

An investigation into the correlation of marital adaptation with stress, anxiety, depression and sexual function and its components

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Summary Background. Marital adjustment is an evolutionary process between a husband and wife that is created, strengthened or weakened in life. Mental health and healthy and pleasant sexual functioning seem to be important in promoting it.

Objectives. The aim of this study was to determine any correlations of marital adaptation with stress, anxiety, depression or sexual function and its components.

Material and methods. This cross-sectional study was done on 514 women of reproductive age who were referred to health centers in Shiraz and were chosen by random sampling. The Spinner marital adaptation questionnaire, the Female Sexual Function Index (FSFI) and the Depression, Anxiety and Stress Scale (Dass-21) were the study tools. The statistical tests applied for data analysis were the t-test, Fisher's, chi-squared and Pearson's coefficient correlation.

Results. Marital conflict was reported in 54.7% of women. The average score of sexual function was significantly less in maladaptive patients than in adaptive ones (22.32 ± 7.05 versus 26.53 ± 5.01). There was a significant link between marital adaption and components of sexual function ($p < 0.05$). The mean scores of stress, anxiety and depression in the maladaptive group were 9.14 ± 4.74 , 6.60 ± 4.56 and 7.75 ± 4.79 versus 6.53 ± 4.62 , 4.48 ± 3.93 and 4.06 ± 4.21 , respectively, which was statistically significant ($p < 0.05$).

Conclusions. As to data analysis, sexual function, stress, anxiety and depression affect marital adaptation. Therefore, providing the necessary relevant education can improve the family health, couples intimacy and marital satisfaction.

Key words: anxiety, depression, personal satisfaction, sexual behavior.

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Background

Marital satisfaction is defined as the couple's perception about their partner's needs and desires [1]. Several studies have revealed that sexual satisfaction has a positive association with overall communication and marital adjustment [2]. According to the study done by Breznsnyak, there is a significant correlation between marital satisfaction and sexual desire in both men and women. The higher the compatibility score, the higher the sexual desire [3].

In a study, it was reported that sexual disorder can create a feeling of deprivation and failure and can become the grounds for physical and mental problems, incompatibility and marital discord [4]. Zinealzadeh et al. reported that inter-personal relationships affect the quality of sexual function and is far beyond just sexual behavior and in case this need is not satisfied, it will

impose lots of physical and mental pressures on individuals, lead to anger, violence, depression, anxiety that affect the quality of inter-personal relationships" [5].

Despite the high importance of sexual health, only 20% of women and 10–30% of men suffering from sexual dysfunction seek treatment from physicians [6, 7].

Theorists in the field of family concepts and their compatibility have presented a variety of theories: they explain the theories of system, exchange, conflict, structure/functionalism and symbolic theories. The theory of conflict is the most important theory of family problems. According to this theory, the lack of understanding of family members, especially women with their spouses, in managing family processes is one of the most common types of dissatisfaction that will subsequently affect sexual relationships and family compatibility [8]. Research on verbal and non-verbal communication focuses especially on verbal communication as a predictor of sexual satisfaction. Basically, regardless of the communication style (verbal or non-verbal),



satisfaction with the style of communication with a sexual partner also seems to be related to sexual satisfaction [9].

According to the researchers, sexual function is one of the important influences on marital satisfaction [3]. Since Ellis, Keynes and Master and Janson did a systematic study on human sexual behavior, it was found that sexual problems and dysfunctions are more common than previously thought [10]. Sexual dysfunction is a common health problem in Iran, with a prevalence of 31–51% [11]. Couples' mental health is another component of marital satisfaction [12]. Besides, studies have shown that there is a relationship between depression and family relationships, wherein depressed people will have difficulty with problem-solving or decision-making [13], communication, religious beliefs, bonding, affection and mutual respect among family members [14], as well as coping skills [15]. On the other hand, according to the model of marital disorder in depression, depression is due to marital conflict [16]. Thus, social support has been reported to play an important role in reducing the symptoms of depression [17]. It also promotes marital satisfaction, of course. The issue of whether depression is a cause for marital dissatisfaction or vice versa is still being discussed in the literature [18].

Some studies have shown marital conditions as a prominent risk factor for depression and anxiety among women. However, social support seems to affect the various aspects of marital relationships and the severity of depression and anxiety in the lives of married women [19]. Thus, it seems that marital satisfaction is directly and indirectly associated with the stability of a family and a better quality of life, while marriage dissatisfaction brings about stress, anxiety and family disturbance [20]. Sexual disorders are a common health problem in Iranian women. Their prevalence has been reported to be 68.4% in a study [21]. This difference in prevalence of sexual dysfunction in different studies of Iran may be due to differences in sampling method, target population and so on. Since family stability and its reinforcement are based on a familiarity with the effective factors on marital satisfaction, we aimed to study the link between marital adjustment, mental health and sexual function and its components.

Objectives

The aim of this study was to study the correlation between marital adaptation and stress, anxiety, depression and sexual function and its components.

Material and methods

Study design

This is a cross-sectional study conducted between 2014 and 2015. The sampling method used was multi-stage cluster sampling. In the first stage, four regions in the north, south, east and west were selected from the 11 regions of Shiraz. Among all health centers (22 centers), 10 were randomly selected by cluster sampling from the 4 regions. About 51–52 subjects were selected from each center. Sampling was done randomly based on the study purpose.

Setting

This study was commenced in health centers affiliated with Shiraz University of Medical Sciences, Iran by random sampling in winter 2014 and it ended in July 2015.

Participants

The study population included all women of reproductive age who were referred to health centers in Shiraz.

Variables

The main outcome measures included determinations of relationships between marital satisfaction, sexual function and all components of sexual function, as well as mental state (stress, anxiety and depression).

Study size

We computed the sample size (n : 514), considering the prevalence rate of 31% in the study done by Mazinani et al. [22] and applying the following formula:

$$N = \frac{z^2 pq}{d^2}$$

($z = 1.96$, $p = 31\%$, $q = 69\%$, $d = 0.04$). The inclusion criteria were all women aged 15–45, married, living in Shiraz (residence of at least 1 year), and willing to cooperate in the study. The exclusion criteria were lactating women less than 8 weeks after giving birth, women not living with their husband within the past 6 months and pregnant women. All of the participants provided informed consent before participating in the study.

Data sources/measurement

Data collection tools included the Spinner Marital Adaptation Questionnaire, the Female Sexual Function Index (FSFI) and the Depression, Anxiety and Stress Scale (Dass-21). The Female Sexual Function questionnaire contains 19 questions in six areas: sexual desire, sexual function, mental stimulation, wetness, orgasm, satisfaction and dyspareunia. The items are scored based on a 5-Likert scale. Sexual dysfunction is considered for scores of 28 or lower [23, 24]. Sepehriyan determined Cronbach's alpha for the Female Sexual Function questionnaire to be 0.95 overall and 0.67, 0.88, 0.89, 0.86, 0.93, and 0.90 for sexual desire, mental stimulation, wetness, orgasm, satisfaction and pain, respectively [25]; this was the basis of the present study.

Spanier's Dyadic Adjustment Scale contains 32 items to measure the compatibility or incompatibility of couples. Its reliability was estimated to be 96% and its credibility was determined to be 86% by measuring its correlation with Locke and Wallace's adaptation questionnaire (1959) [26]. The range of scores in this questionnaire is 0 to 151. An adaptation score above 100 implies higher levels of adaptation and scores below 100 imply marital trouble and family maladaptation. Moreover, its validity was evaluated by Mollazade et al. though the test-retest method with an interval of 37 days on 92 subjects, with a reported value of 86%; Cronbach's alpha was found to be 0.89 [27].

Lewinda's Depression, Anxiety and Stress Scale (Dass-21) was compared by Crawford and Henry to the other two scales of depression and anxiety in order to obtain its reliability. They reported Cronbach's alpha coefficients of 0.95, 0.90, 0.93 and 0.97 for depression, anxiety, stress and total score, respectively [28]. Moreover, Cronbach's alpha was reported to be 0.73, 0.62 and 0.74 for stress, depression and anxiety, respectively, in a study done by Sepehriyan [25]. Therefore, we applied this tool, which contains 21 items with 7 questions for each of 3 domains, scored from 0 (never) to 3 (very high) [25]. The scoring method is presented in the table below.

Statistical methods

The data analysis was done in SPSS 16 by using a t -test to examine the relationship between the total score of sexual function and marital adjustment, a chi-squared test to examine the link between marital adjustment and sexual function and its components and Fisher's test to examine the link between stress, anxiety, depression and sexual function and its domains with marital adjustment were used.

Ethical consideration

This research project was approved by the local Ethics Committee of Shiraz University of Medical Sciences (9372-7279).

Additionally, before the start of the study, informed consent was given by the participants. The participants were assured of the confidentiality of all their personal information. The researchers tried to observe all of the participants' rights in accordance with the Helsinki ethical convention. The research proposal number is 7279.

Results

Participants

The mean age of the subjects was 30.9 ± 5.8 years. The mean ages of people with marital dissatisfaction and sexual compatibility were 31.75 ± 5.87 and 29.94 ± 5.46, respectively.

Main results

In people with sexual disorders (*n*: 371), 36.7% were compatible, while 63.3% were incompatible. However, in people without sexual disorder it was 67.8% and 32.2%, respectively. The average score of marital adjustment was 99.53 ± 16.63. The average score of sexual function was 26.53 ± 5.01 and 22.32 ± 7.05 in compatible and incompatible patients, respectively. This difference was statistically significant (*p* ≤ 0.000). According to Pearson's correlation coefficient, there was a positive linear correlation between these two variables (*r*: 0.42) (Table 1). Marital adjustment showed a significant correlation with components of sexual function, including sexual desire, augment, orgasm, satisfaction (*p* ≤ 0.000), wetness (*p*: 0.002) and dyspareunia (*p*: 0.015). According to the Pearson correlation coefficient, there was a direct linear link between marital adjustment and these variables (Table 2). The average scores of stress in the incompatible and compatible groups were 9.14 ± 4.74 and 6.53 ± 4.62, respectively, which was statistically significant (*p*: 0.004). Among compatible patients (*n*: 281), the highest frequency of stress was reported in 85.8% of women at low levels. The average score of anxiety was higher in the group of incompatible couples than in the compatible couples (6.6 ± 4.56 versus 4.48 ± 3.39); this difference was statistically significant (*p*: 0.001). The correlation coefficient between these two variables showed an inverse linear relationship (*r* = -0.32).

Table 1. The relationship between sexual function and marital adjustment

Variable	Sexual Score	*With SD	Without SD	Mean ± SD	<i>p</i>
Marital adjustment	≥ 100	136 (36.7%)	97 (67.8%)	26.53 ± 5.01	0.001
	< 100	235 (63.3%)	46 (32.2%)	22.32 ± 7.05	

* SD – sexual dysfunction.

The average scores of depression were 7.75 ± 4.79 and 4.06 ± 4.21 in the incompatible and compatible groups, respectively. This difference was statistically significant (*p* = 0.01). The percentage of those without depression was significantly higher in the group of compatible people rather than incompatible ones (87.1% vs 63.7%). However, a higher depression score was reported in incompatible people. According to the correlation coefficient, there was an inverse linear relationship between these two variables (*r* = -0.48) (Table 3).

Table 2. The relationship between marital adjustment and sexual function subscale

Variable	Stress Score	Adjustment	Non-adjustment	<i>p</i> *
Desire	> 3.3	182 (78.1%)	155 (55.2%)	< 0.001
	≤ 3.3	51 (21.9%)	126 (34.4%)	
Arousal	> 3.4	180 (77.3%)	145 (51.6%)	< 0.001
	≤ 3.4	53 (22.7%)	136 (48.4%)	
Lubrication	> 3.4	202 (86.7%)	213 (75.8%)	0.002
	≤ 3.4	31 (13.3%)	68 (24.2%)	
Orgasm	> 3.4	208 (89.3%)	202 (71.9%)	< 0.010
	≤ 3.4	25 (10.7%)	79 (28.1%)	
Satisfaction	> 3.8	201 (86.3%)	183 (65.1%)	< 0.001
	≤ 3.8	32 (13.7%)	98 (34.9%)	
Pain	> 3.8	171 (73.4%)	178 (63.3%)	0.151
	≤ 3.8	62 (26.6%)	103 (36.7%)	

* Chi-squared test for analysis.

Table 3. The relationship between marital adjustment and stress, anxiety and depression

Variable	Score	Adjustment (%)	Non-adjustment (%)	<i>p</i>
Stress	0–14	220 (94.4%)	241 (85.8%)	0.040
	15–18	10 (4.3%)	33 (11.7%)	
	19–25	3 (1.3%)	7 (2.5%)	
	Mean ± SD	9.14 ± 4.74	6.53 ± 4.62	
Anxiety	0–7	175 (75.1%)	174 (61.9%)	0.001
	8–9	30 (12.9%)	33 (11.7%)	
	10–14	26 (11.2%)	62 (22.1%)	
	15–19	2 (0.9%)	10 (3.6%)	
	≥ 20	0 (0%)	2 (0.7%)	
	Mean ± SD	6.60 ± 4.5	4.48 ± 3.93	
Depression	0–9	203 (87.1%)	179 (63.7%)	> 0.001
	10–13	24 (10.3%)	64 (22.8%)	
	14–20	5 (2.1%)	38 (13.5%)	
	21–27	1 (0.4%)	0 (0%)	
	Mean ± SD	7.75 ± 4.79	4.06 ± 4.21	

* Fisher exact test for analysis.

Discussion

A significant association was reported between marital adjustment, sexual function and all of the components of sexual function. A retrospective study on Chinese couples revealed that marital satisfaction had an inevitable effect on sexual satisfaction. According to regression analysis, the mutual inter-

actions between sexual satisfaction, marital satisfaction, and marital satisfaction showed that 18.9% of the total variance predicted marital satisfaction. Moreover, they found that the effect of sexual satisfaction on marital life can be dependent on the level of education. In other words, when other conditions are equal, any increase or decrease in sexual satisfaction leads to changes (increase or decrease) in marital satisfaction in those who had a higher level of education. Moreover, any increase in sexual satisfaction leads to a faster rise in marital satisfaction (rather than men) [29]. This is consistent with the results of the current study. The results implied that the relationship between sexual intercourse open (connections outside the house) and marital satisfaction was stronger in men. Predictors of marital satisfaction included: open sex, relationship length and gender. Sexual satisfaction played an important mediator role in the link between open sex and marital satisfaction. A study suggests that marital satisfaction in general and specific issues such as sexual issues is strengthened with proper communication between couples. It is critical for couples to be willing to communicate appropriately on issues such as sexual relations, which is consistent with the present study [30]. According to a study done in Iran, there is a positive significant link between marital satisfaction and sexual function, besides, there was a significant relationship between sexual satisfaction with age and educational level of couples [31].

The results are consistent with the findings of this study except for dyspareunia. The statistics revealed more dyspareunia in incompatible patients. According to some researchers, the element of pain, which is frequently seen in dyspareunia, is generally less associated with sexual performance and marital satisfaction due to motivational and psychological reasons. Although penetration pain can bring about short-term attention and emotional empathy, sexual cessation leads to less intimacy and romance between couples. Many women choose to continue a painful sexual relationship to avoid losing this emotional relationship and arousing her husband's anger in this regard. Hence, their sexual satisfaction will be less distorted. Pain can be less associated with marital satisfaction due to the importance of maintaining emotional relations with a partner who is lovely and ideal [32]. In general, it may be said that sexual relationships form a part of the spouses' perceptions about each other, which can hold their marital life. Although a happy married life is dependent on more than having a satisfactory sexual relationship, this relationship may be the most important cause of happiness or a lack of happiness in marriage. Undesirable sex can lead to frustration or a lack of security, resulting in lower marital satisfaction and family disintegration [10]. In the present study, a statistically significant relationship was shown between marital adjustment and mental health. A study done on Swiss couples which evaluated their levels of stress, sexual relationship and marital satisfaction showed that a high level of internal stress is associated with less marital and sexual satisfaction in both sexes. If one of the spouses claims more daily stress, his/her sexual partner will report less marital and sexual satisfaction. There was no significant association between external stress and marital satisfaction in women, while it was obvious in men. Men with high levels of external stress reported more sexual and marital satisfaction [33]. The results of this study are consistent with the present study. In that study, internal and external stress was determined with the scl-90-r questionnaire, whereas only female stress was measured by the Lewinda questionnaire. In addition, the present study was conducted only on women of childbearing age and their sex partner was not involved.

A study conducted in Korea (2010) reported a lower level of cumulative stress and higher marital satisfaction in urban immigrant women than in rural women. Both groups reported similar rates of life stress in the housewives. The researchers concluded that the factors influencing marital satisfaction in the two groups of housewives with low levels of life stress and cu-

mulative stress were the support of their husbands and living with a legal spouse [34], findings which were consistent with our results. That study compared marital adaptation in rural and urban women besides cumulative stress and the stress in housewives, but the present study explored stress in women and only in urban women. The results indicate an effect of stress on marital adjustment, which was consistent with the results of this study. Stress reduces interaction and intimacy in couples, leading to less positive interaction, shared experiences, feeling together and increasing the risk of adjustment in couples. Stress can increase negative interactions and reduced positive interactions can decrease the quality of communication in couples. The other effects of stress can be a higher risk of physical and psychological problems, such as sleep disorders and sexual dysfunction [35].

In this study, it was determined that there was a significant relationship between marital adjustment and anxiety. Abedi (2015) did a survey in Iran to investigate the relationship between stress and sexual function and satisfaction in reproductive-aged women in Iran. The researcher reported a significant correlation between the total score of anxiety and marital satisfaction at the level of $p \leq 0.01$. Stepwise regression tests showed that anxiety is one of the factors which predict marital satisfaction variances. As anxiety increased in married students, marital satisfaction decreased [36]. These results are consistent with those of the current study. The same tool was used to assess marital satisfaction, but the General Health Questionnaire (GHQ) was used in Abedi's study, while the Lewinda scale was applied here. According to a study done by Whisman et al., 63.7% of the anxiety scores were over 40, one standard deviation higher than the general population, and 31% of the subjects received a marital score of less than 22, which was the cut-off point for marriage incompatibility. A significant association was observed between relationship satisfaction and anxiety [35]. The results are consistent with those of the present study. This study was done on pregnant women, while the study population was different here. The other difference was about sample size. Whisman applied Spillberger and DASS-7 questionnaires to assess the relationship between anxiety and adaptation. Mental disorders – including anxiety – reduce a person's chances for pleasant relationships. Anxious people may look at the world around their failure and loss, which may include their insight about their life partner, their sexual partner and their marital relationship.

Anxious women have a low level of marital and communication level regarding others; they may be afraid of reduced emotional and instrumental support from their spouses and being left alone in this period, resulting in deterioration [35]. The present findings reveal that depression affects marital adjustment. The result of the study done by Grames et al. showed a significant relationship between marital adjustment, depression and health problems. They found that there was a strong correlation between ethical principles and marital relationship. Couples who are responsible for their actions are more likely to be satisfied with their marriage. In addition, they may suffer less from depression and other health problems [37]. These results are more consistent with our results. The present study was conducted on 514 women aged 15–45. Spanier and Lewinda's questionnaires were applied to assess marital adjustment and depression. A study done by Sandberg et al. in Provo showed that higher scores of incompatibility were associated with higher depression scores in men and women. In men, the higher scores of incompatibility were associated with job satisfaction and poorer health. Negative marital interaction correlated with depressive symptoms in women ($p < 0.001$) [38]; this finding was consistent with our results. This relationship was an inverse relationship; the higher the compatibility scores, the lower the depression scores. It may be because depressed people may be more defective in marital function such as problem solving and marital relationship. Depressed mood leads to decreased

energy, feelings of a lack of enjoyment and finally a decline in individual and social life. Subsequently, problems will arise in the marital relationship, including loss of affection and other positive emotions regarding the spouse, which predicts the collapse of the marital relationship [39]. These results introduce sexual function and mental health as important variables affecting marital compatibility. It seems that the accurate identification and treatment of sexual dysfunction and mental disorders can improve marital satisfaction, strengthen families and contribute to a healthy, productive society.

Limitations of the study

This was a cross-sectional study, which is not necessarily a sign of causality. The advantages include cluster sampling from various health centers, which can be extended to the whole society. Moreover, we applied a valid and reliable tool that has been used in many studies in Iran. It is recommended that studies of marital satisfaction and factors affecting it in couples (women versus husbands, or both) be conducted in different cities of different cultures.

Suggestion

It is recommended that studies should be conducted on the link between marital satisfaction and its influencing factors both

in couples and in the general population. Sex in humans results from a biological structure, life experiences, knowledge, behavior, and attitude that is influenced by physical, psychological, social and cultural factors [40]. Therefore, considering the above factors and the sensitivity of sexual communication, as well as the level of education of women and men, classical and non-classical instruction can be effective in most counseling sessions.

Conclusions

The results demonstrate that there is a relationship between marital satisfaction, sexual function and mental state. In addition, marital satisfaction had a significant relationship with all components of sexual function. Marital satisfaction showed a significant relationship with stress, anxiety and depression, so accurate identification and treatment of mental disorders, as well as sexual counseling, is recommended in couple who are incompatible. Therefore, providing the necessary relevant education can improve the family health, marital intimacy and sexual satisfaction.

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