

# Female Sexual Dysfunction in Housewives, Teachers, and Nurses of Productive Age in Indonesia

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**Abstract:** *Background:* Demographic factors (i.e. employment) can be risk factors for female sexual dysfunction, while impaired sexual function can affect self-esteem and interpersonal relationships, so that sexual function may be influenced by the type of work a woman does. *Objective:* This study was intended to assess the comparison of sexual dysfunction in married women of reproductive age who have different careers. *Materials and Methods:* There were 214 respondents who met the inclusion criteria, 75 unemployed housewives, 68 teachers, and 71 nurses. Respondents' sexual function was measured using the FSFI questionnaire developed by Rosen *et al.*, in 2000, which consisted of 19 questions covering six domains of sexual function, namely desire, arousal, lubrication, orgasm, satisfaction, and pain. *Results:* The mean total FSFI scores of housewives, teachers, and nurses were 25.88, 25.15, and 25.14, respectively. All housewives (100%), 66.2% of teachers, and 81.7% of nurses experienced desire disorders. Arousal disorders were experienced by 81.3% of housewives, 83.1% of teachers, and 66.2% of nurses. Housewives, teachers, and nurses with vaginal lubrication disorders were 61.3%, 86.2%, and 66.2%, respectively. There were 40% of teachers, 53.8% of teachers, and 54.9% of nurses who failed to achieve orgasm. The levels of satisfaction felt by housewives, teachers, and nurses in sexual intercourse were 88.0%, 44.7%, and 57.7%, respectively. Meanwhile, vaginal pain was felt by 48% of housewives, 53.8% of teachers, and 66.2% of nurses. *Conclusion:* Differences in careers of married women of reproductive age do not significantly differentiate the sexual dysfunction they suffer from.

**Keywords:** Women Career, Female Sexual Function, Women of Reproductive Age.

## 1. INTRODUCTION

Female sexual dysfunction (FSD) is a complex medical issue consists of both biological problems—such as such as side effects of medications and gynecological diseases, and psychological conditions—such as the patient's social life context [1]. Impaired sexual function can affect quality of life in women that potential to have damaging effects on the self-esteem, sense of self-integrity and interpersonal relationships of women [2]. There are five common signs that a woman is suffering from sexual dysfunction, namely low sexual desire, difficulty getting sexually aroused, vaginal dryness before and during intercourse, difficulty achieving orgasm, and vaginal pain during sex [3-4].

There are several factors that cause sexual dysfunction in women, namely aging, hormonal disorders, neurogenic diseases, vascular diseases, ovarian cancer management, and get medical surgery. Aging factors are generally associated with menopause. Hormonal disorders can include low levels of the estrogen and testosterone. Neurogenic diseases are central or peripheral nervous system and spinal cord injury. Examples of vascular diseases are diabetes, hypertension, and hyperlipidemia. Ovarian cancer management are oophorectomy and adjuvant chemotherapy. The medical surgery is simple hysterectomy, radical cystectomy, rectal cancer surgeries [5-6].

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Apart from the causal factors above, there are also several risk factors for FSD, namely: demographic, health and wellbeing, obstetrics and gynecology (ob-gyn), partner, and sexual life. The demographic factors include level of education, level of income, unemployment, unemployment of partner, low social status, residence. The health and well-being factors can consist of poor physical health, chronic illness, heart disease, obesity, depression, anxiety, taking antidepressants, dieting, alcohol, smoking, sleeping problems, or poor social relationships. The examples of ob-gyn factors are high number of births and pregnant, use of contraceptive, abnormal menstrual pattern, female genital mutilation, difficult delivery, endometriosis, pelvic inflammatory disease, and sexually transmitted infections. The partner factors include poor partner health, partner smokes, older partner, arranged marriage, polygamous relationship, or living separately from partner. Another risk factor is sexual life which includes no/too little foreplay, no genital contact without intercourse, masturbation, bisexual or homosexual preferences, and dissatisfaction with partner's penis size [7-8].

All of these risk factors can determine the prevalence of sexual function in women, but the exact prevalence of FSD in the world is unknown. Rosen (2000) mentioned the prevalence of FSD as 43%, Simons & Carey (2001) found a prevalence of 46%, while from Brazil Valadares *et al.* (2008) found a prevalence of 35.9% [9-11]. In Indonesia, the prevalence of FSD is outside the figures reported above. Gede Kayika (2016) obtained the prevalence of FSD in Indonesian women aged 26-30 years was 15.2% [12]. Meanwhile, Pasaribu *et al.* (2023) obtained the prevalence rate for women over 45 years of age was 62% [13].

Given that demographic factors (i.e. employment) can be risk factors for female sexual dysfunction, while impaired sexual function can affect self-esteem and interpersonal relationships, the question is whether women's career type is related to their sexual function. To answer this question, we conducted a survey of Indonesian married women of productive age with a different type of careers: non-working housewife, teachers, and nurses. In Indonesia, teachers and nurses are the types of careers most often pursued by women the percentage of female teachers is 61% (from a total of 2,946,695) while female nurses reach 70% (from a total of 582.023) compared to men in the two careers [14-15].

## 2. MATERIALS AND METHODS

### 2.1 Study Setting

This study was conducted from May 2023 to March 2024 in Bandar Lampung City, the capital of Lampung Province, one of the provinces in Indonesia. This cross-sectional designed study has received approval from the Ethics Commission of the Faculty of Medicine, University of Lampung. The selection and determination of participants in this study used purposive sampling techniques, to find women who met the inclusive criteria.

### 2.2 Participants

The women who participated in this study were divided into three groups, namely unemployed housewives, teachers, and nurses. The inclusive criteria for the three participant groups were living and/or working in Bandar Lampung City, married (having a husband), of reproductive age (15 - 49 years), and willing to be interviewed and fill out the female FSFI (female sexual function index) questionnaire. The reproductive age range of 15-49 years refers to the reproductive age used by WHO [16-17]. The attributes and characteristics of the research participants recorded were age, education level, body mass index (BMI), parity, contraception used, and income.

### 2.3 Procedures

The study was conducted by visiting the homes, schools, health centers and/or hospitals where participants live or work. Researchers interviewed participants about their attributes and their willingness to fill out the FSFI questionnaire. The FSFI questionnaire used is a questionnaire developed by Rosen *et al.* in 2000 which consists of six domains (desire, arousal, lubrication, orgasm, satisfaction, and pain) with a total of 19 questions [18].

### 2.4 Statistical Analysis

In analysing data, the SPSS version 26 (SPSS Inc., Chicago, IL, USA) was used. Participant attribute and characteristic data were processed using Pearson's Chi square descriptive statistics. Pearson's Chi square analysis was also used to see the degree of quality of sexual function of three groups of participants according to their sexual function domains. Furthermore, to compare the average total score of FSFI and the total score of each domain of sexual function of participants according to their careers, One Way ANOVA analysis was used. Pearson correlation analysis was used to determine the relationship between general participant characteristics and their sexual function scores. Pearson correlation was also applied to determine the relationship between the characteristics of each group of participants and their sexual function. A *P*-value <0.05 was set as the cut-off to conclude statistical significance in the analysis.

## 3. RESULTS

### 3.1 Attribute and Characteristic of Participant

Data on the number of unemployed housewives, teachers, and female nurses participating in the study based on their demographic and biological attributes and characteristics are presented in Table 1. Age range, BMI, and type of

contraception used in the three groups of women did not differ significantly. Although the cross-tabulation data on age did not differ significantly, the number of unemployed housewives aged <25 years appeared to be higher than teachers and nurses. Differences in respondent characteristics are evident in terms of education level, parity, and income. The majority of respondents (85,3% of unemployed housewife, 94,1% of teacher, and 93,0% of nurses) have normal BMI. All respondent use contraceptive methods, only 9,3% of unemployed housewife, 8,8% of teachers, and 8.5% of nurses that do not use any type of contraceptive.

In terms of parity, all groups of participants have children, where 65.3% of housewives, 81.9% of teachers, and 87.3% of nurses have 1-3 children. Respondents who have four or more children are dominated by unemployed housewives (34.7%), while teachers and nurses with more than four children are only 19.1% and 12.7% respectively. The majority of teachers (92.6%) and nurses (91.5%) have a higher level of education (university graduates), while only 44% of housewives have a higher education, while the rest (56%) have a lower secondary education. The income levels of the three groups of respondents also differ significantly. The majority of teachers (54.4%) and nurses (62.0%) earn more than IDR 5 million per month, while unemployed housewives who earn more than IDR 5 million are only 29.3%. Unemployed housewives earning less than IDR 3 million account for 29.3%, while teachers and nurses earning that amount are only 14.7% and 9.9% respectively.

**Table 1: Attributes and characteristic of respondent**

Variables	Housewife	Teacher	Nurse	Sig. (p)
<b>Total (n)</b>	<b>75</b>	<b>68</b>	<b>71</b>	
<b>Age (years)</b>				
≤25 n (%)	10 <sup>a</sup> (13.3)	1 <sup>b</sup> (1.5)	4 <sup>a,b</sup> (5.6)	.128
26-35 n (%)	24 <sup>a</sup> (32.0)	24 <sup>a</sup> (35.3)	29 <sup>a</sup> (40.8)	
36-45 n (%)	37 <sup>a</sup> (49.3)	39 <sup>a</sup> (57.4)	32 <sup>a</sup> (45.1)	
≥46 n (%)	4 <sup>a</sup> (5.3)	4 <sup>a</sup> (5.9)	6 <sup>a</sup> (8.5)	
<b>BMI</b>				
<18.5 (Underweight) n (%)	11 <sup>a</sup> (14.7)	3 <sup>a</sup> (4.4)	5 <sup>a</sup> (7.0)	0.129
18.5-24.9 (Normal) n (%)	64 <sup>a</sup> (85.3)	64 <sup>a</sup> (94.1)	66 <sup>a</sup> (93.0)	
≥25.0 (Overweight) n (%)	0 <sup>a</sup> (0.0)	1 <sup>a</sup> (1.5)	0 <sup>a</sup> (0.0)	
<b>Contraceptive</b>				
None n (%)	7 <sup>a</sup> (9.3)	6 <sup>a</sup> (8.8)	6 <sup>a</sup> (8.5)	.999
Hormonal n (%)	42 <sup>a</sup> (56.0)	39 <sup>a</sup> (57.4)	40 <sup>a</sup> (56.3)	
IUD n (%)	26 <sup>a</sup> (34.7)	23 <sup>a</sup> (33.8)	25 <sup>a</sup> (35.2)	
<b>Education</b>				
Lower Education n (%)	42 <sup>a</sup> (56.0)	5 <sup>b</sup> (7.4)	6 <sup>b</sup> (8.5)	.001
High Education n (%)	33 <sup>a</sup> (44.0)	63 <sup>b</sup> (92.6)	65 <sup>b</sup> (91.5)	
<b>Parity</b>				
Nulliparity (0) n (%)	0 <sup>a</sup>	0 <sup>a</sup>	0 <sup>a</sup>	.002
Multiparity (1-3) n (%)	49 <sup>a</sup> (65.3)	52 <sup>a,b</sup> (81.9)	62 <sup>b</sup> (87.3)	
Grand multiparity (4-8) n (%)	26 <sup>a</sup> (34.7)	13 <sup>a,b</sup> (19.1)	9 <sup>b</sup> (12.7)	
<b>Income (IDR)</b>				
<3 million n (%)	22 <sup>a</sup> (29.3)	10 <sup>a,b</sup> (14.7)	7 <sup>b</sup> (9.9)	.001
3 - 5 million n (%)	31 <sup>a</sup> (41.3)	21 <sup>a</sup> (30.9)	20 <sup>a</sup> (28.2)	
>5 million n (%)	22 <sup>a</sup> (29.3)	37 <sup>b</sup> (54.4)	44 <sup>b</sup> (62.0)	

### 3.2 The FSFI scores

Table 2 presents the results of the One-Way ANOVA analysis of the mean scores of the respondents' sexual function covering the total FSFI score, along with the mean scores of the desire, arousal, lubrication, orgasm, satisfaction and pain domains. The mean total FSFI, arousal, and orgasm scores in the three groups of respondents did not differ significantly. The mean total FSFI, arousal, and orgasm scores in the three groups of respondents were not significantly different. However, the three groups of respondents had significant differences in terms of the mean scores of desires, lubrication, satisfaction, and pain.

Unemployed housewives had the lowest desire score (3.05), followed by nurses (3.64), and teachers (4.10). The highest lubrication score was found in housewives (4.29), while teachers and nurses had arousal scores of 3.90 and 4.22, respectively. The highest satisfaction score was shown by housewives, namely 5.17, while teachers and nurses had relatively similar scores, namely 4.36 and 4.57. Unemployed housewives also had the highest pain score of 4.87, while teachers and nurses were relatively the same at 4.45 and 4.28 respectively.

**Table 2: Mean score of sexual function of respondent based on One Way ANOVA analysis**

Variables	Sexual Function Score						Sig. (P)
	Housewife		Teacher		Nurse		
	Mean	SE	Mean	SE	Mean	SE	
Desire	3.05 <sup>a</sup>	0.073	4.10 <sup>c</sup>	0.128	3.64 <sup>b</sup>	0.088	0.000
Arousal	3.84 <sup>a</sup>	0.089	3.94 <sup>a</sup>	0.097	4.06 <sup>a</sup>	0.099	0.281
Lubrication	4.29 <sup>b</sup>	0.11	3.90 <sup>a</sup>	0.095	4.22 <sup>ab</sup>	0.103	0.021
Orgasm	4.66 <sup>a</sup>	0.111	4.39 <sup>a</sup>	0.101	4.37 <sup>a</sup>	0.103	0.093
Satisfaction	5.17 <sup>a</sup>	0.081	4.36 <sup>b</sup>	0.11	4.57 <sup>ab</sup>	0.105	0.000
Pain	4.87 <sup>b</sup>	0.154	4.45 <sup>ab</sup>	0.099	4.28 <sup>a</sup>	0.112	0.003
Total FSFI	25.88 <sup>a</sup>	0.387	25.15 <sup>a</sup>	0.375	25.14 <sup>a</sup>	0.389	0.292

SE: Standard Error; Mean values in the same row followed by the same superscript are not different by LSD pst hoc tes at  $\alpha < 0.05$

### 3.3 Respondents' sexual dysfunction

Based on the average FSFI score in Table 2, it is revealed that all respondents, both housewives and teachers, as well as nurses, experienced sexual dysfunction. This is indicated by the average FSFI score of housewives of 25.88, teachers of 25.15, and nurses of 25.14. This figure is below the cut-off score for female sexual function which is called normal, namely 26.55 [19]. To determine the level of sexual dysfunction in the three groups of respondents, we mapped the level of sexual dysfunction of the participants using the grading system proposed by Ismail *et al.* (2021) into three levels, namely moderate, mild, and no FSD [20]. The results of the FSD grade comparison between respondent group using Pearson Chi square analysis are presented in Table 3.

Based on the total FSFI scores only 24% of housewife, 12.3% of teachers, and 15.5% of nurses that has a normal sexual function, the rest suffer from mild to moderate sexual dysfunction. Based on the desire domain score, all housewives experienced desire disorders, while teachers (33.8%) and nurses (18.3%) did not experience desire disorders. Unemployed housewives who experienced moderate desire disorders were 63.3%, while teachers and nurses who experienced similar disorders were 16.9% and 35.2% respectively. Only 18.7% of housewife, 16.9% of teachers, and 33.8% of nurses did not experience arousal disorders, the rest experienced mild to moderate arousal dysfunction.

There were 38.7% of housewives, 13.7% of teachers, and 33.8% of nurses who did not experience vaginal lubrication disorders before and during sex. The majority of housewives (60.0%) did not experience disorders in achieving orgasm during sex, while teachers and nurses who were not disturbed in achieving orgasm were 46.2% and 45.1%. Based on the satisfaction grade, it was revealed that the majority of housewives (88.0%) felt satisfied with their sexual relationship with their husbands, while teachers and nurses who felt satisfied were 44.7% and 57.7%. Based on vaginal pain scores during intercourse, 52% of housewives, 46.2% of teachers, and 33.8% of nurses reported not experiencing vaginal pain.

**Table 3: Number of participants by their FSD level**

Variable	Number of respondents			Sig. (p)
	Unemployed housewife	Teacher	Nurse	
<b>Total FSFI</b>				
Moderate (14.5–21.6) n (%)	6 <sup>a</sup> (8.8)	10 <sup>a</sup> (15.4)	8 <sup>a</sup> (11.3)	.296
Mild (21.7–28.1) n (%)	51 <sup>a</sup> (68.0)	50 <sup>a</sup> (72.3)	52 <sup>a</sup> (73.2)	
No FSD (28.2–36) n (%)	18 <sup>a</sup> (24.0)	8 <sup>a</sup> (12.3)	11 <sup>a</sup> (15.5)	
<b>Desire</b>				
Moderate (0–3.5) n (%)	52 <sup>a</sup> (69.3)	11 <sup>b</sup> (16.9)	25 <sup>c</sup> (35.2)	.001
Mild (3.6–4.7) n (%)	23 <sup>a</sup> (30.7)	32 <sup>a</sup> (49.2)	33 <sup>a</sup> (46.5)	
No FSD (4.8–6) n (%)	0 <sup>a</sup> (0.0)	25 <sup>b</sup> (33.8)	13 <sup>c</sup> (18.3)	
<b>Arousal</b>				
Moderate (0–3.5) n (%)	17 <sup>a,b</sup> (22.7)	22 <sup>b</sup> (33.8)	10 <sup>a</sup> (14.1)	.021
Mild (3.6–4.7) n (%)	44 <sup>a</sup> (58.7)	32 <sup>a</sup> (49.2)	39 <sup>a</sup> (52.1)	
No FSD (4.8–6) n (%)	14 <sup>a</sup> (18.7)	14 <sup>a</sup> (16.9)	22 <sup>a</sup> (33.8)	
<b>Lubrication</b>				
Moderate (0–3.5) n (%)	8 <sup>a</sup> (10.7)	17 <sup>a</sup> (23.1)	10 <sup>a</sup> (14.1)	.021
Mild (3.6–4.7) n (%)	38 <sup>a</sup> (50.7)	42 <sup>a</sup> (63.1)	37 <sup>a</sup> (50.7)	
No FSD (4.8–6) n (%)	29 <sup>a</sup> (38.7)	9 <sup>b</sup> (13.8)	24 <sup>a</sup> (33.8)	
<b>Orgasm</b>				
Moderate (0–3.5) n (%)	7 <sup>a</sup> (9.3)	5 <sup>a</sup> (7.7)	8 <sup>a</sup> (11.3)	.293
Mild (3.6–4.7) n (%)	23 <sup>a</sup> (30.7)	32 <sup>a</sup> (46.2)	32 <sup>a</sup> (43.7)	

No FSD (4.8-6) n (%)	45 <sup>a</sup> (60.0)	31 <sup>a</sup> (46.2)	31 <sup>a</sup> (45.1)	
<b>Satisfaction</b>				
Moderate (0-3.5) n (%)	0 <sup>a</sup> (0.0)	10 <sup>b</sup> (15.4)	5 <sup>a,b</sup> (7.0)	.001
Mild (3.6-4.7) n (%)	9 <sup>a</sup> (12.0)	26 <sup>b</sup> (36.9)	24 <sup>b</sup> (33.8)	
No FSD (4.8-6) n (%)	66 <sup>a</sup> (88.0)	32 <sup>b</sup> (47.7)	42 <sup>b</sup> (57.7)	
<b>Pain</b>				
Moderate (0-3.5) n (%)	6 <sup>a</sup> (8.0)	3 <sup>a</sup> (4.6)	7 <sup>a</sup> (9.9)	.253
Mild (3.6-4.7) n (%)	30 <sup>a</sup> (40.0)	32 <sup>a</sup> (49.2)	39 <sup>a</sup> (54.9)	
No FSD (4.8-6) n (%)	39 <sup>a</sup> (52.0)	30 <sup>a</sup> (46.2)	24 <sup>a</sup> (33.8)	

### 3.4 Relationship of sexual function to participant attributes

The relationship between respondents' characteristics and their sexual function scores was analysed using Pearson correlation, the results are presented in Table 4. Only three respondents' attributes were correlated with their sexual function scores, namely parity, education level, and income level. Parity was negatively correlated with lubrication score ( $r=-0.144$ ;  $p=0.035$ ). Education level was positively correlated with arousal ( $r=0.297$ ;  $p=0.000$ ), but negatively correlated with pain score ( $r=-0.238$ ;  $p=0.000$ ). Education level was only positively correlated with arousal ( $p=0.257$ ;  $p=0.000$ ). Other attributes such as age, BMI, and type of contraception used did not correlate with respondents' sexual function scores.

**Table 4: Pearson’s Correlation between sexual function score and attribute of all participant**

Independent variables	Correlation	Dependent variables						
		Desire	Arousal	Lubrication	Orgasm	Satisfaction	Pain	FSFI
Age	Coef. (r)	-0.093	-0.004	-0.109	0.003	-0.077	-0.039	-0.1
	Sig. (p)	0.175	0.949	0.113	0.97	0.265	0.566	0.143
BMI	Coef. (r)	-0.066	0.015	0.017	-0.078	-0.053	-0.027	-0.093
	Sig. (p)	0.337	0.832	0.81	0.256	0.445	0.695	0.177
Contra-ception	Coef. (r)	0.096	0.039	-0.056	0.051	0.048	0.112	0.122
	Sig. (p)	0.161	0.57	0.414	0.457	0.484	0.102	0.075
Parity	Coef. (r)	-0.119	-0.086	-.144*	-0.064	-0.089	0.002	-0.051
	Sig. (p)	0.083	0.208	0.035	0.355	0.194	0.981	0.461
Education	Coef. (r)	-0.034	.297**	0.098	-0.133	-0.007	-.238**	-0.119
	Sig. (p)	0.617	0	0.154	0.052	0.924	0	0.084
Income	Coef. (r)	0.022	.257**	0.046	-0.018	-0.027	-0.134	-0.039
	Sig. (p)	0.747	0	0.499	0.79	0.692	0.05	0.571
** Correlation is significant at the 0.01 level (2-tailed).								
* Correlation is significant at the 0.05 level (2-tailed).								

When the correlation between sexual function scores with the attributes of housewives, teachers, and nurses was analysed separately, the statistical correlation parameters were obtained as presented in Table 5. In the group of unemployed housewives, only income and age were correlated with sexual function scores. Income was correlated with arousal scores ( $r=0.334$ ;  $p=0.003$ ), while age was negatively correlated with desire ( $r=-0.233$ ;  $p=0.044$ ), with lubrication ( $r=-0.249$ ;  $p=0.031$ ), and with total FSFI ( $r=-0.236$ ;  $p=0.042$ ). In the group of teachers, only contraceptive use was correlated with sexual function, namely with pain scores ( $r=0.321$ ;  $p=0.008$ ). While in the group of nurses, only BMI was negatively correlated with orgasm scores ( $r=-0.243$ ;  $p=0.041$ ).

**Table 5: Pearson’s Correlation between sexual function score and attribute of housewife, teacher, and nurses**

Participant	Attribute	Correl.	Dependent variables						
			Desire	Arousal	Lubrication	Orgasm	Satisfaction	Pain	FSFI
Housewife	Income	Coef. (r)	0.042	.334**	-0.014	0.055	0.066	-0.08	-0.09
		Sig. (p)	0.721	0.003	0.907	0.639	0.575	0.493	0.445
	Age	Coef. (r)	-.233*	0.003	-.249*	-0.012	-0.212	-0.09	-.236*
		Sig. (p)	0.044	0.978	0.031	0.918	0.068	0.444	0.042
Teacher	Contra-ception	Coef. (r)	0.226	0.038	0.05	-0.047	0.216	.321**	0.229
		Sig. (p)	0.063	0.756	0.683	0.703	0.077	0.008	0.06
Nurses	BMI	Coef. (r)	-0.154	0.061	0.012	-.243*	-0.213	-0.07	-0.107
		Sig. (p)	0.2	0.615	0.921	0.041	0.074	0.56	0.376
*. Correlation is significant at the 0.05 level (2-tailed).									
**. Correlation is significant at the 0.01 level (2-tailed).									



#### 4. DISCUSSION

The results of this study indicate that based on the total FSFI score, 74% of housewives, 87.7% of teachers, and 84.5% of nurses have sexual dysfunction, indicated by a total FSFI score of less than 26.55. This finding is quite surprising because several other studies have found different figures but all are below that figure. In 2010 Suryadi found the prevalence of FSD at 15.2%, in 2014 Kanedi & Sutyarso found 54%, in 2017 Wulandari *et al.*, found a prevalence of 51.2%, while Manurung & Rahardjo (2023) found a prevalence of 34.5% [21-24]. The prevalence of FSD found in this study is also above the prevalence found by other researchers in the world. From Cameroon it was reported that the prevalence of FSD in reproductive-age women was 42.0%, in Gaza Strip it was 61%, while in the world the average prevalence is 50.7% [25-27]. The difference in prevalence rates may be due to differences in the psychometric issues of the women studied, as well as because the reported sexual experiences were limited to the last 4 weeks. The use of the FSFI questionnaire cannot explain when the onset of problems and the duration of the sexual dysfunction occurred [28].

The high prevalence of FSD in housewives in this study may be related to low family income and low education, where 56% of housewives only had lower secondary education with income below IDR 5 million reaching 70.7%. According to Neal *et al.*, (2015) female sexual function is closely related to low levels of education and household income [29]. In the teacher group, the factor that causes high FSD may be related to a relatively heavy workload. In Indonesia female teachers are over-burdened with their tasks at school and at home, having no leisure time, lacking of social participation, being not optimal in job performance, and tend to do social withdrawal [30]. As is known, the burnout factor due to workload has a major influence on women's sexual function [31]. The nursing profession also has a very high workload, in addition to working during the day they also have to work shifts at night. Nurses who work with a shift system like that can experience sexual dysfunction up to 68.85% [32]. A meta-analysis study of the sexual function of health workers from 16 countries, Chen *et al.*, (2024) found the prevalence of sexual dysfunction in health workers reached 46.79% [33].

Another factor that may be strongly associated with the high level of sexual dysfunction in the respondents of this study is parity. All respondents of the study had children in their marriage. Another factor that may be strongly associated with the high level of sexual dysfunction in the respondents of this study is parity. All respondents of the study had children in their marriage. As suggested by Botros *et al.* (2006) that childbirth has a long-lasting psychological impact on women's sexual function [34].

Another finding in this study was that all housewives (100%), the majority of teachers (66.2%), and nurses (81.7%) experienced desire dysfunction. This finding successfully confirmed previous research that in Indonesia at least 32.0% of married women experience desire disorders [35]. In America, the prevalence of desire disorders in married women is 26.7% in premenopausal women and 52.4% in menopausal women [36]. From Australia it was reported that desire disorder in women increase with age. At the age of 18-24 years the prevalence was 12.2% to 33.4% at the age of 40-44 years, and tends to persist until the age of 60-64 years (33.1%) [37].

Arousal disorders in the respondents of this study are also classified as very high where 81.3% of housewives, 83.1% of teachers, and 66.2% of nurses experience arousal disorders. This disorder is relatively difficult to distinguish from desire disorders, characterized by low sexual fantasy, low initiative of sexual activity, and decreased pleasure in sexual intercourse. Factors associated with this arousal disorder include psychological and sociological factors [38]. Unfortunately, both factors were relatively less measurable in all respondents in this study.

The factor that is greatly influenced by the high level of desire and arousal disorders experienced by the respondents of this study is the high level of lubrication disorders, where 61.3% of housewives, 81.2% of teachers, and 66.2% of nurses admitted to experiencing lubrication function disorders. As Laumann *et al.*, (2005) stated that vaginal dryness is closely related to low sexual desire and arousal [39].

Another interesting finding from this study is the high level of respondents' achievement of orgasm and satisfaction in their sexual relationships. There were 60% of housewives, 46.2% of teachers, and 45.1% of nurses in the study who admitted to being able to achieve orgasm during sex. Housewives, teachers, and nurses who were satisfied with their sexual lives were 88.0%, 47.7%, and 57.7% respectively. Orgasm and sexual satisfaction are indeed closely related. Orgasm is strongly related to pleasure and sexual desire. Therefore, Dienberg *et al.*, (2023) argue that orgasm is an important factor that can be used to predict sexual satisfaction in women [40]. Unfortunately, in this study we failed to find a correlation between orgasm and sexual satisfaction of respondents with the attributes attached to them (Table 4). In the nurse group, the orgasm they achieved was correlated with BMI (Table 5), while in housewives and teachers there was no correlation between their orgasm and sexual satisfaction with the characteristics they had. It may be true what Shahhosseini *et al.* (2014) proposed that analysis of factors influencing sexual satisfaction regardless of socio-cultural context, religious beliefs, and women's personal attitudes, tends to be inefficient, unscientific, and irrational [41].

Based on the pain scores of respondents in this study, it is known that 48% of housewives, 53.8% of teachers, and 66.2% of nurses admitted to experiencing vaginal pain during intercourse. This fact seems odd considering that 60% of housewives, 46.2% of teachers, and 45.1% of nurses admitted to being able to achieve orgasm, and 88.0% of housewives, 47.7%, teachers and 57.7% of nurses were satisfied with their sexual relationship. The high rate of vaginal pain experienced by the respondents of this study may be related to their high rate of lubrication disorders. As shown by Waetjen *et al.* (2018) vaginal dryness and lubricant use are strongly associated with vaginal pain during sex [42].

The main drawback of this study is the limited attributes and characteristics of the respondents recorded. Lifestyle such as smoking, alcohol consumption, exercise habits; body hormone levels, and types of chronic diseases suffered are examples of available data. The influence of lifestyle on women's sexual function Rahnavardi *et al.* (2021) and Stenlund *et al.* (2024) revealed that a woman's healthy lifestyle such as not smoking, not consuming alcohol, and exercising, has a significant impact on their sexual function [43, 44]. Chronic diseases are also known to affect sexual function such as diabetes mellitus, HIV aids, and cancer [45-47].

## 5. CONCLUSION

Based on the average total score of FSFI, most respondents in this study, housewives, teachers and nurses experienced mild to moderate sexual dysfunction. There was no significant difference in terms of their sexual function domain scores, both desire, arousal, lubrication, orgasm, satisfaction and pain domains. Thus it can be said that differences in careers of married women of reproductive age cannot be a differentiator in the prevalence of sexual disorders.

### Compliance with Ethical Standards

- **Acknowledgments:** The author would like to thank all health officials and school principals in Bandar Lampung City for the opportunity to conduct this research.
- **Disclosure of conflict of interest:** The authors declare no conflict of interest.

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