	0.45	1.09	0.37
30+	1.87	0.30	2.20	0.43	1.39	0.35
Primary support group size						
10+	0.00		0.00		0.00	
4-9	0.20	0.22	0.54	0.33	0.22	0.25
3 or less	0.51	0.23	0.76	0.38	0.23	0.31
In-patient in mental hospital						
No	0.00		0.00		0.00	
Yes	0.29	0.27	1.21	0.38	0.56	0.29
Current medication						
No	0.00		0.00		0.00	
Yes	1.01	0.22	0.61	0.37	0.64	0.24
No. of stressful events						
2 or under	0.00		0.00		0.00	
3-6	0.65	0.33	0.28	0.50	0.63	0.37
7+	1.04	0.35	0.83	0.52	1.13	0.38
Random parameters						
Prison level variance (Ω_u)	0	0	0.23	0.26	0	0
Prisoner level variance	1	0	1	0	1	0

* all risk factors included in the model simultaneously

B3: Odds ratios and confidence intervals for attempted suicide (past year) risk factors by prisoner type and sex

Fixed Variable	Male remand			Male sentenced			All female prisoners		
	Odds Ratio C.I			Odds Ratio C.I			Odds Ratio C.I		
		Lower limit	Upper limit		Lower limit	Upper limit		Lower limit	Upper limit
Age									
40+	1.00	-	-	1.00	-	-	1.00	-	-
30-39	1.14	0.54	2.40	1.50	0.52	4.29	1.59	0.69	3.64
21-29	1.71	0.84	3.45	1.85	0.67	5.07	3.19	1.45	7.01
16-20	3.34	1.58	7.05	6.24	2.03	19.20	3.20	1.29	7.98
Ethnic group									
Black	1.00	-	-	1.00	-	-	1.00	-	-
White	1.88	0.91	3.87	4.49	0.92	21.82	2.72	1.24	5.96
Other	1.80	0.66	4.93	1.31	0.09	18.92	3.28	1.08	9.96
Psychotic disorder									
Unlikely	1.00	-	-	1.00	-	-	1.00	-	-
Probable	3.01	1.79	5.05	2.21	0.90	5.42	3.82	2.10	6.96
CIS-R Score									
0-11	1.00	-	-	1.00	-	-	1.00	-	-
12-17	3.04	1.63	5.68	2.69	1.13	6.39	1.65	0.79	3.46
18-23	3.67	2.03	6.63	4.53	1.85	11.08	2.58	1.25	5.32
24-29	4.08	2.15	7.73	5.69	2.36	13.75	2.98	1.45	6.13
30+	6.47	3.62	11.55	9.00	3.88	20.87	4.01	2.01	7.98
Primary support group size									
10+	1.00	-	-	1.00	-	-	1.00	-	-
4-9	1.23	0.80	1.88	1.71	0.89	3.27	1.25	0.76	2.05
3 or less	1.67	1.06	2.64	2.15	1.03	4.49	1.25	0.68	2.30
In-patient in mental hospital									
No	1.00	-	-	1.00	-	-	1.00	-	-
Yes	1.34	0.79	2.27	3.36	1.59	7.09	1.74	1.00	3.05
Current medication									
No	1.00	-	-	1.00	-	-	1.00	-	-
Yes	2.75	1.77	4.25	1.84	0.89	3.80	1.89	1.19	3.02
No. of stressful events									
2 or under	1.00	-	-	1.00	-	-	1.00	-	-
3-6	1.91	1.00	3.65	1.32	0.49	3.55	1.88	0.92	3.84
7+	2.84	1.43	5.64	2.28	0.82	6.36	3.10	1.47	6.54

* all risk factors included in the model simultaneously