ISSN: 2345-2897; Health Education and Health Promotion. 2022;10(2):295-301.

Predictors of Sexual Satisfaction based on the Information–Motivation–Behavioral Skills Model in Iranian Men

ARTICLE INFO

Article Type
Descriptive Study

Authors
Ghaderi N.[1] *PhD,*
Zarei F.*[1] *PhD,*
Motamedi M.[2] *PhD,*
Yoosefi N.[3] *PhD*

How to cite this article
Ghaderi N, Zarei F, Motamedi M, Yoosefi N. Predictors of Sexual Satisfaction based on the Information–Motivation–Behavioral Skills Model in Iranian Men. Health Education and Health Promotion. 2022;10(2):295-301.

[1]Department of Health Education and Health Promotion, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran
[2]AIDS and STIs Department, Ministry of Health and Medical Education (MOHME), Tehran, Iran
[3]Department of Counseling, Faculty of Humanities and Social Sciences, University of Kurdistan, Sanandaj, Iran

***Correspondence**
Address: Tarbiat Modares University, Tehran, Iran. Postal Code: 1411713116
Phone: +98 (21) 82884546
Fax: +98 (21) 82884546
f.zarei@modares.ac.ir

Article History
Received: August 2, 2021
Accepted: January 28, 2022
ePublished: June 14, 2022

ABSTRACT

Aims Sexual satisfaction is one of the aspects of sexual health that is vital in maintaining the couple's relationship and their quality of life. The present study aimed to investigate the factors predicting sexual satisfaction based on the IMB model among Iranian men.

Instrument & Methods This was a cross-sectional descriptive-analytical study. A number of 362 men living in Sanandaj, Iran, with a marriage age of fewer than 5 years were systematically included in the study. Data collection tools were Larson sexual satisfaction questionnaire, sexual health questionnaire based on information-motivation-behavioral skills model constructs, and men's sexual function questionnaire. Data analysis was performed at a significant level of 0.05 and with SPSS 20 software.

Findings The results indicate that 1.4% of participants have no sexual satisfaction at all, 43.1% have poor sexual satisfaction, 53.9% have moderate sexual satisfaction and 1.7% have high sexual satisfaction. The regression model showed that the level of education, information, and motivation of the IMB model were predictors of sexual satisfaction with a 13% variance (F=19.48, p=0.001, r=0.13, R2=0.37).

Conclusion The findings of this study showed that sexual dissatisfaction is related to the level of education, information, and motivation of men about sexual issues.

Keywords Sexual Satisfaction; Information Literacy; Motivation; Behavior; Iran

CITATION LINKS

[1] Sexual well-being of older men and ... [2] Exploring determinants of sexual ... [3] What is sexual satisfaction? Thematic analysis ... [4] Randomized controlled trial ... [5] Sexual satisfaction and its ... [6] Predicting sexual satisfaction ... [7] Gender differences in factors ... [8] Prevalence of female sexual ... [9] Efficacy of emotion-focused ... [10] Distance learning of ... [11] Couple communication, emotional ... [12] Education, communication and ... [13] The association between ... [14] A systematic review of sexual ... [15] The importance of sexual self-disclosure ... [16] Sexual dysfunction in the United ... [17] The role of sexual desire ... [18] Evaluating the relationship between ... [19] Development and psychometric ... [20] Correlates and predictors of sexual ... [21] An explanatory model of sexual ... [22] On the relationship between ... [23] An exploratory mixed method ... [24] Is information- motivation - behavioral ... [25] Project ROADMAP: Reeducating ... [26] A qualitative inquiry of ... [27] Validity and reliability of the persian ... [28] The relationship between sexual ... [29] The relationship between marital and ... [30] Satisfaction guaranteed? How ... [31] Psychosocial variables of sexual ... [32] Predictors of condom use behavior ... [33] Predicting protected sexual behaviour using the ... [34] Factors affecting sexual functioning ... [35] A theory of marital ... [36] High emotional and sexual ... [37] Health status, sexual activity and ... [38] Application of the information-motivation ...

Introduction

Humans are sexual creatures, and remain sexual throughout their lives [1]; the sexual need is one of the most basic human needs [1]. The World Health Organization (WHO) considers sexual health and satisfaction a human right [2]. Sexual satisfaction is one aspect of sexual health [3] and is vital and very influential in sustaining a couple's relationship [4]. Sexual satisfaction is defined as a person's judgment of the pleasure one feels during sex [3]. Sexual dissatisfaction can lead to instability in marital relationships, sexual dysfunction[5], marital discord, hatred toward one's partner, resentment, lack of self-confidence, feeling revengeful, and infidelity [6]. These problems gradually widen the gap between the partners [7] and may eventually culminate in divorce [8]; 50 - 60% of divorces and 40% of infidelities and extra-marital affairs stem from sexual dissatisfaction [9-11].

Multiple studies have examined the role of different factors in a couple's sexual satisfaction, including educational [11], social, economic, and cultural status [12], better psychological and physical status [13], frequency of intercourse, occupation, marital status, and the number of children [3, 13]. Many studies have investigated sexual satisfaction and its background factors and the global findings point toward greater sexual dissatisfaction among women than in men [5, 8]. Some studies, however, have presented conflicting results on sexual satisfaction and in spite of emphasizing sociocultural differences [14] have concluded that sexual satisfaction is higher among women than in men [14, 15]. Sexual dissatisfaction among American men and women have been reported at 31% and 43%, respectively [16]. In the Middle East, the rate of sexual dissatisfaction among men and women have been reported between 43-45% and 35-59%, respectively [17]. Iranian studies have also indicated that many couples are not satisfied with their sexual lives [18, 19]. In the first years of marriage, couples experience many issues due to several reasons such as, insufficient familiarity with each other, inadequate or incorrect information or inexperience regarding sexual issues, which can increase marital and familial problems; such that in Iran, more than 50% of divorces occur during the first 5 years of marriage [4]. Several factors play a role in strengthening sexual satisfaction. Among these are, intimacy and commitment, sexual knowledge, sexual attitude, sexual performance, orgasmic experience, communication skills, the quality of marital relations, and demographic and familial factors [18]. Literature on couples' sexual satisfaction indicates that it is associated with spousal perception of the overall marital satisfaction and their physical and psychological health and in general with their overall well-being [18-20]. Sexual satisfaction leads to physical and mental health [21] and brings about intimacy between the partners; at higher levels -and in general- sexual satisfaction is associated with a couple's increased quality of life [20-22].

Sexual behavior is a multifaceted concept; numerous factors affect the type, form, and limits of sexual behavior. These factors are gender-based and differ from one society to another. Therefore, promoting sexual satisfaction as an outcome of successful sexual behavior will be more successful if considered as any other behavior in a theoretical framework. Experimental evidence has underscored the significant role of behavioral information, motivation, and skills in the promotion of sexual behavior in the form of the 'Information Motivation Behavioral skills' model constructs [4, 23]. The Information-motivation-behavioral skills (IMB) model is a social psychological-based approach to understanding and promoting health-related behavior [24, 25]. According to this model, the more the couple is informed and the greater their motivation for healthy sexual behavior and acquisition of sexual skills, the more empowered they are in achieving positive healthy results, including sexual satisfaction [24].

Researching sexual issues is very difficult in Iran given the socio-cultural structures and status, and becomes even more difficult when it comes to women's sexual issues [26]. Nevertheless, to our knowledge, most studies have investigated the factors related to sexual satisfaction among women and have sufficed as demographic predictors. Gender selection in sexual health-related studies itself describes the orientation of the studies [26, 27]. In other words, it is as if sexual health-related studies are gender-based too, and that the preconceived notion that women are responsible for men's sexual satisfaction is reflected in the direction these studies are conducted in two. Here, through a balanced approach, we sought to describe the predicting factors of sexual satisfaction in men based on the IMB model, information, motivation, and behavioral skills. By becoming familiar with the status of sexual satisfaction and its relevant factors in married men, we may achieve correct, complete, and scientific information regarding their sexual satisfaction (SS), knowledge about their differences in sexual demands and interests, identify their attitudes and beliefs about their spouses' needs and facilitate planning for interventions aimed at promoting sexual satisfaction among men.

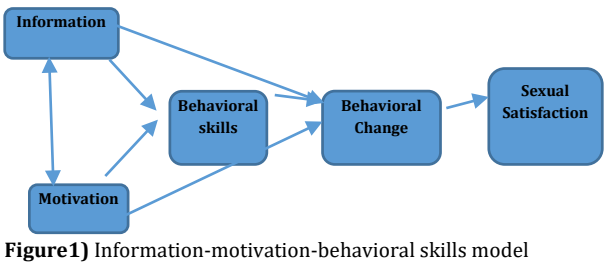

Figure1) Information-motivation-behavioral skills model

Instrument and Methods

A cross-sectional descriptive-analytical study was conducted to examine the predicting factors of sexual satisfaction among Iranian men, which was derived from the first phase of the clinical trial "Design, Execution, and Evaluation of an Educational Program on Sexual Satisfaction among Married Men in Sanandaj based on the IMB Framework". The research setting was Sanandaj's Marriage Counseling Center. Sampling took place from 7th Sep to 22nd Sep 2019 for two weeks. The participants of this study were married men from Sanandaj city. To select the samples, a list of men was extracted from marriage counseling centers using marriage registration offices. These men attended these centers from 2014 to 2019 (3000 individuals) to receive marriage counseling. Given the sample size (362 people), the number 8 was chosen from the lists of ten, and the eighth person was selected from each list until systematic randomized sampling was completed. The selected samples were contacted via phone and the study goal was explained to them. If they possessed the inclusion criteria informed consent would be taken from them and then the questionnaires would be handed out to them in person; this process would continue until sample size completion. Concerning studies [18, 28] and using the following sample size formula, the correlation between marital satisfaction and sexual satisfaction was estimated at 0.4; α=0.05, β=0.2, and d=0.05, a sample size of 330 was estimated, which was increased to 362 taking the possibility of sample loss into account, to raise the accuracy of the study.

$$n=\frac{(1/96)^2.0/4.0/6}{(0/05)^2}=362$$

The inclusion criteria included, being a resident of the city, lack of an acute marital problem (not having an ongoing medical record), not seeking treatment, having been married for at least 6 months and at the most 5 years, age>18 years old, the age difference between spouses not greater than 15 years, being able to read and write and having passed primary education. The exclusion criteria were lack of interest in participation and incomplete filling of the questionnaire.

The variables collected included two groups of dependent (sexual satisfaction) and independent variables. The independent variables included education (primary education, high school diploma, associate bachelors, bachelors, master's, and doctorate), age (<30, 30-35, 36-40, 40< years), employment status (unemployed, worker, employee, student, freelancer, other), number of marriage (1st marriage, 2nd marriage, 3rd marriage), illness (present, absent), income status (<1, 1-2, 2-3, 3-4, 4< million TOMAN), housing status (owner, mortgage, rental, organizational, free, other), number of children (no children, 1 child, 2 children), marriage duration (1, 2, 3, 4, 5 years), and the sexual function questionnaire; sexual health was based on the IMB model which described below:

Larson's sexual satisfaction questionnaire (LSSQ): We used Larson's 25-item sexual satisfaction questionnaire to evaluate the level of sexual satisfaction. The item's responses include 5 Likert scale-like options (never, rarely, sometimes, mostly, always). In questions 1-2-3-10-12-12-13-17-17-19-22-23 the option never points 1 and always 5 points and in questions 4-5-6-7-8-9-11-11-14 15-18-20-24-25 The option never received a score of 5 and the option always received a score of 1. A score of 25-50 was equivalent to sexual dissatisfaction, a score of 51-75 was equivalent to low sexual satisfaction, a score of 76-100 was equivalent to moderate sexual satisfaction, and a score of 125-101 was equivalent to high sexual satisfaction. This scale has been localized to the Iranian population and standardized in 2015 by Bahrami *et al.* [27]. The internal consistency of the scale was estimated at Cronbach's alpha of 0.7.

Sexual health questionnaire based on the IMB model constructs: To evaluate sexual health, we used the sexual health questionnaire that contains 51 questions and three main scales (information, motivation, sexual behavior skill) and 9 subscales. The sexual information scale includes three subscales (facts: 7 questions; exploratory discussion: 2 questions; implicit theories: 3 questions); the motivation subscale includes three subscales (attitude towards sex: 12 questions; sexual trend: 3 questions; social support: 2 questions); and the behavioral skills scale includes three subscales too (sexual self-efficacy: 11 questions; behavioral skill: 4 questions; behavior: 7 questions). The questionnaire's reliability and validity have been approved by Bagheri *et al.* [23]. The content validity index and rate have been reported at 0.92 and 0.90 for the subscales, respectively, and, the reliability values of this tool have been reported at 0.78 - 0.95.

This study was approved by Tarbiat Modares University. After briefly describing the topic and goals of the study and taking into account the inclusion and exclusion criteria of the study, we invited the men attending Sanandaj's Marriage Counseling Center to participate in the study.

The collected data were analyzed using SPSS 20, with descriptive statistics, such as, mean, standard deviation, and relative frequency percentage. The normality of the dependent variable was examined. Parametric tests such as t-test, Spearman's and Pearson's correlation, and ANOVA were used to examine the associations between the variables and

sexual satisfaction. Eventually, multiple linear regression was applied to examine the factors affecting sexual satisfaction in males. 0.05 was considered as the level of significance.

Findings

Based on the findings, most of the participants were between 30 and 35 years old, with no children, bachelor's degrees, freelancers, married for the first time, residing in a rental house, with a monthly income between 2-3 million, and disease-free, and had been married for 4-5 years (Table 1). A fourth of the participants did not have sexual satisfaction at all, 43.1%, 53.9%, and 1.7% had weak, average, and high sexual satisfaction, respectively. The mean±SD of sexual satisfaction was 71.02 ± 6.28, which lies in the average range. The mean of the IMB construct including information, motivation, and behavioral skills were 74.3±46.7, 0.001, 68.97±9.86, and 82.75±33.85, respectively (p=0.001). Results of univariate analysis (Table1), showed positive and significant associations between sexual satisfaction and education (posthoc tests: higher educational status was associated with higher SS), employment status (posthoc tests: workers had lower SS), place of residence (posthoc tests: those residing in organizational housing had higher SS), IMB model dimension (posthoc tests: sexual information, motivation, and skill) and the IMB model's subscales (exploration, implicit theory, attitude, trend, support, self-efficacy, and behavior). However, there were no significant associations between SS and the other variables such as age, number of marriages, number of children, income status, having a disease, sexual function, and the IMB model's subscales (facts, behavioral skill). It may be said that the highest correlation with SS was seen in the information dimension and the lowest was seen in the SS dimension.

We used the multiple linear regression model to determine the share of SS predictors. First, the normality of the SS variable was tested and then the linearity and independence of the remaining variables were examined. All the table's variables whose p values were smaller than 0.2 were entered into the stepwise regression model. Results of the regression model indicated that educational status and the information and motivation scale constructs were the remaining predictors of SS; together they account for 13% of the changes and variance of SS (p=0.001, F=19.48, R2=0.13, r=0.37). Generally speaking, a significant negative association was observed between educational status (higher education and higher SS), and a significant positive association was observed between the dimensions of information and motivation (IMB constructs) and SS (Tables 2 & 3).

Table 1) Frequency results of variable's study and their relationship with sexual satisfaction

	Variables	N (%)	p-value
Level of education	High school	19 (5.2)	0.0001
	Diploma	89 (24.6)	
	Associate Degree	24 (6.6)	
	Bachelor	160 (44.2)	
	M.Sc.	51 (14.1)	
	Ph.D.	19 (5.2)	
Age (years)	>30	90 (24.9)	0.094
	31-35	155 (42.8)	
	36-40	90 (24.9)	
	40 <	27 (7.5)	
Job	Unemployed	12 (3.3)	0.0001
	worker	36 (9.9)	
	Clerk	143 (39.5)	
	Student	9 (2.5)	
	Freelancer	152 (42.0)	
	Other	10 (2.8)	
Marriage number	First	336 (92.8)	0.632
	Second	25 (6.9)	
	Third	1 (0.3)	
Income (Million TOMAN)	>1	4.7 (4.7)	0.603
	1-2	35.1 (35.1)	
	2-3	38.7 (38.7)	
	3-4	14.6 (14.6)	
	>4	6.9 (6.9)	
Disease	No	333 (92.0)	0.51
	Yes	29 (8.0)	
House	Owner	99 (27.3)	0.042
	Mortgage	30 (8. 3)	
	Rent	199 (0.55)	
	Organizational	10 (2.8)	
	Free	16 (4.4)	
Children	None	183 (50.6)	0.200
	One	150 (41.4)	
	Two	29 (0.8)	
Marriage duration (Year)	1	66 (18.2)	0.841
	2	58 (.16)	
	3	57 (15.7)	
	4	76 (.21)	
	5	105 (.21)	

Table 2) The frequency of sexual satisfaction scales levels in married men (The numbers in the parentheses are in percent)

Level	Sexual dissatisfaction
Dissatisfaction	5 (1.4)
Low	156 (43.1)
Moderate	195 (53.9)
High	6 (1.7)
Mean±SD	71.02±6.28

Table 3) Multiple linear regression of sexual satisfaction and independent variable

Model	Beta	T	Sig.	95.0% Confidence Interval for B	
				Lower Bound	Upper Bound
(Constant)		11.625	0.0001	1.673	2.354
Education	-0.269	-5.400	0.0001	-0.073	-0.034
Information	0.189	3.484	0.001	0.005	0.019
Motivation	0.160	2.942	0.003	0.002	0.011

Discussion

The goal of the current study was to examine the predicting factors of sexual satisfaction in Iranian men. To our knowledge, this is the first study that

has investigated SS–related factors in men with an emphasis on the IMB model.

The mean SS observed in the current study was 71.02%; overall, 53.9% of the participants reported average SS. Most earlier studies have investigated SS and sexual dissatisfaction among women and homosexuals and fewer studies have examined SS among men. Nevertheless, generally speaking, the SS observed in this study is almost similar to previous studies conducted in Iran (56.4% SS among women) [29] and elsewhere in the world, such as 65.57% SS among men in a study [30], 66% in Chile and 50.4% in Ethiopia [5]. The differences observed in the SS rate may be due to the population studied, cultural factors, access to sex-related information, sample size, and methodology.

Based on our results, there is a significant association between education and SS, such that an increase in educational level is associated with an increase in SS in men. In other words, men with lower educational status reported lower rates of SS. This finding is consistent with that of the study [31]. Ziaee *et al.* also reported a significant association between education and SS among women. Perhaps this finding may be justified such, that higher educational status is usually accompanied by a higher socioeconomic position, and may help raise SS. Earlier studies have also indicated that higher socioeconomic status was associated with greater SS [29].

Another finding of this study was the relationship between employment status and SS. Workers have lower SS compared to men employed in other types of jobs, and the highest mean SS was reported by employees. We may say that having a stable job and a better social status may result in higher self-confidence and peace of mind in men, which in turn positively affect their SS; literature has shown that one of the influential factors in marital satisfaction is the economic/income issue [5, 12, 16]. It may also be said that having a permanent job and income may facilitate living and in turn, lead to SS.

Other findings of the study show a significant association between SS and the place of residence. Men living in organizational housing systems reported greater SS than those living in rental or purchased houses. As an innovation, here we showed that a significant association existed between the dimensions of the IMB model (information, motivation, and sexual skills) & its subscales (exploration, implicit theory, attitude, trend, support, self-efficacy, and behavior), and sexual satisfaction. Although earlier studies have not investigated the relationship between the dimensions of this model and SS, some have examined the association between the IMB model's dimensions and its application in promoting lifestyle and condom use during high-risk sex and have observed positive results [32, 33].

Eventually, we did not observe significant associations between age, number of marriages, number of children, income status, presence or absence of disease, sexual function, and IMB subscales (facts, behavioral skill) and SS among men. Contrary to our study where we found no association between age and SS, Oyanedel *et al.* observed a negative significance [2] and Velten *et al.* found a positive significant association between age and SS [30]. We believed that an increase in age would be associated with fewer episodes of sex and eventually lower SS and that the opposite in younger age would result in higher SS. However, in our study the participants' age range was small, thus explaining the insignificance of the association between age and SS. We recommend including groups from different age ranges in future studies to allow this aspect to be investigated among Iranian men.

Similar to Oyanedel's study, no significant relationship was observed between socio-economic status and SS, though earlier studies have confirmed the significant association between the two among women [31]. Although earlier studies have reported significant associations between socioeconomic status and sexual satisfaction [34, 35], consistent with a study [30]. We did not observe any significant relationship.

Although it seems that being ill can affect SS, we did not observe any significant relationship between disease and SS, which is consistent with earlier findings, too [36]. However, other studies have shown that fewer physical problems and diseases among seniors are associated with greater SS [36, 37]. Moreover, SS is lower in couples affected with polycystic ovarian syndrome compared to those without it [10]. We did not find any association between the number of children and SS. Consistent with our results, in another study conducted in Iran on working women no significant association was observed between the number of children and SS [29].

Multivariate regression analysis results indicated that to adjust the effect of variables on each other in the current study, education, information, and motivation, respectively, had the greatest effects on SS in men, such that by improving the levels of these three, the participants' SS increased. Thus, it may be said that higher education and greater information can positively affect SS. Even though we did not find relevant studies to compare our results with theirs, others have reported a negative significant association between information, motivation, and sexual behaviors, such that the greater the individual's information and motivation for high-risk sexual behavior, the fewer these behaviors [38]. Other research studies have also shown the positive effect of information and motivation on the use of condoms during sex [32, 33].

Based on the literature, it seems that the greater an

individual's knowledge and information on sexual issues, SS may be greater too [5, 25], and lack of sexual knowledge leads to conflict and sexual dissatisfaction [25].

Finally, since our final model described 13% of changes in sexual satisfaction, it appears that multiple factors affect SS that have not been examined in our study. Thus, we recommend future studies use different health education variables and models to describe this relationship.

The current study was a descriptive-analytical cross-sectional study, thus, cause and effect associations cannot be deduced. Moreover, this study was conducted based on a survey and self-report by participants, therefore, mental biases and perceptions, and taboos associated with discussions on sexual issues may have affected the results. Women were not included in this study, as collecting sexual information from participants is difficult in Muslim countries like Iran.

Conclusion

The findings of this study showed that sexual dissatisfaction is related to the level of education, information, and motivation of men about sexual issues. Therefore, an educational intervention based on the IMB model is proposed in promoting sexual satisfaction of men and subsequently couples. Given the high level of sexual dissatisfaction observed and the association between education, information, and motivation and sexual satisfaction, educational interventions are suggested to improve sexual satisfaction among Iranian men. Our results indicate that health policymakers can take advantage of the IMB model's dimensions in their health promotion interventions to raise the quality of life among married couples and in particular to increase sexual satisfaction among men.

Acknowledgments: The authors of the study thank Tarbiat Modares University and Kurdistan University of Medical Sciences for their cooperation in conducting the study, as well as the participants for completing the present research questionnaires.

Ethical Permissions: Ethical approval for collecting the data was obtained with the ethical code=IR.MODARES.REC.1398.038 from Tarbiat Modares University. Materials and data sets are available from the corresponding author upon request.

Conflicts of Interests: This study was part of a Ph.D. dissertation.

Authors' Contributions: Ghaderi N (First author), Introduction writer/Discussion writer (45%); Zarei F. (Second author), Methodologist (15%), Motamedi M (Third author), Statistical analyst (15%); Yoosefi N (Fourth author), Methodologist/Discussion writer (25%)

Funding/Support: The financial support was from Tarbiat Modares University.

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