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AN ASSESSMENT OF MARITAL ADJUSTMENT AND SEXUAL FUNCTIONS OF WOMEN WORKING IN SHIFTS IN HEALTHCARE

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Abstract

The aim of the study was to assess the marital adjustment and sexual functions of women working in shifts in healthcare. The population of this descriptive, cross-sectional study consisted of 152 women working in shifts in a hospital in the city of Adana. The sample of the study consisted of 117 women who met the inclusion criteria (married, active sexual life, not be in menopause, to have no premorbid psychiatric diagnosis) and who agreed to participate in the study. The data of the study was gathered using a “Personal Information Form” which included the descriptive data of the women, a “Sexual Function Index” to assess women’s sexual dysfunctions, and a “Marital Adjustment Test” to assess marital compatibilities of the women. The mean MAT score of women working in shifts in healthcare was $39,32 \pm 11,01$, suggesting that women had low marital adjustment. A weak positive and significant relationship was found between sexual functions and marital adjustments of women working in shifts in healthcare ($r = 0.382, p < 0.05$). Decreasing working hours and workloads women working in shifts, therefore allowing women to have a more active role at home, and allowing them to improve their marital relationships is suggested.

Keywords

Sexual Functions, Marital Adjustment, Women, Working in Shifts, Healthcare

1. Introduction

Shift work is defined as arranging working hours into two or more groups outside of traditional working hours, to increase the working hours and to assure the continuity of the production at the workplace (Pati, Chandrawanshi & Reinberg, 2001). Nowadays, increasing changes in economic and social standards have made working in shifts with long working hours a necessity, not only during the day but also during the night time (Selvi et al., 2010; Koç, 2017). This type of work is one of the oldest working types with flexible working hours, and is considered against human nature in many of the developed countries. However, personnel working in the healthcare must work in shifts to ensure providing the public a 24-hour service (Yeşilçiçek Çalık et al., 2015).

Working in shifts makes the body work against its own biological rhythm, resulting in damages in various ways. The rhythm of human organism is to be awake during the day and to be asleep during the night. Working during the night against the normal rhythm of the body

affects women even more, who already have a heavy work load at home. By altering this pattern, their physiological and psychological health, social and family lives, as well as their sleep patterns are extremely affected (Koç, 2017; Yeşilçiçek Çalık et al., 2015). These changing factors are related to each other, and a change that occurs in one, affects the other (Yeşilçiçek Çalık et al., 2015). Especially married women working in shifts face priority problems due to traditional gender roles, while performing roles regarding home and work (Rehman, 2017). Alongside the working life of women, domestic responsibilities that come with the role of “a mother and a wife” imposed by social roles make things more difficult, since women need to work at the workplace as well as at home 24 hours a day, 7 days a week. Women who face a dilemma in terms of family responsibilities and duties at work, struggle with many difficulties and problems (Demir Erbil, 2016).

Marriage is a cultural and a social system that has formal, emotional, behavioral, and biological aspects affecting social construct in different ways (Demir Erbil, 2016). Furthermore, it is defined as a consistent sexual encounter with a man and a woman in the frame of regulated rules and obligations (Şafak & Arkar, 2014). Marriages of couples who can compromise on matters regarding the marriage and the family, and who can solve problems in a positive way, are defined as satisfactory marriages. Happiness, satisfaction, and fulfilling expectations of couples in a marriage is only possible through mutual well-adjustment (Koç, 2017)

Satisfying the sexual need, one of the basic functions of a marriage, and a biological need, is one of the most important duties of a marriage (Kahraman, 2011). Sexuality, which forms the basis of marital adjustment, has a profound effect on happiness, success, and on relationships of the woman (Kömürcü, Demirci, Yıldız & Gün, 2014) Couples have an opportunity to fulfill their social needs such as being together with trust, protecting and feeling of solidarity, looking to the future with trust, obtaining a place in the society, and being proud and happy of each other, and to fulfill individuals' vital needs, feeling supported, and protected (Kahraman, 2011).

Women working in shifts experience uneasiness and worry for not being able to have enough time for their spouses and children, and for not being able to pay attention to them or see them enough. This restricts the husband-wife relationship and results in neglecting the family ties (Pekel Özdemir, 2006). In a report by the World Health Organization published in 2006, where the evidence regarding work and health of working women was investigated, the importance of

preserving the health status of women in their profession, and maintaining their sexuality was emphasized (WHO, 2006).

Sexual activity cannot be separated from the general communication of marital life. Therefore, conflicts and clashes are expected to affect sexual function. Sexual problems result in conflicts and clashes in the marital life, and this affects the marital adjustment negatively (Gülsün, Ak & Bozkurt, 2009).

Working and marital lives are two important aspects of an individual's life that affect each other mutually. As a social creature, working lives of humans cannot be expected to be separated from the domestic and marital life. Therefore, working life affects the relationship between spouses as well as their sexual function. This study aims to investigate marital adjustment and sexual functions of women who work in shifts in healthcare

2. Materials and Methods

2.1 Design of the Study

The design of the study is a descriptive cross-sectional study conducted with female nurses, midwives, doctors, and cleaning personnel working in shifts in a hospital to determine their sexual functions and marital adjustment.

The study was conducted in a university hospital between July and December of 2017.

2.2 Population and Sample of the Study

The population of the study consists of 152 women working in shifts hospital in Adana Republic of Turkey. The sample of the study consists of 117 women who met the inclusion criteria, and who agreed to participate in the study. 77% of the population was reached in the study.

Inclusion criteria for the study required the women;

- 1) To be married.
- 2) To have an active sexual life.
- 3) To have no communicational problems.
- 4) To not be in menopause.
- 5) To have no premorbid psychiatric diagnosis.

2.3 Data Collection

Data was collected using a “Personal Information Form”, which included demographic data of the women, the “Female Sexual Function Index” to assess the women’s sexual function, and “Marital Adjustment Test” to assess the marital adjustment of the women. The data was collected with face to face interviews performed by the researchers.

2.4 Data Collection Tools

Personal Information Form: The form, created by the researchers in light of literature, consists of questions regarding women’s sociodemographic data (age, educational status, type of family etc.), working conditions (working hours in shifts etc.), and sexual relations.

Female Sexual Function Index: The scale, developed by Rosen and associates in 2000, has six domains and 19 items. The reliability and validity of the Turkish adaptation of the scale was tested by Öksüz and Malhan (2005). The domains of the scale include desire, arousal, lubrication, orgasm, satisfaction, and pain. Each item is scored between 0 and 5. Sexual desire or interest and the level is assessed in the 1st and the 2nd questions (score range 1-5), frequency and level of arousal, confidence, and satisfaction regarding arousal in the questions from the 3rd to the 6th (score range 1-5), frequency and difficulty of lubrication, and difficulty and frequency in maintaining lubrication in the questions from the 7th to the 10th (score range 1-5), frequency, difficulty, and satisfaction regarding orgasm in the questions from the 11th to the 13th (score range 1-5), satisfaction of emotional closeness with partner, level of sexual relationship, and of overall sexual activity in the questions from the 14th to the 16th (score range for the 14th item 0-5, and for the 15th and the 16th items 1-5), and discomfort or pain during vaginal penetration, pain following vaginal penetration, and level of pain during or following vaginal penetration in the questions from the 17th to the 19th (score range 1-5). The highest score obtainable from the scale is 36.0, and the lowest is 2.0. The cut-off score of the scale is 26.55, and a score ≤ 26.55 indicates a negative change in sexual function. Following scores of the domains indicate sexual dysfunction: for desire ≤ 3.6 (score range 1,2-6), for arousal ≤ 3.9 (score range 0-6), for lubrication ≤ 3.6 (score range 0-6), for orgasm ≤ 3.6 (score range 0-6), for satisfaction ≤ 3.6 (score range 0-6), and for pain ≤ 4.4 (score range 0-6) (Peksoy, 2011).

The test-retest correlation coefficient was 0.90 in the reliability and validity tests for the Turkish version of the scale, and the Cronbach’s alpha varied between 0.75 and 0.95 in the analyses for internal consistency for each of the domains (Öksüz&Malhan, 2005; Rosen et al.,

2000, Aygin&Eti Aslan, 2005; Öztürk, 2013). The Cronbach's alpha for the scale was 0.97 in this study.

Marital Adjustment Test (MAT): Marital Adjustment Test was developed by Locke and Wallace in 1959. Following the development of the scoring system by Hunt in 1978 and by Freeston and Plechaty in 1997, the Turkish validation and reliability study was conducted by Tutarel and Kışlak in 1999. The test consists of 15 items in total, and each item is scored from 0 to 6 depending on the number of options. Score ranges for the 1st item is from 0 to 6 points, for the items from 2nd to 9th from 0 to 5 points, for the 10th and the 14th items between 0 and 2 points, for the 11th and 13th items between 0 and 3 points, the 12th item is scored as 0 points if one of the spouses chooses “stay at home” and the other chooses “on the go”, as 1 point if both spouses choose “on the go”, as 2 points if both spouses chooses “stay at home”, and the 15th item between 0 and 2 points. According to the scoring of the scale, the score for distinguishing satisfactory and non-satisfactory marital relationships is 43.5. The scores obtained from the scale vary from 1 to 60, and higher scores indicate greater satisfaction, whereas lower scores indicate lower satisfaction. In addition, the Cronbach's alpha was 0.84 in the validity test of the scale (Tutarel Kışlak; 1999). The Cronbach's alpha was 0.92 in this study.

2.5 Statistical Analysis

The coding and the analysis of the data was performed in a computer setting using the SPSS 22.0 software. The results were assessed using 95% confidence interval, and level of statistical significance was chosen as 0.05. The data was analyzed using percentage, arithmetic mean, standard deviation, and Spearman's correlation tests.

2.6 Ethical Considerations

Before gathering the data, an official permission from the hospital, and an approval from the Cukurova University Faculty of Medicine Ethics Committee was obtained. In addition, the aim of the study was explained to the healthcare personnel, and participants agreeing to volunteer were chosen to the study. The duration of completing the scales was 10 to 15 minutes on average.

3. Findings

Following findings were obtained in the study which aimed to investigate the marital adjustment, and sexual functions of women working in shifts in healthcare.

The women who participated in the study had a mean age of $33,15 \pm 5,83$, 68,4% were nurses, and 54,7% had Bachelor's degrees. Participants had been working for $10,10 \pm 5,57$ years on average, and had been working in shifts for average of $8,45 \pm 5,18$ years, the lowest time for working in shift being one year and the highest being 24 years. 62,4% of the spouses of the women had Bachelor's degrees, and 45,3% were working as government officers. 65,8% of the women perceived their economic status as Moderate, 91,5% had a nuclear type of family, and the mean length of marriages was 8,33 years. 72,6% of the women reported getting married by flirting, and 73,5% responded to the question asking what comes to their minds with sexuality as pleasure, 66,7% as necessity, 26,5% as pain, 9,5% as fear, and 5,1% as sin, and 47,0% of the women reported being satisfied with their sexual lives (Table 1)

Table 1: Women's Demographic Distribution (n=117)

Introducing Features (n=117)	Number (n)	Percentage (%)
Occupation		
Nurse	80	68,4
Doctor	2	1,7
Midwifery	17	14,5
Health personnel	18	15,4
Education degree		
Primary School	18	15,4
Health Vocational High School	15	12,8
Associate	10	8,5
Bachelor's degrees	64	54,7
Graduate	8	6,8
Doctor's Degree	2	1,7
Education status of spouse		
Middle school	2	1,81
High school	42	35,89
University	73	62,30
Economic status		
Low	10	8,5
Moderate	77	65,8
High	30	25,6
Family type		
Nuclear	107	91,5
Large	10	8,5
Types of marriage		
Arrangad marriage	19	16,2
Flirt	85	72,6
Marriage of convenience	11	9,4
Other	2	1,7

In terms of sexuality		
Pleasure	86	73,5
Necessity	78	66,7
Pain	31	26,5
Fear	11	9,4
Sin	6	5,1
Sexual life satisfaction		
Satisfied	55	47,0
Not satisfied	23	19,7
Indecisive	39	33,3

The mean scores of the Female Sexual Function Index assessing women's sexual functions demonstrated that 40,1% of the women did not have a sexual dysfunction, and the mean FSFI total score for women who did not have a sexual dysfunction was 29.48 ± 2.28 . 59,8% of the women had a sexual dysfunction, and their mean FSFI total score was 17.47 ± 7.89 (Table 2).

Table 2: *Distribution of Women's FSFI Score Means*

Sexual Dysfunctions	Number	Percentage	x	Standart deviation
Not available (score > 26,55)	47	40,18	29,48	2,28
Available (score ≤ 26,55)	70	59,82	17,47	7,89
Total	117	100	22,29	8,60

The FSFI mean scores for women working in shifts were as follows; FSFI's mean score of desire domain was 3.33 ± 1.07 , mean score of arousal domain was 3.44 ± 1.68 , mean score of lubrication domain was 3.81 ± 3.81 , mean score of orgasm domain was 3.75 ± 3.75 , mean score of satisfaction domain was 4.00 ± 1.55 , and mean score of pain domain was 3.94 ± 3.94 , and the mean FSFI total score was 22.29 ± 8.60 (Table 3).

Table 3: *Distribution of Female FSF Subscale Score Means*

Subscale	Min and max scores of the scale	Min and max scores of the scale	x±ss
Desire	1,2-6	1,2-6	3,33±1,07
Arousal	0-6	0-6	3,44±1,68
Lubrication	0-6	0-6	3,81±3,81

Orgasm	0-6	0-6	3,75±3,75
Satisfaction	0,8-6	0,8-6	4,00±1,55
Pain	0-6	0-6	3,94±3,94
Total	2 -36	2-34,20	22,29±8,60

Mean scores of the Marital Adjustment Scale assessing women’s marital satisfaction showed that 41,3% of the women reported having a satisfactory marriage, and their mean total scores were 49.16 ± 3.73 . 58, 9% of the women reported not being satisfied with their marriages, and their mean total scores were 32.47 ± 9.03 . The mean MAT total score of the women was 39.32 ± 11.01 (Table 4).

Table 4: *Distribution of Women's MAT Score Means*

Satisfactory Marriage	Number	Percentage	x	Standard deviation
Available (score>43,5)	48	41,03	49,16	3,73
Not available (score<43,5)	69	58,97	32,47	9,03
Total	117	100	39,32	11,01

The Spearman’s correlation coefficient for FSFI and MAT was $r = 0.382$, which suggests a weak positive significant relationship between the two scales ($p < 0.001$) (Table 5).

Table 5: *The Spearman’s Correlation Coefficient for FSFI and MAT*

Scales	FSFI
MAT	$r=0,382$ $p<0,001$

4. Discussion

Marriage is an institution legitimizing sexuality around the world. In some societies, married women are expected to fulfill their husbands’ sexual needs [21]. When investigating the literature, there are mainly studies regarding working women’s experiences with chronic illnesses, psychosocial, sleep, and nutritional problems, and problems relating to the workplace (Devrim Bařterzi & Yılgör, Wickwire et al., 2017; Wright et al., 2013; Juda, 2010; Pusmaika, Latifah Novianti., 2017). However, there is limited amount of studies investigating sexual functions and marital adjustment of working women.

This study aimed to investigate the marital adjustment and sexual functions of women working in shifts in healthcare. The results of the study demonstrated that 19,7% of the participants were dissatisfied with their sexual lives, and 33,3% were hesitant about their satisfaction. In addition, 70% of the women appeared to have a sexual dysfunction (Table 1). In a similar study by Kumkale (2015), 57,1% of the women who had a sexual dysfunction, and 85,7% of the women who did not have a sexual dysfunction, reported being satisfied with their marriages. Lee et al (2012) found in their study that the environment created by shift work resulted in loss of sexual desire in nurses, and that it affected their sexual functions negatively. Similarly, Alihocagil Emeç (2016) reported in their study that 76,8% of the working women had a sexual dysfunction. In a study where nurses working in shifts in Taiwan were investigated, 51,9% of women reported a decrease in their sexual desires, and 68,85% had a sexual dysfunction (Lin, 2008). Negative situations at workplace were seen to affect women's sexual functions in a study by Frühauf et al. (2013). Similarly, Juda (2010) found that women working in shifts had inadequate sexual function. Contrary to the findings of this study, Ege et al (2010) found that the work conditions of women did not influence their sexual functions.

In a healthy and a happy sexuality, the importance of a healthy sexual life between the individuals/spouses in a biopsychosocial perspective, is emphasized (Öztürk, 2013). The mean FSFI total score in our study was 22, 29 ± 8 , 60 (Table 2). The results of the study suggest that the women had sexual dysfunctions. There are limited amount of studies in the literature similar to this study. In a study by Yang (2017), 2030 nurses working in six hospitals had a mean FSFI total score of 24.40, and the older the women were, the higher the prevalence for sexual dysfunction was. In a study by Lianjun et al. (2011), the mean total score for FSFI was 23.25 ± 4.00 . The mean FSFI total score was 27.5 ± 4.7 in a study by Boehmer, Timm, Ozonoff and Potter (2012). In a study by Alikocagil Emeç (2016), the mean total score for FSFI was 17.86 ± 6.41 . Studies suggest that sexual functions of women are affected by their work conditions. Working in shifts forms a long, irregular, tiring, and a stressful working environment, and this may result in a decrease in women's sexual functions.

In the study, FSFI's mean score of desire domain was 3.33, mean score of arousal domain was 3.44, and mean score of pain domain was 3.94. The results suggest that women had a sexual dysfunction in the domains of desire, arousal, and pain using the cut-off scores. FSFI's mean score of lubrication domain was 3.81, mean score of orgasm domain was 3.75, and mean score of

satisfaction domain was 4.00, indicating that women did not have a sexual dysfunction in these domains (Table 3). Similarly, in a study by Alikocagil Emeç (2016), women's mean score of desire domain was 3.54 ± 1.41 , mean score of arousal domain was 2.54 ± 1.63 , mean score of lubrication domain was 3.04 ± 1.38 , mean score of orgasm domain was 2.87 ± 1.36 , mean score of satisfaction domain was 2.20 ± 1.68 , and mean score of pain domain was 3.65 ± 1.90 .

In this study, the mean MAT total score was 39.32 ± 11.01 (Table 4). Using the cut-off scores of the scale indicated low marital adjustment with women working in shifts in healthcare. In a study by Yesilçiçek et al. (2015), 91,9% of nurses reported that their working hours affected their social and family lives, and 37,7% reported that it resulted in deterioration of their relationships with their spouses. In a study by Demir and Erbil (2016), where the effects of work satisfaction on marital adjustment was investigated on married individuals, 20,3% had satisfactory marriages, whereas 79,8% reported having dissatisfactory marriages. Literature emphasizes that the longer the women's working hours are, the lower their marital adjustments are, and that there is a positive relationship between working hours, and work-family problems (Yeter, 2017; Akbolat, Kahraman and Öztürk, 2012). Work types affected women's marital relationships also in a study by Demir and Erbil (2016). In a study by Fah (2017), working women's shifts composed of three different shifts; work life, relationship with the spouse, and domestic life, and the emotional life with the spouse was affected by negative experiences in the workplace. These findings suggest that the higher the working hours of the women are, and more the work types change, the less they spend time with their spouses, and more away from home. Therefore, the time spent together with their spouses decreases, sharing becomes insufficient, and their marital adjustment is negatively affected. As opposed to the findings of this study, Yeşiltepe (2011) found that working men and women supported each other in their marriages, and their marital adjustments were therefore not affected.

The results of the study showed that there is a weak positive significant relationship between the FSFI and the MAT (Table 5). No studies were found in the literature investigating sexual functions and marital adjustment of women working in healthcare. However, contrary to this study's findings, in a study by Kumkale (2015), where the effects of sexual dysfunction on marital adjustment was assessed, results suggested that couples with sexual dysfunction had low marital adjustment, whereas couples who did not have a sexual dysfunction had high marital adjustment. Sexuality, inherent in marriage, is important between the spouses. Therefore,

sexuality affects marital relationships positively or negatively. It is possible to argue in our study that since the women working in shifts are home during the day when their spouses aren't home, their marital adjustment is less affected. Sexual lives of women who are not home during the nighttime are more affected, and their sexual functions are affected negatively. The findings of this study support the notion that sexuality affects marital adjustment in a marriage.

5. Conclusion and Suggestions

The results of the study demonstrated that the mean MAT total score was 39.32 ± 11.01 , and the mean FSFI total score was 22.29 ± 8.60 for women working in shifts in healthcare. The results indicate that sexual functions and marital adjustment of the women were low. The Spearman's correlation was $r = 0,382$ between the FSFI and the MAT, suggesting a low positive significant relationship between the two ($p < 0.001$). In light of these results, following recommendations are offered; decreasing and regulating the working hours in shifts, choosing suitable individuals for work during the nighttime, and providing rotations allowing the personnel to change. Decreasing working hours, and therefore increasing time for spouses is suggested. There is a need for more research similar to this study in this field.

Research Limitation

Using a scale to assess the sexual functions of female healthcare personnel working in shifts ensures obtaining objective data. However, the most significant limitations are that the statements are limited with the statements on the scale, and the study can only be generalized to the hospital the study was conducted in.

Scope of Future Research

This study assessed the sexual functions of female healthcare personnel working in shifts. Future studies can also include male healthcare personnel, or male and female healthcare personnel, who do not work in shifts.

Contribution of the Authors

All authors have contributed significantly this article to design of the work;, analysis, or interpretation of data for the work and all authors are in agreement with the content of the manuscript. Authors' contributions ŞY collected the data. EN,SA,SKY,SDD analysed the data. All authors drafted and finalised the manuscript. All authors contributed to the design of the study and reviewed the manuscript. All authors read and approved the final manuscript.

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Compliance with Ethical Standards Conflict of Interest

Both authors declares that they have no conflict of interest. Ethical Approval All of the procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent

Online informed consent was stated and therefore obtained from all individual participants included in the study. No sensitive or identifiable data were collected for the purpose of this study.

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