

The Relationship between Midwifery Students' Attitudes towards Couples' Sexual Relationships and Their Clinical Skills in Providing Sexual Health of Counseling Services

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| ARTICLE INFO | ABSTRACT |
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| <p><i>Article type:</i> Original article</p> | <p>Background & aim: Midwives have a substantial role in evaluating and improving sexual health and providing family counseling. The aim of this study was to evaluate clinical skills of midwifery students of Mashhad University of Medical Sciences in providing sexual health counseling services and determine their attitudes toward sexual relations of couples in the academic year of 2014-2015.</p> <p>Methods: This cross-sectional study was performed on 63 midwifery students, who were selected by convenience sampling. The data collection tools included an academic and demographic questionnaire, the questionnaire of attitudes toward couples' sexual relations, and a checklist to assess the midwifery students' clinical skills in taking sexual history, providing sexual counseling during pregnancy and menopause, and diagnosis and treatment of sexual dysfunction. The checklist was completed by observers in objective structured clinical test consisting of five stations. Data analysis was performed using descriptive statistics, One-way ANOVA, Pearson correlation, repeated measures ANOVA, and regression, using SPSS version 16.</p> <p>Results: The mean score of students' attitude was 34.1±4.0 out of 40, and 85.7% of the participants had a very good attitude toward sexual relation of couples. The mean total score of the students' clinical skill was 22.6±8.0 out of 128, and 90.5% of the samples were at a poor level.</p> <p>Conclusion: Although providing sexual health counseling services is among the educational purposes of midwifery students and is one of the qualifications midwifery students and midwives must have, midwifery students' do not have satisfactory skills in this area. However, given the positive attitude of the students toward this issue, these skills can be promoted. Therefore, it is recommended to design and implement sexual health programs for midwifery students.</p> |
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Introduction

Dissatisfaction with sexual life accounts for 90% of marital problems and 50% of divorces in Iran (1). In fact, healthy and satisfying sexual relation is one of the most important components of marriage. Given the importance of family in Iranian community and the role of

couples' sexual health in family maintenance and prevention of marital problems, promoting sexual health at individual and social levels is of great importance (2-4).

Sexual health is critical to public and family health (1, 5). Sexual health education includes

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sexual and reproductive physiology and anatomy in humans, physical problems in males and females, sexually transmitted diseases and their prevention, sexual behaviors, and sexual and marital dysfunction. Providing counseling on sexual health facilitates having a healthy sexual life (6, 7).

Sexual health entails having personal and social morality and at the same time enjoying reproductive behavior, and not having problems (such as fear, misconception, shame, guilt, diseases, and physical abnormalities and deficiencies that interfere with sexual and fertility function) that can inhibit sexual response and cause sexual disorders (6-9).

According to The International Conference on Population and Development (1999), which was held in Cairo, all the people have the right to have optimal sexual health information. On the other hand, training on principles of sexual relations and addressing couples' sexual problems are the basic components and standards of reproductive healthcare (10). In order to achieve these standards, evaluate and promote sexual health, and provide family counseling, the World Health Organization, the Council of the Cultural Revolution, and the Ministry of Health and Medical Education acknowledge a key role for midwives (11).

According to Crack Patrick, the consultants who serve clients with sexual problems should feel comfortable discussing sexual issues and have a positive attitude toward it, so that they can consider the moods of their clients as a part of their sexual issues (12). Papaharitou et al., in a study performed on 714 students of medicine, psychology, pharmacology, nursing, and midwifery concluded that negative attitudes could affect the sexual health counseling process (13). Purabuli et al., who evaluated the knowledge and attitudes of nurses toward sexual relations and provided training to patients with myocardial infarction and their spouses, concluded that despite having positive attitudes nurses had inadequate knowledge in this regard (14).

In addition, the results of a study by Guthrie et al. on nurses' understanding of sexual issues and its relationship with patient's care showed that nurses had inadequate understanding, and

the quality of patient care depends on the nurses' understanding of sexual issues (15). Despite the importance of sexual relations, many women have difficulty talking to their healthcare providers about sexual issues.

Healthcare providers should take sexual history, counsel patients on healthy sexual behaviors, treat sexual dysfunction effectively, inform patients on the effects of the diseases or medical treatment on sexual relations, and address patients' sexual concerns. However, adolescent and adult patients believe that healthcare providers are not comfortable discussing sexual issues, and they often lack sufficient skills (16-18). Previous studies indicated low level of midwifery students' competence and skills in providing sexual health services (19-22), which implies the importance of assessing midwifery students' competence and planning appropriate educational programs.

Given the importance of sexual relations and absence of similar studies, and considering the fact that midwifery students are going to be part of medical staff, we aimed to evaluate the attitudes of midwifery students of Mashhad University of Medical Sciences toward couples' sexual relations, and their clinical skills in providing sexual health counseling services.

Materials and Methods

After obtaining approval of Ethics Committee of Mashhad University of Medical Sciences, this cross-sectional study was performed on 63 midwifery students, who were selected through convenience sampling in 2014. At first, 84 students who had the inclusion criteria including consent to participate in this study, passing the theory course of sexual dysfunction, educating in seventh semester of bachelor or first or third semester of M.Sc. of Mashhad school of nursing and midwifery were included in the study, if they didn't completely pass the five-station of objective structured clinical test and lack of response to the questionnaire of attitude toward sexual relation were excluded from the study.

A total of 21 students were excluded from the study due to unwillingness to participate, test time and training program overlap, matching transitional program to other

universities, and having the exclusion criteria. The data collection tools included academic and demographic questionnaire, the questionnaire of attitudes toward couples' sexual relations, and a checklist to assess the sample's clinical skills in providing sexual health counseling services. The individual and academic questionnaire included 39 items, the questionnaire of attitude toward sexual relation, which evaluated the participants' beliefs on the importance and need for a satisfactory and desirable sexual relation in marital life, included 10 items using a five-point Likert scale. The total score of this questionnaire ranged between 0 and 40, and was divided into four categories of poor (0-10), medium (11-20), good (21-30), and very good (31-40).

The checklists evaluating students' clinical skills in providing sexual health counseling services were designed in five stations of OSCT.

Checklist of station No. 1 was related to obtaining sexual history about pain disorder type of vaginism. The checklist prepared for this station had two parts, the first part was related to the communication skills of students, questions about patient's demographic characteristics, current performance, and explaining the patient's routine interactions.

Students' communication skills included seven options that for each item. A score of zero was considered for not doing and 1 for doing it, this section had a total of seven points, the other three parts of this section and the second section of the checklist which was related to sexual learning, sexual experiences in childhood, adolescence, and adulthood, and questions about specific issues included 43 items. For each item, a score of zero was considered for not being asked, 0.5 for being asked incompletely, and 1 for being asked completely. The total score of this section was 43, and the overall score of this station was 50.

Checklist of station No. 2 was related to sexual counselling during pregnancy. The checklist of this station consisted of two parts. The first part was related to the questions that sexual education could provide an appropriate answer to them. This section included ten items, and scores of one and zero were given to being asked and not being asked, respectively.

The second part assessed the students' performance in providing sexual training during pregnancy that the questions of 1 to 6 were scored by trigon Likert method. A score of 0 was given to lack of training, 0.5 for incomplete training, and 1 for complete training. In the items of 7 to 10, binary options were used, and a score of zero was assigned to no training and one for training. Total score of this station was 20.

Checklist of station No. 3 was related to sexual counseling regarding dyspareunia in menopause. In this station, scenarios of a standardized patient who had been reported as a case were used. Checklist of this station consisted of three parts. The first part, which was related to the diagnosis of pain disorder, included three items and the scores one and zero were considered for writing and not writing any statements, respectively. The second part was related to the questions differentiating vaginism from dyspareunia. This section consisted of five items, and the scores of one and zero were considered for writing and not writing any statements, respectively. The third part was related to sexual education during menopause with 20 items, a score of zero was considered for not writing education and one for writing education. The minimum and maximum possible scores were 0 and 28, respectively.

Station No. 4 was related to diagnosis and providing therapeutic strategies for orgasm disorders. The station was held using scenarios of a standardized patient who was reported as a case. Checklist of this station consisted of two parts. The first part was related to diagnosis of disorder, which included three items, and the scores of one and zero were considered for writing and not writing any statements, respectively. The second part was related to providing therapeutic strategies with ten items, a score of zero was considered for not writing and one for writing therapeutic strategy. The minimum and maximum possible scores of this station were 0 and 13, respectively.

Station 5 was about diagnosis and providing therapeutic strategies for sexual aversion disorder. In this station, scenarios of a standardized patient who was reported as a case were used. Checklist of this station

consisted of two parts. The first part was related to diagnosis of disorder, which included four items, and the scores of one and zero were considered for writing and not writing any statements, respectively. The second part was related to providing therapeutic strategies with 13 items, a score of zero was considered for not writing and one for writing therapeutic strategy. The minimum and maximum possible scores were 0 and 17, respectively. Total score of clinical skill in providing sexual health counseling ranged between 0 and 128 that was divided into four categories of poor (0-32), medium (32.1-64), good (64.1-96), and very good (96.1-128).

After explaining the purpose of the study and obtaining informed consent from the participants, the demographics and attitude questionnaires were filled out. Thereafter, the students' skills in providing sexual counseling were evaluated using OSCT, which included five test stations and one rest station. The stations were as follows: Station 1: taking sexual history of a 28 years old woman with vaginism using a standardized patient; Station 2: providing a complete sexual counseling to a 30-year-old pregnant woman at 10 weeks of pregnancy, who had referred due to fear of intercourse during pregnancy using a standardized patient; Station 3: providing advice for decreased libido and dyspareunia during menopause using standardized patient scenarios; Station 4: diagnosis and treatment of orgasm disorders using standardized patient scenarios; Station 5: diagnosis and treatment of sexual aversion using standardized patient scenarios; and station 6: rest. Each OSCT for each individual lasted 60 minutes.

Each of the stations was held in a separate room and the time allocated to each station was ten minutes. The participants were evaluated at the same time and in one place. At the beginning, the students entered a separate room and after receiving explanation on how to conduct the test, the subjects entered the exam hall in groups of six. Each participant entered one room (station). At the end of each station, the participants rotated clockwise to switch places with the next person until every person had passed all the six stations. The OSCT was held at the clinical

skills center of School of Nursing and Midwifery. Other researchers with master's degree monitored and evaluated the quality of the stations. Content validity of the demographic characteristics and attitudes questionnaires, as well as the OSCE checklists was confirmed by ten faculty members. Since the reliability of demographics questionnaire had already been established in previous studies, it was not examined in this study. However, the internal consistency reliability of attitude questionnaire and OSCE checklists was evaluated using Cronbach's alpha ($\alpha=0.74$ for the attitudes questionnaire, $\alpha=0.79$ for the checklist in first stations, $\alpha=0.82$ for the second station, $\alpha=0.84$ for the third station, $\alpha=0.77$ for the fourth station, and $\alpha=0.82$ for the fifth station).

Descriptive statistics were used to describe the data. To evaluate the effect of the underlying variables on attitudes and clinical skills mean scores, One-way ANOVA, Pearson correlation, repeated measures ANOVA, and regression were performed using SPSS version 16. *P-value* less than 0.05 was considered significant. The participants were assured that the obtained data are kept completely confidential and the results are going to be reported generally. Moreover, they were told that they could quit participating in the study at any time, and their questions regarding the study were answered during the study.

Results

The subjects were aged 21-41 years, with mean age of 25.5 ± 4.8 years, and 44.4% ($n=28$) the participants were in the seventh semester of bachelor's degree, 28.6% ($n=18$) in the first semester of master's degree, and 27% ($n=17$) in the third semester of master's degree. In terms of marital status, 47.6% ($n=30$) were single, 50.8% ($n=32$) were married, and 1.6% ($n=1$) were divorced. Sexual dysfunction score of the samples ranged between 12 and 20 with mean score of 17.1 ± 1.6 . Among the subjects, 20.6% ($n=14$) had completed studying sexual counseling, and the majority of them (35.7%) had used the Internet as the source, and 9.5% of the subjects ($n=6$) reported that they had provided sexual health counseling.

Table 1 shows the mean score of attitude towards couples' sexual relation. The maximum

Table 1. The mean and standard deviation of the scores of attitude toward sexual relation and clinical skills in providing sexual health counseling of midwifery students

| Variable | N | Mean±SD (score out of 100) |
|---|-------------|-------------------------------|
| Attitude toward couples' sexual relation | 63 | 85.3±10.0 |
| Clinical skills of midwifery students in providing sexual health counseling | 63 | 17.7±6.3 |
| Paired t-test result | T=175 df=62 | P<0.0001 |

Table 2. Mean and standard deviation of scores of clinical skill in providing sexual health counselling services of midwifery students in objective structured clinical test

| Variables (station) | N | Max | Min | Mean±SD (score out of 100) | Total score |
|--|--------|------|----------|-------------------------------|-------------|
| station 1 (taking sexual history) | 63 | 25.5 | 0 | 22.8±9.3 | 50.0 |
| station 2 (sexual counselling during pregnancy) | 63 | 13.5 | 1.0 | 22.0±11.5 | 20.0 |
| station 3 (sexual counselling during menopause) | 63 | 9.0 | 0 | 11.1±6.7 | 28.0 |
| station 4 (diagnosis and treatment of orgasm disorder) | 63 | 8.0 | 0 | 15.4±12.3 | 13.0 |
| station 5 (diagnosis and treatment of sexual aversion) | 63 | 5.0 | 0 | 9.4±7.1 | 17.0 |
| Results of repeated measures ANOVA | F=45.3 | df=4 | P<0.0001 | | |

possible score was 40 and students gained 85.3% of the total score. The table also shows the mean score of clinical skills in providing sexual counseling, which is the sum of the five stations, and the maximum possible score is 128. The results demonstrated that students gained 17.7% of its total score.

According to Pearson correlation coefficient, there is a significant linear relationship between students' clinical skills and their attitude ($P=.024$, $r=.64$).

It was found that 85.7% and 14.3% of the samples had very good and good attitudes toward couples' sexual relation, and none of them was in low and medium levels. In addition, 90.5% ($n=57$) of the students were at poor level in providing sexual health counselling services, 9.5% ($n=6$) at moderate level, and none of them were at good and very good levels.

The mean score of students' clinical skills in the first, second, third, fourth, and fifth stations was $11.4±1.2$, $4.4±2.3$, $3.1±1.9$, $2.0±1.6$, and $1.6±1.2$, respectively. Students' scores in the five stations were considered as repeated scores and were compared using repeated measures ANOVA. The results showed that the mean score of students' clinical skills was significantly

different in the stations. The post-hoc test showed a significant difference between students' scores in the first and second stations and the third, fourth, and fifth stations and between the fourth and fifth stations (Table 2).

Because of the importance of obtaining sexual history and the extent of the parts of this clinical skill, the students' function at first station is described in Table 3. The students' scores in the two parts (parts 1 and 2 included four and five sub-skills, respectively) were analyzed separately. For this purpose, the percentage of the total scores achieved by the students in these nine sub-skills were calculated and considered as repeated scores.

Repeated measures ANOVA showed that there was a significant difference between students' mean scores in different sub-skills. In part one, the post-hoc test showed that there were statistically significant differences between the scores of communication skills, recording patients' demographics, and those of assessment of current sexual performance and describing routine interactions. The results of repeated measures ANOVA reflected that the mean score of sub-skills in the second part of the first station were significantly different. The post-hoc test showed that there were

significant differences between the two sub-skills of sexual learning and patients' specific issues and taking sexual history of childhood, adolescence, and adulthood.

Mean score of attitudes toward couples'

sexual relation and clinical skills in providing sexual health counselling services were not significantly different in groups divided based

Table 3. Mean and standard deviation of scores of midwifery students based on separation of different sections of the first station

| First station | Number of items in each sub-skill | Obtainable score of Each section | Mean±SD (scores out of 100) | Mean±SD (the obtained scores) |
|---------------------------------------|-----------------------------------|----------------------------------|-----------------------------|-------------------------------|
| First section | | | | |
| Communication skills | 7 | 7.0 | 45.7±24.3 | 3.2±1.7 |
| Patients' demographic characteristics | 8 | 8.0 | 31.3±20.2 | 2.5±1.6 |
| Assessing current performance | 6 | 6.0 | 28.2±28.3 | 1.7±0.9 |
| Describing routine interactions | 6 | 6.0 | 25.0±28.3 | 1.5±1.2 |
| F=37.6 df=3 P=.0001 | | | | |
| Second section | | | | |
| Sexual learning | 3 | 3.0 | 16.7±26.7 | 0.5±0.8 |
| Sexual history of childhood | 2 | 2.0 | 0 | 0 |
| Sexual history of adolescence | 3 | 3.0 | 1.0±3.3 | 0.03±0.1 |
| Sexual history of adulthood | 8 | 8.0 | 1.3±5.0 | 0.1±0.4 |
| Special issues | 7 | 7.0 | 22.9±24.3 | 1.6±1.7 |
| F=63.8 df=4 P=0.0001 | | | | |

on marital status (P=0.150, P=0.599), different educational levels (P=0.118, P=0.459), having self-study about sexual issues (P=0.460, P=0.329), the sources of the self-study (P=0.641, P=0.217), and history of providing sexual counselling services (P=0.250, P=0.473). Also, the result of Pearson correlation test indicated that there was no significant linear relationship between the students' scores of sexual dysfunction course and their clinical skill scores achieved in OSCT (P=0.705, r=-0.051), and also their attitude scores (P=0.736, r=-0.046). Age had no significant relationship with clinical skill scores (P=0.939, r=-0.01), and attitude scores (P=0.219, r=-0.16).

The general linear model demonstrated no relationship between the students' age, educational level, marital status, score in sexual dysfunction course, having self-study about sexual issues, type of study source, history of providing counselling services, and the scores of clinical skills in providing sexual health counselling services. The students' scores of attitude toward sexual relationship had a significant relationship with the scores of clinical skills in providing sexual health

counselling services (P=0.031, r=0.56), and in the presence of attitude variable other factors mentioned did not have a significant relationship with clinical skills in providing sexual health counselling services (P<0.05).

Discussion

The results showed that 85.7% and 14.3% of the samples had very good and good attitudes toward couples' sexual relations, respectively. The results showed that midwifery students had desirable attitude that is a good background for evaluating the client's sexual health. A significant linear relationship was found between the attitude scores and those of clinical skills in providing sexual health services. McKelvey et al. examined the knowledge and attitudes of medical students toward sexual issues. They concluded that providing training to increase sexual knowledge, change attitudes, and overcome negative attitudes toward sexual problems can promote medical students' performance in taking sexual history and providing counselling in this regard (23).

The first station of the OSCT, which was about taking sexual history, included

interacting with the patients, which is one of the most important skills that medical students and health personnel must have (24). The highest obtained score from this station was pertinent to students' communication with patients, taking patients' demographics, evaluating current performance, describing routine interactions, responding to questions on specific issues, and sexual learning, and the lowest score was related to taking sexual history. The mean obtained score in this station was 11.4 ± 4.7 . These findings show that students are weak in the field of sexual health assessment, which is the first skill in providing sexual health services.

A study performed by Carson showed that many interviewers did not have sufficient knowledge and experience in evaluating sexual issues (25). Holey et al. carried out a study on 241 gynecologists and 1086 general practitioners to evaluate taking history of sexual abuse. Their findings demonstrated that only 2.2% of general practitioners and 3% of obstetricians and gynecologists had performed sexual health assessment. According to that study, physicians stated that they should promote their skills and experience (26), which is consistent with the present study, but is inconsistent with the study of Fisher et al. evaluating gynecology residents' ($n=47$) skills in sexual health assessment. The study conducted by Fisher et al. demonstrated that gynecology residents had average skills in this area (27). This discrepancy might be due to applying different methods of student training, and the fact that in western countries people are more comfortable discussing sexual issues compared to Iran.

In the second station, which evaluated students' sexual counselling during pregnancy, the mean score of the students was 4.4 ± 2.3 , which indicates inadequate skills of the students in this area. The third station, which was about sexual counselling during menopause, the mean overall score was 3.1 ± 1.9 , which shows poor performance of the students. In a study conducted by Beigi et al., which evaluated sexual disorders during menopause, sexual health maintenance was recommended to prevent psychological and social problems secondary to sexual disorders during this period (28).

The fourth and fifth stations evaluated the students' skills in diagnosis and treatment of sexual dysfunction. The mean score of the students' skills in diagnosis and treatment of orgasm disorders was 2.0 ± 1.6 , and the mean score of the students' skills in diagnosis and treatment of sexual aversion was 1.6 ± 1.2 . The mean score of the students' clinical skills in the five stations was 22.6 ± 8.0 , which was $17.7 \pm 6.3\%$ of the overall score. The maximum score of clinical skills in providing sexual counselling services was the sum of the scores of the first, second, and fourth stations.

In general, 90.5% ($n=57$) of the midwifery students had low clinical skills in providing sexual counselling services, and only 9.5% ($n=6$) of them were at moderate level. However, all of the participants had passed sexual dysfunction course with mean score of 17.1 ± 1.6 . Kazutaskas et al. in a study on rehabilitation counselors reported that their samples had average knowledge about sexual issues (29). A study performed by Dupras et al. on 42 healthcare providers showed that the participants had limited knowledge about aging and sexuality (30). However, a study conducted by Garcia suggested that obstetrics and gynecology residents had good knowledge on sexual healthcare (correct response range=80-92.5) (27). The disagreement among the results of these studies might be due to differences in the study populations and samples.

Haboubi et al. evaluated sexual knowledge of 318 health personnel in the medical, nursing, and physiotherapy groups. The results showed that 94% of the samples had poor sexual information and needed further training in this regard (31). Ozgoli et al. found that 14% of midwives, nurses, and gynecology, surgery, and internal residents had performed sexual health assessment, and 84.2% of the samples agreed with the necessity of sexual health assessment. Moreover, 58%, 62%, 90%, 75.5%, and 71.5% of the participants stated that sexual health assessment is not performed due to limited knowledge and skills, lack of individual ability, absence of training courses, unsuitable location, and insufficient time, respectively. In addition, 81% of the participants stated training could improve sexual assessment (32). This finding indicates that little training has

been provided for the healthcare providers regarding sexual issues.

In studies conducted in other countries, lack of training on sexual issues has been seriously discussed. Absence of training on sexual issues in most schools, limited scientific knowledge on sexual behaviors, and teachers with inadequate knowledge were proposed to be the main reasons for sexual problems (32). However, having adequate skill in sexual health assessment and providing sexual services is necessary for healthcare providers.

Since sexual health is a human right, healthcare providers must be able to provide sexual counselling and health services to guarantee people's sexual health, the is, complete physical, mental, and social health related to sexuality (33, 34). The limitation of this study is the small number of students eligible to participate in the study.

Conclusion

Despite positive attitude of midwifery students toward couples' sexual relations and its importance in marital life, they did not have adequate skill in providing sexual health counselling in educational services and in diagnosis and treatment of sexual problems. Since midwifery students pass theoretical courses on sexual disorders in bachelor's degree, they are expected to have the necessary expertise in this area. However, our study reflected low level of students' skills in this regard. To overcome this problem, providing appropriate educational content, using teaching methods appropriate to educational purposes, and having experienced professors in this field are recommended.

According to the findings of this and previous studies, it is recommended to use OSCT to evaluate the ability of healthcare providers in providing sexual health services. OSCT in addition to evaluating knowledge can also assess performance of learners, while in the majority of studies only personnel's knowledge has been evaluated. Using stations for various sexual health areas can identify learners' weaknesses, which leads to improving the ability of learners in this regard.

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Conflicts of Interest

The authors declare no conflicts of interest.

References

1. Eshaghi SR. The importance of sexual health at the individual and community health. *Monthly Magazine The Health and Development*. 2011; 2:44.
2. Refaie Rafaei SK, Chinichian M, Eftekhari AH, Pourreza AG. Need assessment: sexual health education in family planning centers, Tehran, Iran. *Payesh*. 2010; 9(3):251-260.
3. Nicolosi A, Laumann EO, Glasser DB, Moreira ED, Paik A, Gilgell C. Sexual behavior and sexual dysfunctions after age 40: The global study of sexual attitudes and behaviors. *Urology*. 2004; 64:991-997.
4. Laumann EO, Nicolosi A, Glasser DB, Paik A, Gingell C, Moreira E, et al. Sexual problems among women and men aged 40-80 y: prevalence and correlates identified in the Global Study of Sexual Attitudes and Behaviors. *International Journal of Impotence Research*. 2005; 17(1):39-57.
5. Coverdale JH, Balon R, Roberts LW. Teaching Sexual history-taking: a systematic review of educational programs. *Academic Medicine*. 2011; 86(12):1590-1595.
6. Reproductive health. Defining sexual health. World Health Organization. Available at: URL: http://www.who.int/reproductivehealth/topic/sexual_health/sh_definitions/en/; 2014.
7. Rafaei Shirpak KH. The book of public health. 2nd ed. Tehran: Arjmand Press; 2008.
8. Rafaei Shirpak KH, Eftekhari H, Mohammad K, Chinichian M, Ramazan Khani A, Fotuhi A, et al. Incorporation of a sex education program in health care centers in Tehran, Iran. *Payesh*. 2007; 6(3):243-256.
9. Maclaren A. Primary care for women, comprehensive sexual health assessment. *Journal of Nurse-Midwifery*. 1995; 40(2):104-119.

10. Mohebbi P, Kamaly Fard M. Quality of sexual health counseling provided premarital counseling centers in Tabriz from the perspective of clients. *Journal of Nursing and Midwifery Care*. 2011; 2(1):23-30.
11. Pak Gohar N, Mir Mohammad A. Effect of pre-marriage counseling on sexual health. *Tehran Journal of Nursing and Midwifery*. 2005; 11(3-4):39-46.
12. Jorj R, Christiani T. Ravanshenasie moshavere nazariyeha ahdaf va farayandhayeh moshavere va ravandarmangari. 6th ed. Trans: Fallahi R, Hajillo M. Tehran: Roshd; 2012.
13. Papaharitou S, Nakopoulou E, Moraitou M, Tsimsiou Z, Konstantinidou E, Hatzichristou D. Exploring sexual attitudes of students in health professions. *The Journal of Sexual Medicine*. 2008; 5(6):1308-1316.
14. Purabuli B, Azizzade FM, Mohammad AS. Knowledge and attitudes of nurses in sexual activity and educate it to patients with myocardial infarction and their spouses. *Journal of Critical Care Nursing*. 2010; 2(4):5-6.
15. Guthrie C. Nurses' perceptions of sexuality relating to patient care. *Journal of Clinical Nursing*. 1999; 8(3):313-321.
16. Satcher D. The surgeon general's call to action to promote sexual health and responsible sexual behavior. *American Journal of Health Education*. 2001; 32(6):356-368.
17. Nusbaum MR, Hamilton CD. The proactive sexual health history. *American Family Physician*. 2002; 66(9):1705-1722.
18. Vollmer S, Wells KE, Blacker KH, Ulrey G. Improving the preparation of preclinical students for taking sexual histories. *Academic Medicine*. 1989; 64(8):474-479.
19. Khadivzadeh T, Erfanian F. The effects of simulated patients and simulated gynecologic models on student anxiety in providing IUD services. *Simulation in Healthcare*. 2012; 7(5):282-287.
20. Malekzadeh J, Erfanian F, Khadivzadeh T. Evaluating neonatal resuscitation skills of nursing and midwifery students using objective structured clinical examination (OSCE). *Journal of Midwifery and Reproductive Health*. 2015; 3(3):418-423.
21. Erfanian F, Khadivzadeh T. Evaluation of midwifery students' competency in providing intrauterine device services using objective structured clinical examination. *Iranian Journal of Nursing and Midwifery Research*. 2011; 16(3):191-196.
22. Rashidi Fakari FR, Kordi M, Mazloom SR, Khadivzadeh T, Tara M, Akhlaghi F. Comparing the effect of traditional, web based and simulation training on midwifery students' clinical competence in postpartum hemorrhage management. *Journal of Mazandaran University of Medical Sciences (JMUMS)*. 2015; 25(123):65-77.
23. McKelvey RS, Webb JA, Baldassar LV, Robinson SM, Riley G. Sex knowledge and sexual attitudes among medical and nursing students. *Australian and New Zealand Journal of Psychiatry*. 1999; 33(2):260-266.
24. Khadivzadeh T, Katebi MS, Sepehri Shamloo Z, Esmaily H. Assessment of Midwives' communication skills at the maternity wards of Mashhad teaching hospitals in 2014. *Journal of Midwifery and Reproductive Health*. 2015; 3(3):394-400.
25. Chun J, Carson CC. Physician-patient dialogue and clinical evaluation of erectile dysfunction. *Urologic Clinics of North America*. 2001; 28(2):249-258.
26. Holey N, Mahenux B, Rivard M, Gervais A. Sexual health risk assessment and counseling in primary care: how involved are general practitioners and obstetrician gynecologist? *American Journal of Public Health*. 1999; 89(6):899-902.
27. Garcia M, Fisher WA. Obstetrics and gynecology residents, self-rated knowledge, motivation, skill and practice patterns in counseling for contraception, STI prevention, sexual dysfunction, and intimate partner violence and sexual coercion. *Journal of Obstetrics and Gynaecology Canada*. 2007; 30(1):59-65.
28. Beigi M, Fahami F, Hasanzahraei R, Arman S. Sexual dysfunction in menopause. *Journal of Isfahan Medical School*. 2008; 26(90):294-300.
29. Kazutaskas KA, Lam CS. Disability and sexuality: knowledge, attitudes and level of comfort among certified rehabilitation counselor. *Rehabilitation Counseling Bulletin*. 2010; 54(1):15-25.
30. 's education to sexuality through reflective analysis of their sexual practice. *Sexologies*. 2012; 21(4):171-175.
31. Haboubi NHJ, Lincoln N. Views of health professionals on discussing sexual issues with patients. *Disability and Rehabilitation*. 2003; 25(6):291-296.
32. Ozgoli G, Sheikhan Z, Dolatian M, ValaHee N. The survey of obstacle and essentiality health providers for sexual health evaluation in women referring to health centers related of Shahid Beheshti University of Medical Sciences. *Pajoohandeh Journal*. 2014; 19(4):175-183.
33. Palacios S, Castano R, Grazziotin A. Epidemiology of female sexual dysfunction. *Maturitas*. 2009; 63(2):119-123.

34. Wylie K. Sex education and the influence on sexual wellbeing. *Procedia-Social and Behavioral*

Sciences. 2010; 5:440-444.