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 **Foresight**

**Mental Capital and Wellbeing:
Making the most of ourselves in the 21st century**

**State-of-Science Review: SR-B5
The Mental Ill-Health of Prisoners**

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Summary

This review of research on the mental ill-health of prisoners includes an analysis of the risk factors which influence it, and its associated disability and wider consequences. In general, psychiatric disorders are more prevalent among prisoners than the general population, with variations according to the type of prisoner: sentenced, remand, male or female. Personality disorder rates range from 50% to 78%, with antisocial personality disorders being most prevalent of all categories. Psychotic disorders are far more highly represented than in the general population, with schizophrenia and delusional states being more common than affective disorders. Neurotic disorders in prisoners, as in the general population, are more common among women. Suicidal behaviour and completed suicides are both serious issues. Around a quarter of all remand prisoners have attempted suicide at some time in their lives. These suicidal thoughts and behaviours are significantly associated with the higher rates of psychosis, neurosis and personality disorders in the prison population. Rates of alcohol and drug abuse or dependence vary considerably, though the majority of all prisoners report using illicit drugs at some time in their lives. Mental disorders tend to co-occur among prisoners: one in five have four of the five major mental health problems. At least one-third of all prisoners report long-standing physical health problems, especially musculo-skeletal and respiratory conditions. Analysis of risk factors for psychiatric morbidity shows local authority care, early school leaving, stressful life events, domestic violence or abuse, low economic status and poorly functioning families as most influential. The mental health of prisoners is also shaped by the prison environment itself: relations with staff, isolation, and lack of stimulus.

1. Prevalence

There were a total of 80,303 prisoners being held in prisons in England and Wales on March 30, 2007 (Home Office Research Statistics Directorate). Male sentenced prisoners made up about three-quarters of the prison population, male remand prisoners about 20%, and both remand and sentenced women constituted about 5% of the total prison population.

In the UK, there have been several studies of psychiatric morbidity among prisoners over the past twenty years, all of which have indicated a greater prevalence of psychiatric disorders in prisoners than in the general population, and that the prevalence of mental disorders shows considerable variation between different types of prisoner – remand and sentenced, male and female (Turner and Tofler, 1986; Gunn et al., 1991; Davidson et al., 1995; Maden et al., 1995; Maden, 1996; Singleton et al., 1998).

This finding has been replicated in surveys carried out in several other countries: Australia (Butler et al., 2006; Tye and Mullen, 2006); Canada (Bland et al., 1990); Denmark (Andersen, 2004); France (Prieto and Faure, 2004); Greece (Fotiadou et al., 2005); New Zealand (Brinded et al., 2001); and the US (Jordan et al., 1996). A recent review of all methodologically sound studies by Harris et al., (2007) concluded there were significantly greater degrees of mental health problems, substance abuse and worse physical health in prisoners than in the general population.

For this review, extensive reference is made to the Survey of Psychiatric Morbidity among Prisoners in England and Wales (Singleton et al., 1998). This is considered to represent a considerable advance on earlier surveys in the UK by using standardised psychiatric assessment procedures (Coid et al., 2002a). In this survey of the mental health of prisoners in England and Wales, assessments were carried out to estimate the prevalence of personality disorder, psychosis, and neurotic disorders, as well as of alcohol and drug abuse and dependence, suicidal behaviour and self-harm.

2. Personality disorder

Personality disorder was assessed using the SCID-II – the Structured Clinical Interview for DSM-IV (Pfohlet al., 1983). The prevalence of any personality disorder was 78% for male remand, 64% for male sentenced and 50% for female prisoners. Antisocial personality disorder had the highest prevalence of any category of personality disorder: 63% of male remand prisoners; 49% of male sentenced prisoners; and 31% of female prisoners. These rates would be expected, since the category of 'antisocial personality disorder' requires the presence of antisocial behaviour before the age of 15 years, which persists into adulthood.

3. Psychotic disorders

The rates for any functional psychosis in the past year as assessed by SCAN – Schedules for the Clinical Assessment of Neuropsychiatry (Wing et al., 1990) - were 7% for male sentenced, 10% for male remand, and 14% for female prisoners. Schizophrenic or delusional disorders were more common than affective disorders. These rates are considerably higher than those found in the earlier survey of the general household population in which a rate of four per thousand (0.4%) was found (Meltzer et al., 1995). Using the same dataset, Brugha et al. (2005) reported that one in four prisoners with a psychotic disorder had psychotic symptoms attributed to the toxic or withdrawal effects of psychoactive substances.

4. Neurotic disorders

Singleton et al. (1998) found that women prisoners were significantly more likely than men to suffer from a neurotic disorder, matching the trend in the general household population survey (Meltzer et al., 1995). Whereas 59% of remand and 40% of sentenced male prisoners in England and Wales had a neurotic disorder, the corresponding figures for women were 76% and 63%. For all six neurotic disorders (depressive episode, Generalised Anxiety Disorder, mixed anxiety and depressive disorder, phobia, Obsessive-Compulsive Disorder and panic), the prevalence rates for male remand prisoners were higher than those of their sentenced counterparts.

5. Suicidal behaviour

Suicidal behaviour and completed suicide are serious problems within British prisons, leading to significant morbidity and mortality, and are the focus of major efforts towards their prevention (Jenkins et al., 2005). In the national survey of psychiatric morbidity among prisoners in England and Wales, 46% of male remand prisoners had thought of suicide in their lifetime, 35% in the past year, and 12% in the week prior to interview.

The prevalence of suicide attempts was also very high: 27% of male remand prisoners said they had attempted suicide at some time in their life; 15% in the year before interview; and 2% in the previous week. The rates for female remand prisoners were even higher. For example, just over a quarter of the female remand prisoners had tried to kill themselves in the year before interview, twice the proportion of male prisoners on remand (Singleton et al., 1998).

Analysing the 1997 UK survey data in greater depth, Jenkins et al. (2005) found that suicidal thoughts and suicide attempts were significantly associated with higher rates of psychosis, neurosis and personality disorder among prisoners. Being young, single, white, leaving school early and experiencing poor social support and significant social adversity were all found to be significant risk factors for suicidal thoughts. There was no separate category of people at suicidal risk who did not have psychiatric disorders.

Fazel et al., (2005) compared suicides of male prisoners in England and Wales between 1978 and 2003 with suicide rates in the general male population and found a five-fold excess of suicides among prisoners, with a particularly striking excess in boys aged 15-17 years. Similarly, in a study of male prisoners aged 18-44 in Canada, Bland et al. (1990) found that lifetime suicide attempts were seven times more frequent in prisoners than in the general population.

The risk of suicide persists after release from custody. Pratt et al. (2006) identified 382 suicides occurring in 244,988 individuals within one year of release from prison: a suicide rate of 156 per 100,000 person/years, which is far higher than in the general population. About a fifth of these suicides occurred within the first 28 days after release.

In England and Wales, rates for self-harm without the intention of suicide (parasuicide) ranged from 5% for male remand prisoners to 10% for female sentenced prisoners (Singleton et al., 1998). These rates are similar to those found in a study of Greek male prisoners (Fotiadou et al., 2005), with rates of self-harm prior to, and during, imprisonment at 15% and 2.5% respectively.

6. Alcohol and drug dependence

Fazelet al., (2006) carried out a systematic review of studies measuring the prevalence of drug and alcohol abuse and dependence in male and female prisoners on reception into prison. There was substantial heterogeneity among the 13 studies (with a total of 7,563 prisoners) included in the review. The estimates of prevalence for alcohol abuse and dependence in male prisoners ranged from 18% to 30% and 10% to 24% in female prisoners. The prevalence estimates of drug abuse and dependence varied from 10% to 48% in male prisoners and 30% to 60% in female prisoners. These rates are substantially higher among prisoners than in the general population, particularly for women with drug problems.

In the national survey in England and Wales, the majority of prisoners had used illicit drugs at some time in their lives. Fewer than a fifth of the men and a third of the women said they had never used drugs. More than half of the prisoners in all sample groups reported using at least one drug in the year before coming to prison. For example, 41% of remanded and 26% of sentenced women said they had used heroin in that year (Singleton et al., 1998).

A quarter of the female remand prisoners reported using drugs during their current prison term, as did a third of female sentenced prisoners. Among the men interviewed, the rates were even higher – over a third of those on remand and nearly half the sentenced prisoners also reported using at least one drug during the current prison term.

Female remand prisoners were the group most likely to report having ever injected drugs, with 40% having done so at some time, and 34% saying that they had injected regularly. In addition, over a quarter (28%) said they had been injecting in the month before coming to prison.

A larger proportion of women than men were dependent on opiates, i.e. heroin and non-prescribed methadone. Opiate dependence in the year before coming to prison, either alone or together with dependence on stimulants, was reported by 41% of the women in the remand group and 23% of those in the sentenced group, compared with 26% of the male remand and 18% of the male sentenced group. Analysing the same data, Boys et al. (2002) concluded that the extent of an individual's experience of prison was related more consistently to heroin and/or cocaine use in and out of prison than personal background, social history or psychiatric morbidity.

In general, both men and women held for burglary, robbery and theft had above average rates of drug dependence before coming to prison. The highest proportions reporting dependence were found among men held for burglary and women on remand for theft. Among these groups, over 70% reported some drug dependence, and over 60% reported dependence on drugs other than cannabis.

7. Co-occurrence of mental disorders

All surveys in all countries where investigations into the mental health of prisoners have been carried out report high levels of comorbidity. The Prison Reform Trust states that one in five prisoners have four of the five major mental health disorders and that 72% of male and 70% of female sentenced prisoners suffer from two or more mental health disorders (Prison Reform Trust, Fact Sheet 39). Singleton et al. (1998) found that rates for multiple disorders were higher among remand than sentenced prisoners. Those assessed as probably having functional psychoses were particularly likely to have three or four of the other disorders.

Those with personality disorder of types other than antisocial were more likely to show evidence of functional psychosis or to have significant neurotic symptoms than those with no personality disorder or antisocial personality disorder only. In contrast, those with antisocial personality disorder were slightly more likely to report hazardous drinking in the year before coming to prison than others and were more than six times more likely to report drug dependence (Singleton et al., 1998).

In a survey of prisoners in New Zealand, Brinded (2001) showed not only increased prevalence rates for schizophrenia and related disorders than in the general population, but also a high level of comorbidity with substance misuse disorders.

8. Physical health problems

About a third of male prisoners and two-fifths of female prisoners reported a longstanding physical health problem. The most common problems were of the musculo-skeletal or respiratory systems. Respondents with significant neurotic symptoms were more likely than other prisoners to report a physical complaint. However, those with evidence of psychosis had lower odds of reporting physical health problems compared with prisoners without a psychotic disorder.

Those with drug dependence in the year before coming to prison, particularly individuals dependent on opiates, were six times as likely to report an infectious disease (which includes hepatitis) compared with those who were not drug-dependent. (Singleton et al., 1998).

9. Risk factors

In the national survey of psychiatric morbidity of prisoners in England and Wales (Singleton et al., 1998), a quarter of the female sentenced group and a third of the male remand group had been in local authority care.

Two-fifths of the sample reported leaving school before their 16th birthday, and almost one in 10 respondents had stopped attending school aged 13 years or younger.

Compared with the general population, both the men and women in the survey were far less likely to be working before they came to prison: 36% of male remand, 44% of male sentenced, 26% of female remand, and 34% of female sentenced prisoners.

The vast majority, over 96% of all prisoners, had experienced at least one stressful life event and about a half had experienced five or more. The most commonly reported stressful events reported by just under half of all prisoners were: running away from home; serious money problems; separation or the breakdown of a steady relationship; and the death of a close relative or friend. About half the women and about a quarter of the men interviewed reported having suffered from violence at home, while about one in three of the women reported sexual abuse compared with just under one in 10 of the men.

During their current prison term, 34% of male and 41% of female remand prisoners reported at least one type of victimisation compared with 46% of both male and female sentenced prisoners. The rate of lifetime exposure among female prisoners in the US to traumatic events was also found to be very high (Jordan et al., 1996).

Singleton et al. (1998) found that the two risk factors most strongly associated with personality disorder were economic activity status prior to coming to prison and the number of stressful life events respondents had experienced. Those living off crime were more likely to show evidence of personality disorder than those who were working.

The type of household where prisoners were living, poor intellectual functioning and a history of sexual abuse or bullying were the factors most strongly associated with evidence of psychotic disorder. Compared with couples with children, those who were living alone before coming to prison or in other types of household (mostly hostels or on the street) had increased odds of having a psychotic disorder. Looking at new arrivals to prisons in France, Prieto and Faure (2004) also found that one in eight of them had been homeless.

Fewer Black and South Asian male prisoners reported childhood traumas and conduct disorder, and fewer Black prisoners experienced stressful prison experiences than White prisoners. The lower prevalence of psychiatric morbidity observed in Black prisoners corresponds with reduced exposure to risk factors (Coid et al., 2002b).

10. Prison characteristics

De Viggiani (2007) argues that prisoner health is influenced as much by structural determinants (institutional, environmental, political, economic and social) as it is by the physical and mental constitution of the prisoners themselves. Prison health may therefore be better understood with greater insight into how people respond to imprisonment: the psychological pressures of incarceration; the social world of prison; being dislocated from society; and the impact of the institution itself with its regime and architecture.

The early phase of imprisonment is a vulnerable period. Andersen (2004) surveyed remand prisoners in Denmark and found a moderately high incidence of adjustment disorders in this group, with twice the level in solitary, compared with non-solitary, confinement.

In a more qualitative study of prisoners in a local prison in Southern England, Nurse et al. (2003) reported that long periods of isolation with little mental stimulus contributed to poor mental health and led to intense feelings of anger, frustration, and anxiety. Prisoners said they misused drugs to relieve the long hours of tedium.

Most focus groups identified negative relationships between staff and prisoners as an important issue affecting stress levels of both populations. Staff shortages also affected prisoners who would be locked up for longer periods of time. Their ensuing frustration would then be released on staff, aggravating the situation still further.

11. Conclusions

About 80-90% of prisoners have one mental disorder (personality disorder, functional psychosis, neuroses, alcohol dependence or drug dependence). About a half of the prison population have two or more disorders.

Disorders are more prevalent among remand than sentenced prisoners.

Non-White prisoners tend to have lower rates of disorders.

Suicidal thoughts and attempts are also highly prevalent in the prison population – 15% of male remand and 25% of female remand prisoners had tried to kill themselves in the previous 12 months.

More than half of the prisoners reported using at least one drug in the year before coming to prison. For example, 41% of remanded and 26% of sentenced women said they had used heroin in that year.

The two risk factors most strongly associated with personality disorder were economic activity status prior to coming to prison and the number of stressful life events respondents had experienced.

The type of household where prisoners were living, poor intellectual functioning, and a history of sexual abuse or of bullying were the factors most strongly associated with evidence of psychotic disorder.

The early phase of imprisonment, being locked up for long periods of time, and solitary confinement increased the stress of prisoners.

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