Salud Mental 2014;37:349-354
ISSN: 0185-3325
DOI: 10.17711/SM.0185-3325.2014.040

Social correlates of depression and suicide risk in sex workers from Hidalgo State, Mexico

Catalina González-Forteza,[1] Eva María Rodríguez,[1] Patricia Fuentes de Iturbe,[1] Leticia Vega,[1] Alberto Jiménez Tapia[1]

Original article

SUMMARY

Available data on mental health among female sex workers in Mexico is scarce. What little evidence there is shows that the prevalence of depression and suicidal problems is much higher in this group than in the general population. The objective of this article was to explore the psychosocial factors associated with depression and suicide risk in a sample of 103 sex workers from the state of Hidalgo, Mexico. Among them, the frequency of depression and suicide risk was higher than for women in the general population (39.8% and 3.0%, respectively). The variables that predicted these illnesses were a bad relationship with their mothers, negative health effects due to alcohol use, partner violence, and sexual violence. It is necessary to consider these results to promote actions that reduce or eliminate partner violence, promote the acquisition of skills to manage the negative consequences of violence, and implement strategies to reduce the harm caused by alcohol consumption in this vulnerable group of the population.

Key words: Depression, sex workers, suicide risk, alcohol use.

RESUMEN

Los datos disponibles sobre la salud mental en trabajadoras sexuales en México son escasos. Sin embargo la poca evidencia disponible muestra que las prevalencias de depresión y problemática suicida son mucho más elevadas que en la población general. El objetivo de este artículo es explorar los factores psicosociales que se relacionan con la depresión y el riesgo de suicidio en una muestra de 103 trabajadoras sexuales del Estado de Hidalgo, México. Los resultados muestran que las frecuencias de depresión y riesgo de suicidio fueron más elevadas que en las mujeres de la población general (39.8 y 3.0%, respectivamente). Las variables que predijeron estos malestares fueron la mala relación con la madre, los efectos perjudiciales del consumo de alcohol sobre la salud física y las actividades domésticas, la violencia de la pareja y la violencia sexual. Es necesario considerar estos resultados para propiciar acciones que reduzcan o eliminen la violencia de pareja, fomenten la adquisición de habilidades para el manejo de las consecuencias negativas de la violencia, así como implementar estrategias para reducir el daño ocasionado por el consumo de alcohol en este grupo poblacional en situación de vulnerabilidad.

Palabras clave: Depresión, riesgo suicida, trabajadoras sexuales, consumo de alcohol.

Translation of the original version published in spanish in: Salud Mental 2014, Vol. 37 Issue No. 4.

INTRODUCTION

Depression and suicide are among the main public mental health problems facing the population of Mexico. The National Survey of Psychiatric Epidemiology, which is carried out on the general population between 18 and 65 years of age, found a prevalence of depressive problems during a lifetime of 4.8% (2.6% in men and 6.8% in women).[1] It has been documented that for 2.0% of the population, these problems start in childhood or adolescence and no treatment is received, which is directly related to the problem of suicide.[2,3]

Suicide in Mexico is a phenomenon that has grown constantly in recent years. In 1990, 1,941 deaths by suicide were recorded (2.4 per 100 000 inhabitants). Some 284 of these were women (0.69 per 100 000. In 2012, this figure had risen to 5,550 (5 per 100 000 inhabitants), of which 1,077 were women (2 per 100 000). These figures place suicide within the 20 primary causes of death, and it is the third highest cause of accidental and violent deaths among women.[4] Given the scale of this phenomenon, it is necessary to study the behaviors included within the problem of suicide –ideation, planning, and intent–[5] and to deal with the intent, which is one of the primary risk factors for suicide being carried out.[6]

The interest in the study of different factors related with mental health in the population has been maintained in recent years; however, the evidence is still limited in terms

[1] Directorate of Epidemiological and Psychosocial Research, National Institute of Psychiatry Ramón de la Fuente Muñiz.

Correspondence: Alberto Jiménez Tapia. Directorate of Epidemiological and Psychosocial Research, National Institute of Psychiatry Ramón de la Fuente Muñiz. Calz. México-Xochimilco 101, San Lorenzo Huipulco, Tlapan, 14370 Mexico City. Tel: (55) 4160 - 5179. E-mail: alberj@imp.edu.mx

of hidden or vulnerable populations, as is the case with sex workers. Studies on sexual health, STIs, and HIV have been more frequent in these populations, and although there are fewer studies in relation to their mental health, information in the scientific literature shows that this group has a frequency of moderate or severe depression that is higher than women in the general population.[7]

Information available on the problem of suicide in sex workers is scarce, but it is known that the frequency of suicidal intent at some point in their lives is very elevated (53%)[8] and higher than the proportion among the general female population. It has also been seen that suicide is an important cause of death in this group (4.5%)[9] and that the problem of suicide is a phenomenon with a considerable presence; different studies have reported that ideation reaches 14% and intent oscillates between 8% and 19%.[10,11]

Different correlates associated with the presence of depression and suicide in women sex workers have been identified; these factors usually form part of the contexts in which they carry out their activities, and are occasionally inherent to themselves. Violent conditions are known to exist on the part of their partners and clients, as well as alcohol abuse, drug consumption, and reduced mental health, including low self-esteem, depressive problems, and anxiety.[10,11]

Sex work has a particular relevance and certain characteristics which make it a complex phenomenon. The study of certain mental health problems and their psychosocial determinants have only been approached in a limited way in women who carry out these activities. This work is presented as a contribution with the aim of exploring the psychosocial factors related to depression and the problem of suicide in a sample of sex workers from Hidalgo State, Mexico.

METHOD

A descriptive crosscutting study was carried out in Hidalgo State. The sample was non-probabilistic and included 103 sex workers. The selection criteria were that the participants carried out sex work, were aged between 18 and 65 years, and knew how to read and write.

Instrument

An expressly-designed instrument was used for this study in order to carry out semi-structured interviews based on 287 questions exploring different areas related to the health of this population. This work reported sociodemographic information as well as history of education, depression, risk of suicide, and alcohol consumption. The dependent variables were depression and risk of suicide, which were assessed using the MINI (International Neuropsychiatric Interview 5.0.0).[12]

Procedure

The field work was carried out in 2010 in a Health Jurisdiction in Hidalgo State, where the women attended a medical review in order for them to give permission and be able to work that weekend.

The interviews were carried out by a team of three psychologists previously trained in applying the instrument. It was applied face to face with an average duration of three hours in separate cubicles in order to maintain privacy during the interviews.

Ethical considerations

The Ethics Committee at the National Institute of Psychiatry Ramón de la Fuente Muñiz approved the project. The interviews were carried out with the informed consent of the women, and with clear knowledge of the objectives of the study, assuring the participants absolute confidentiality in the way the information would be managed. Participation was voluntary and the women were advised that they could withdraw from the study at any time they wished; there were no rejections.

Statistical analysis

A frequency analysis was carried out in order to describe the sociodemographic characteristics of the sample; scales were graded and the scores were coded in order to form groups that did and did not have depression (D) and suicide risk (SR), in accordance with MINI criteria. Finally, a tree analysis for automatic detection of interactions with the CHAID[13] technique was carried out for each condition with independent variables grouped into segments: family (the way they were raised and relationships with parents), partner (time with current partner, violence –emotional, physical, and sexual– and fear of partner), alcohol consumption (harmful effects and negative consequences), drug consumption over the past 12 months, sexual violence (abuse or rape at any time during their lives), sexual slavery, violence at work, and impulsivity.

RESULTS

The participants' ages ranged between 18 and 47 years. The majority of the participants (67%) were from various states within Mexico, including Hidalgo; 31% were from Mexico City, and 2% were from other countries. Some 70% of the sample had a middle/secondary level of education or lower. Around half of the women were married and the majority had been doing sex work for between one and five years. Some 80% of the women reported an elevated consumption of alcohol and half carried out their sex work in bars only (Table 1).

Table 1. Characteristics of sex workers in Hidalgo (n=103)

	%
Age (median=28.8, SD=6.7)	
• 18-24 years	31.1
• 25-34 years	48.5
• 35-44 years	17.5
• >45	2.9
Level of education	
• No education	1.0
• Elementary or lower	30.4
• Middle/secondary	39.2
• High school	21.6
• Incomplete degree	4.9
• Completed degree	2.9
Civil status	
• Single	49.0
• Married/common law marriage	28.0
• Divorced/separated	14.0
• Widowed	9.0
Time in sex work	
• <1 year	9.7
• 1-5 years	56.3
• >5 years	34.0
Alcohol consumption patterns	
• High	78.0
• Moderate	14.0
• Light	6.0
• Infrequent	2.0
Sex work and other activities*	
• Sex work in bars only	48.0
• Sex work on the street only	16.0
• Cleaning work	25.0
• Employed	14.0
• Other activities	9.0

* The categories are not mutually exclusive.

The classification of cases of depression and suicide risk showed that 40% of the women had problems with depression or a risk of suicide when considered independently, and 25% of the women in the sample presented both problems simultaneously (Table 2).

Table 2. Distribution of cases of depression and suicide risk in sex workers in Hidalgo (n=103)

Present conditions		F	%
Depression	Yes	41	39.8
	No	62	60.2
Suicide risk	Yes	40	38.8
	No	63	61.2
Both conditions present		26	25.2

Analysis of the decision trees generated different models with the two dependent variables: cases of depression –D– and cases of suicide risk –SR–.

Cases of depression

The model generated two segments in analysis of the area of family with regard to the relationship that the women had with their mothers. A bad or very bad mother-daughter relationship predicted 75% of the cases of depression, whereas when the relationship was good, it predicted 62% of the cases that did not have depression. Table 3 shows the percentages of correct prediction; in this case, the model had specificity of 70% and sensitivity of 67%.

In analyzing the area of partners, the model generated two final segments: emotional abuse by a partner at any time, which predicted 64% of cases of depression, and an absence of the same, which predicted 71% of cases without depression (specificity=34%, sensitivity=90%) (Table 3).

The model with sexual violence also generated two final segments that predicted the presence of depression in 74% of cases of depression when the women reported having been victims of sexual abuse at any time during their lives, and 51% of the cases without depression when they were not victims of sexual abuse (specificity=82%, sensitivity=40%) (Table 3).

The rest of the independent variables which were included in the analysis did not generate models of classification.

Risk of suicide

The resulting model generated two final segments with respect to the area of family; these predicated 56% of the cases of suicide risk when the relationship with the mother was bad or very bad, and 78% of those without suicide risk when the relationship was good or very good (specificity=63%, sensitivity=73%) (Table 4).

Table 3. Percentages of classification for cases and non-cases of depression in sex workers in Hidalgo (n=103)

	Predicted		
	No depression (%)	Depression (%)	Correct (%)
Family: Relationship with the mother			
No depression	31.0	13.0	70.5
Depression	19.0	39.0	67.2
Partner: Emotional abuse			
No depression	15.0	29.0	34.1
Depression	6.0	52.0	89.7
Sexual violence: Sexual abuse			
Sin depresión	37.0	8.0	82.2
Depresión	35.0	23.0	39.7

Table 4. Percentages of classification for cases and non-cases of suicide risk in sex workers in Hidalgo (n=103)

	Predicted		
	No suicide risk (%)	Suicide risk (%)	Correct (%)
Family: Relationship with the mother			
• No suicide risk	39.0	23.0	62.9
• Suicide risk	11.0	29.0	72.5
Partner: emotional abuse			
• No suicide risk	60.0	2.0	96.8
• Suicide risk	33.0	7.0	17.5
Alcohol consumption: harmful effects			
• No suicide risk	49.0	14.0	77.8
• Suicide risk	12.0	27.0	69.2
Sexual violence: Rape			
• No suicide risk	53.0	10.0	84.1
• Suicide risk	22.0	18.0	45.0

The partner model generated three final segments: the first predicted 91% of the women without suicide risk when they had not been emotionally abused by their partner; the other two segments predicted 78% of the cases with suicide risk when they had been emotionally and physically abused by their partner, and 57% without suicide risk when they received emotional but not physical abuse (Table 4) (specificity=97%, sensitivity=18%).

In terms of alcohol consumption, the model generated three final segments. The first predicted 67% of the cases with suicide risk when there were harmful effects on participants' health. The other two segments predicted 63% of the cases of suicide risk when there was a harmful effect on their paid work; however, where this was not the case, it predicted 80% of the cases without suicide risk (specificity=78%, sensitivity=69% (Table 4).

The model for sexual violence generated two final segments. The first predicted 64% of the cases with suicide risk when the sex workers had been raped at some time; and the second predicted 71% of the cases without suicide risk when they had not been raped (specificity=84%, sensitivity=45%) (Table 4).

DISCUSSION

The data from this work is relevant in approaching mental health problems that have been little researched in populations that are difficult to access such as female sex workers. The study of mental health in this group has hardly been approached globally, and in Mexico it is almost non-existent. One study that stands out is that of Ulibarri et al.,[14] carried out in 2010 on prostitutes in Tijuana and Ciudad Juárez, which describes the characteristics and prevalence of sexual and physical abuse and its association with symptoms of depression.

The present work explored the psychosocial correlates related with depression and suicide risk in a sample of 103 sex workers in Hidalgo State, Mexico. The frequency of depression was 39.8% which is much higher than that reported by the Survey of Psychiatric Epidemiology for the prevalence of any affective disorder, both in women in the general population (3.0%)[15] and overall in the general population.[16] The frequency of suicide risk –which includes suicidal ideation, planning, and intent– was 39%, which is also higher than women in the general population of Mexico, where the prevalence of suicidal ideation is 10.9%, planning was 1.5%, and intent was 1.0%.[17] These figures provide evidence that prevalence is not distributed randomly, but is instead concentrated in those with greater vulnerability.[18]

Further to the scale of the frequency of depression and suicide risk, it should be noted that the women from the sample were young adults with an average age of 29 years, who required mental healthcare. If they did not receive this in a timely manner, it would aggravate their problems and affect important areas of their lives such as family and work.[1]

Variables in the family environment that predicted the cases of depression and suicide risk were having a bad or very bad mother-daughter relationship in terms of lack of affection, communication, or interest in the daughter's activities and concerns, as well as lack of supervision or boundaries. These aspects, translated into child-raising practices like emotional rejection and negligence, are considered forms of family violence due to their consequences.[19]

Suffering emotional abuse from a partner also predicted depression and suicide risk; as such, violence is one of the correlates related to both forms of distress in these women. Violence perpetrated by a partner directly affects the depressive state and suicidal behavior which translates into a self-destructive way of coping with the suffering caused by the abuse.

The impact of violence on the mental health of sex workers, and women in general, is widely documented; one study observed that one in every five women who attended a healthcare center reported having experienced some type of violence on the part of their partner.[20]

Violence in the family setting, partner violence, and a history of sexual abuse which is generally carried out by family members or other people known to the participants, all take a severe toll on the mental health of the women in both the short and long term.

The high proportion of depression and suicide risk in the sex workers of this study coincides with that reported in another study on sex workers in Tijuana, which found that more than 80% presented elevated depressive symptomatology.[14] It also concurs with other studies that have documented higher frequencies of mental health problems among sex workers than women in the general population.[7,21]

With regard to suicide risk in particular, an important predictor was related to the negative consequences of alcohol

consumption on the home and on physical health. One of the WHO[22] proposals refers to the shared responsibility of alcoholic drinks producers and intermediaries –as in the case of most working activity taking place in bars– along with governments and the health sector to have strategies focused on damage limitation; in other words, reduction of the harmful consequences of alcohol consumption. To achieve this, it is necessary to translate the high costs to health into economic terms in order to make the authorities aware of the various sectors involved, including those who promote alcohol consumption in the working activities of sex workers: "only evidence of this negative economic impact will convince those managing the health and other sectors".[23]

Another predictor for suicide risk is related to sexual violence, specifically rape. Being a victim of rape refers to a physically and emotionally significant victimization, the consequence of which is suicidal ideation, planning, and/or intent as a self-destructive way of coping with the suffering caused by the rape and its moral and social implications.[20]

Joined together, the predictors of depression and suicide risk are identified in the compounding of family, partner, and working violence (under the pressure of drinking), and the results concur with those reported in other work.[10] The predictors identified are evidence of the need to treat mental health problems as a consequence of past and present victimization. In this sense, it is important to consider the results obtained with the aim of promoting actions to reduce or eliminate partner violence, strengthen the acquisition of skills to manage negative consequences of the past, and implement strategies to reduce the damage caused by alcohol consumption. This is the case given the characteristics of the sex workers' working environment, as "sex work is an extremely dangerous occupation and the use of damage limitation strategies can safeguard the lives of sex workers".[24]

The results of this work present a panorama of certain types of mental health distress in a highly-vulnerable population group. It contributes a background, setting out interesting questions about the impact that this can have on the general health and lives of sex workers,[25] as well as important challenges to deepen research into these subjects and develop interventions. However, there are also aspects of the work that could be improved, such as working with larger and more representative samples; it should be noted that when working with difficult-to-access populations, as in this case, there are adjacent circumstances which limit the work or the collection of data, such as managers of the establishments where they work, their partners, or their pimps limiting the women's time or censoring their activities. It is therefore important to embark on studies that consider this element in their design and planning, as well as other follow-up studies that allow for more conclusive evidence to be generated about the effect that these circumstances have on the women who face them.

ACKNOWLEDGEMENTS

The authors extend grateful thanks to Edith Rivera Guevara as statistical consultant for her faultless advice, and to the Program for Equality between Men and Women for granting financing for this work.

REFERENCES

1. Medina-Mora ME, Borges G, Lara C, Benjet C et al. Prevalencia de trastornos mentales y uso de servicios: resultados de la Encuesta Nacional de Epidemiología Psiquiátrica en México. Salud Mental 2003;26(4):1-16.
2. Benjet C, Borges G, Medina-Mora ME, Fleiz C et al. La depresión con inicio temprano: prevalencia, curso natural y latencia para buscar tratamiento. Salud Pública Mex 2004;46(5):417-424.
3. Opoliner A, Blacker D, Fitzmaurice G, Becker A. Challenges in assessing depressive symptoms in Fiji: A psychometric evaluation of the CES-D. Int J Soc Psychiatry 2013; publicado en línea. Access date: March 2014.
4. INEGI. Datos de mortalidad general, por tipo de defunción. México: 2012.
5. Carroll PW, Berman AL, Maris RW, Moscicki EK et al. Beyond the Tower of Babel: A nomenclature for suicidology. Suicide Life Threat Behav 1996;26(3):237-252.
6. Maris R W. Suicide. Lancet 2002;360(9329):319-326.
7. Surratt H, Weaver J, Inciardi J. The connections of mental health problems, violent life experiences, and the social milieu of the "stroll" with the HIV risk behaviors of female sex workers. J Psychol Hum Sexuality 2005;17:23-44.
8. Gilchrist G, Gruer L, Atkinson J. Comparison of drug use and psychiatric morbidity between prostitute and non-prostitute female drug users in Glasgow, Scotland. Addict Behav 2005;30:1019-1023.
9. Potterat J, Brewer D, Muth S, Rothenberg R et al. Mortality in a long-term open cohort of prostitute women. Am J Epidemiol 2004;159(8):778-785.
10. Hong Y, Li X, Fang X, Zhao R. Correlates of suicidal ieation and attempt among female sex workers in China. Health Care for Women International 2007;28:490-505.
11. Shahmanesh M, Wayal S, Cowan F, Mabey D et al. Suicidal behavior among female sex workers in Goa, India: The silent epidemic. Am J Public Health 2009;99(7):1239-1246.
12. International Neuropsychiatric Interview. MINI. Spanish version (Sudamérica y Centroamérica) 5.0.0. DSM-IV. 1998.
13. SPSS for Windows, version 19.0. Illinois: SPSS INC; 2010.
14. Ulibarri M, Hiller P, Lozada R, Rangel G et al. Prevalence and characteristics of abuse experiences and depression symptoms among injection drug-using female sex workers in Mexico. J Environ Public Health 2013;60(4):367-376.
15. Medina-Mora ME, Borges G, Benjet C, Lara MC et al. Estudio de los trastornos mentales en México: Resultados de la Encuesta Mundial de Salud Mental. In: Rodríguez JJ, Kohn R, Aguilar-Gaxiola S (eds.). Epidemiología de los trastornos mentales en América Latina y el Caribe. Washington, D.C.: Organización Panamericana de la Salud; 2009.
16. Belló M, Puentes E, Medina-Mora ME, Lozano R. Prevalence and diagnosis of depression in Mexico. Salud Pública Mex 2005;47(1):4-11.
17. Borges G, Medina-Mora ME, Orozco R, Ouéda C et al. Distribución y determinantes sociodemográficos de la conducta suicida en México. Salud Mental 2009;32(5):413-425.
18. Kessler R, Aguilar-Gaxiola S, Alonso J, Chatterji S. Special articles. The global burden of mental disorders: An update from the WHO World Mental Health (WMH) surveys. Epidemiologia Psichiatria Sociale 2009;18(1):23-33.
19. Torío S, Peña JV, Rodríguez MC. Estilos educativos parentales. Revisión bibliográfica y reformulación teórica. Teor Educ 2008;20:151-178.
20. Ramos L, Saltijeral MT, Romero M, Caballero MA et al. Violencia sexual y problemas asociados en una muestra de usuarias de un centro de salud. Salud Pública Mex 2001;43(3):182-191.

Translation of the original version published in spanish in: Salud Mental 2014, Vol. 37 Issue No. 4.

21. Gu J, Lau JTF, Chen H, Tsui H et al. Prevalence and factors related to syringe sharing behaviours among female injecting drug users who are also sex workers in China. Int J Drug Policy 2011;22(1):26-33.
22. World Health Organization (WHO)-Organización Panamericana de la Salud (OPS). Guía internacional para vigilar el consumo de alcohol y sus consecuencias sanitarias, Washington, DC: 2000.
23. Menéndez EL, di Pardo RB. Alcoholismo: políticas e incongruencias del sector salud en México. Desacatos 2006;20:29-52.
24. Rekart ML. Sex-work harm reduction. Lancet 2006;366(9503):2123-2134.
25. Rodríguez E, Ramos L, Fuentes de Iturbe P, Morón A et al. Violencia y salud mental. Resultados de un estudio realizado en trabajadoras sexuales. In: Rodríguez E, Fuentes de Iturbe P (eds.). Visibilizando las necesidades de salud mental de las trabajadoras sexuales. México: Instituto Nacional de Psiquiatría; 2013.

Declaration of conflict of interests: None

Translation of the original version published in spanish in:
Salud Mental 2014, Vol. 37 Issue No. 4.