STUDY OF PREVALENCE OF HIGH-RISK SEXUAL BEHAVIOUR AND ASSOCIATED PSYCHIATRIC COMORBIDITY AMONG FEMALE SEX WORKERS

Kasthuri Pandiyan¹, Manju Aswath²

¹Associate Professor, Department of Psychiatry, MVJ Medical College, Hoskote, Bangalore, Karnataka.

²Associate Professor, Department of Psychiatry, KIMS Hospital, Bangalore, Karnataka.

ABSTRACT

BACKGROUND

A number of psychiatric morbidities are known to contribute to risky sexual behaviour. Recent studies have explored the link between psychiatric morbidity and risky sexual behaviour. This study is aimed to find the prevalence of psychiatric comorbidity and associated high-risk sexual behaviour among female sex workers and the prevalence of STI's in the population.

MATERIALS AND METHODS

96 consenting female sex workers were recruited into the study and were administered the following questionnaires- MINI neuropsychiatric interview, HIV Risk Behaviour Scale (HRBS), Beck's Depression Inventory (BDI) and Presumptive Stressful Life Events Scale (PSLES). Statistical analysis was done using SPSS V19.

RESULTS

They had significantly higher prevalence of risky sexual behaviours ($p=0.02$), depression ($p=0.04$), stress levels ($p=0.001$) and overall prevalence of STI's ($p=0.03$).

CONCLUSION

There is a high prevalence of STI's and risky sexual behaviours among female sex workers. This could be accounted for by higher psychiatric comorbidities such as depression, drug abuse, higher stress, which is less frequently understood. Future studies should look at high-risk sexual behaviour as a possible preventive factor for STIs in this population.

KEYWORDS

High-Risk Sexual Behaviour, Female, Sex Workers, Psychiatric Co-Morbidity.

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BACKGROUND

Female commercial sex workers (CSWs) are defined as those females who provide sexual services for payment in cash or kind in the last one month (NACO, India).⁽¹⁾ Many psychosocial adversities contribute to individuals taking up sex work as a profession. A significant number of them are found to have psychiatric morbidity, such as substance dependence and depression.⁽²⁾

Another study done on females has identified that factors like poor maternal attachment, symptoms of CD was associated with high-risk sexual behaviour among young women.³

Aims and Objectives

This cross-sectional study was sought to find the prevalence of high-risk sexual behaviour, sexually transmitted diseases and psychiatric comorbidity in commercial sex workers of Bangalore city.

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Corresponding Author:

Dr. Manju Aswath,

Associate Professor,

Department of Psychiatry,

Kempegowda Institute of Medical Sciences,

Bangalore, Karnataka.

E-mail: drkasthurip@gmail.com

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MATERIALS AND METHODS

It was a cross-sectional study, carried out at the Psychiatry Outpatient Clinic of a tertiary care hospital in Bangalore, India. The majority of participants were recruited through voluntary agencies, providing counselling services to sex workers ($n=86$). The remaining 10 participants were introduced to the study by chain referral through participants' associates. A majority of participants (70%) were from Bangalore. All participants were asked to register their understanding and consent to participate in the study by oral consent signed in the form by an impartial witness. 96 eligible participants took part in the study. Interviews were conducted at Victoria Hospital, Bangalore. The interview was conducted by the principal investigator in a place which ensures visual and auditory privacy. Each interview lasted for about 2 hours. Ethical clearance was obtained from the college ethical committee. The sample size was calculated as for convenience.

Statistical analysis was performed using SPSS V 19 software. T-test was used to compare various continuous variables such as BDI, ASRS, HRBS scores between those with and without comorbid psychiatric comorbidity. Pearson correlation coefficient was used to assess relationship between psychiatric comorbidity and BDI, ASRS and HRBS scores. Analysis of data was done using t-test, Fisher's exact test, Spearman's correlations are used. (Unpaired t-test) are expressed as Mean $\pm$ Standard deviation.

Inclusion Criteria

Female sex workers who have sold sex in exchange for goods or money in the last one month, above the age of 18 providing impartial oral consent.

Exclusion Criteria

Participants who are critically ill and whose mental status does not allow them to comprehend the questions and respond.

These Participants were then Administered the following Scales and Questionnaires

A semi-structured interview was used to elicit the following details- Socio-demographic data: Age, residence, marital status, educational status, employment status, income and number of living children. Other details of sexual behaviour, substance use, lower urinary tract symptoms and symptoms of sexually transmitted diseases were confirmed with a venereology consultation which included investigations such as urine routine, culture, urethral smear, VDRL and ELISA-HIV.

HIV risk behaviour scale (HRBS)⁽⁴⁾ was used to screen for high-risk sexual behaviour. Semi-structured Questionnaire Drug use and drug treatment- Participants will be asked about age of initiation of drug use and which drug they first used whether they had ever injected any drug and which drugs injected, age of initiation of injecting drug use and which drug they first injected, drugs used in the last 12 months and injecting drug use patterns in the last month across different drug types-

- The Opiate Treatment Index (OTI) is a structured interview designed to provide a measure of the effectiveness of drug treatments. The OTI measures 6 treatment outcomes; drug use, HIV risk-taking behaviour, social functioning, criminality, health status and psychological functioning. In some studies, only selected components of the instrument are administered.
- Injection-related risk behaviour⁽⁴⁾- The injecting sub-scale of the HIV Risk Taking Behaviour Scale, a component of the Opiate Treatment Index (OTI) will be used to measure current injection-related risk behaviour (Darke et al, 1992).
- Mini International Neuropsychiatric Interview (MINI)⁽⁵⁾- It is a brief structured interview design for the major Axis I psychiatric disorders in DSM-IV and ICD-10. It is divided into modules identified by letters, each corresponding to a diagnostic category at the beginning of each of which are screening questions corresponding to the main criteria of the disorder, which is used as a screener tool in this study for co-morbid psychiatric conditions (Sheehan DV et al). It is a validated structured diagnostic psychiatric interview for DSM-IV and ICD-10.

Depression

The Beck Depression Inventory (BDI)- (Beck et al, 1996)⁽⁶⁾ will be administered to determine the presence and severity of current depressive symptoms. The BDI is a 21-item self-reported measure, designed to represent the criteria for a major depressive episode as presented in the Diagnostic and Statistical Manual of Mental Disorders Text Revision (DSM-IV TR) (American Psychiatric Association, 2000). (Beck et al 1996, Whisman et al 2000, Grothe et al 2005).

Suicidal Ideation

Participants will be asked about suicidal ideation, whether they had ever attempted suicide and age at first and last suicide attempt. Data was also collected on methods of attempted suicide. Beck suicide intent scales. The patients also asked to report self-reported perceived stress. Presumptive stressful life events scale (PSLES)⁽⁷⁾ was used to generate a score for the stressful life events. This scale has 55 life events in order of severity. Statistical analysis was done using SPSS v 19.

RESULTS

	Mean	Standard Deviation (SD)
Age (yrs.)	39.9	7.3
Years of education	3.6	4.3
Income (Rupees)	13774	3307.2

Table 1. Socio-Demographic Characteristics of the Sample

	Psychiatric Morbidity (n=31)	No Psychiatric Morbidity (n=65)	P value
Consistent condom use	5	56	0.001***
More than 5 partners	11	24	0.11
Group sex	11	14	0.09
Injection use prior to sex	4	12	0.10
Alcohol use prior to sex	12	24	0.02*

Table 2. High-Risk Sexual Behaviour with and without Psychiatric Co-Morbidity

Those with no psychiatric morbidity had less consistent condom use and alcohol use prior to sex than those without psychiatric morbidity.

	Psychiatric Morbidity (n=31)	No Psychiatric Morbidity (n=65)
Beck's Depression Inventory 63 is Maximum Scale		
0-13	0	14
14-19	0	0
20-28	5	0
29-63	14	0
Presumptive Life Event Scale 55 Items	22 had between 30 - 50 life events	5- had between 6 life events
HIV Risk Behaviour Scale 55 is the score	19 Between 35 to 55 score	6 had score of 10

Table 3. Comparison of Comorbidities in those With and Without Psychiatric Morbidity

Those with high sexual behaviour also had higher score of depression and stress than those without psychiatric comorbidity.

Those with depression had high-risk sexual behaviour higher stressful life events score high-risk behaviour. The patient with psychiatric morbidity had high correlation with high-risk sexual behaviour than those without psychiatric morbidity.

	Correlation Coefficient (r)	P value
BDI vs. HRBS	0.28	0.26
PSLES vs. HRBS	0.34	0.04*
Psychiatric Morbidity vs. HRBS	0.78	0.001**
Table 4. Correlations of Scores with Risky Sexual Behaviour		

Both psychiatric morbidity scores and stress scores had a significant correlation with risky sexual behaviour.

	Psychiatric Morbidity (n=31)	No. of Psychiatric Morbidity (n=65)
HIV	3	0
Herpes genitalis	4	9
Syphilis	3	1
Others	4	7
Total	14	17
Table 5. Distribution of STI's in the Population		

Those with psychiatric morbidity had significantly higher prevalence of STI's overall ($p = 0.03^*$). Overall, prevalence of those with any STI in the sample was 26.04% ($n = 25$). Only those with psychiatric morbidity had HIV. "Others" included those with gonorrhoea, lymphogranuloma venereum and molluscum.

DISCUSSION

- There was a very high prevalence of psychiatric symptoms among this sample of sex workers ($n = 31$, 32.2%). This could be because those with psychiatric morbidity predispose to develop high-risk behaviours, of which risky sexual behaviour is one. Those with psychiatric co-morbidities such as depression,⁽²⁾ substance use which further increases the risk.⁽⁸⁾ (The mean BDI score and HRBS scores are also high, which reflects the same).
- Majority of the sample had high-risk sexual behaviours such as group sex, inconsistent condom use, higher number of partners, injection and alcohol use prior to sex. Reasons as stated by a few of them were that the clients pay more when condoms were not used (In spite of them reporting that they had knowledge of safe sexual practices). It was also seen that those with psychiatric morbidity had less consistent condom use and higher frequency of alcohol use prior to sex. This could reflect possible lack of behavioural inhibition as reported by Brown and Hardley, which contributes to impulsivity and risk taking behaviours.
- Those with high sexual behaviour also had higher prevalence of depression and stress than those without psychiatric comorbidity.⁽⁹⁾
- The overall prevalence of those with any STI in the sample was 26.04% ($n = 25$). Those with psychiatric comorbidity had significantly higher prevalence of STI's overall ($p = 0.03^*$). Only those with psychiatric comorbidity had HIV. Thus, it could be speculated that psychiatric comorbidity is also a risk factor for STI's, which is probably mediated by risky sexual behaviour.⁽¹⁰⁾⁽¹¹⁾

Limitations

1. Small sample size.
2. Cross-sectional study design.
3. The study sample was brought by counsellors, which could indicate that those taken up for the study already were having some psychiatric morbidity (not an indicator of a community sample).

CONCLUSION

There is a high prevalence of STI's and risky sexual behaviours among female sex workers. This could be accounted for by higher psychiatric comorbidities such as depression, higher stress and which is less frequently understood. Future studies should look at psychiatric comorbidity as a possible preventive factor for STI's in this population.

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