Short communication

Comparison of drug use and psychiatric morbidity between prostitute and non-prostitute female drug users in Glasgow, Scotland

Gail Gilchrist[a,*], Laurence Gruer[b], Jacqueline Atkinson[c]

[a]*Department of General Practice, University of Melbourne, Australia*
[b]*NHS Health Scotland, Scotland, UK*
[c]*Public Health and Health Policy, University of Glasgow, Scotland, UK*

Abstract

Aims: To compare psychiatric morbidity between 176 female drug users with lifetime involvement in prostitution (prostitutes) and 89 female drug users with no involvement (non-prostitutes) in Glasgow, Scotland.
Method: The Revised Clinical Interview Schedule (CIS-R) measured current neurotic symptoms.
Results: Prostitutes were more likely to report adult physical (OR 1.8) or sexual abuse (OR 2.4), to have attempted suicide (OR 1.7) and to meet criteria for current depressive ideas (OR 1.8) than non-prostitutes. Seventy-two percent of prostitutes and sixty-seven percent of non-prostitutes met criteria for a level of current neurotic symptoms likely to need treatment (CIS-R $\geq$18). Being in foster care (OR 8.9), being prescribed medication for emotional problems in the last 30 days (OR 7.7), adult sexual abuse (OR 4.5), poly drug use in the last 30 days (OR 3.6) and adult physical abuse (OR 2.6) were significantly associated with a CIS-R score of $\geq$18 for prostitutes using multiple logistic regression.
Conclusions: Higher rates of adulthood abuse among prostitutes may explain the greater proportion of prostitutes than non-prostitutes meeting criteria for current depressive ideas and lifetime suicide attempts.

 * Corresponding author. Department of General Practice, University of Melbourne, 200 Berkeley Street, Carlton, Melbourne, 3053 Victoria, Australia. Tel.: +61 3 8344 4716; fax: +61 3 9347 6136.
   E-mail address: g.gilchrist@unimelb.edu.au (G. Gilchrist).

1. Introduction

High proportions of prostitutes are drug-dependent and have experienced physical and sexual abuse in childhood and adulthood (Church, Henderson, Barnard, & Hart, 2001; El-Bassel, Schilling, Irwin, Faruque, Gilbert, Von Bargen, Serrano, & Edlin, 1997; El-Bassel, Simoni, Cooper, Gilbert, & Schilling, 2001). Furthermore, abused female drug users report greater psychiatric morbidity (Jarvis & Copeland, 1997). Despite these findings, the mental health of female drug-dependent prostitutes is not well understood. Two US studies reported significantly greater psychiatric symptom severity among female drug using prostitutes than female drug users recruited from the same sites (El-Bassel et al., 1997, 2001). This is the first European study to compare psychiatric morbidity between female drug users involved and not involved in prostitution.

2. Method

2.1. Aims, participants and setting

The study determined the prevalence of drug use and psychiatric morbidity between female drug users with lifetime involvement (prostitutes, n=176) and no involvement in prostitution (non-prostitutes, n=89) recruited from three services in Glasgow: 96 from a drop-in for female prostitutes, 90 from a 24 hour crisis centre and 79 consecutive new methadone patients from a medical-led specialist service. Convenience sampling was employed at the drop-in and crisis centre.

2.2. Measures

Questions on abuse were adapted from the Female Addiction Severity Index (Oberg & Sallmen, 2002). The Diagnostic Interview Schedule assessed 12-month drug dependence (Robins, Helzer, Croughan, Williams, & Spitzer, 1981). The Revised Clinical Interview Schedule assessed 14 current neurotic symptoms (CIS-R) (Lewis & Pelosi, 1992). A score of ≥18 indicates a severity of current neurotic symptoms likely to need treatment (Kershaw, Singleton, & Meltzer, 2000). These measures were administered face-to-face by trained interviewers.

2.3. Statistical analysis

Percentages were calculated on actual responses. Continuous data were analysed using t-tests. Odds ratios (OR) and 95% confidence intervals (95% CI) were calculated by logistic regression. Variables significant at univariate analysis were entered into multiple logistic regression analyses to ascertain the models associated with a CIS-R score ≥18 for prostitutes and non-prostitutes. The fit of the model is considered good when the Hosmer–Lemeshow goodness-of-fit p-value is insignificant (>0.05).

Table 1
Comparison of demographics, drug use, childhood and adulthood abuse and psychiatric morbidity between prostitutes and non-prostitutes

	Prostitutes (*n*=176)	Non-prostitutes (*n*=89)	OR (95% CI)
Demographics			
Live with drug user	49% (86/175)	36% (32/89)	1.72 (1.02–2.91)
History of homelessness	81% (143/176)	64% (57/89)	2.43 (1.37–4.32)
Ever incarcerated	53% (94/176)	30% (27/89)	2.63 (1.53–4.52)
Drug use			
Poly drug use in last 30 days	79% (139/176)	84% (75/89)	0.70 (0.36–1.38)
12-month heroin dependence	96% (169/176)	97% (86/89)	0.84 (0.21–3.34)
12-month illicit tranquilliser dependence	49% (87/176)	49% (44/89)	1.00 (0.60–1.66)
Cocaine use in last 30 days	18% (31/176)	7% (6/89)	2.96 (1.18–7.38)
Injected drugs in last 30 days	72% (127/176)	51% (45/89)	2.53 (1.49–4.31)
Ever experienced accidental drug overdose	55% (97/176)	27% (24/89)	3.32 (1.91–5.79)
Childhood abuse (<16 years)			
Emotional	47% (81/172)	36% (31/87)	1.61 (0.94–2.73)
Physical	38% (66/172)	30% (26/87)	1.46 (0.84–2.54)
Sexual	36% (61/171)	24% (21/87)	1.74 (0.97–3.12)
Adulthood abuse (≥16 years)			
Emotional	64% (111/173)	57% (50/87)	1.32 (0.78–2.24)
Physical	57% (98/173)	42% (37/87)	1.77 (1.05–2.97)
Sexual	33% (57/173)	18% (16/87)	2.18 (1.16–4.09)
Mental health			
Deliberate self harm	39% (69/176)	30% (27/89)	1.48 (0.86–2.55)
Attempted suicide	53% (93/176)	39% (35/89)	1.73 (1.03–2.90)
Psychiatric admission	21% (36/175)	20% (18/89)	1.02 (0.54–1.93)
Prescribed medication for mental health problems in last 30 days	22% (39/175)	29% (26/89)	0.69 (0.39–1.24)
Self-reported lifetime eating disorder	37% (64/175)	27% (24/89)	1.56 (0.89–2.73)
Treatment/help in last 12 months	35% (61/176)	39% (35/89)	0.82 (0.48–1.39)
Current neurotic symptoms			
CIS-R ≥18	72% (127/176)	67% (60/89)	1.25 (0.72–2.18)
Somatic	49% (87/176)	51% (45/89)	0.96 (0.57–1.59)
Fatigue	82% (144/176)	77% (69/89)	1.30 (0.70–2.44)
Concentration/forgetfulness	58% (103/176)	51% (45/89)	1.38 (0.83–2.30)
Sleep problems	79% (139/176)	77% (69/89)	1.09 (0.59–2.02)
Irritability	64% (112/176)	70% (62/89)	0.76 (0.44–1.32)
Worry about physical health	35% (62/176)	33% (29/89)	1.12 (0.65–1.93)
Depression	70% (123/176)	61% (54/89)	1.50 (0.88–2.56)
Depressive ideas	72% (127/176)	58% (52/89)	1.84 (1.08–3.15)
Worry	79% (139/176)	70% (62/89)	1.64 (0.92–2.92)
Anxiety	60% (106/176)	53% (47/89)	1.35 (0.81–2.26)

Table 1 (*continued*)

	Prostitutes (*n*=176)	Non-prostitutes (*n*=89)	OR (95% CI)
Phobias	26% (45/176)	30% (27/89)	0.79 (0.45–1.39)
Panic	24% (42/176)	29% (26/89)	0.76 (0.43–1.35)
Compulsions	37% (66/176)	34% (30/89)	1.18 (0.69–2.01)
Obsessions	53% (94/176)	47% (42/89)	1.28 (0.77–2.14)

3. Results

Comparison between prostitutes and non-prostitutes are summarised in Table 1. There was no difference in mean total current CIS-R scores between prostitutes and non-prostitutes (25.9 vs. 24.3; $t(263)=0.962$; $p=0.337$). Table 2 describes the variables associated with a CIS-R score of ≥ 18 among prostitutes. Using multiple logistic regression, emotional abuse as an adult (OR 8.0, 95% CI 2.4–27.2), 12-month dependence

Table 2
Significant associations with the likelihood to need treatment for current neurotic symptoms (CIS-R ≥ 18) among female drug using prostitutes

Univariate analysis	Significance	OR (95% CI)
Foster care as a child (aged <16 years)	0.047	7.93 (1.03–61.09)
Substance use		
Poly drug use in last 30 days	0.001	3.83 (1.79–8.21)
Dependent on illicit tranquillisers in last 12 months	0.002	2.97 (1.47–5.98)
Heroin use in last 30 days	0.045	2.90 (1.02–8.23)
Illicit tranquilliser use in last 30 days	0.021	2.19 (1.12–4.29)
Experience of abuse		
Sexual abuse as an adult (aged ≥ 16 years)	<0.001	5.90 (2.19–15.93)
Physical abuse as an adult (aged ≥ 16 years)	<0.001	4.12 (2.01–8.42)
Emotional abuse as an adult (aged ≥ 16 years)	0.004	2.73 (1.37–5.45)
Emotional abuse as a child (aged <16 years)	0.005	2.72 (1.33–5.58)
Sexual abuse as a child (aged <16 years)	0.042	2.21 (1.03–4.75)
Mental health		
Prescribed medication for mental health problems in last 30 days	0.004	6.13 (1.79–20.99)
Self-reported lifetime eating disorder	0.003	3.44 (1.54–7.69)
Attempted suicide	0.049	1.96 (1.00–3.83)
Multivariate analysis		
Foster care as a child (aged <16 years)	0.046	8.93 (1.04–76.67)
Prescribed medication for mental health problems in last 30 days	0.009	7.71 (1.66–35.72)
Sexual abuse as an adult (aged ≥ 16 years)	0.007	4.50 (1.51–13.40)
Poly drug use in last 30 days	0.005	3.65 (1.47–9.06)
Physical abuse as an adult (aged ≥ 16 years)	0.022	2.61 (1.15–5.94)

n=169, Hosmer–Lemeshow goodness of-fit-test, *p*=0.60.

on cannabis (OR 7.9, 95% CI 1.9–32.9) and Self-reported lifetime eating disorder (OR 7.1, 95% CI 1.3–40.1) were significantly associated with a score of ≥ 18 for non-prostitutes.

4. Discussion

Prostitutes were more likely to use cocaine, inject drugs and have overdosed accidentally on drugs than non-prostitutes, suggesting that prostitution is an even more extreme situation for female drug users. Contrary to the US studies (El-Bassel et al., 1997, 2001), we found no significant difference in overall neurotic symptom scores between prostitutes and non-prostitutes. The recency of involvement in prostitution in the US studies may explain the greater psychological distress among prostitutes reported (El-Bassel et al., 1997, 2001). The study confirms that adult sexual abuse is associated with psychiatric morbidity among prostitutes (El-Bassel et al., 1997). Higher rates of adulthood abuse among prostitutes and also the "stressful and degrading aspects of sex trading" (El-Bassel et al., 2001, p. 180) may explain the greater proportion of prostitutes than non-prostitutes meeting criteria for current depressive ideas and lifetime suicide attempts. The findings suggest the need to enhance access to mental health services for female drug users, including those involved in prostitution.

References

Church, S., Henderson, M., Barnard, M., & Hart, G. (2001). Violence by clients towards female prostitutes in different work settings: Questionnaire survey. *British Medical Journal*, *322*, 524–525.

El-Bassel, N., Schilling, R.F., Irwin, K.L., Faruque, S., Gilbert, L., Von Bargen, J., Serrano, Y., & Edlin, B. (1997). Sex trading and psychological distress among women recruited from the streets of Harlem. *American Journal of Public Health*, *87*, 66–70.

El-Bassel, N., Simoni, J. M., Cooper, D. K., Gilbert, L., & Schilling, R. F. (2001). Sex trading and psychological distress among women on methadone. *Psychology of Addictive Behaviors*, *15*, 177–184.

Jarvis, T. J., & Copeland, J. (1997). Child sexual abuse as a predictor of psychiatric co-morbidity and its implications for drug and alcohol treatment. *Drug and Alcohol Dependence*, *49*, 61–69.

Kershaw, A., Singleton, N., & Meltzer, H. (2000). Survey of the health and well-being of homeless people in Glasgow. London: National Statistics.

Lewis, G., & Pelosi, A. J. (1992). *The manual of CIS-R*. London: Institute of Psychiatry.

Oberg, D., & Sallmen, B. (2002). *ASI-X training manual*. Norrkoping: Swedish Prison and Probation Administration.

Robins, L. N., Helzer, J. E., Croughan, J., Williams, J. B. W., & Spitzer, R. L. (1981). *NIMH diagnostic interview schedule*. Rockville, MD: National Institute of Mental Health Version III.