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· Original Article ·

An Assessment of Sexual Dysfunction and General Health in Men Conscripted into the Military Service in Iran

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Abstract

Aim: The aim of the present study was to assess the relationship of sexual dysfunctions (SD) and mental health among young males was conscripted into the military service in Iran.

Methods: This cross-sectional study was conducted on the married male aged above 18 years who were conscripted into the military service in Iran from January 2015 to March 2016. Military service is mandatory for all Iranian males. The data were obtained using demographic data questionnaire, a questionnaire evaluating male sexual function index (IIEF), and general health questionnaire (GHQ-28).

Results: This sample consisted of 300 Iranian males conscripted to the military service. The mean (\pm SD) age of the participants was 23.10 (\pm 2.69) years. The mean of Overall sexual dysfunction (SD) was 43.11 (\pm 16.24). Mean scores for items on the ED ranged from 0 to 30, with an overall mean total score of 17.16 (\pm 7.23). Correlation analyses showed that there was a negative relationship between SD and the somatic symptoms, anxiety, and insomnia and depression.

Conclusion: High prevalence rates in SD among young males conscripted in military service in Iran. Also, young males conscripted in military service with physical and mental health disorder diagnoses had an increased risk of receiving an SD diagnosis.

Key words Sexual dysfunction; General health; Military

Introduction

Sexual dysfunctions (SD) has indicated that sexual functioning difficulties, including problems with desire, arousal, penile erection, orgasm, and satisfaction with orgasm^[1,2]. A recent study showed SD is prevalent in military populations^[3,4].

Military groups are especially exposed to SD because of several possible risk factors, including susceptibility to trauma, live in a masculine society, and high daily performance requirements^[5-7]. The military is also an aggressive situation that indicates physical fitness and appearance. These circumstances have the potential to affect

the body and genital image perceptions and satisfaction^[8].

Erectile dysfunction (ED) is typically exhibited in older men but has been rising in young military populations. More than a third of the young military populations have reported ED symptoms^[4]. A study showed rates of ED are as high as 15.7% in veterans without post-traumatic stress disorder (PTSD) and more than 80% in male veterans with PTSD^[9,10].

The main factors correlated to SD were smoking, consumption of illegal drugs or medication without prescription, poor mental and physical health, lack of physical activity, obesity, hypertension and lack of sexual activity^[8].

Soldiers are participants in and victims of violence. They are forced to perform brutal actions of violence^[11].

Despite increasing demand for treatment of SD, studies in the military population are comparatively scarce, particularly for mandatory military service^[12]. Most studies on SD among

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veterans have investigated at PTSD cases.

SD may have more effects on mental health to younger people and their partners than to elderly people. Younger adults are more expected to be organizing intimate relations and are at the height of their sexual potential^[13].

Military service is mandatory for all Iranian males aged above 18 years. The aim of the present study was to assess the relationship of sexual dysfunctions and mental health among young males was conscripted into the military service in Iran.

Methods

Data source

This cross-sectional study was conducted on the married male aged above 18 years who were conscripted into the military service in Iran from January 2015 to March 2016. Military service is compulsory for all Iranian males. The time of conscription is not a fixed according to the law; it can vary due to country's shortage of soldiers. In this study, the time was 21 months. Exclusion criteria were the consumption of any androgen in the past three months; has an any severe medical, psychiatric, or neurological disease that could influence brain structure or cognition; a current or past history of consumption of any medication that was expected to influence sexual function; or, they were unwilling to participate in this study. The study protocol was reviewed and approved by the ethical committee of the Baqiyatallah University of Medical, and informed consent form was obtained from the participant.

A psychiatrist and relevant staff member of the psychiatry department checked the participants individually in a quiet room. Before each meeting, the interviewer described the purposes and methodology of the study to each member. We informed to the participants that fulfillment of the questionnaire was voluntary and anonymous. A research assistant and psychiatrist were available to answer any questions. A cover letter described the purpose of the study and emphasized the data was anonymous.

Measures

The data were obtained using demographic data questionnaire, a questionnaire evaluating male sexual function index (IIEF), and general health questionnaire (GHQ-28).

Demographic information questionnaire included age, the number of children, history of drug abuse, history of medications use, smoking.

IIEF

The 15 questions International Index of Erectile Function

(IIEF) Questionnaire is a validated tool investigation^[14].

A score of 0-5 is determined to each of the 15 questions that measure the four main areas of male sexual function: erectile function, orgasmic function, sexual desire and intercourse satisfaction.

The six items evaluate erection confidence, erection firmness, maintenance ability, maintenance frequency, and satisfaction. Each question is scored on five points where lower values denote a weaker sexual function. The erectile function scale consists of questions 1 to 5 and 15 for estimating global erectile function. Scoring of the IIEF allowed classification of each patient as having no (over 21), mild (12-21), moderate (8-11), or severe (less than 7) ED. The reliability of the FSFI was verified by Cronbach's alpha >0.70 for all the factors.

GHQ

GHQ-28 is a reliable tool for determining individuals' mental disorders (Goldberg, 1978). This questionnaire includes four subscales, namely somatic symptoms (items 1-7), anxiety and insomnia (items 8-14), social dysfunction (items 15-21), and depression (items 22-28). The individuals getting scores >24 were estimated to have mental disorders. The reliability coefficients for all the factors were higher than 0.70^[15].

Statistical analysis

Spearman correlational statistics were used to examine relationships among variables. Also, multiple linear regression analysis was used to assess the association between the several variables simultaneously. We checked all data for a normal distribution using the *Kolmogorov-Smirnov* test, and then data were analyzed using SPSS 20 software. A *P*-value less than 0.05 were considered statistically significant. The data were analyzed by SPSS-24 statistical software (SPSS, Chicago, IL, USA) and analyzed using descriptive significance level was set at 0.05.

Results

This sample consisted of 300 Iranian males conscripted to the military service. The mean (\pm SD) age of the participants was 23.10 (\pm 2.69) years. The mean duration of the marriage of the participants was 16.84 (\pm 11.02) years (Table 1).

Overall general health scores for all samples ranged from 1 to 47, with an overall mean total score of 15.84 (\pm 8.65). Mean scores for items on the ED ranged from 0 to 30, with an overall mean total score of 17.16 (\pm 7.23).

The lowest-scoring item for general health score was depression [Mean (\pm SD), 2.49 (2.93)] (Table 3).

SD scores for all samples ranged from 0 to 74, with an overall mean total score of 43.11 (\pm 16.24). Mean scores for

Table 1 Demographic characterizes of participants

Characterize	Data
Age, mean (SD)	23.10 (±2.69)
Duration of the marriage, mean (SD)	16.84 (±11.02)
Number of children	2.0%
Having a history of disease	2.7%
Medications use	1.0%
Drug use	1.0%
Smoking	2.3%
Masturbating	8.3%

Table 2 Means of general health dimensions in dysfunctions

Dimensions	Mean	SD	Maximum	Minimum	% of dysfunction
Somatic symptoms	4.07	3.18	17	0	25.7%
Anxiety and insomnia	4.75	3.46	16	0	33.3%
Social dysfunction	4.53	2.46	13	0	32.0%
Depression	2.49	2.93	18	0	18.4%
Overall general health	15.84	8.65	47	1	18.0%

Table 3 Means of sexual function dimensions in sexual dysfunctions

Dimensions	Mean	SD	Maximum	Minimum	% of SD
Erectile function	17.16	7.23	30.00	0	76.7%
Orgasmic function	5.55	2.67	10.00	0	70.7%
Sexual desire	6.31	2.07	10.00	0	63.7%
Intercourse satisfaction	7.59	3.64	15.00	0	79.0%
Overall satisfaction	6.57	2.34	10.00	0	50.7%
Overall sexual function	43.11	16.24	74.00	0	70.2%

items on the ED ranged from 0 to 30, with an overall mean total score of 17.16 (±7.23) (Table 3).

Correlation analyses showed that the relationship between the overall SD and overall general health was significant ($r = -0.520, P < 0.001$).

The results revealed a significant, negative, reverse relationship between sexual dysfunction and somatic symptoms ($r = -0.416, P < 0.001$), anxiety and insomnia ($r = -0.361, P < 0.001$), social dysfunction ($r = -0.154, P < 0.001$) and depression ($r = -0.479, P < 0.001$). Thus, higher general health in the dimensions of somatic symptoms, anxiety and insomnia, social dysfunction, and overall general health was accompanied by a reduction in sexual dysfunction.

The relationships between SD and age and duration of marriage were not statistically significant (Table 4).

Multivariate analysis

The relationship between SD with age, duration of the marriage and the dimensions of mental health was

investigated simultaneously using multi-variable regression (Table 5).

It was shown that 36.0% of the SD was described by Dimensions of mental health ($R\text{-Square} = 0.362, P < 0.001, F = 9.65$). Age, duration of marriage, the number of children, history of drug abuse, history of medications use and smoking coefficient were not a significant predictor for the SD (Table 5).

There was a negative relationship between SD and the somatic symptoms, anxiety, and insomnia and depression. However, social dysfunction was not a significant predictor for the SD.

Discussion

In this study, we sought to investigate the relationship between SD and general health among young married men conscripted to military service in Iran. The present study, to our knowledge, is the first research to evaluate the

Table 4 Correlation findings using Spearman's r coefficient

Items	Mental health and its dimensions					
	Overall sexual dysfunction	Overall satisfaction	Intercourse satisfaction	Sexual desire	Orgasmic function	Erectile function
Age	-0.040	-0.047	-0.095	0.011	-0.092	-0.004
Duration of marriage (month)	0.04	-0.032	0.022	0.052	0.022	0.088
Mental health and its dimensions						
Somatic symptoms	-0.416**	-0.362**	-0.402**	-0.274**	-0.326**	-0.415**
Anxiety and insomnia	-0.361**	-0.262**	-0.358**	-0.215**	-0.313**	-0.389**
Social dysfunction	-0.154**	-0.085	-0.177**	-0.118*	-0.110	-0.144*
Depression	-0.479**	-0.444**	-0.470**	-0.308**	-0.362**	-0.470**
Overall general health	-0.520**	-0.421**	-0.498**	-0.345**	-0.416**	-0.529**

* $P < 0.05$, ** $P < 0.01$.

Table 5 Regression analysis summary

Variables	Unstandardized coefficients		Standardized coefficients	t	P	R ²
	B	Std. Error	B			
(Constant)	62.722	10.312		6.082	<0.001	0.36
Somatic symptoms	-0.958	0.383	-0.188	-2.499	0.013	
Anxiety and insomnia	-0.892	0.359	-0.188	-2.487	0.014	
Social dysfunction	-0.350	0.423	-0.052	-0.826	0.410	
Depression	-1.748	0.375	-0.327	-4.664	<0.001	
Age	-0.450	0.460	-0.070	-0.978	0.329	
Duration of marriage (month)	0.162	0.116	0.101	1.395	0.165	
Smoking	0.232	7.274	0.002	0.032	0.975	
Number of children	3.568	6.027	0.038	0.592	0.555	
Having a history of disease	11.620	8.705	0.081	1.335	0.184	
Medications use	2.363	5.500	0.032	0.430	0.668	
Drug use	0.925	4.087	0.018	0.226	0.821	

Dependent variable: Overall sexual function.

relationships of SD and general health in young mandatory military personnel.

There are several probable and interrelated mechanisms such as PTSD, live in a masculine society, and high daily performance requirements that may contribute to sexual dysfunction in military personnel with general health problems^[5-7,16,17]. Young conscripted person is spending a formative time of their sexual development and their sexual wellness may be vulnerable to the stress of battle^[18,19]. Military condition negatively affects neuropsychological health, in general, and more specifically, neuroendocrine, neurobiology and autonomic dysfunction produced by PTSD may promote sexual dysfunction. This situation correlated with mental illness may cause sexual dysfunction^[18-20].

In the present study for conscripted men under age 35, estimates of ED was 76.7%, and we found a prevalence of SD of 70.2% for this groups overall. According to the results,

36.3% of the participants had a desirable sexual function, while the rest (63.7%) has different degrees of SD. The results were in agreement with the findings reported by another study, which expressed the high rates of SD among military personnel^[8]. In the present study, 18% of the participants had general health disorders and a significant negative relationship was found between overall SD and somatic symptoms, anxiety, and insomnia, depression and overall general health.

Another study reported a negative relationship was found between anxiety and sexual desire; *i.e.* as the level of anxiety increased, sexual desire decreased in both men and women^[21].

Some studies have also shown a significant association between mental health and SD^[22-24]. This was in agreement with the findings of the present study. The present results demonstrated a significant negative relationship between

somatic symptoms and sexual desire, orgasm, sexual satisfaction, and overall SD, meaning that upper general health in somatic symptoms was followed by a reduction in sexual desire, orgasmic, and sexual satisfaction disorders and overall SD. This finding was agreement with the results of another study^[24,25]. The mental and physical disease is correlated with relational difficulties, marital separation, reduced intimacy, spousal abuse, and lower marital satisfaction^[26].

The present study revealed no significant associations between SD and social function. In contrast, Takahashi *et al.*^[27] showed that decreased sexual desire and orgasm were highly associated among depressed females. Managing depression symptoms can enhance individuals' satisfaction and sexual function.

The present findings expand upon previous studies that showed a relationship between general health and SD. Results suggest that poor general health is explanation factors for SD. This establishes in mandatory military personnel what other studies have previously evaluated in others populations.

To our knowledge, this is the first study to examine SD among young married males that conscripted to military service in Iran. The present results show high rates among young males conscripted in military service for maintaining or developing an SD over time. Although for half of the individuals the problem might disappear immediately, for the other half, the situation continues. Consequently, when consulting with young males conscripted to military service, health professionals should examine about SD as part of their routine psychosocial evaluation and leave the subject open for discussion.

Finally, future studies should examine in more detail the relationship between sexual dysfunctions and general health for military personnel.

Conclusion

The present results show high prevalence rates in SD among young males conscripted in military service in Iran. According to the results, young males conscripted in military service in Iran with physical and mental health disorder diagnoses had an increased risk of receiving an SD diagnosis. Thus, the identification and treatment of physical and mental disorders are suggested for the patients suffering from SD.

Conflict of interest

The authors have no conflict of interest.

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