Original

Psychiatric morbidity among women prisoners newly committed and amongst remanded and sentenced women in the Irish prison system

Brenda Wright, Dearbhla Duffy, Katherine Curtin, Sally Linehan, Stephen Monks, Harry G Kennedy

Ir J Psych Med 2006; 23(2): 47-53

Abstract

Objectives: To estimate the prevalence of psychiatric morbidity, substance misuse problems and related health and social problems among women prisoners newly committed and a cross-section remanded and sentenced in the Irish prison population. In 2002 women represented 10.7% (1043) of all persons committed to the Irish Prison system, and 3.3% (104) of the daily average number of persons in custody. We surveyed psychiatric morbidity in these two groups to assess the need for psychiatric services for women prisoners, and to compare Irish morbidity with an international average.

Method: We interviewed 94 newly committed women prisoners within 72 hours of committal, representing approximately 9% of female committals per year. We also interviewed a cross sectional sample of 92 women, representing approximately 90% of all women in custody. Mental illness and substance misuse was measured using the SADS-L, SODQ and a structured interview.

Results: Five (5.4%) of the committal and 5 (5.4%) of the cross-sectional sample had a psychotic illness within the previous six months. 8 (8.5%) of the committals and 15 (16.3%) of the women in the cross-sectional sample had a major depressive disorder in the last six months. 8 (8.6%) committals and 14 (15.2%) in the cross-sectional sample had an anxiety disorder within the last six months. 61 (65.6%) of the women interviewed at committal and 61 (65.2%) of the cross-sectional sample had a substance misuse problem in the last six months.

Conclusions: There is a high prevalence of mental illness and substance misuse problems amongst women newly committed to prison and in a cross section of those remanded or sentenced in prison in Ireland. We found evidence of a cycle of deprivation and institutionalisation. These findings highlight the need for the integration of community and forensic psychiatric services, and for ongoing collaboration with drug services.

Key words: Psychiatric morbidity; women prisoners; Irish prison system.

***Brenda Wright,** MRCPsych, Research Fellow, **Dearbhla Duffy,** MRCPsych, Research Fellow, **Katherine Curtin,** MRCPsych, Research Fellow, **Sally Linehan,** MRCPsych, Research Fellow, **Stephen Monks,** MRCPsych, Research Fellow, **Harry G Kennedy**, MD, FRCPI, FRCPsych, Consultant Forensic Psychiatrist, National Forensic Mental Health Service, Central Mental Hospital, Dundrum, Dublin 14, Ireland.

**Correspondence*

SUBMITTED: MARCH 5, 2005. ACCEPTED: JANUARY 20, 2006.

Introduction

Studies of psychiatric morbidity amongst newly committed prisoners are rare, with very few such studies of women prisoners.[1] A recent meta-analysis[2] which included 2,160 remanded and 804 sentenced women prisoners in cross-sectional but not committal surveys, revealed that 4% of women prisoners on remand or sentenced had a psychotic illness and 12% a major depression within the previous six months, rates that are higher than amongst men prisoners. A study of psychiatric disorder among a cross-section of women in one Irish prison[3] found that 58% met DSM criteria for substance misuse and 24% met DSM criteria for other Axis-1 diagnoses. A national cross-sectional survey of blood borne viruses in Irish prisoners[4] found that women prisoners were more likely than their male counterparts to report ever injecting drugs and heroin smoking in the past year. 59.7% of the women surveyed reported ever injecting, compared to 42.4% of men. 59% of women reported smoking heroin compared to 42% of men. The same survey[5] found that the prevalence of hepatitis was significantly higher in female prisoners than male prisoners in Ireland.

There appears to be a significant pool of mentally ill people in women's prisons, and an unmet need for mental health services. The morbidity in women prisoners appears to be quantitatively and qualitatively different from men prisoners.

As part of a larger study of psychiatric morbidity and treatment needs in the Irish prisons population[6,7] we set out to estimate the prevalence of psychiatric morbidity, substance misuse problems and related health and social problems among women prisoners in the Irish prison population using research diagnostic methods. There are very few published studies of psychiatric morbidity in women prisoners on committal to prison,[8] although newly committed prisoners represent the largest identifiable group passing through the prison system. We hypothesised that the prevalence of mental illnesses in newly committed and in cross-sectional samples of women prisoners should be the same, and also that the prevalence of mental illnesses in this population should be comparable to known prevalence in the community; or no higher than in prison populations in other jurisdictions.

Methods

Ethics

Ethical approval for the study was obtained from the Research Ethics Committees of the Irish Prisons Service and the National Forensic Mental Health Service. Voluntary written consent was obtained from all those approached to participate in the study.

Sample and study design

In 2002, women represented 10.7% (1043) of all persons

committed to prison in Ireland. Of those committals 301 were sentenced. The daily average number of female prisoners in that year was 104. Female prisoners represented only 3.2% of all prisoners in custody in the Republic of Ireland.[9] The majority of women prisoners are detained in The Dochas Centre, the only female prison in Ireland with a capacity for approximately 80 inmates, though the capacity is often exceeded. A smaller number are detained on a female wing in Limerick Prison, located outside Dublin.

We considered two populations. In the first survey we aimed to interview a cross section of all women in prison at the time of the study. In the second survey we aimed to assess approximately 10% of all women committed to prison in the year of the study.

Cross-sectional sample

For the cross-sectional survey, a list of all women prisoners in custody was obtained from each of the two women's prisons by the Irish Prisons Service Information Technology Department, sorted according to age and time in custody. Prior to commencing the study, information leaflets were distributed to prisoners who were then initially approached by prison officers. All women prisoners were approached to participate in the study. Those who declined were not pressed. We visited the Dochas Centre during two separate sampling periods. Remand prisoners were interviewed from November 6, 2003 to November 11, 2003, and sentenced prisoners were interviewed between February 4, 2004 and February 20, 2004. Women in the small female wing of Limerick prison were interviewed over two days (August 1, 2002 and September 30, 2002). We approached 102 women prisoners, 10 of whom declined to be interviewed, giving us a response rate of 87.3%. We interviewed 92 women prisoners, 24 of whom were on remand and 68 were sentenced.

Committal sample

In 2002 there were 1043 committals of sentenced and remanded women prisoners, 10.7% of all committals to prison. For the survey of new committals potential subjects were drawn from committal lists provided by the prison receptions, and all committals were approached. Those who declined to be interviewed were not pressed. Of 208 women committals during the two sampling periods (August 2003, April to May 2004), 124 were available, of whom 94 agreed to be interviewed, 57 (61%) remanded and 37 (39%) sentenced. We found that even when aiming to interview women committals within 72 hours of reception in the prison, 40% were not available due to court appearances, visits, activities or release prior to interview. Of those approached, 31.6% declined to give consent for interview. We interviewed 94 women on committal, representing 9% of 1043 women committed to prison.

Interview schedule

We used the Schedule for Schizophrenia and Affective Disorders, Lifetime version (SADS-L),[10] to detect current and lifetime mental disorder. The SADS-L generates diagnoses according to DSM criteria, almost all of which are interchangeable with ICD-10-Diagnostic Criteria for Research. SADS-L therefore distinguishes major depressive disorder (DSM-IV-TR,[11] equivalent to ICD-10 DCR[12] major and moderate depressive disorder combined), from minor depressive disorder (DSM-IV-TR) which is equivalent to ICD-10 DCR minor depressive disorder. We have reported diagnoses as far as possible in keeping with the criteria used in the meta-analysis by Fazel and Danesh.[2] We used the Severity of Dependence Questionnaire (SODQ) to quantify levels of drug use and dependence.[13] Self-reported levels of alcohol and drug use were also recorded. We added to these, questions to clarify the six-month and 12-month prevalences, as well as the current and lifetime diagnosis. We obtained demographic, ethnic and personal details using a semi-structured standardised interview, which was piloted for acceptability and practicality. Training in the use of the SADS-L and further interview instruments was followed by joint interviews to ensure inter-rater reliability. Research interviewers were post-membership psychiatrists.

The committal sample was screened for personality disorder using the Schedule for Assessment of Personality, Screening Version (SAPAS).[14]

We reviewed the prison medical notes of those who agreed to participate in the study and discussed psychiatric history with prison medical staff.

Table 1: Comparison between demographic characteristics of female committal and cross-sectional samples

Characteristic	Female Committals N = 94	Female Cross-sectional N = 92
Mean age (years)	27.4	31.5
Married (%) [95% CI]	28 (30.1%) [21.5-39.7]	19 (20.7%) [13.6-30.0]
Violent offence (%) [95% CI]	14/60 (23.3%) [14.4-35.4]	22/84 (26.2%) [18.0-36.5]
Nationality % (Irish origin)	74 (78.7%) [69.4-85.8]	79 (85.9%) [77.3-91.6]

Table 2: Prevalence of infectious disease in female prisoners

	Female Committals (%) N=94	Female Cross-Sectional (%) N=92
Hepatitis B [95 % CI]	4 (4.3) [1.7-10.5]	2 (2.2) [0.6-7.6]
Hepatitis C [95 % CI]	27 (29.0) [21.0-39.3]	31 (34.1) [24.9-43.8]
HIV [95 % CI]	6 (6.5) [3.0-13.4]	7 (7.6) [3.7-14.9]

Table 3: Medication prescribed prior to imprisonment

Prescribed medication	Female committal N=94	Female cross-sectional N=92
Benzodiazepines	29.0%	25.6%
Methadone	35.5%	33.3%
Antidepressant	24.7%	27.8%
Antipsychotic	7.5%	2.2%

Table 4: Six-month prevalence of mental illness and substance misuse in female committals and cross-sectional sample

DSM-IV diagnosis	Female Committals (%) [95 % CI] N=94	Female Cross-sectional (%) [95 % CI] N=92
Psychosis*	5 (5.4) [2.3-12.0]	5 (5.4) [2.3-12.1]
Affective disorder**	13 (14.0) [8.4-22.5]	19 (20.7) [13.6-30.0]
Major depressive disorder	4 (4.3) [1.7-10.4]	15 (16.3) [10.1-25.2]
Anxiety disorder	8 (8.6) [4.4-16.1]	14 (15.2) [9.3-23.9]
Substance use disorder	61 (65.6) [63.1-81.8]	61 (65.2) [56.2-75.1]
Any mental illness	24 (25.8) [18.0-35.5]	36 (39.1) [29.8-49.3]

**Includes schizophrenia, drug-induced psychosis, depressive disorder with psychotic symptoms, bipolar affective disorder-manic.*

***Includes mild, moderate and severe depression without psychotic symptoms, and dysthymia*

Table 5: Prevalence of psychotic illness in female committal and cross-sectional samples

Psychosis	Female Committals (%) [95 % CI] N=94	Female Cross-sectional (%) [95 % CI] N=92
Current	5 (5.4) [2.3-12.0]	3 (3.3) [1.1-9.2]
Six Month	5 (5.4) [2.3-12.0]	5 (5.4) [2.3-12.1]
Lifetime	10 (10.8) [5.9-18.7]	7 (7.6) [3.7-14.9]

Table 6: Affective disorders in female committal and cross-sectional samples

Affective disorders*	Female Committals (%) [95 % CI] N=93	Female Cross-sectional (%) [95 % CI] N=92
Current	10 (10.8) [5.9-18.7]	15 (16.3) [10.1-25.2]
Six Month	13 (14.0) [8.4-22.5]	19 (20.7) [13.6-30.0]
Lifetime	22 (23.7) [6.2-33.2]	39 (42.4) [32.8-52.6]
Major Affective Disorder**		
Current	4 (4.3) [1.3-13.4]	11(12) [6.8-20.2]
Six month	8(8.5) [4.4-15.9]	15(16.3) [10.1-25.2]
Lifetime	15(16.1) [8.6-28.2]	34(37) [27.8-47.2]

**Includes mild, moderate and severe depression without psychotic symptoms, and dysthymia*

*** Includes ICD-10 F32-33*

Data analysis

Data was analysed using SPSS 11.0. Within the cross-sectional sample the remand and sentenced data was analysed together in view of the small number of participants involved.

Results

Demographic and social

Age

The mean age of women in the female committals sample was 27.4 (SD 8.7) years and 31.5 (SD 11.0) years for the cross-sectional sample *(see Table 1).*

Accommodation, marital status and employment

At the time of interview 62% (57) of women in the committal were single, 30.1% (28) were married or cohabiting, 5.4% (5) were separated or divorced and 2.2% (2) were widowed.

Only 23.7% (22) reported that they had been employed at the time of committal, while 67.8% (63) were unemployed or on disability benefit. 3.2% (3) were students. 53.8% (50) reported a history of homelessness.

In the cross-sectional sample, at the time of interview, 62% (57) were single, 20.7% (19) were married or cohabiting, 13% (12) were separated or divorced and 13% (12) were widowed. 77.2% (71) reported being unemployed or on disability benefit at the time of arrest. 51.6% (47) reported a history of homelessness.

Social supports and housing

76.3% (71) of women newly committed to prison and 73.9% (68) of the cross sectional sample of women prisoners were living in settled accommodation either with family or in their own homes. 1.1% (1) of committals and 6.5% (6) of the cross sectional sample were living in settled hostel accommodation for greater than one month prior to imprisonment. 12.9% (12) of committals and 7.6% (7) of the cross sectional sample were living in unsettled accommodation e.g bed and breakfast or hostel accommodation for less than one month. 7.7% (7) of committals and 9.8% (9) of the cross sectional sample were roofless in the month prior to imprisonment. 1.1% (1) of committals and 2.2% (2) of the cross sectional sample were living in official halting sites.

53.8% (50) of committals and 51.1% (47) of the cross sectional sample reported that they had been homeless at some stage in their lives. 10.8%(10) of committals and 16.3% (15) of the cross sectional sample reported that they would have no-where to live when released from prison.

Educational attainment and employment

Of the sample of women newly committed to prison 10.6% (10) described themselves as illiterate, compared with only 1.1% (1) of the cross-sectional sample. 13.8% (13) of committals interviewed, and 12% (11) of the cross-sectional sample attended special school or remedial classes in mainstream school. 48.9% (46) of the committal sample, and 46.7% (43) of the cross-sectional sample left school without formal examinations. Only 8.5% (8) of the committals and 7.6% (7) of the cross sectional subjects completed the Leaving Certificate examination. 48.9% (46) of the committals and 35.9% (33) of the cross-sectional sample reported a

history of truanting from school.

Ethnicity

The majority of women interviewed, 78.7% (74) of the committal sample and 86.8% (79) of the cross sectional sample were white and from European Union nations. 10.8% of committals and 6.6% of the cross sectional sample were non European. The larger number of non-nationals in the committal sample is accounted for by those on deportation orders and not charged with a criminal offence. Irish Travellers were over-represented in both samples and accounted for 10.6% (10) of the committal sample and 6.5% (6) of the cross sectional sample, compared to 0.58% of the general population[15] *(see Table 1)*.

Family disruption

The majority of women prisoners interviewed, 61.3% (57) of committals and 65.2% (60) of the cross sectional sample, had children. 19.1% (18) of committals and 10.9% (10) of the cross sectional sample reported being placed into care or sent to a juvenile detention centre before the age of 16 years. 17.0% (16) of committals and 16.3% (16) of the cross sectional sample stated that their own children had been placed into care or had been involved with social workers.

Women who had themselves been placed in care as children were significantly more likely to have children placed in care compared to those women who had never been in care, 80.4% compared to 22.2% (chi-squared =7.7, p=0.005) of women in the committal sample, and 70.0% compared to 19.1% (chi-squared =10.6, p=0.001) of women in the cross sectional sample.

Forensic histories

20.2% (19) of the sample of women newly committed to prison and 23.3% (95% CI 15.8-33.1) of the cross sectional sample of women prisoners reported that they had been in contact with the juvenile court system. The mean number of previous sentences served was 1.7 for the women committals and 1.4 for the cross sectional sample. The mean number of periods on remand was 2.9 for the female committals and 1.9 for the cross sectional sample.

Medical histories

The self-reported prevalence of blood-borne diseases was high in both groups *(see Table 2).* A high proportion of women in both samples were receiving prescribed benzodiazepines prior to committal to prison. Approximately one-third of both samples were prescribed opiate medications, predominantly methadone. 24.7% (23) of new committals interviewed and 27.8% (25) of the cross-sectional sample were prescribed antidepressants in the community *(see Table 3)*.

High risk behaviours and infectious disease

35.5% (33) [95% CI 26.2-45.2] of female committals and 40.7% (37) [95% CI 31.1-50.9] of the cross sectional sample reported a history of intravenous drug use. 69.7% (23) [95% CI 52.7-82.6] of intravenous drug users in the committal sample and 51.4% (23) [95% CI 35.9-66.6] of intravenous drug users in the cross sectional females had shared needles. There was a high prevalence of infectious disease in both samples. Among the committal sample, 29.0% (27) reported testing positive for Hepatitis C, 4.3% (4) for Hepatitis B and 6.5% (6) for HIV. Among the cross sectional sample, 34.1% (31) reported testing positive for Hepatitis C, 2.2% (2) for Hepatitis B and 7.6% (7) for HIV. *(see Table 2)*.

Table 7: Prevalence of anxiety disorder in female prisoners

Anxiety disorder	Female Committals (%) [95 % CI]	Female Cross-sectional (%) [95 % CI]
Current	6 (6.5) [3.0-13.4]	14 (15.2) [9.3-23.9]
Six month	8 (8.6) [4.4-16.1]	14 (15.2) [9.3-23.9]
Lifetime	10 (10.8) [6.0-18.9]	18 (19.6) [12.7-28.8]

Table 8: Prevalence of substance disorders in female prisoners

Any substance	Female Committals (%) [95 % CI]	Female Cross-sectional (%) [95 % CI]
Current	61 (65.6) [55.5-74.5]	Not known
Six month	61 (65.6) [55.5-74.5]	60 (65.2) [55.1-74.2]
Lifetime	65 (69.9) [59.9-78.3]	64 (71.1) [59.5-78.0]

Psychiatric histories

Mental illnesses and substance use disorders were common *(see Table 4)*. 34.4% (32) [95% CI 25.5-44.5] of female committals and 39.6% (36) [95% CI 29.8-49.3] of the cross-sectional subjects reported a history of contact with community psychiatric services either as outpatients or inpatients. 57.8% (53) [95% CI 48.0-67.8] of women interviewed in the cross-sectional sample had contact with forensic psychiatric services (excluding reports) compared with only 9.7% (9) [95% CI 5.2-17.4] of female committals.

Psychosis

A diagnosis of any psychosis included schizophrenia, schizo-affective disorder, delusional disorder, depressive disorder with psychotic symptoms, bipolar affective disorder and drug induced psychosis (ICD-10 F1x.5, F20, F22-29, F30-31, F32.3, F33.3)

In total 10 of the committal sample and seven of the cross-sectional sample had a history of a psychotic illness. *Table 5* shows the lifetime, six-month and point prevalences of psychotic illness in the two groups. Of those with a lifetime history of psychosis, 80% (8) [95% CI 49.0-94.3] of female committals and 43% (3) [95% CI 15.8-75.0] cross-sectional subjects had a co-morbid history of substance and/or alcohol disorders.

The point prevalence of any psychosis was 5.4% (5) for the committal sample and 3.3% (3) for the cross sectional sample. The six-month prevalence of any psychosis was the same for the committal and cross sectional sample at 5.4% (5). The lifetime prevalence for any psychosis was 10.8% (10) for committal women and 7.6% (7) for the cross sectional sample *(see Table 5)*.

Affective disorders

Within the committal sample the point prevalence of affective disorder (includes mild, moderate and severe depression without psychotic symptoms, and dysthymia) was 10.8% (10) [95% CI 5.9-18.7]. The six-month prevalence was 14.0% (13) [95% CI 8.4-22.5] and the lifetime prevalence was 23.7% (22) [95% CI 6.2-33.2].

Within the cross-sectional sample the point prevalence of affective disorder was 16.3% (15) [95% CI 25.2]. The six-month prevalence was 20.7% (19) [95% CI 3.6-30.0] and lifetime prevalence was 42.4% (39) [95% CI 32.8-52.6] *(see Table 6)*.

The point prevalence for a major depressive disorder (ICD-10 F32-33) was 4.3% (4) for the female committals and 12% (11) [95% CI 6.8-20.2] for the cross sectional sample. The six-month prevalence for a depressive disorder was 8.5% [95% CI 4.4-15.9] for the female committals and 16.3% (15) [95% CI 10.1-25.2] for the cross sectional sample. The lifetime prevalence of major depressive disorder was 16% (15) for the female committals and 37% (34) [95% CI 27.8-47.2] for the cross sectional sample *(see Table 6)*.

Anxiety disorders (ICD-10- DCR 40-42)

Within the committal sample the point prevalence of anxiety disorder was 6.5% (6) [95% CI 3.0-13.4]. The six-month prevalence was 8.6% (8) [95% CI 4.4-16.1] and the lifetime prevalence of anxiety disorder was 10.8% (10) [95% CI 6.0-18.9] *(see Table 6)*.

In the cross-sectional group of women both the point prevalence and six-month prevalence of anxiety disorders were 15.2% (14) [95%CI 9.3-23.9]. The lifetime prevalence for anxiety disorder was 19.6% (18) [95%CI 12.7-28.8] *(see Table 7)*.

The most common disorders were panic disorder and phobic disorder. Withdrawal from street drugs is the most likely explanation for the differences between committal and cross sectional samples, though the higher reported lifetime prevalence is difficult to reconcile with this.

Any mental illness

The point prevalence of any mental illness, (excludes substance misuse, adjustment disorder and personality disorder, includes ICD-10-DCR F1x.5, F20, F22-29, F30-39, F40-42) was 22.3% (21) [95% CI 15.1-31.8] of the female committals and 33.7% (31) [95% CI 24.9-43.8] of the cross sectional sample. 24.5% (23) [95% CI 16.9-34.0] of female committals compared with 39.6% (36) [95% CI 29.8-49.3] of the cross sectional sample interviewed had a six-month prevalence of mental illness. 42.6% (40) [95% CI 33.0-52.6] of female committals compared with 59.8% (55) [95% CI 49.6-69.2] of the cross sectional sample interviewed had a lifetime history of mental illness.

Drug and alcohol histories

Alcohol and drug problems were diagnosed using the categories of harmful use and dependence syndrome from ICD-10 Diagnostic Criteria for Research (ICD-10 F1x.1, F1x.2). Rates of substance misuse were high in both samples *(see Table 8)*.

Table 8 shows the prevalence of any substance problems, abuse and dependence, in both samples. 48.4% (45) [95% CI 38.5-58.4] of the female committals reported a current drug dependence problem, while 24.7% (23) [95% CI 17.1-34.4] reported a current alcohol dependence problem. Of the cross-sectional sample 18.5% (17) [95% CI 11.9-27.6] of women reported an alcohol dependence problem within the six months prior to their committal to prison, and 46.7% (43) [95% CI 36.9-56.9] reported a drug dependence problem in the six months prior to committal.

Table 9: Comparison of six-month prevalence rates of psychosis and depressive disorder in Irish prisons and other jurisdictions

	Irish prison study [95% CI] N=92	Meta-analysis[2] [95% CI] N=2964
Psychosis (six month prevalence)	5.4% [2.9-9.6]	4% [3.3-4.7]
Major depressive disorder (six month prevalence)	16.3% [10.1-25.2]	12% [10.9-13.2]

45.2% (42) [95% CI 35.4-55.3] of female committals and 42.4% (39) [95% CI 32.8-52.6] of the cross-sectional sample reported opiate dependence during the year prior to interview.

35.5% (33) [95% CI 26.5-45.6] of female committals, and 29.3% (27) [95% CI 21.0-39.3] of the cross-sectional sample reported they were prescribed methadone maintenance in the community prior to committal.

Suicidal ideation and suicidal behaviour

38.7% (36) [95% CI 29.4-48.9] of female committals had self-harmed at some time, 9.6% (9) [95% CI 5.1-17.2] of these in the last six months. 27.9% (26) [95% CI 19.9-37.8] of female committals interviewed were recurrent self-harmers, and 11.8% (11) [95% CI 6.7-20.0] reported more than five episodes of self-harm. The most frequent methods of self-harm reported were overdose 23.7% (22), self-laceration 22.8% (21) and attempted hanging 11.8% (11).

Within the cross-sectional sample 41.1% (37) [95% CI 30.8-50.4] reported a history of self-harm. 10.9% (10) [95% CI 6.0-18.9] of these reported an episode in the last six months. 26.1% (24) [95% CI 18.2-35.9] of the cross-sectional sample were recurrent self-harmers, and 8.9% (8) [95% CI 4.5-16.2] reported more than five episodes of self-harm.

31.2% (29) [95% CI 22.7-41.2] of the committals sample reported the suicide of a significant person in their lives. An additional 6.5% (6) [95% CI 2.5-19.6] reported the suicide of a first-degree relative. In the cross-sectional sample 40.4% (36) [95% CI 29.8-49.3] reported the suicide of a significant person in their lives while another 7.9% (7) [95% CI 3.7-14.9] reported the suicide of a first degree relative.

Personality disorder

51.4% (37) of 72 screened positive for personality disorder. These had higher rates of every type of psychiatric morbidity when compared to those who did not screen positive for personality disorder, but only three (4.2%) who were positive for personality disorder did not have a co-morbid mental illness or substance dependence or harmful use.

Discussion

This survey of women on committal to prison is one of the few such studies available.[1] This is the first national survey of psychiatric morbidity amongst prisoners in the Irish prison system, allowing comparisons to be made with a cross-

Table 10: Comparison of female committals with and without personality disorder

	Disorder [95 % CI] N=37 (%)	None [95 % CI] N=35 (%)
Previous time in prison	27 (73)* [57.0-84.6]	14 (40) [25.6-56.4]
Receiving prescribed medication	27 (73) [57.0-84.6]	15 (42.9) [28.0-59.1]
Receiving prescribed benzodiazepines	21(56.8)* [40.9-71.3]	4 (11.4) [4.5-26.0]
Receiving prescribed antidepressants	14 (37.8) [24.1-53.9]	6 (17.1) [8.1-32.7]
Receiving a prescribed antipsychotic	7 (18.9) [9.5-34.2]	0 (0) [0.0-9.9]
Contact with child psychiatry services	14 (37.8) [24.1-53.9]	4 (11.4) [4.5-26.0]
Contact with community psychiatry services	18 (51.4)* [33.4-64.1]	6 (17.1) [8.1-32.7]
Contact with prison psychiatry services	7 (18.9) [9.5-34.2]	0 (0) [0.0-9.9]
Ever tried to kill/harm self	22 (59.5)* [43.5-73.7]	7 (20) [10.0-35.9]
Ever had suicidal thoughts	29 (78.4)* [62.8-88.6]	15 (42.9) [28.0-59.1]
Current mental illness	17 (45.9)* [31.0-61.6]	0 (0) [0.0-9.9]
Mental illness in the last six months	19 (51.4)* [35.9-66.6]	0 (0) [0.0-9.9]
Past mental illness	23 (62.2)* [46.1-75.9]	7 (20.0) [10.0-35.9]
Current substance problem	29 (78.4) [62.8-88.6]	18 (51.4) [35.6-67.0]
Lifetime substance problem	31 (83.8) [68.9-92.3]	19 (54.3) [38.2-69.5]
Current non-psychotic mood disorder	11 (29.7)* [17.5-45.8]	0 (0) [0.0-9.9]

sectional sample of women on remand and sentenced, and with the male prisoner population[6,7] and with international averages.

Weaknesses in the present study

We found that the rate of refusal to take part was high in this study. While it is possible that those with a psychiatric history might avoid a psychiatric interview leading to an under-estimate, it is unlikely that we have over-estimated the prevalence of mental disorders in the prison population.

Methodological issues

We were satisfied that the SADS-L used in conjunction with the ICD-10 Diagnostic Criteria for Research allowed us to diagnose mental illnesses, even in the presence of a six-month or lifetime history of alcohol or substance abuse or dependence. The SADS-L has been well-validated for use in surveys of general populations[8,16] and in prison surveys.[8] We were reliant on the self-report of prisoners to establish the prevalence of substance misuse following committal. However continued use of cannabis and other drugs is common in prison and reliable information about this would be hard to obtain.

Ethnicity

Irish Travellers were found to be over-represented in both committal and cross-sectional samples of women prisoners. Irish Travellers comprise a small proportion of the national population, estimated at 0.58% in the last census. They are one of the most marginalized and disadvantaged groups in Irish society. In a pilot for this survey,[17] female travellers had a relative risk of imprisonment compared to the general settled community of 12.9, as high an excess as for men from the Irish Traveller community. This survey is in keeping with those findings.

Substance misuse

Harmful use and dependence on alcohol and drugs was prevalent to a similar extent as in male prisoners.[5,6] The prevalence of benzodiazepine use in this population is particularly worrying, because of the high prevalence of substance misuse problems and impulsive self harm.[18] The high number of prisoners receiving prescribed benzodiazepines prior to committal is of concern in view of their contra-indication for longer-term treatment, and the level of abuse and dependence on these drugs within prison populations. The near-complete association between personality disorder and substance abuse raises interesting questions about the direction of causation.

The high prevalence of hepatitis C is indicative of the level of intravenous drug use and the practice of sharing syringes. There is a discrepancy between the level of opiate use within these samples and the number in receipt of methadone maintenance therapy

Mental illness

There were few significant differences between the committal and cross-sectional samples. Major depressive disorder and anxiety disorders were more common in the cross-sectional sample, but rates of psychosis and substance problems were similar.

We have found a greater prevalence of mental illness overall in the female prison sample compared to the male Irish prison samples.[5,6] There is also a significant excess prevalence of psychosis compared to what is known of the general Irish population. In a survey of a rural population, a 12-month prevalence for schizophrenia, schizoaffective disorder, bipolar and bipolar II disorders combined was 9.3/1000 total female population, with morbid risk (lifetime prevalence) 17.8/1000 women.[19] The excess of mental illness in the female prisoner samples when compared to the male prisoner samples is accounted for predominantly by the higher rates of affective disorders and to a lesser extent, anxiety disorders, within the cross-sectional group. It is possible that stress incurred upon the individual by time spent in prison causes higher rates of anxiety and affective disorders in this population. The acute effects of withdrawal from alcohol and street drugs such as cannabis may also contribute.[20]

The six-month prevalence rates of mental illness can be broadly compared with studies from other jurisdictions, which have been summarised in the meta-analysis by Fazel and Danesh[2] *(see Table 9)*. The rate of major depressive disorder

in the Irish female samples (16.3% for remand and sentenced combined) was not significantly different from the international average.

Various authors have examined the factors that contribute to the accumulation of the mentally ill in prisons. Penrose studied prison and mental hospital populations in Europe and found a negative correlation, which he interpreted to mean that a constant population of severely mentally ill people would find institutional care in what ever institution society chose to provide in a given place at a given time.[21] Torrey[22] in America and Gunn[23] in the UK both reviewed increases in the number of mentally ill prisoners coinciding with de-institutionalisation of the mentally ill. Priebe *et al* identified this trend as 're-institutionalisation' in six countries.[24] Social factors thought to have a bearing on the large numbers of mentally ill in prisons include inadequately resourced community services, homelessness, and co-morbid substance misuse. In other jurisdictions, services such as police station and District Court liaison schemes, hospital diversion, and compulsory community treatment have been well established for over a decade and shown to be successful.[25,26] Within the Irish jurisdiction the absence of modern mental health legislation dealing with mentally disordered offenders[27] and the lack of services to divert mentally disordered offenders from the criminal justice system probably contributes to the over-representation of the mentally ill in prison here.

Service implications

The mental health profile of female prisoners in the Irish Prison system is characterised by high rates of substance misuse problems, affective disorders, anxiety disorders and psychotic disorders. These difficulties occur in a context of low educational achievement, unemployment, homelessness and a cycle of family disruption and institutionalisation. The higher level of mental illness within the cross-sectional sample suggests that these problems do not resolve during the period of imprisonment, and may deteriorate.

Conclusions

These findings highlight the need for a more integrated approach to the psychiatric care of women in Irish prisons. The service provided should be at least equivalent in quality to that available in the community. Currently the psychiatric care available to mentally ill women in Irish prisons falls short of that standard in a number of ways. There is incomplete provision of treatment modalities that would be available in the community, for example occupational therapy, counselling, and psychology. Patients requiring inpatient hospital treatment are transferred to a special security hospital (the Central Mental Hospital) regardless of their security needs. Acutely disturbed mentally ill prisoners are often confined to isolation cells, which provide only containment and no therapeutic benefit.

Mental health services for women prisoners should facilitate a multidisciplinary delivery of care. This should include the recruitment of nurses with training in psychiatry to work in prisons, better screening procedures at committal, and improved stratification of high-risk individuals within the prison accommodation, as well as access to adjunctive services, including occupational therapy, psychology and counselling services. Greater integration between psychiatric and drugs services is required to address the high prevalence of co-morbidity in this population and the complex challenges this presents. Community services need to be more consistent in refusing to prescribe benzodiazepines inappropriately. Community services seldom provide access to dialectic behaviour therapy or related clinical management strategies for challenging or demanding patients.

The implementation of mental health legislation and services that would facilitate the diversion of mentally disordered individuals from the criminal justice system to treatment in the community psychiatric services is urgently required,[28] but must also be accompanied by the development of comprehensive community mental health services, including local psychiatric intensive care units (ie. acute low secure units) for challenging or high-risk individuals.[29] There is also an urgent need for more secure psychiatric beds on a national level. The lack of provision of low secure units and under provision of community hostel beds in many health boards should be addressed.[30]

Declaration of Interest: None

References

1. Parsons S, Walker L, Grubin D. Prevalence of mental disorder in female remand prisoners. Journal of Forensic Psychiatry 2001. 12; 194-202.
2. Fazel S, Danesh J. Serious mental disorder in 23,000 prisoners: a systematic review of 62 surveys. Lancet 2002; 359: 545-50
3. Mohan D, Scully P, Collins C, Smith C. Psychiatric Disorder in an Irish female prison. Criminal Behaviour and Mental Health, 7, 229-235 1997.
4. Allwright S, Bradley F, Long J, Barry J, Thornton L, Parry JV. Prevalence of antibodies to hepatitis B, hepatitis C, and HIV and risk factors in Irish prisoners: results of a national cross sectional survey. BMJ 2000; 321: 78-82.
5. Long J, Allwright S, Barry J et al. BMJ 2001; 323:1209. Prevalence of antibodies to hepatitis B, hepatitis C and HIV and risk factors in entrants to Irish prisons: a national cross sectional survey.
6. Linehan S, Duffy DM, Wright B, Curtin K, Monks S, Kennedy HG. Psychiatric morbidity in a cross-sectional sample of male remanded prisoners (42% of remanded men in Irish prisons). Irish Journal of Psychological Medicine 2005; 22:128-132
7. Duffy DM, Linehan SA, Kennedy HG. Psychiatric Morbidity in the male sentenced Irish Prisons Population (submitted)
8. Birmingham L, Mason D, Grubin D. 1996. Prevalence of mental disorder in remand prisoners: consecutive case study. British Medical Journal 313, 1521-1524.
9. Irish Prison Service Report, 2002. The Stationery Office, Dublin.
10. Endicott J, Spitzer RL. A diagnostic interview: schedule for affective disorders and schizophrenia. Arch Gen Psychiatry 1978; 35:837-44.
11. American Psychiatric Association, Diagnostic and statistical Manual of Mental Disorders (DSM-IV-TR) Fourth Edition, Text Revision. Washington DC. American Psychiatric Association, 2000.
12. World Health Organization. The ICD-10 Classification of Mental and Behavioural Disorders. Diagnostic Criteria for Research. World Health Organization: Geneva. 1993.
13. Phillips GT, Gossop MR, Edwards G, Sutherland G, Taylor C, Strang G. The application of the SODQ to the severity of opiate dependence in a British sample. British Journal of Addictions 1987; 82: 691-9.
14. Moran P, Leese M, Lee T, Walters P, Thornicroft G, Mann A. 2003. Standardised Assessment of Personality Abbreviated Scale (SAPAS): preliminary validation of a brief screen for personality disorder. British Journal of Psychiatry 183(3):228-232.
15. Central Statistics Office
www.cso.ie/statistics/population/travsbysexagemaritalstatus2002.htm
16. Bromet EJ, Dew MA, Eaton W. Epidemiology of psychosis with special reference to schizophrenia. In: MT Tsuang, M Tohan, GEP Zahner (Eds). Textbook in Psychiatric Epidemiology. 3rd edition. 1995. New York, Wiley-Liss.
17. D Duffy, S Linehan, H O'Neill, HG Kennedy Irish Travellers and forensic mental health. Irish Journal of Psychological Medicine 2002;19(3):76-79
18. Department of Health and Children: Benzodiazepines: Good Practice Guidelines for Clinicians. 2002. Dublin, DoHC.
19. Scully, PJ, Owens JM, Kinsella A, Waddington JL. Schizophrenia, schizoaffective and bipolar disorder within an epidemiologically complete, homogenous population in rural Ireland: small area variation in rate. Schizophrenia Research 2004; 67:143-155
20. D Duffy, S Lenihan, H Kennedy. Screening prisoners for mental disorders. Psychiatric Bulettin 2003, 27:241-242.
21. Penrose LS. 1939. Mental disease and crime: outline of a comparative study of European statistics. British Journal of Medical Psychology 18, 1-18.
22. Torrey EF 1995. Jails and prisons – America's new mental hospitals. American Journal of Public Health 85(12): 1611-3.
23. Gunn J. 2000. Future directions for treatment in forensic psychiatry. British Journal of Psychiatry 176: 332-338.
24. Priebe S, Badesconyi A, Fioritti A. Reinstitutionalisation in mental health care: comparison of data on service provision from six European countries. British Medical journal 2005;330:123-126.
25. James DV 1999. Court diversion at 10 years: can it work, does it work and has it a future? Journal of Forensic Psychiatry 10: 507-524.
26. Birminham L. Diversion From Custody. Advances in Psychiatric Treatment 2001. 7;198-207.
27. Harding T. Prevention of torture and inhuman or degrading treatment: medical implications of a new European Convention. Lancet 1989; I:1191-1193.
28. O'Grady J. The complementary role of regional and local secure provision for psychiatric patients. Health Trends 1990; 22: 14-16.
29. HG Kennedy. Therapeutic Uses of Security: mapping forensic mental health services by stratifying risk. Advances in Psychiatric Treatment 2002; 8: 433-443
30. C O'Neill, H Sinclair, A Kelly, HG Kennedy. Interaction of forensic and general psychiatric services in Ireland: learning the lessons or repeating the mistakes?
Irish Journal of Psychological Medicine 2002; 19(2): 48-54.