Article

The Association of Demographic Factors Among Ex-Female Sex Workers and Non-Female Sex Workers in Ex-Localization Area

Katharina Merry Apriliani Angkawidjaja[1] (iD), Ardyan Wardhana[2] (iD), Anita Dahliana[3] (iD)

[1]Department of Psychiatry, Medical Faculty of Surabaya University, Surabaya, Indonesia

[2]Department of Anesthesiology, Medical Faculty of Surabaya University, Surabaya, Indonesia

[3]Department of Public Health, Medical Faculty of Surabaya University, Surabaya, East Java, Indonesia

Correspondence Author:
Email: merryapriliani@staff.ubaya.ac.id

Abstracts

Introductions: The localization of Female Sex Workers (FSW), one of the largest in Southeast Asia, has considerably reduced because of the government's actions since 2014. Minimal research reported on the association factor among ex-FSW and non-FSW. **Objectives:** This study aimed to determine the association of demographic factors among ex-FSW and non-FSW in the ex-localization area. Methods: This was a cross-sectional study to identify the association of demographic factors among ex-FSW and non-FSW in the ex-localization area in Surabaya, Indonesia. Seventy-five participants met inclusion criteria and were gathered at predetermined locations on December 10th, 2022, to complete demographic data. Also, they had completed Beck Depression Inventory (BDI) tests for screening the clinical depression assessment. Data analysis was performed using the SPSS 24 software. **Results:** The study determined associated factors within the ex-FSW ($p<0.05$) in terms of marital status (0.03), history of psychiatric disorders (0.01), and history of smoking (0.02). The clinical depression assessment was higher in the ex-FSW group (22.5%) than in the non-FSW group (11.43%). **Conclusions:** Based on the work history of FSWs and non-FSWs, it had been found associated in terms of marital status, history of psychiatric disorders, and smoking history. Also, the Clinical Depression occurred more in the ex-FSW than the non-CSW group.

Keywords: Clinical Depression Assessment, Demographic Factors, Female Sex Workers

Introductions

A localization of Female Sex Workers (FSW) was once one of the largest in Southeast Asia. However, this has considerably reduced because of the measures taken by the government since 2014. There was minimal research about demographic factors that might be associated with the history of ex-FSW and non-FSW. Also, the impact of those measures has not yet been reported, especially in depression disorders. Mental disorders in FSW have been reported to be approximately 63.2%. This includes mood disorder (41.5%), anxiety (34.2%), and post-traumatic stress disorder (21.2%) [1]. A study [2], reported the psychological health of FSWs became a significant health concern in many low- and middle-income countries. The risk factors include poverty, low education, violence, alcohol and drug use, human immunodeficiency virus (HIV), stigma and discrimination. Some studies [3], found that the risk factors for severe depression among ex-FSW included HIV infection, verbal harassment, and the aging process. On the other hand, ex-localization areas also encountered an economic impact after the shutdown [4]. Therefore, this study aimed to determine the association of demographic factors among ex-FSW in the ex-localization area.

Methods

The study was conducted in an ex-localization area within an Indonesian city. The region is famous as one of the largest sex worker-localization areas around Southeast Asia. The required ethical approval was obtained from the Medical Research Ethics Committee of the University of Surabaya, Surabaya City, East Java, Indonesia, number 151/ KE/X/2022. A purposive sampling method was employed in the study. This consisted of ex-FSW and adult women (non-FSW group) who lived in the ex-localization area. The information about this research was disseminated to the neighborhood/hamlet/urban village to collect the requisite data for this research. Village cadres questioned the individuals who met the inclusion criteria.

This cross-sectional study identified the association of demographic factors among ex-FSW and non-FSW in the ex-localization area. The inclusion criteria were women aged 18–65 still living in ex-localization areas. All individuals signed an informed consent. Women who disagreed or were unable to complete the psychometric test were excluded.

All participants were gathered on December 10th, 2022, at predetermined locations. Before the study, the participants received an oral explanation of the research procedure. Sociodemographic and health data, including age, marital status, last education, family status, history of psychiatric illness, history of family's psychiatric illness, occupation, income status, history of mental counseling, history of occupational FSW, and smoking status, were previously obtained. The participants completed the Beck Depression Inventory (BDI) tests. The BDI cut-off was ≥ 14 [5–7].

Continuous data were expressed as quantities, percentages, averages, and standard deviations. The primary result was the association between sociodemographic factors and history of last occupational (ex-FSW and non-FSW). The secondary result was the screening of clinical depression disorders among them. Data analysis was performed using the SPSS 24 software.

Results

Based on 76 participants, 1 participant dropped out. Altogether, 75 participants who met the inclusion criteria of this study were women who lived around the ex-localization area.

Based on demographic characteristics, the average age was 42.9 years old (ex-FSW group) and 44.3 years old (non-FSW group). Most participants were married (58.67%). The recent education status for most participants was not attending school/graduating elementary school (45.3%). Besides, most of the participants were firstborns (37.3%).

Also, most individuals had no previous history of psychiatric illness (72%), and none had a family history of psychiatric disorders (100%). Most participants have family incomes between 500,000–1,500,000 rupiahs monthly (48%). Several participants stated no previous history of mental health counseling (90.67%). Most of the participants had a history of smoking (72%). Of the 75 participants, the majority were ex-FSW (53.3%). The results for comparing the participants' demographic characteristics to the occupational history of FSWs and non-FSWs found associated in terms of marital status, history of psychiatric disorders, and smoking history **(Table 1)**.

Table 1. Baseline characteristics

Parameter		Former-sex workers (n=40) 53.3%	non-sex workers (n=35) 46.67%	p
Age in years (mean±SD)		42.9±8.2	44.3±14.0	0.61
Age first sex in years (mean±SD)		19.6±4.0	21.2±5.0	0.20
Marital status, *n* (%)	Single	5 (12.5)	2 (5.7)	**0.03**
	Still married (58.67%)	17 (42.5)	27 (77.1)	
	Divorced	5 (12.5)	2 (5.7)	
	Widow	13 (32.5)	4 (11.4)	
Last education, *n* (%)	No education/Elementary (45.3%)	20 (50)	14 (40.0)	0.48
	Junior High School	9 (22.5)	9 (25.7)	
	Senior High School	10 (25)	10 (28.6)	
	College/Diploma	0 (0)	2 (5.7)	
Family status, *n* (%)	First child (37.3%)	12 (30)	16 (45.7)	0.50
	Second child	14 (35)	10 (28.6)	
	Last Child	10 (25)	6 (17.1)	
	Single child	3 (7.5)	1 (2.9)	
	Orphans	1 (2.5)	0 (0)	
History of psychiatric illness, *n*(%)	None (72%)	26 (65)	28 (80.0)	**0.01**
	Depression	0 (0)	3 (8.6)	
	Anxiety	8 (20)	1 (2.9)	
Family history of psychiatric illness, *n*(%)	None (100%)	27 (67.5)	27 (77.1)	1.0
	Depression	0 (0)	0 (0)	
	Anxiety	0 (0)	0 (0)	
Income status (in Rupiahs), *n* (%)	**< 500,000**	**12 (30)**	**6 (17.1)**	**0.37**
	500,000-1,500,000 (48%)	18 (45)	18 (51.4)	
	1,500,000-3,500,000	5 (12.5)	2 (5.7)	
	> 3,500,000	0 (0)	1 (2.9)	
Previous history of mental counseling, *n*(%)	Ever	3 (7.5)	2 (5.7)	0.60
	Never (90.67%)	37 (92.5)	31 (88.6)	
Smoking history	Active smoker	10(25)	0 (0)	**0.02**

n(%)	Former smoker		6 (15)	3 (8.6)
	Not smoker	(72%)	24 (60)	30 (85.7)
Duration of becoming a sex worker in years (mean±SD)			6.8±4.7	
Duration of non-active as a sex worker in years (mean±SD)			13.3±8.9	

Meanwhile, for other demographic characteristics, there were no significant results (p>0.05) for the work history of FSWs and non-FSWs. For marital status, it was found to be associated at 0.03 (p <0.05), and for history of psychiatric disorders, it was also associated at 0.01 (p <0.05). For the history of smoking, it had an association at 0.02 (p<0.05).

From Table 2, the comparison of the Clinical Depression Assessment of the work history of FSWs and non-FSWs was determined to obtain a comprehensive picture. The percentage of Depression was higher in the ex-FSW group (22.5%) than in the non-FSW group (11.43%) compared to the total population in each group.

Table 2. Comparison of Clinical Depression Assessment with Last Occupational History of ex-FSWs and non-FSWs

		History of Last Occupational			
		ex-FSW (n=40)		non-FSW (n=35)	
Clinical Depression Assessment	Yes	9	22.5%	4	11.43%
	No	31	77.5%	28	80 %
	incomplete data	0		3	8.57%

Discussions

The marital status was associated with previous work history (FSWs and non-FSWs). This is a novel finding of this study.

The history of psychiatric illness significantly correlated to previous employment history (FSWs and non-FSWs). These results are similar to previous research that obtained a history of dissociative disorders and mental disorders related to a history of childhood physical, emotional, or sexual abuse [8, 9]. Sexual harassment has been reported to reduce adolescents' self-esteem toward their bodies. The choice of being a sex worker is a way adopted by adolescents to reduce anxiety due to sexual harassment as a form of self-harm.

The smoking status correlated significantly with previous employment history (FSWs and non-FSWs). These results are in line with those of previous studies [10, 11] conducted outside Indonesia.

In this study, clinical depression was higher in the ex-FSW group than in the non-FSW group. The results are consistent with previous studies [3], [11–13]. The average of become FSW for about 6.8 years and become non-active FSW for about 13.3 years. These might lead to depression disorders, based on the significant income decrease that disturbs economic stability.

However, these results still have a large bias value because the average educational level of the research participants were non-graduates from elementary school (48.6%). Thus, there is great potential for misunderstanding different psychometric questionnaire (BDI) questions. Also, there is the possibility of social stigma related to mental health among women around the ex-localization area. Par-

ticipants must complete the psychometric tests after improving from the actual situation [12], [14–16].

Major depression was significantly associated with a lack of individual autonomy, police arrest, experience of physical violence, alcohol use, sexual behavior (mobility for sex workers and consistent use of condoms with clients), sexual health (positive HIV status and experience with sexually transmitted infections), weak social support (not living with family members), financial problems, sexual partner violence, stigma in society, lack of social support, and alcohol use. Other studies have reported the failure of feelings of love that are important in triggering depression. It is also a risk factor for suicidal thoughts [16-19]. The ex-FSW constitute a socially marginalized group, and stigma is a major barrier to seeking health services and social benefits [2, 15, 20]. Major depression is especially prevalent among sex workers who are socially, emotionally, economically, physically, and psychologically deprived.

Conclusions

In conclusion, the association of the demographic factors from participants with the occupational history of FSWs and non-FSWs determined the significant indicators in terms of marital status, history of psychiatric disorders, and history of smoking. Also, depression occurred higher in the ex-FSW group than in the non-CSW group, compared to the total participants in each group. However, this result plays a vital role for more specific future research based on the association of demographic factors that lead to becoming FSW. Also, depression intervention is needed, especially among this special population.

The limitation of the study was we did not evaluate the etiological factors of depression. Also, we did not accompany the participants, one by one, in filling out the psychometric test, so it might have led them to a large misunderstanding.

Conflict of Interests
The authors declare that the research was conducted without commercial or financial relationships that could be considered a potential conflict of interest.

References
[1] A. J. Ferrari et al., "Global variation in the prevalence and incidence of major depressive disorder: a systematic review of the epidemiological literature.," Psychol. Med., vol. 43, no. 3, pp. 471–481, Mar. 2013, doi: 10.1017/S0033291712001511.

[2] T. S. Beattie, B. Smilenova, S. Krishnaratne, and A. Mazzuca, "Mental health problems among female sex workers in low- and middle-income countries: A systematic review and meta-analysis.," PLoS Med., vol. 17, no. 9, p. e1003297, Sep. 2020, doi: 10.1371/journal.pmed.1003297.

[3] S. Ouma, N. M. Tumwesigye, R. Ndejjo, and C. Abbo, "Prevalence and factors associated with major depression among female sex workers in post-conflict Gulu district: a cross-sectional study.," BMC Public Health, vol. 21, no. 1, p. 1134, Jun. 2021, doi: 10.1186/s12889-021-11207-8.

[4] Natrya NadiBumi, "Haruskah Dolly Ditutup?," 2017. https://www.kompasiana.com/natryanadibumi/5a32c004cf01b-46fa0550603/haruskah-dolly-ditut-up?page=3&page_images=1

[5] W. A. Groth-Marnat G, Handbook of Psychological Assessment, 6th ed. USA: Wiley Online Library, 2016.

[6] A. T. Beck, R. A. Steer, and M. G. Carbin, "Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation," Clin. Psychol. Rev., vol. 8,

no. 1, pp. 77–100, 1988, doi: https://doi.org/10.1016/0272-7358(88)90050-5.

[7] C. E. Carney, T. G. Moss, A. L. Harris, J. D. Edinger, and A. D. Krystal, "Should we be anxious when assessing anxiety using the Beck Anxiety Inventory in clinical insomnia patients?," J. Psychiatr. Res., vol. 45, no. 9, pp. 1243–1249, Sep. 2011, doi: 10.1016/j.jpsychires.2011.03.011.

[8] F. Svensson, C. Fredlund, C. G. Svedin, G. Priebe, and M. Wadsby, "Adolescents selling sex: exposure to abuse, mental health, self-harm behaviour and the need for help and support--a study of a Swedish national sample.," Nord. J. Psychiatry, vol. 67, no. 2, pp. 81–88, Apr. 2013, doi: 10.3109/08039488.2012.679968.

[9] S. Tschoeke, R. Borbé, T. Steinert, and D. Bichescu-Burian, "A Systematic Review of Dissociation in Female Sex Workers.," J. trauma dissociation Off. J. Int. Soc. Study Dissociation, vol. 20, no. 2, pp. 242–257, 2019, doi: 10.1080/15299732.2019.1572044.

[10] L. L. Devóglio, J. E. Corrente, M. H. Borgato, and I. de Godoy, "Smoking among female sex workers: prevalence and associated variables.," J. Bras. Pneumol. publicacao Of. da Soc. Bras. Pneumol. e Tisilogia, vol. 43, no. 1, pp. 6–13, 2017, doi: 10.1590/S1806-37562016000000162.

[11] S. J. Semple et al., "Maternal role strain and depressive symptoms among female sex workers in Mexico: the moderating role of sex work venue.," Women Health, vol. 60, no. 3, pp. 284–299, Mar. 2020, doi: 10.1080/03630242.2019.1626792.

[12] C. T. Rael and A. Davis, "Depression and key associated factors in female sex workers and women living with HIV/AIDS in the Dominican Republic.," Int. J. STD AIDS, vol. 28, no. 5, pp. 433–440, Apr. 2017, doi: 10.1177/0956462416651374.

[13] A. Abelson et al., "Lifetime experiences of gender-based violence, depression and condom use among female sex workers in Cameroon.," Int. J. Soc. Psychiatry, vol. 65, no. 6, pp. 445–457, Sep. 2019, doi: 10.1177/0020764019858646.

[14] J. Gu et al., "Socio-ecological factors associated with depression, suicidal ideation and suicidal attempt among female injection drug users who are sex workers in China.," Drug Alcohol Depend., vol. 144, pp. 102–110, Nov. 2014, doi: 10.1016/j.drugalcdep.2014.08.011.

[15] M. A. Stockton et al., "Associations among experienced and internalized stigma, social support, and depression among male and female sex workers in Kenya.," Int. J. Public Health, vol. 65, no. 6, pp. 791–799, Jul. 2020, doi: 10.1007/s00038-020-01370-x.

[16] F. Ranjbar et al., "Mental health status among female sex workers in Tabriz, Iran.," Arch. Womens. Ment. Health, vol. 22, no. 3, pp. 391–397, Jun. 2019, doi: 10.1007/s00737-018-0907-1.

[17] S. K. Patel, N. Saggurti, S. Pachauri, and P. Prabhakar, "Correlates of Mental Depression Among Female Sex Workers in Southern India.," Asia-Pacific J. public Heal., vol. 27, no. 8, pp. 809–819, Nov. 2015, doi: 10.1177/1010539515601480.

[18] H. Chen, X. Li, B. Li, and A. Huang, "Negative trust and depression among female sex workers in Western China: The mediating role of thwarted belongingness.," Psychiatry Res., vol. 256, pp. 448–452, Oct. 2017, doi: 10.1016/j.psychres.2017.06.031.

[19] M. A. Rosenthal et al., "A Prospective Study of Depressive Symptoms, Condomless Sex, and HIV Viral Load in HIV-Positive Female Sex Workers in Kenya.," AIDS Behav., vol. 25, no. 10, pp. 3047–3056, Oct. 2021, doi: 10.1007/s10461-021-03258-0.

[20] B. S. West et al., "Typologies and Correlates of Police Violence Against Female Sex Workers Who Inject Drugs at the México-United States Border: Limits of De Jure Decriminalization in Advancing Health and Human Rights.," J. Interpers. Violence, vol. 37, no. 11–12, pp. NP8297–NP8324, Jun. 2022, doi: 10.1177/0886260520975820.

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EDITORIAL NOTED

Mental health is a very important aspect which could not be separated from human life. The World Health Organization in its constitution defines health as a state of physical, mental, and social well-being, and not merely the absence of disease or disability. Mental health is a holistic part of health that is often neglected when physicians treat their patients. Therefore, an understanding of psychiatry is very important for practitioners and should not be forgotten. The Surabaya Psychiatry Journal or Jurnal Psikiatri Surabaya (JPS) presents aspects of Mental Health, Neuroscience, and Psychiatry that could contribute to the advancement of medical science, both theoretically and practically. This journal is packed with various cases, reviews, and research progress in the field of psychiatry which also involves cross-disciplinary authors/researchers. We hope that this journal will be able to fulfill the achievement of Sustainable Development Goals (SDGs) by improving people's mental health in the future.

best Regards,

EDITORIAL TEAM OF JPS

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