

Comparing Sexual Function in Females of Reproductive Age Referred to Rural and Urban Healthcare Centers in Ahvaz, Iran

Nahid Javadifar,¹ Farideh Pargar,^{2,*} Parvaneh Musavi,² and Mohammad Hussein Haghhighizadeh³

¹Reproductive Health Promotion Research Center, School of Nursing and Midwifery, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, IR Iran

²School of Nursing and Midwifery, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, IR Iran

³School of Public Health, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, IR Iran

*Corresponding author: Farideh Pargar, School of Nursing and Midwifery, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, IR Iran. E-mail: aridehpargar2014@gmail.com

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Abstract

Background: Healthy sexual function can be considered as an important element to improve personal and public hygiene. The sexual desire plays an important role in mental health and improving the quality of life.

Objectives: The current study aimed to compare sexual function of females in urban and rural areas.

Methods: The current descriptive study adopted 800 females of reproductive age (range 15 - 45 years) referred to rural and urban healthcare centers in Ahvaz, Iran, in 2015. Samples were randomly selected. Applied instruments in the study were demographic information and female sexual dysfunction questionnaires (FSFI). Independent T-test, Chi-square and logistic regression were employed to analyze data by SPSS ver. 22.

Results: The result showed a significant statistical difference between females in urban and rural areas in terms of sexual desire, vaginal lubrication, intercourse pain and sexual function ($P < 0.05$). However, there was no significant statistical difference between the two groups in terms of excitement, orgasm and sexual satisfaction ($P > 0.05$). Frequency of sexual dysfunction was 59.9% in females in rural and 36.5% in urban areas and the difference between the groups was statistically significant (0.000). In both groups, the highest sexual disorder frequency was related to intercourse pain.

Conclusions: According to the obtained results, females in the rural areas had lower sexual function than the ones in the urban areas. It is suggested to establish female sexual health units in healthcare centers to give female sexual function consultation adjusted with awareness and culture of females and consider the existing problems.

Keywords: Sexual Function, Reproductive Age, Rural, Urban

1. Background

One of the most important problems that can affect personal and social life is sexuality and satisfying the sexualities in a desirable manner that can play key role in the development of the human personality and deprivation from the sexualities is irreparable (1). The sexual desire can be resulted from personal characteristics, interpersonal relationships, family and cultural status, community, history of sexual activities, physical and mental chronic diseases, malignancies, medications and hormonal status of individuals (2). Sexuality can be considered as one of the most important elements to improve personal and public hygiene (3, 4).

Since the social attitude, sexual health and hygiene are changed in the last decade, increase in awareness of people can enable them to improve their sexual health and relations. Many researchers emphasize on identifying and solving sexual problems of people (5).

Today, it is difficult to consider the problems relevant to sexual affairs, due to the specific views in this regard. However, it seems necessary to consider them, since complexities of the issue are to such an extent that can explain the reasons for assessment and the need to investigate them in different dimensions. Its prevalence over different years, despite the taken measures and efforts, indicate the importance of this issue. Rosen et al. indicated that 40% - 45% of females have sexual dysfunction (6). In Iran, prevalence of sexual dysfunction is 64% and the most frequency is related to the scope of intercourse pain (37%) (7). A study reported that the prevalence of sexual dysfunction in Iran is more than that of the U.S. The reason for more prevalence of the dysfunctions in Iran (85%) than the US (43%) is emphasis on patience of females as a cultural value, negligence of female sexuality, the need for sexual submission, lack of sexual education, and high modesty out of religious and cultural beliefs to express sexuality (8).

In rural societies, culture and ideology can have significant impact on beliefs and attitudes of people. In some rural societies, marital relationship is done as a task and not an enjoyable action and this can result in reduction of sexual desire and sexual satisfaction (9). In the study by Lau et al. on a village in China, the prevalence of sexual dysfunctions was 43% and the most frequency (31%) was related to orgasm (10). In another study adopted by Viswanathan et al. in Tamay Villages, sexual dysfunction was 64.3% and the most frequency was related to sexual desire as 52.2% (11). Sathyanarayana Rao et al. in Mysore Village of India indicated that one-fifth of males and one-seventh of females in this village had one or more sexual dysfunction. Most of the people had low level of sexual education and awareness and need to be identified and trained (12). Ojumo in a study in a village of Nigeria indicated that 71% of females had one or more dysfunctions and the most frequency was related to orgasm (13).

Culture, traditions and rites play a key role in forcing couples to have a premature baby, which can be a factor for anxiety and dysfunction in sexual function. Fear of pregnancy, in most cases forcible marriage, imposed norms to defend males' rights and inequality of rights of males and females and similar conflicts are among ideologies accepted in rural societies (9).

Over the past decade, the influence of technology has caused basic changes in life, feelings, thoughts, beliefs, values, traditions and rites and in general, in lifestyle and culture of the current people. Majority of villages benefit from technologies such as satellite, internet and TV and as a result of influence of main elements of renewal such as hygiene, mass media, technological instruments, communicating with cities and modern education changed people mainly in different dimensions (14). Despite the urbanization of villages, it should be noted that the process does not mean complete change of rural life and complete destruction of urban and rural differences and in most studies, target population is the urban society. However, the rural society of Iran is faced these changes and evolutions which is neglected unfortunately (15).

2. Objectives

Sexual function is one of the most effective factors on general health in marital life and providing health of females in families is one of the most important factors for the stability of family and society. According to socio-economic and cultural statuses and factors in perception of people and society of sexual desires and behaviors and lack of systematic studies in rural societies, the current study aimed to compare performance and sexual function between rural and urban females of reproductive age.

3. Methods

The present analytical study aimed to compare sexual function of females of reproductive age referred to rural and urban healthcare centers in Ahvaz, Iran, in 2015. Sample size was estimated based on sample with 40 members from urban and rural areas as pilot with 95% confidence interval. Stratified clustering method was employed. For this purpose, healthcare and medical centers of Ahvaz were divided into two parts of East and West. Then, each center was considered as a cluster. In step 1, out of 23 urban healthcare centers of Ahvaz East region, urban healthcare centers 1, 6, 9 and of rural centers, Ghyzanyh, Nazheh and Koreit were randomly selected. Also, Out of 11 urban centers of Ahvaz West region, centers 1, 2, 5 and of the rural centers Albaji, Om-Tamir and Tasveyeh-shekar were randomly selected. Then, samples were randomly selected from each center and based on case number. Then 12 participants were assigned to each group. Qualified people were called and asked to participate. The inclusion criteria were: females of reproductive age (range 15 - 45 years), having intercourse with husband, being single-spouse and willing to participate in the study. The exclusion criteria were: menopause, infertility, pregnancy, history of mental health disorders, history of chronic diseases, surgical procedures such as hysterectomy and vaginal repair, polygamy and the puerperium (six weeks after childbirth) and drug addiction. Applied instrument was demographic questionnaire with two sections including personal information such as age, husband's age, job, husband's job, literacy, husband's literacy, number of pregnancies, number of childbirth, number of children, type of delivery, average marriage duration and body mass index (BMI). Second section was related to sexual function including six fields of sexual desire (questions 1 - 2); sexual motivation (3 - 6); vaginal lubrication (7 - 10); orgasm (11 - 13), sexual satisfaction (14 - 16) and intercourse pain (questions 17 - 19). Points in each section were calculated through adding points of questions related to the section and multiplying the result by coefficient of each section. Gaining more points indicated better sexual function. Accordingly, to create the same weight for scopes, maximum point for each scope was six and a total point of 36. Point 0 indicates that individuals had no sexual activity over the past week. The cut-off point for the total scale and subscales respectively included total scale of 26.5, sexual desire to 3.3, excitement to 3.4, vaginal lubrication to 3.4, orgasm to 3.4, sexual satisfaction to 3.8 and intercourse pain of 3.8. In other words, values over the cutoff point indicated good function. Validity of female sexual function index questionnaire was confirmed by Rosen et al. (16). In Iran, validity and reliability of its Farsi version was confirmed by Mohammadi

et al. Total reliability of the test was reported to (75% and 78%) using half-split and retest method and for substests, it has been obtained (63% - 75%) via half-split and (70% - 81%) retest methods. After obtaining permission from research deputy of university, the author referred to the centers for sampling and after receiving written consent and explaining the process to the participants, research goals and ensuring confidentiality of data, they participated in the study. Afterwards, they completed the questionnaires. All statistical analyses were conducted by SPSS ver. 22. Data analysis was conducted using descriptive statistics (frequency, standard deviation) and inferential statistics (T-test, ANOVA, Chi-square and logistic regression). Chi-square test was used to compare categorical variables in the two groups. One-way ANOVA and independent T-test were used to compare parametric sexual function and satisfaction scores. In case of significance, the odd ratios for the total population were calculated. All 2-sided hypotheses, with a P value of < 0.05, were considered significant. Values were presented as mean ± SD.

4. Results

According to Table 1, demographic information include: mean values and SD of age in rural and urban females were 29.57 ± 7.59 and 30.73 ± 7.11 , respectively. Means of marriage duration were 9.48 ± 6.99 and 7.77 ± 5.46 years for rural and urban females, respectively. A significant statistical difference was observed between the two groups ($P = 0.001$). Moreover, based on statistical tests, no significant difference was observed between the groups in terms of number of pregnancies and number of childbirth ($P > 0.05$). Another studied variable was BMI. The highest rate of normal weight was observed among rural females as 43.3% and the highest mean overweight was measured among urban females as 43.9%. In rural areas, 83.3% of females were housewives and in urban areas, 45.5% of females were employed. According to the obtained results, the highest educational level among rural females was elementary and secondary school (40.8%) and the highest educational level of urban females were non-completed high school and high school diploma (54.8%). The highest mean of ethnicity in rural (39.8) and urban (39.3) areas was Arabs. The study by Heiman on sexual function in relation to ethnicity did not show statistically significant differences (17) between the ethnics.

Table 2 presents comparison of frequency and prevalence of sexual function subscales between the two rural and urban groups. Frequency of sexual desire, vaginal lubrication and sexual functions were significantly different between rural and urban females ($P = 0.000$). However, independent T-test indicated no significant correlation be-

Table 1. Social Demographic and Marital Characteristics of the Participant

Variables	Groups		P Value
	Number of Rural Females (%)	Number of Urban Females (%)	
Females mean age	29.75 ± 7.59	30.73 ± 7.11	0.026 ^a
Males mean age	34.26 ± 8.31	34.74 ± 8.04	0.402
Mean of marriage duration	9.48 ± 6.99	7.77 ± 5.46	0.000 ^a
Mean number of pregnancy	2.19 ± 1.42	2.06 ± 1.39	0.134
Mean number of childbirth	2.03 ± 1.35	1.84 ± 1.19	0.26 ^a
Mean number of children	1.95 ± 1.29	1.82 ± 1.21	0.034
Body mass Index			0.000 ^a
Thin	10 (2.5)	0	
Normal	173 (43.3)	131 (32.8)	
Overweigh	155 (38.8)	175 (43.9)	
Obese	62 (15.5)	93 (23.3)	
Females' job			0.000 ^a
House-keeper	335 (83.3)	218 (54.5)	
Employed	65 (16.3)	182 (45.5)	
Male's job			0.000 ^a
Unemployed	25 (6.3)	55 (13.8)	
Employed	375 (93.8)	345 (86.3)	
Females' educational level			0.000 ^a
Illiterate	27 (6.8)	8 (2)	
Elementary	163 (40.8)	118 (12)	
Secondary school	157 (39.3)	157 (54.8)	
Non-completed high school and high school diploma	53 (13.3)	125 (31.3)	
Ethnicity			0.000 ^a
Fars	64 (16)	72 (18)	
Lore and Bakhtiari	152 (38)	118 (29.5)	
Arab	159 (39.8)	157 (39.3)	

^aStatistically significant.

tween the two groups in terms of excitement, orgasm and sexual satisfaction ($P > 0.05$). Prevalence of sexual dysfunc-

tion was 59% and 3.65% among rural and urban females, respectively. In both groups, the highest frequency was related to intercourse pain. The study results indicated a significant statistical difference between the living place and sexual function.

In Table 3, to control the effect of interfering variables in the study, all variables that had significant correlation with sexual function in one-variable analysis were placed in the regression model. Variables such as type of delivery, normal physical profile and living place were significantly correlated with the sexual function. However, factors such as age of couples, number of pregnancies, number of childbirth and number of children had no significant correlation with sexual function.

5. Discussion

In the current study on 800 rural and urban females of reproductive age, the prevalence of sexual dysfunction was 59% and 36.5% in rural and urban females, respectively. In the study by Lau et al. on villages of China, it was found that 43% of females had sexual dysfunction and culture played a key role in the relevant beliefs and attitudes of sexuality. Beliefs play an important role in creating sexual dysfunction (10). Viswanathan et al. found that the prevalence of sexual dysfunction among the females of Tamayy villages was 64.3% and the finding was relatively consistent with those of the present study (11). Different studies reported the prevalence of female sexual dysfunction among urban females 25% - 63% (6). The reason can be more access of urban females to information bases. In the current study, sexual desire, vaginal lubrication and intercourse pain were significantly correlated with the residential location; although excitement, orgasm and sexual satisfaction had no statistically significant correlation with the residential location. No study compared sexual function in rural and urban females. However, each dimension was investigated separately in rural and urban females.

Obtained results of the study indicated that the prevalence of sexual dysfunction in rural females was 28.5%, which was consistent with the findings of a study in China (10). Sexual dysfunction in the study by Mazinani in Tehran was 33%, which was inconsistent with the results of the present study (18). However, a study in the US indicated that 22% of females had sexual dysfunction (19). In the current study, the prevalence of excitement dysfunction in rural females was more than that of the urban females. Lau (10) in Dongfeng Village and Henan in China reported the prevalence of excitement dysfunction was 26%, which was consistent with the results of the current study. In urban females, prevalence of motivation dysfunction was 16.5% in the study by Mozayanane (18); although in a study

by Ojumo aimed to investigate the sexual dysfunctions in married females of a Nigerian village; excitement dysfunction was reported 40% (13), which was not consistent with the findings of the current study. Higher prevalence of motivation dysfunction in rural females can be because of living in populated families, lack of private space, lack of love before marriage and communicative defects.

Another assessed dimension was vaginal lubrication dysfunction, which its prevalence in rural population of the current study was 22.5%. The study by Viswanathan et al. indicated that 52% of the studied healthcare centers had vaginal lubrication dysfunction, which was inconsistent with the findings of the present study (11). In other rural studies, because of different instruments and equipment, vaginal lubrication was not investigated. Vaginal lubrication dysfunction in these societies can be the result of accelerated sexual activity and lack of love and intimacy in marital relations. Prevalence of vaginal lubrication dysfunction in urban females was consistent with the findings of Ramezani (18.9%) (7).

In regard with orgasm, prevalence of sexual dysfunction in rural females was more than that of urban ones. Results of a study in Tamayy and a Nigerian village in Africa (55%) regarding orgasm were not consistent with those of the current study (11). The reasons for this issue can be different rural ethnicities, geographical location and cultural difference in the societies. In the current study, samples were collected from villages close to Ahvaz and developed villages. Most of them had access to satellite channels, internet, cellphone and rural clinics and their lifestyle was similar to that of the urban life. In regard with urban females, prevalence of sexual dysfunction was reported 25% in the study by Mozayanane (18). Desirable sexual function is important to preserve sexual relations of males and females and orgasm is essential for satisfaction of marital and sexual relations. In some rural societies, marital relations are considered as a task and it is not considered as an enjoyable action.

In regard with sexual satisfaction, there was no significant difference between the two groups. Difference in sexual satisfaction in rural females of the current study was 24.2%. A study by Shonima in Tamayy reported the difference 50.9%, which was different from the findings of the present study (11). In other rural studies, sexual satisfaction was not investigated. Prevalence of sexual dysfunction in urban females was reported 19.8%, which was consistent with the findings of the study by Ramezani (7). The study by Etesamipoor et al. in Jahrom, Iran, found that urban females have higher sexual satisfaction than rural females. Being in a hurry for pregnancy immediately after marriage, fear of pregnancy, marriage in low ages, imposed marriage, neglecting emotions of females, inequal-

Table 2. Comparing Frequency and Prevalence of Sexual Dysfunction Subscales in the Studied Groups^a

Variables	Groups		P Value	Cut-off Point	Minimum-Maximum Score
	Rural Females (N = 400)	Urban Females (N = 400)			
Sexual desire	114 (28.5)	61 (15.3)	0.000 ^b	3.3	1.2 - 6
Excitement	98 (24.5)	83 (20.8)	0.118	3.4	0 - 6
Vaginal lubrication	90 (22.5)	42 (10.5)	0.000 ^b	3.4	0 - 6
Orgasm	72 (18)	60 (15)	0.147	3.4	0.8 - 6
Sexual satisfaction	96 (24.2)	79 (19.8)	0.073	3.8	0.8 - 6
Intercourse pain	115 (28.8)	196 (49)	0.000 ^b	3.8	0 - 6
Sexual function	236 (59)	146 (36.5)	0.000 ^b	26.55	36

^aValues are expressed as No. (%).

^bStatistically significant.

Table 3. Assessing Factors Affecting Sexual Function Using the Likelihood of Regression Logistic

Variables	Groups				P Value
	95% Confidence Interval for Likelihood				
	B	OR	Min.	Max.	
Females age	0.352	0.966	0.924	1.09	0.123
Males age	0.006	1.006	0.969	1.045	0.755
Number of pregnancies	0.186	1.20	0.902	1.610	0.208
Number of childbirth	-0.610	0.544	0.280	1.05	0.72
Number of children	0.479	1.61	0.897	2.905	0.110
Delivery type (base: both types)					
No delivery (the base delivery)	1.16	4/12	1.56	9.7	0.002 ^a
Normal vaginal delivery (the base cesarean)	-0.0623	2.13	1/14	3/3	0.008 ^a
Body mass index (base: obese people)					
Thin	0.682	1.97	0.513	7.62	0.322
Normal	0.617	1.85	1.19	2.87	0.006 ^a
Overweigh	0.332	1.39	0.924	2.10	0.114
Residential location (base: urban area)					
Rural	-1.067	0.344	0.280	1.056	0.000 ^a
Urban					

^aStatistically significant.

ity of males and females rights and higher prevalence of violence in rural areas can make the females have more dissatisfaction of their sexual relations (20, 21).

Regarding the intercourse pain, rural females reported

less pain than urban females. In a study by Lau et al. mostly the prevalence of sexual dysfunction was associated with intercourse pain in rural females (10) and in a study by Mozayanane et al. the most prevalence of the same dys-

function was associated with intercourse pain (18). The findings confirmed the results of the present study. Maybe one of the reasons for the prevalence of this dysfunction is cesarean delivery and harder perineal tissues in urban females.

Because of expansion and development of communications and technology, medical services and urbanization, villagers have lower level of sexual dysfunction based on the studies in Tamayy and a Nigerian village. However, still higher prevalence of sexual dysfunctions can be observed in rural societies. Maybe one of the main reasons for this is the key role of culture and beliefs in sexual dysfunctions.

Obtained results from the current study indicated that factors such as residential location, sexual beliefs and specific social limitations play key roles in the expression of sexual problems and dysfunctions and even demands for medical treatments. Education on sexual function can be the most important axis of discussion in consultation sessions before marriage for couples. Content of the sessions should be designed in such a manner that it can be adjusted with culture of the societies, beliefs of males and females regarding the societies. Strength of this study includes using sexual function questionnaire including all dimensions of sexual function with high degree of validity and reliability; no study till now aimed to compare rural and urban females in sexual functions. Limitation of this study was that the subjects were invited to participate into the research and the questionnaires were completed by them. Because of cultural conditions of the society, asking these questions was considerably time consuming and it was mostly difficult for them to talk about these issues. The result of the study can offer educational strategies and suggestions to improve the health status, reduce sexual dysfunction and increase sexual satisfaction.

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