Original Research

The Comparison of Anxiety Disorder Among Ex-Female Sex Workers and Non-Female Sex Workers in The Ex-localization Area

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Abstract—Indonesian localization of Female Sex Workers (FSW) was one of the largest in Southeast Asia, which has been taken by the government since 2014. The impact of mental health disorders has not yet been reported. This study aimed to compare the anxiety disorder among ex-FSW and non-FSW. This was a study to compare the prevalence of anxiety disorders among ex-FSW compared to non-FSW, located in ex-localization in Surabaya, Indonesia. Seventy-five participants met inclusion criteria and were gathered on December 10th, 2022 to complete Beck Anxiety Inventory (BAI) tests. The results showed that 16,67% of participants (*n*=12) were found with clinical anxiety scores. Among them, 41,67% ex-FSW (*n*=5) and 58,33% non-FSW (*n*=7). The prevalence of anxiety disorder, also the total BAI score, compared to the work history of FSWs and non-FSWs were found not associated (*p*>0.05). The anxiety disorder was found higher in the non-FSW group than ex-FSW group. But there was no difference found in the prevalence of anxiety and the BAI score between ex-FSW and non-FSW.

Keywords: anxiety disorder, female sex workers, mental disorders

Abstrak—Eks-lokalisasi Pekerja Seks Komersial (PSK) di Indonesia adalah salah satu yang terbesar di Asia Tenggara, yang ditutup pemerintah di tahun 2014. Dampaknya pada kesehatan mental belum pernah dilaporkan. Penelitian ini bertujuan untuk membandingkan gangguan cemas diantara mantan PSK dan non-PSK. Penelitian ini adalah studi untuk membandingkan prevalensi gangguan cemas diantara mantan PSK dan non-PSK sekitar eks-lokalisasi di Surabaya, Indonesia. Didapatkan 75 partisipan yang memenuhi kriteria inklusi, mereka dikumpulkan pada 10 Desember 2022 untuk mengisi tes Beck Anxiety Inventory (BAI). Hasil penelitian menunjukkan bahwa 16,67% partisipan (*n*=12) didapatkan hasil positif untuk skor kecemasan, di antaranya, 41,67% mantan PSK (*n*=5) dan 58,33% non-PSK (*n*=7). Prevalensi kecemasan serta total skor BAI tidak berhubungan dengan riwayat pekerjaan mantan PSK dan non-PSK. Gangguan kecemasan ditemukan lebih tinggi pada non-PSK dibandingkan mantan-PSK. Namun, tidak ditemukan perbedaan prevalensi kecemasan dan skor BAI diantara mantan PSK dan non-PSK.

Kata kunci: gangguan cemas, gangguan mental, wanita pekerja seks komersial

INTRODUCTION

The localization of Female Sex Workers (FSW) in Indonesia was one of the largest in Southeast Asia. Since 2014, this localization has been taken by the government. The impact of this has not been reported yet, especially in mental health disorders. The occurrence of mental disorders in FSW has been reported to be approximately 63.2%, including mood disorder (41.5%), anxiety (34.2%), and post-traumatic stress disorder (21.2%) [1–3]. Anxiety disorder is one of the most common mental health problems found in FSW [4]. This is based on many psychodynamic's risk factors among ex-FSW. Some studies reported the risk factors for anxiety among ex-FSW included childhood sexual abuse, childhood physical abuse, poverty, interpersonal violence in adulthood, Sexually Transmitted Diseases (STD), and substance use [5]. Some studies reported that there is an association between previous history of mental disorder (especially in childhood) and a history of employment as an FSW [6,7].

On the other hand, the prevalence of anxiety disorder among women non-FSW living in ex-localization has not been reported. This population might be at high risk of anxiety because of many psychosocial factors. The negative stigma of living together around ex-FSW might give a negative impact on their family. The wives might have frightened if their husbands

start or ever play with prostitutes. Then, they will continue to transmit venereal diseases to them at home, that they got from prostitutes. Children might also see bad significant figures based on what they see every day, from the prostitutes' occupations. All these problems might lead the women living there, also, be at high risk of anxiety disorder.

On the other hand, ex-localization areas also encountered an economic impact after the shutdown [8]. Some people took advantage to support their economy by selling there. When the localization still opened, they got additional income by selling around the ex-localization. After it was taken and closed by the government, they lost one of the supports of their economy. This might lead them to an anxiety state that tends to be an anxiety disorder.

Therefore, this study aimed to compare anxiety disorder among ex-FSW and non-FSW in the ex-localization area.

METHODS

This study was conducted in an ex-localization area of Surabaya City. The area is famous as one of the largest sex worker-localization areas around Southeast Asia. The ethical approval was obtained from the Medical Research Ethics Committee of the University of Surabaya, Surabaya City, East Java, Indonesia (number 151A/KE/X/2022). A purposive sampling method was employed in this study, which consisted of ex-FSW and non-FSW, who still lived around 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. The individuals who met the inclusion criteria, including adult women living nearby, were invited to participate in the study.

This was a cross-sectional study to identify the incidence of anxiety disorders in ex-FSW and adult women in the ex-localization area. The inclusion criteria were women aged 18–65 years who were 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. After the participants received an oral explanation of the procedure, they filled in the sociodemographic data and continue to complete the Beck Anxiety Inventory (BAI) tests. The BAI cut-off was ≥16 [9–13].

Data were expressed as quantities and percentages, mean, and standard deviations. The primary result was the association between sociodemographic status and history of occupational FSW. The secondary result was the prevalence of anxiety disorders among ex-FSW. Wilcoxon signed-rank tests were used to analyze continuous data, including ages, duration become a sex worker and ex-sex worker, also BAI scores. Chi-square tests were used to analyze the others as categorical data. Data analysis was performed using the SPSS 24 software.

RESULTS

The study took place on December 2022. All participants were gathered 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, income status, history of mental counseling, history of occupational FSW, smoking status, and history of drugs/alcohol, were previously obtained. Finally, the participants completed the BAI tests.

Based on demographic characteristics (see Appendix **Table 1**), the average age was 42 years in the ex-FSW group and 44 years in the non-FSW group. Most participants were married (58.67%). The recent education status for the majority of the participants was not attending school/graduating elementary school (45.3%). Most of the participants were first-child (37.3%). Also, the majority of the individuals had no previous history of psychiatric illness (72%), and none had a family history of psychiatric disorders (72%). Most of the participants

have family incomes between 500,000–1,500,000 rupiahs in a month (48%). Most participants stated that there was no previous history of mental health counseling (90.67%) and most of the participants had no history of smoking (72%).

Based on 76 participants who met inclusion criteria, 1 participant was excluded. Altogether, 75 participants who met the inclusion criteria of this study were women who lived around the ex-localization area. Of the 75 participants, the majority about 53.3% were ex-FSW (*n*=40).

Of the 75 participants included, 12 participants (16% of total participants) were found with clinically significant anxiety disorder, consisting of 5 participants (12.5%) in the ex-FSWs group and 7 participants in the non-FSWs group (20%). These results were not associated compared to the work history of FSWs and non-FSWs (see Appendix **Table 2**).

Based on **Table 2**, the comparison of the total BAI score to the work history of FSWs and non-FSWs was determined to obtain a comprehensive picture. However, no difference in the prevalence of anxiety was found between the two groups (*p*= 0.35). The BAI score was also not different (*p*= 0.79).

DISCUSSION

In this study, the anxiety score was no different from the employment history of FSWs and non-FSWs and also did not correlate with the total BAI score. The results are different from previous studies [2,4,14–17]. However, these results might report no difference because they have a large bias value due to the average educational level of the research participants being non-graduates from elementary school (48.6%). Thus, there is great potential for misunderstanding different questions in the psychometric questionnaire (BAI). This was evident when one subject did not fill in the details as they did not have any complaints that led to anxiety as included in the BAI screening.

Anxiety is some alerting signal, as a response to a threat something unknown, internal, vague, or conflictual [18]. Anxiety appears even though there is no real object in front. Some people become anxious when threatened by loss of love, position, wealth, or safety [19]. The participants of this study, especially the non-FSWs group, reported higher than the ex-FSWs group in terms of the prevalence of anxiety disorder. That was because they were threatened by safety and health. The women living there (non-FSW) might be anxious to think that their husband could play with another woman (ex-FSW) who living around then go home and transmit venereal disease sexually. They also have anxiety about the mental health of their children who might be imitating what they saw around from ex-FSWs behavior.

This study also reported anxiety disorder among the ex-FSWs group. This group has an anxious state because of many psychosocial risk factors that lead them to anxiety disorder. Some journals [4] also reported that anxiety about FSW was significantly associated with a lack of access to health services, work-related stigma, illegal status, and higher rates of workplace violence among FSWs. In several countries where sex work is illegal may lead FSWs to be exposed to many types of violence, social and cultural stigma. Also, there was a highly consistent presence of perpetuating interpersonal trauma, including the history of childhood physical, emotional, psychological, and sexual violence sexual abuse, and physical assault, which have significant correlation with diagnosis of PTSD. Some FSWs experienced childhood neglect that influenced their personality development. They have a desire to protest against any demand and all those circumstances placed them in a state of continuous anxiety. Finally, sex work is a method used to escape their long-lasting anxiety [4]. Because of a lack of access to health services, they might have had no reported history of psychiatric illness before. In simple terms, their anxiety disorder might never have been reported.

A score of 0 (zero) from the BAI is interesting because it reflects the possibility of social stigma related to mental health that is still bad among women around the ex-localization area. This is related to some studies [4,15,20–23] which reported that sex workers are frequently faced with the unacceptable, inappropriate or completely threatening situation due to

stigmatizing perspectives negatively influencing their job environment, interactions, and health. Cultural factors could influence and affect the reporting of mental health problems. They experience several forms of stigma such as disrespect, devaluation, and even violence.

However, the limitations of this study were the inclusion criteria that gave a wide range of ages. Also, the participants' lack of educational background might lead to misunderstandings in fulfilling the BAI test. They might have negative stigmatization in mental health assessment so that led them to faking good their BAI test. More research will be needed to overcome this limitation.

CONCLUSION

The prevalence of anxiety disorder is higher in the non-FSW group than in the ex-FSW group. But, the comparison of the total BAI score showed no association with the work history of FSWs and non-FSWs. However, this result might play an important role in mental health prevention among non-FSW, also the mental health promotion of negative stigmatization among ex-FSW. The suggestion in Trauma-based support services and cultural factors may be the strategies to promote mental health treatment among this vulnerable population.

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Appendix

Table 1
Baseline Characteristics

Parameter			ex- FSW		non-FSW	
			n=40	53.3%	n=35	46.67%
Age in years (mean±SD)			42.9±8.2		44.3±14.0	
Age first sex in years (mean±SD)			19.6±4.0		21.2±5.0	
Marital status	Single		5	12.5	2	5.7
	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	No education/Elementary	(45.3%)	20	50	14	40
	Junior High School		9	22.5	9	25.7
	Senior High School		10	25	10	28.6
	College/Diploma		0	0	2	5.7
	no fill		1	2.5	0	0
Family status	First child	(37.3%)	12	30	16	45.7
	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
	no fill		0	0	2	5.7
History of psychiatric illness	None	(72%)	26	65	28	80
	Depression		0	0	3	8.6
	Anxiety		8	20	1	2.9
	no fill		6	15	3	8.6
Family history of psychiatric illness	None	(72%)	27	67.5	27	77.1
	Depression		0	0	0	0
	Anxiety		0	0	0	0
	no fill		13	32.5	8	22.9
Income status (in Rupiahs)	< 500,000		12	30	6	17.1
	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
	no fill		5	12.5	8	22.9
Previous history of mental counseling	Ever		3	7.5	2	5.7
	Never	(90.67%)	37	92.5	31	88.6
	no fill		0	0	2	5.7
Smoking history	Active smoker		10	25	0	0
	Former smoker		6	15	3	8.6
	Not smokers (72%)		24	60	30	85.7
	no fill		0	0	2	5.7
Duration become 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			

Tables 2

Anxiety Screening Results

	History Becoming A Sex Worker				*p*
	Yes		No		
	n=40	100%	*n*=35	100%	
Anxiety	5	12.5%	7	20%	0.35
Not Anxiety	34	85%	25	71.43%	
no fill	1	2.5%	3	8.57%	
BAI score	9.3±11.1		8.7±9.8		0.79