Adv Nurs Midwifery Original Article

Summer 2018, Volume 27, Issue 2

The Relationship between Psychological Status (Depression and Anxiety) and Social Support and Sexual Function

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DOI: 10.29252/ANM-027021

Submitted: 24.01.2017
Accepted: 16.05.2017

Keywords:
Sexual Function
Depression
Anxiety
Social Support

How to Cite this Article:
Saberi N, Amir Ali Akbari S, Mahmoodi Z, Nasiri M. The Relationship between Psychological Status (Depression and Anxiety) and Social Support and Sexual Function. *Adv Nurs Midwifery*. 2017;**27**(1):1-8. DOI: 10.21859/ANM-027031

Abstract

Introduction: Given that large numbers of marital problems arise from lack of proper satisfaction with sexual desire (libido) as well as lack of awareness towards the complicated dimensions of this fundamental motive, the purpose of the present study was to determine correlations between psychological state (depression and anxiety), social support, and sexual function among females of the reproductive age.

Methods: This study was a descriptive-analytic research on 400 females referred to clinics affiliated with Shahid Beheshti University of Medical Sciences in the city of Tehran, during year 2015. The study sample was recruited by cluster and multi-stage random sampling method. The Sexual Function Questionnaire, Demographic Questionnaire, Scale of Perceived Social Support, Spielberger's Anxiety Inventory, and Beck Depression Inventory were also used to collect the data. The obtained data was analyzed through the SPSS software via descriptive statistics, t test, one way Analysis of Variance (ANOVA), as well as chi-square test.

Results: The findings revealed that 4.5% of females had poor level of sexual functioning. In addition, 24.5% of females benefited from low social support and also 75% and 9% of the given individuals had chronic depression and severe anxiety, respectively. According to the results of this study, sexual functioning was correlated with female's age, husband's age, age of first pregnancy, length of marriage, duration of having private rooms, and history of infertility ($P < 0.05$). Furthermore, there were relationships between sexual functioning and depression as well as anxiety and social support ($P < 0.05$).

Conclusions: It was concluded that sexual functioning was correlated with psychological state (depression and anxiety) and social support. Thus, it was recommended to conduct screening tests in terms of the variables examined.

INTRODUCTION

Sexual desire and motivation, similar to other human fundamental impulses, are an integral part of biological, mental and social nature, and it is clear that quality to satisfy such critical desire plays a very important role for individual and social health, as well as comfort and welfare. Many of the major problems in today's world are due to the lack of satisfaction of sexual desire and lack of awareness of this fundamental phenomenon [1]. In fact, sexual instinct is one of the strongest human instincts that effects behavior [2], and sexual activity is the source of many transformations in human life. This is because, same as other natural desires of humans, it has been with them since birth and it flourishes gradually proportional to development [3]. On the other hand, satisfaction obtained from such desire is one of the most important aspects of human life [4]. Sexual function that is a part of a female's health is an essential component of life and a multidimensional phenomenon affected by many biological

factors. It is also a part of human life and behavior [5], and it is mixed with male's personality in such a way that it would be impossible to speak of it as an independent phenomenon. Sexuality has always been the center of men's attention, interest, and curiosity and can significantly impact quality of life and sexual life of men's partners. Accordingly, in the area of psychiatric disorders, sexual function has been regarded as a classified disorder at the center of recognition [6]. Indeed, it could be said that, in terms of significance, sexual desire can be categorized as a major marital life problem, and sexual dysfunction as a cause of emotional stress and mental health problem and a common curable problem [7]. Several factors can cause sexual dysfunction in females. Some of these factors include general health status, psychological disorders, interpersonal factors, and social issues [8]. Female Sexual Dysfunction (FSD: Female Sexual Dysfunction) is one of the most common problems that effects approximately 40% to 45% of women [9]. The prevalence of sexual dysfunction is very high, and diverse studies have estimated its prevalence in females as 25% to 50% [10]. In Iran, 31.5% of females have at least one sexual dysfunction [11]. In an international survey performed on 13885 females, aged 40 to 80 years old, it was indicted that 39% with sexual activity reported at least one problem with regards to their sexual activity [12]. The results obtained from different studies in Iran are indicative of the prevalence of sexual dysfunction, which is 89% among married females in Qazvin, and sexual desire disorder with 41.1% accounted for the highest frequency [13]. A female's adverse sexual function is often the outcome of her current psychosocial context [14]. Depression is one of the most common psychological factors affecting sexual dysfunction [15]. Females, more than males, are in danger of depression [16]. In a research performed by Hadi in 2003, 21.5% of females were depressed [17]. The research carried out by Azar in 2003 indicated that sexual dysfunction in patients with depression was higher than non-depressed people [18]. A 2010 study by Vaziri showed that people with sexual problems often have low self-esteem and depression or anxiety, and their sexual relationship is predicted by their defeat [19]. In most researches performed on depressed females, sexual dysfunction has been reported. Compared to non-depressed females, those with depression have higher difficulty in accomplishing the stages of provocation and orgasm while they are involved in sexual intercourse [20]. Females with depression experience depression about twice as often as males. Depressive disorders are often associated with little sexual desire, and the onset of depression may precede sexual desire, may occur concurrent with it, or it may be the consequence of a lack of libido [21]. The performed research corroborates the relationship between social support and mental health, and the clear impact of perceived social support on health and mental peace [22]. Thus, understanding and studying human sexuality is one of the most important public health and mental issues [14].

Despite the high prevalence of sexual dysfunction in females, many of them do not express their sexual problems due to cultural and religious issues or seek to find solutions to resolve it. In the meantime, sexual dysfunction negatively impacts a female's physical psychological and social health. Since depression and anxiety are recognized mental disorders in females, and social protection can be considered a factor influencing sexual function, the current research aimed at determining the association between depression, anxiety, and social support of sexual function in females.

METHODS

Study Design

This community-based cross-sectional descriptive study was performed to determine the relationship between psychological status (depression and anxiety) and social support, and sexual function.

Setting and Sampling

The research sample comprised of 400 females visiting the clinics affiliated to Shahid Beheshti University of Medical Sciences. In the research, first, a list of the regions under the coverage of Shahid Beheshti University of Medical Sciences and its clinics was specified. Then, among the clinics, the samples were randomly selected and included in the research in an convenient manner. After obtaining the approval of the research from the ethics committee of the international branch of Shahid Beheshti University of Medical Sciences and gaining acommendation letter, the researcher performed the sampling at relevant clinics. After introducing himself to the research participants, the researcher presented information on the objectives and stages of the current research, confidentiality of the data and collective interpretation of information. After obtaining the participants' complete consent, the questionnaires were distributed among them.

The Inclusion Criteria

The inclusion criteria for the females was as follows; 1) had an Iranian nationality; 2) were literate; 3) lived with their husband at the time; 4) were at the reproductive age [18-45]; 5) were not pregnant; 6) were not afflicted with a mental illness; 7) or did not take psychiatric treatments (antidepressants, lithium, antipsychotics, benzodiazepines, anticonvulsants) and did not have medical conditions that effect sexual function (cardiopulmonary disorders, multiple sclerosis, chronic pain, urinary incontinence, arthritis, Parkinson's disease).

Data Collection

Tools for data collection included the following questionnaires: A demographic and socio-economic status questionnaire, Beck depression, Spielberger's anxiety, perceived social support and Female Sexual Function Index (FSFI) questionnaires.

Beck Depression Questionnaire

The questionnaire included 21 four-option questions as a self-report to assess depression in adults and adolescents of 13 years and older. Thus, the scale determines varying degrees of depression, ranging from mild to severe, and in terms of total points obtained, four categories indicate lowest or no depression (0 to 13), mild depression (14 to 19), moderate (20 to 28) or severe depression (29 to 63). In the research performed by Dabson, the tool's validity for each item was 0.913, while the validity was obtained as 0.873 in Iran using factor analysis and construct validity through Cronbach's alpha [23].

Spielberger Anxiety Questionnaire

This questionnaire is composed of two parts that evaluate state and trait anxiety, separately. Each part included 20 items by a scoring from 1 to 4, and in total, the scores of each person at each part was a number from 20 to 80. Based on the questionnaire, the participants were divided to 3 categories of people with mild (20 to 40), moderate (41 to 60), and intense anxiety (61 to 80). In Iran, in the research performed by Mehram in Mashhad city, Cronbach's alpha reported for the state anxiety scale, trait anxiety scale, and total scale was 0.91, 0.90, and 0.09, respectively [24]. Cronbach's alpha coefficient for the questionnaire in the research performed by Safavi and Maeroofi was 0.90 [25].

Perceived Social Support Questionnaire (MSPSS)

This test measures the amount of social support received by the participants with 12 statements, and measures the support received by individuals from 3 sources, including families (4 statements), friends (4 statements), and important people in life (4 statements). The range of the scores obtained from this scale is 13 to 84. A score from 13 to 48 indicates low perceived social support, the samples with a score from 49 to 68 indicates average social support, and samples with scores from 69 to 84 have high perceived social support. In this test, Cronbach's alpha of the total scale and also subscales range from 0.85 to 0.91 and its reliability has been reported as 0.72 to 0.85 through re-test [27]. In the Persian version, the Cronbach's alpha in a sample of 176 people, the score was obtained as 0.83 [28].

Female Sexual Function Index (FSFI)

This is a questionnaire with 19 items that assesses female's sexual function in 6 domains of sexual function, including sexual desire (2 items), arousal (4 items), vaginal moisture (4 items), orgasm (3 items), sexual satisfaction (3 items), and pain during sexual activity (3 items). These subcategories have a response range of 1 to 5, and a score higher than 5 refers to optimal performance. To calculate the scores in this questionnaire, total scores relevant to each area were multiplied by its factor. The total score was 95 and minimum score was 3, which were converted to a percentage scale. Females with a score of 0 to 33.3 were recognized as those with poor performance, from 33.4 to 66.6 with average performance and 66.7 to 100 with good performance. The scale's reliability and validity has been confirmed by several researches performed by Iranian researchers such as Ozgoly et al. (2004), Nasiri Amiri et al. (2007), Hosseini Tabaghdehi et al. (2006), Bahrami et al. (2007), and Mohamadi et al. (2008). To determine the reliability of the questionnaire for each of the 6 areas and the total scale for the control groups and total number of the subjects, internal consistency was calculated using Cronbach's alpha coefficient. The results showed that internal consistency of the questions in all areas in the females of the case group was 0.61 and above, and in the females of the control group this was 0.70 and above, and for all people under study, this was 0.7 and above and at an acceptable level. The items' internal consistency of the total scale for the case group, the control, and for the entire sample was 0.85 and above, and this indicates the instrument's good reliability. Thus, the Persian version of FSFI is a reliable measure to assess female's sexual function [29-33]. This tool was confirmed by Witting et al. (2008), Rosen et al. (2000), Mansour et al. (2014), and Ryding et al. (2015). Ethical considerations were considered in the current study [34-37].

Data Analysis

The SPSS 21 software was employed for data analysis and descriptive statistics, *t* test, one-way Analysis of Variance (ANOVA), chi-square and Mann-Whitney U tests were used.

RESULTS

The research findings indicated that the female sexual function index score was 68 ± 16.61. Other variables are indicated in Table 1. The majority of females (214 individuals; 53.8%) and their husbands (189 individuals; 47.3%) were university graduates. The majority of the females (284; 71%) were housewives, and their husbands (161 individuals; 40.3%) were predominantly self-employed. The majority of the research participants had no family relations (300 individuals; 75%), ethical difference (307 individuals; 76.7%) and dialect difference (333 individuals; 66.8%) with their husbands. Furthermore, 400 participants were Muslim (100%), and the number of marriage of 391 individuals (97.8%) was once, and the marriage procedure among 267 (66.8%) was traditional (introduction and matchmaking). And 376 women (94%) had a history of infertility, and in 47 women (39.3%) the number of pregnancy, number of live births, and number of children was 2. In 331 women (82.8%) the number of abortions was zero. In the current research, contraceptive method in 225 women (55.3%) was normal procedures, and the type of last birth in 277 women (69.3%) was cesarean. 307 women (76.8%) had sleep private room and 379 women (94.8%) did not live with another person. In addition, 250 (61.8%) of women did not exercise and the most common type of exercise among 95 (23.8%) was walking. According to the results of this study, sexual functioning was significantly and indirectly correlated with female's age ($r = -0.185$, $P < 0.001$), husband's age ($r = -0.133$, $P < 0.008$), age of first-time pregnancy ($r = -0.104$, $P < 0.04$), length of marriage ($r = -0.120$, $P<0.01$), duration of time spent in private rooms ($r = -0.121$, $P < 0.05$) and history of infertility ($r t = -2.801$, $P < 0.005$). The mean scores of sexual function, depression, anxiety, and perceived social support is shown in Table 2.

Based on this research and according to the relationship between depression (Table 3, Fig 1), anxiety (Table 4, Fig 2) and perceived social support (Table 5, Fig 3), there was a significant and indirect relationship between sexual function and depression and anxiety. Also, there was a significant and direct relationship between sexual function and perceived social support ($P < 0.001$).

Table 1: Mean and Standard Deviation of the Demographic Characteristics of the Participants

Characteristics	Mean ± SD	Max-Min
Age	32.41 ± 6.33	18-45
Husband's Age	36.57 ± 7.1	23-56
First marriage age (Years)	21.98± 4.3	14-37
Duration of married life (years)	10.23 ± 6.47	0-30
First Pregnancy age (Years)	24.43 ± 4.56	15-40
Time spent at a private room (years)	7.4 ± 1.7	0-30
Duration of exercise per week (hours)	2.56 ± 1.57	0-14

Table 2: Instrument Descriptive of Sexual function, Depression, Anxiety, and Perceived Social Support

Characteristics	Mean ± SD	Max-Min
Sexual function	68 ± 16.61	3-95
Depression	12.68 ± 10.31	0-45
Anxiety	65.76 ± 8.9	22-82
Perceived social support	58.97± 15.19	15-84

Table 3: The Relationship between Depression and Female Sexual Function Index

Sexual Function	Has		Does not Have		P-value
	Percentage	Frequency	Percentage	Frequency	
Poor	50%	9	50%	9	Chi-square test 0.001 *
Moderate	68.4%	92	31.9%	43	
Good	68.1%	107	56.7%	140	

Table 4: The Relationship between Anxiety and Female Sexual Function Index

Sexual Function	Low		Moderate		Sever		P-value
	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	
Poor	0%	0	11.1%	2	88.9%	16	Chi-square test 0.04 *
Moderate	0%	0	21.6%	29	78.4%	105	
Good	16%	4	25.9%	64	72.5%	179	

Table 5: The Relationship between Perceived Social Support and Female Sexual Function Index

Sexual Function	Low		Moderate		Sever		p-value
	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	
Poor	5.6%	1	61.1%	11	33.3%	6	Chi-square test 0.001 *
Moderate	42.2%	57	42.2%	57	15.6%	21	
Good	16.3%	40	44.9%	111	38.9%	96	

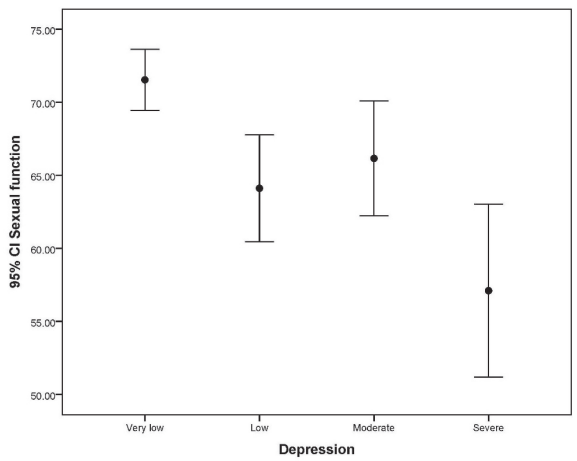

Figure 1: The Relationship between Depression and Female Sexual Function Index

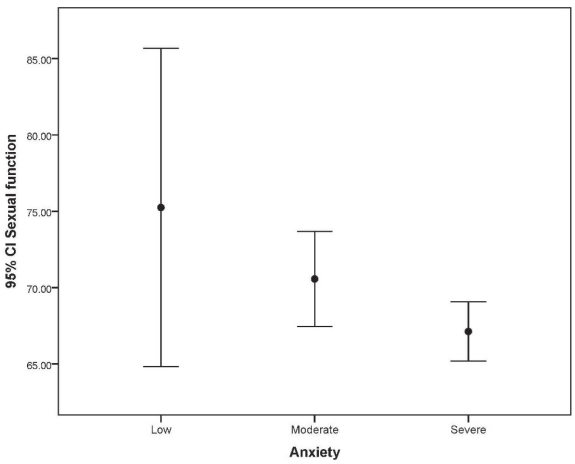

Figure 2: The Relationship between Anxiety and Female Sexual Function Index

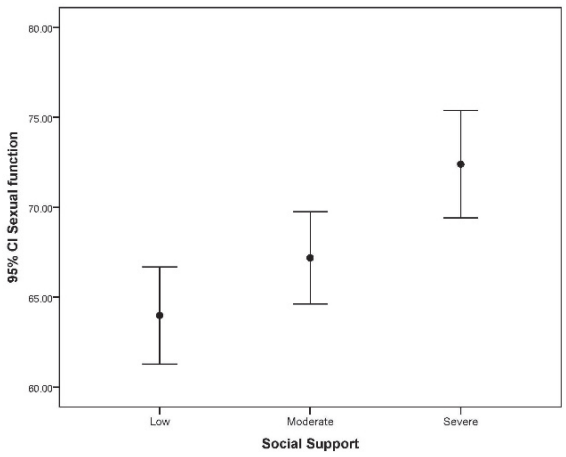

Figure 3: The Relationship between Perceived Social Support and Female Sexual Function Index

DISCUSSION

Based on the findings obtained from the current research, the sexual function of the majority of females (61.8%) was at an acceptable level. In contrast, in the research performed by Shayan 2015, 91.1% of the females and in the study of Yeke Fallah (2006) from Qazvin, 93.1% of the females had sexual function disorder, and only 21.5% of the females were satisfied with their sexual activity [13, 38]. In the research performed by Mojdeh (2012), only 18% of females had a satisfactory sexual function and others had complaints of varying degrees of sexual dysfunction [39]. In another research performed by Palasius (2009) in Spain and Zhang in China, the prevalence of female's sexual disorders was reported to be 40% and 56.8%, respectively, which is not consistent with the current research. This inconsistency in the results could result from different samples (cultural, social, economic status, etc.) and the research setting [40, 41]. In the current research, there was a significant and inverse relationship between increase in female's age and prevalence of sexual dysfunction, such that as the female's age increases, female sexual function somewhat declines, and the research performed by Hisa Sasue et al. (2005), Berman et al. (2003), and Ponholzer et al. (2005) have also achieved such results [42-44]. The research performed by Nazarpur et al. (2015), Beigi et al. (2008), Jonusiene et al. (2013), Perez-Lopez (2012), and Merghati-khoei et al. (2013) also corroborated that an increase in female's age could lead to increased sexual dysfunction [45-49]. In a research performed by Krbasi et al. (2005), there was no significant relationship between sexual function disorders and age [50]. In the current research, there was a significant and inverse relationship between spouse's age, age of marriage, and the age of first pregnancy, and sexual function indicator. This means that with an increase in spouse's age, age of marriage, and the age of first pregnancy, sexual disorders become more exacerbated and sexual function score is further reduced. However, in the research performed by Nazarpour et al. (2015), there was no significant correlation between spouse's age and total score of sexual dysfunction [45]. Thus, in the research performed by Shayan (2015), the correlation between the variable and spouse's age was significant and direct, and with an increase in spouse's age, sexual dysfunction was increased [38]. The research results obtained by Sidi et al. (2007) Farahmand et al. (2012), Etesami pour (2011), Bakhshayesh et al. (2010), Gashtasbi et al. (2008), and Boloriyan et al. (2007) were consistent and in line with the results obtained by Shayan et al. (2015) [10, 38, 51-55]. In addition, the current research indicated that there was a significant and inverse correlation between the duration of spouse cohabitation and sexual function, and there was a significant and direct relationship between time spent in a private room and sexual function, i.e. with an increase in the duration of spouse cohabitation based on lower sexual performance, and with an increase in time spent at a private room, sexual performance could increase. In the research performed by Nazarpour et al. (2015), Bluryan and Gangelue (2007), there was a significant and inverse relationship between duration of spouse cohabitation and sexual function [45, 46]. In a research performed by Cayan et al. (2004), which sought to analyze sexual disorders and its potential risks on 179 Turkish females, with an increase in the age and duration of marriage years, the prevalence of sexual disorders among the females also increased [56]; the result of Shayan et al. (2015) and Bakouei et al. (2006) were inconsistent with this result [38, 57]. The current research indicated that there was no significant relationship between education level of males and females, while Baigi et al. (2008), Verit et al. (2009), confirmed an inverse relationship in this regard, and Perez and Lopez et al. (2012) and Lianjun et al. (2011) did not show a direct relationship [46, 48, 58, 59]. In addition, cayan et al. (2004) stated that low education level could influence sexual function [56]. In analyzing the history of midwifery in the current article, it was indicated that number of pregnancies, abortion, family size, and number of children had no significant correlation with sexual function, while in the research performed by Nazarpoure et al. (2015), Charandaby et al. (2012), and Bakouei et al. (2005), there was a significant and direct relationship [45, 57, 60]. In the current research, there was no significant statistical correlation between pregnancy contraceptive procedures and type and duration of using it. The results obtained from the study of Hosaini Tabaghdehi et al. (2006) and Shayan et al. (2015) did not show a significant relationship between sexual function and pregnancy contraceptive procedures, which is consistent with the current research findings [31, 38].

Based on the findings of the current research, there is a significant relationship between depression and sexual function, and the research carried out by Mojdeh et al. (2012) indicated that depression is associated with decreased sexual drive and orgasm in females [39]. This finding is consistent with the results obtained from the research performed by Lai et al. (2011), which indicated that reduced sex drive and orgasm are 2 common problems among depressed females [61]. The research performed by Chivers et al. (2011) showed that depression is associated with orgasm, yet, it has no statistical correlation with sexual desire [62]. The research carried out by Tahmasebi et al. (2011) on female's depression (20 to 40 years old) indicated that more than half (58.7%) of females had depression, 39% had mild depression, and there were also a significant relationship between depression and sexual function [63]. The results obtained from the research performed by IldarAbadi et al. showed that 63.3% of the females were depressed [64]. The research by Azar et al. indicated that there was a significant relationship between sexual func-

tion and depression [65]. Boyd et al. alleged that in sexual dysfunctions, males showed a greater loss of self-esteem and shame that turned to mental preoccupation and eventually caused depression in people [66]. Other findings showed that there was a significant relationship between anxiety (severe) and sexual function, which is consistent with the researches performed by Sepehrian and Hossini (2012), Hurtman (2007; on the bilateral relationship between sexual dysfunction and anxiety) [67, 68], Kashden et al. (2011) and MC cabe (2005; on the significant impact of depression on the expansion of sexual disorder) [69, 70], Bradford and Maston (2006; performed on the relationship between anxiety and sexual arousal) [71], and Brezendan et al. (2006) [72]. In addition, in the current research, there was a significant correlation between sexual function and social support, and the results are consistent with Cornman et al. (2005), which showed social support could influence mental health. Social support and good social relations significantly contribute to health. This issue had a strong impact on health. Supportive relationships may motivate more healthy behaviors. People, who receive less social support, are more vulnerable to mental and physical problems [22]. Among multiple factors, Kaplan considered mental health and believed that a high percentage of females had sexual and mental dysfunction due to low levels of mental health [6]. Some of the critical factors influencing the participants' response to the questions and results include negative social beliefs regarding sexual issues and their consideration as a taboo, individual differences, psychological characteristics, shame and embarrassment, etc. Sexual function is related to depression, anxiety, and social support so it is recommended to implement screening in respect with studied variables.

ETHICAL CONSIDERATION

This research was approved by ethics committee of the international branch of Shahid Beheshti University of Medical Sciences.

ACKNOWLEDGMENTS

The authors of this study acknowledge the people who helped with this study, particularly the females, who participated in the research.

CONFLICT OF INTEREST

There was no conflict of interest to be declared.

FUNDING

This study was funded by The research deputy of Shahid Beheshti Medical Science University.

AUTHORS' CONTRIBUTIONS

All authors contributed equally to this project and article. All authors read and approved the final manuscript.

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