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Application of the Health Belief Model for Investigation of Couples' Attitude toward Sexual Health

Siros Kabodi[1], Majid Barati[2]*, Nader Rajabi Gilan[3], Sohyla Reshadat[4]

Abstract

Aim: This study aimed to investigate the beliefs toward sexual health among couples attending marriage counseling centers, based on the Health Belief Model (HBM) as a theoretical framework.

Methods: This cross-sectional study was performed on 416 couples, aged 14 to 40 years, who referred to a marriage counseling center in Kermanshah in 2014. They were recruited through a simple random sampling method. The data gathering tool consisted of a self-administered questionnaire based on the HBM constructs and some demographic characteristics. Data were analyzed with SPSS-18 software using independent t-test, one way ANOVA, and Pearson correlation.

Findings: According to the results, the level of perceived susceptibility of the consequences of unsafe sexual behaviors and perceived barriers among couples were not satisfactory; however, perceived severity and benefits were reported in a relatively good level. Internet and friends were the most important cues to action related to sexual health.

Conclusion: Results demonstrated that the framework of the HBM is useful for investigation of sexual health related beliefs among couples. Thus, design and implementation of interventions based on the results of present study may be effective in promoting knowledge and beliefs toward sexual health among couples.

Keywords: Attitude, Couples, Health Belief Model, Sexual health

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1. M.Sc., Center of Excellence for Community Oriented Medicine Education, Kermanshah University of Medical Sciences, Kermanshah, Iran Email: kabodisiros@yahoo.com
2. Ph.D., Social Determinants of Health Research Center, Hamadan University of Medical Sciences, Hamadan, Iran Email: barati@umsha.ac.ir
3. M.Sc., Social Development & Health Promotion Research Center, Kermanshah University of Medical Science, Kermanshah, Iran Email: rajabi_nader@yahoo.com
4. Associate Professor, Center of Excellence for Community Oriented Medicine Education, Social Development and Health Promotion Research Center, Kermanshah University of Medical Sciences, Kermanshah, Iran Email: S.reshadat@kums.ac.ir

Introduction

Sexuality is one of the innermost emotions and deepest heart desires in humans to fulfill a relationship. Sexual needs are considered not only in the same rank with human physiological needs, but also with their spiritual and mystic needs, such as the need to beauty and perfection [1]. Sexual health of spouses is judged by having a proper and healthy sexual relationship. This relationship leads to having favorite physical, mental and behavioral conditions and indicates familiarity, affection and marital satisfaction [2]. Psychologists believe that the satisfactory sexual relationships can significantly affect couples' mental health and make both their family and society healthy .On the contrary, unsatisfactory sexual relationships can cause mental disorders and society disruptions [2].

According to some research, 40% of satisfied couples with their marital life had some problems in their sexual relationships or were relatively dissatisfied with them. Nearly 50% of married women, older than 35, had not experienced orgasm yet. In addition, 30-40% of the referred men to sexual disorder clinics suffered from premature ejaculation [1]. Other findings showed that the 80% of infertile couples suffered from psychological disorders, including sexual dissatisfaction, reduction of self-confidence in their intercourses, reduction in sexuality, anger and negative emotional effects [3].

Having healthy sexual relationship depends on various factors such as cultural beliefs, academic education level and family trainings [1, 4]; for example, shyness while talking about sexual issues and non-healthy perception of sexual issues and not having sufficient information in this regard are influential causes for occurring sexual problems in early stages of couples' life [5].

Although sexualities are intrinsic and involuntary, sexual beliefs and behaviors are learnable.Therefore, similar sexual behaviors can have various meanings for different people. Those meanings even change for a person from time to time [5]. In the rich Islamic culture, it is emphasized to marry and then intercourse but it should be noted that development of mass media leads in transmition of not only knowledge and technology, but also culture and behavior. It may also lead to changes in beliefs, attitudes and sexual behavior among talented people [1, 6]. Studies have shown a significant relationship between people's attitudes and their risky sexual behaviors [7, 8]. According to the high probability of change in people's social attitude about sexual health, daily attention of authorities to sexual health issues should be increased because by effective educational interventions, people will be able to improve their sexual health [5].

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Most experimental interventions have been proposed to promote sexual health of adolescents and young adults but a few of them have been successful [5, 9]. Researchers believe that the failure of these programs can be due to inattention to analytical studies or program implementation without considering social cognition models as a conceptual framework [10, 11]. Various social cognition models, such as Health Belief Model (HBM) have been used to explore sexual behaviors [8, 12]. HBM shows the relationship between health beliefs and health behaviors, based on the assumption that healthy and proper behavior is shaped by an individual's beliefs. Regarding this model, a person's behavior is the function of his knowledge and beliefs. This model emphasizes that person's perception about his/her vulnerability to one issue or problem influences his decision about healthy behaviors [13].

It seems that recognition of couples' attitudes and beliefs about their spouse sexual needs and their gender differences can effectively remove thier sexual health- related problems [5]. Therefore, this study aimed to investigate the beliefs toward sexual health among couples attending marriage counseling centers based on the HBM as a theoretical framework.

Methods

This cross-sectional study was performed on 416 couples, aged 14 to 40 years, who referred to a marriage counseling center in Kermanshah city, west of Iran, in 2014. They were recruited through a simplerandom sampling method. There was one marriage counselling center in the city and the list of the couples was obtained from that center. Using random numbers table and health records, participants were randomly selected. The Inclusion criteria were: registeration at the studied marriage counseling center, not having previous marriage and not having any associated diseases and sexual dysfunction. In order to collect data, self-administrated questionnaires were anonymously completed by 2 trained interviewers. Introducing themselves to participants, interviewers expressed the aim of this study and ensured participants that while preserving confidentiality, all questionnaires would be used just for statistical analysis. This study was conducted with approval from Kermanshah University of Medical Sciences' institutional review board and ethical committee. Informed assent and consent were obtained from participants.

Instrument

The self-administered questionnaire included demographic variables and sexual health-related beliefs based on HBM constructs. It required approximately 30 minutes to be completed. The questionnaire included two

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sections: (a) demographic variables: including age, gender, education, residential site and job status; (b) HBM Theoretical constructs: HBM scale was designed based on a previous similar questionnaire (5) and included 34 items under six constructs including (a) perceived susceptibility; (b) perceived severity; (c) perceived benefits; (d) perceived barriers; (e) perceived self-efficacy and (f) cues to action.

Perceived susceptibility was assesssed with 3 items (e.g., "Sexual problems can have a devastating effect on my life"), perceived severity with 4 items (e.g., "Lack of sexual health leads to the loss of emotional relationships between couples"), perceived benefits with 9 items (e.g., "With sexual health, marriage would be more attractive") , perceived barriers with 6 items (e.g., "In pre-marital period, obtaining information about sexual health may be considered effrontery"), perceived self-efficacy with 5 items (e.g., "I am confident that I can prevent sexually transmitted diseases"). The items were rated on a 5-point scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Cues to actions were measured using eight items. The items were rated on a 3-point scale, ranging from 0 (No) to 3 (Yes). To assess the internal consistency reliability of the questionnaire, a pilot study was performed on 40 couples, who were similar to the target population. According to the results, internal correlation coefficient of questions (Cronbach alpha) was 75% for perceived susceptibility, 82% for perceived severity, 79% for perceived benefits, 84% for perceived barriers, 91% for perceived self-efficacy and 72% for cues to actions, respectively. Content validity of questionnaire was confirmed by an expert panel of 10 health education specialists. In this part, content validity ratio (CVR) and content validity index (CVI) were calculated and then last version of the research questionnaire was finalized by adding experts' recommendations.

Data Analysis

All statistical analyses were performed using SPSS, statistical software package (SPSS Inc., Chicago, IL, USA) version 18.0. After data cleaning, descriptive analyses of HBM constructs were conducted using means and standard deviations. Frequency and percentages of cues of action were reported. In addition, Pearson coefficient of correlation was calculated with each of HBM constructs. An independent t-test was conducted to determine if there was any significant difference in descriptive measures of HBM constructs between females and males as well as between couples, who were living in an urban or rural area. One way ANOVA was used to determine any significant difference between some variables including age, education level, job status and descriptive measures of HBM

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constructs. A p-value of 0.05 or less was considered statistically significant.

Findings

The mean age of respondents was 24.9 years (S.D. =±5.1). It ranged from 14 to 40 years. The majority (65.9%) of the respondents were 21-30 year old. Regarding the educational status, 3.1% of respondents had primary education, 15.9% had secondary education, 41.3% had diploma and 39.7% had academic education, respectively. In addition, 91.1% of participants were residents of urban areas.

Descriptive statistics (means, standard deviation and range of scores) of HBM constructs are presented in Table 1. According to findings, beliefs of perceived severity (73.8% of maximum attainable score) and perceived benefits (81.7% of maximum attainable score) of couples while marriages were favourable. On the contrary, beliefs of perceived susceptibility (46.1% of maximum attainable score) and perceived barriers (49.1% of maximum attainable score) were discouraging.

Table 1 Mean, standard deviation, range of scores and percent of mean from maximum obtainable score for HBM constracts (N=416)

Variables	Mean	SD	Range of Scores	Percent of mean from maximum obtainable score
Perceived Susceptibility	8.53	2.1	3-15	46.1 %
Perceived Severity	15.82	2.8	4-20	73.8 %
Perceived Benefits	38.43	5.7	9-45	81.7 %
Perceived Barriers	17.78	3.9	6-30	49.1 %
Perceived Self-efficacy	17.39	3.3	5-25	61.9 %
Cues to action	8.93	3.1	0-14	63.8 %

Table 2 Pearson correlation coefficients between the HBM constracts (N=416)

Variables	1	2	3	4	5	6
1. Perceived Susceptibility	1					
2. Perceived Severity	-0.006	1				
3. Perceived Benefits	-0.021	0.596**	1			
4. Perceived Barriers	0.004	0.095	0.032	1		
5. Perceived Self-efficacy	0.172**	0.110*	0.214**	-0.059	1	
6. Cues to action	0.103**	0.155**	0.137**	-0.202**	-0.053	1

Note. *P<0.05, **P<0.001

Pearson correlation coefficients of HBM constructs are shown in Table 2. According to the results, cues to action was positively correlated with perceived susceptibility, perceived severity and perceived benefits (P<0.05). Cues to action was negatively correlated with perceived barriers (P<0.01). In addition, perceived self-efficacy was positively correlated with perceived severity (P<0.05), perceived susceptibility and perceived benefits

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(P<0.01). Perceived benefits was positively correlated with perceived severity (P<0.01).

Table 3 presents the relationships between demographic variables and HBM constructs using independent t-tests and ANOVA. Based on the findings, statistically significant relationship was found between perceived susceptibility and gender and job status (P<0.001). Subsequent post-hoc tests (Tukey) showed that the significant differences involved the job status. Housekeepers had a significantly higher perceived susceptibility (P<0.001) than the other four job groups. In addition, there was a statistically significant relationship between perceived severity and demographic variables such as age, education level and residence status (P<0.05). Tukey post-hoc test revealed that couples, who were 10 to 20 year old, significantly differed from the other groups (P=0.046). Besides, this group had a lower perceived severity than the other groups. Tukey post-hoc test showed significant differences in the mean scores of perceived severity between couples with primary vs high school, primary vs academic level and secondary vs high school and secondary vs academic education level (P<0.001).

Table 3 Association between demographic variables and HBM constructs

Variables		Perceived Susceptibility		Perceived Severity		Perceived Benefit		Perceived Barrier		Self-Efficacy	
		Mean(±SD)	P_{value}	Mean(±SD)	P_{value}	Mean(±SD)	P_{value}	Mean(±SD)	P_{value}	Mean(±SD)	P_{value}
Age (years)	10-20	8.74(±2.1)	0.401	15.12(±2.9)	0.024	36.36(±5.6)	0.001	18.25(±3.8)	0.421	16.84(±2.9)	0.213
	21-30	8.51(±2.1)		15.95(±2.7)		38.89(±5.6)		17.70(±3.9)		17.54(±3.3)	
	31-40	8.28(±1.9)		16.31(±2.8)		39.48(±5.1)		17.46(±4.1)		17.52(±3.5)	
Gender	Male	9 (±1.9)	0.001	15.65(±2.7)	0.301	38.47(±5.9)	0.892	17.73(±3.8)	0.828	18.49(±3.4)	0.001
	Female	7.87(±1.8)		15.95(±2.9)		38.40(±5.5)		17.82(±4.1)		16.61(±2.9)	
Education	Primary	9.77(±1.8)	0.072	12.23(±3.1)	0.001	33.69(±5.4)	0.001	18.85(±4.1)	0.032	14.92(±3.1)	0.008
	Secondary	8.23(±1.8)		14.11(±2.9)		35.42(±6.1)		18.30(±3.6)		17.36(±3.1)	
	High School	8.47(±2.1)		15.99(±2.6)		38.39(±5.1)		18.20(±3.6)		17.85(±3.3)	
	Academic	8.62(±1.9)		16.62(±2.4)		40.05(±5.5)		17.30(±4.1)		17.12(±3.2)	
Residential area	Urban	8.51(±2.1)	0.585	15.96(±2.7)	0.002	38.70(±5.5)	0.002	17.80(±3.9)	0.759	17.43(±3.3)	0.483
	Rural	8.70(±1.7)		14.43(±3.3)		35.36(±6.2)		17.59(±4.1)		17.03(±3.1)	
Job status	Employee	8.18(±1.9)	0.001	16.49(±2.8)	0.164	40.85(±4.8)	0.001	17.85(±3.4)	0.222	17.75(±3.3)	0.001
	Free	7.88(±1.8)		15.95(±2.7)		38.58(±5.6)		17.67(±4.2)		18.36(±3.5)	
	Unemployed	8.32(±2.4)		15.33(±2.8)		36.60(±5.3)		17.40(±2.3)		18.20(±4.1)	
	Student	9.31(±2.5)		15.62(±3.4)		36.72(±6.4)		16.23(±3.7)		17.23(±3.6)	
	Housekeeper	9.17(±1.8)		15.51(±2.8)		37.71(±5.6)		18.14(±3.8)		16.31(±2.6)	

We also found statistically significant relationship between perceived benefits and

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demographic variables such as age, education level, residential and job status (P<0.05). Tukey post-hoc test revealed that couples, who were 10 to 20 year old, significantly differed from the other groups (P<0.001). This group had a lower perceived benefit than the other groups. Tukey post-hoc test showed significant differences in mean perceived benefit when comparing primary vs high school, primary vs academic and secondary vs high school and secondary vs academic education level in couples (P<0.001). Regarding job status, Tukey post-hoc test revealed that there were significant differences in terms of perceived benefit when comparing unemployed vs employee (P= 0.014) and unemployed vs housekeepers (P= 0.002).There was a significant relationship between perceived barriers and education level (P<0.05). Finally, statistically significant relationships were found between perceived self-efficacy and gender, education level and job status (P<0.05). Tukey post-hoc test showed that there were only significant differences in terms of self-efficacy when comparing couples with primary vs high school education level (P= 0.011) and housekeepers vs employees (P= 0.017).

Results showed that internet and friends were the most important cues for actions about sexual health issues. (Figure 1)

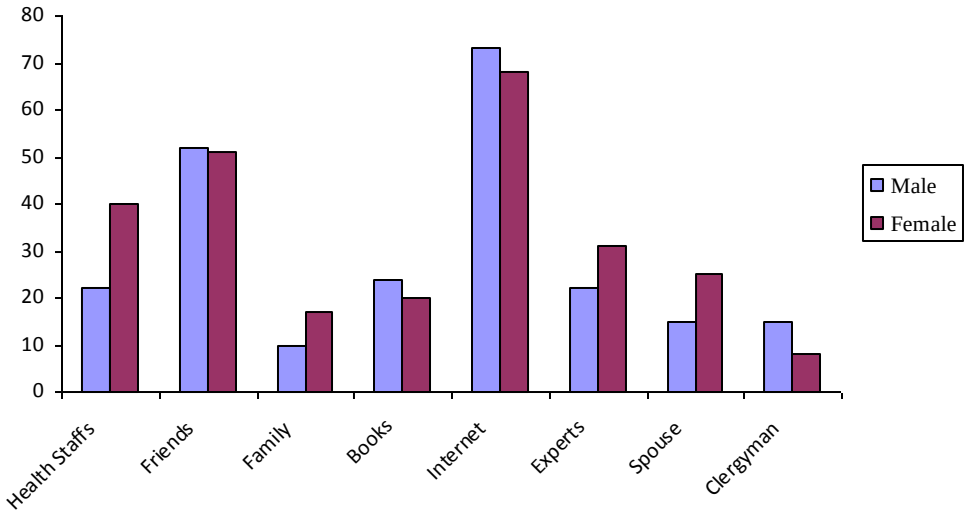


Figure 1 The frequency distribution of cues of action related to sexual health by gender

Discussion

Applying HBM, the present study was conducted to investigate the sexual health-related beliefs of couples while marriage in

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Kermanshah City. According to the findings, perceived susceptibility toward sexual health among couples was low and 38% of participants believed that sexual issues can considerably influence their lives. Whereas, it is possible to occur some intensive and horrible complications related to sexual health for all couples [14]. Along with the results of the present study, in Nuhi and colleagues' study, a significant number of women did not intend to think about and consider any consequences of unhealthy sexual relationships [4]. These results are consistent with the findings of other researchers [6]. Results of the present study showed that perceived severity of unhealthy sexual behaviors was relatively high. Among related consequences to unhealthy sexual behaviors, perceived severity of sexually transmitted diseases and unwanted pregnancies was more than the others. These findings are consistent with the findings of other similar studies [3, 4].

Results of this study showed that older people with higher education level reported more perceived severity about effects and complications of unhealthy sexual relationships. Such high perceived severity may be originated from couples' previous experiences in this regard. About 21.1% of couples, who were 10 to 20 year old, reaffirmed the necessity of promoting people and health authorities' awareness level in this regard because low awareness can increase the risk of unwanted pregnancies [15].

The findings of other studies done by Tschann and associates [16] and Greener [17] are similar to those of the present study. They referred to positive effects of age and education on perceived threat level of unhealthy sexual relationships. Higher education level and age above 20 (as the best age to start sexual relationship) positively affected couples' sexual relationship. It seems that couples with older age have higher education levels, so 2 factors of higher age and education level help them to have better conception and awareness about healthy sexual relationships [18].

In the present study, housewives had more perceived susceptibility about unhealthy sexual relationships because of any possible financial dependency and fear from divorce. Besides, according to our findings, women had lower perceived susceptibility than men about consequences of not having sexual health. These results are consistent with the findings of other similar studies [19, 20]. Moreover, in a research done among Iranian and American men and women, Iranian men and American women paid more attention to their sexual health [21]. Differences can be attributed to women's high shyness level and their fear of divulging their secrets about taboos of sexual issues when completing questionnaires on one

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hand and women's lower mean age and education level compared to men on the other hand. We also found that couples, who were living in urban areas reported higher perceived severity than rural couples. This finding is consistent with the findings of another study [17].This difference can be because of higher mean age and higher awareness level of married women who live in urban areas.

Participants of this study believed that benefits and consequences of marital relationship are very important. In this regard, loneliness frequency among couples was low. It shows that educational programs emphasize more on mental benefits and usefulness of healthy sexual relationships. This result is consistent with the findings of other similar studies [22, 23]. In addition, perceived barriers toward healthy sexual relationship were low and desirable. This finding was similar to results of Lauby and colleagues [24] and Deptula and associates' studies [22]. The most reasonable reported barriers were being shy to talk about having sexual relationship with spouse and asking questions about healthy sexual relationship. Significant associations were observed between age and perceived benefits; between education level and perceived benefits of sexual health; between age and education level and perceived barriers. In this regard, with increasing age and education level perceived benefits of having healthy sexual relationship escalates, while perceived barriers of having healthy sexual relationships decrease by increasing age and education level. These results are consistent with the findings of other similar studies [22]. This result emphasizes on necessity of permanent training of couples at the beginning of their marriage regarding perceived benefits. In addition, there was significant association between perceived benefits and residential status. In this regard, couples who were living in urban areas reported higher perceived benefits than rural couples. This difference could be due to higher awareness level of couples, who were living in urban areas. This finding is consistent with the findings of another similar study [22].

In this study, participants reported relatively favourable level of perception of their self-efficacy and ability to have sexual health. It seems that performing proper behaviors in certain conditions are necessary to increase the lower scores of couples' self-efficacy [25]. Having sexual health and starting healthy sexual relationship needs high awareness and various life skills. Because of poor training level of couples, obtainig all these skills is relatively hard in our society. Hence, couples' perception of their self-efficacy in this field will not be completely desirable. In this study, couples' perceived self-efficacy increased by their education level. This finding is in agreement with other similar studies [6]. The

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significant relationship between self-efficacy and gender was the other finding of the present study. It seems that society gives more power and chance to men; therefore, they have higher self-efficacy compared to women. This result is consistent with the findings of another study [6].

In this study, internet and friends were the best cues of actions for sexual health among couples. In the present study, weak role of scientific books and experts in providing accurate information about sexual health was noticeable. It was emphasized in the previous study in Iran, too [26]. This issue was also proposed in a study comparing English and Taiwanese couples. English couples studied handbooks to get more information about healthy sexual relationships more then their Taiwanese counterparts. They learnt more from their ancestors, reported better knowledge and attitude in this regard [21]. These results show the necessity to design proper educational plans to continuously train this target group.

The present study, while having several strengths, had certain limitations too. Data were collected through participants' self-report and their sexual behavior assessment was based on the completed questionnaires. The future studies are needed to overcome these problems.

Conclusion

Results confirmed the effectiveness of the HBM for investigation of the couples' beliefs toward their sexual health. Therefore, it is recommended to implement educational interventions applying HBM, with an emphasis on perceived susceptibility and perceived barriers as effective factors for promoting sexual health, in further programs. In addition, it seems that the couples may actually have cues of actions to healthy sexual behaviors, but they believe that cues are not so helpful for those behaviors.

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Conflict of Interest Statement

The authors have no conflicts of interest

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