http://medicaleducation-bulletin.ir
Original Article (Pages: 231-241)

Explaining the Challenges of Sex Education in Midwives and General Practitioners: a Qualitative Study

Talat Khadivzadeh [1], Robab Latifnejad Roudsari [1], *Masumeh Ghazanfarpour [2]

[1] Nursing and Midwifery Care Research Center, Mashhad University of Medical Sciences, Mashhad, Iran.
[2] Student Research Committee, Kerman University of Medical Sciences, Kerman, Iran.

Abstract

Background: Although sexual health assessment is required for health care providers and sexual rights are a human right, only 2% of general practitioners pay attention to the sexual issues of their patients. Most international studies have reported a lack of clinical knowledge and skills in sexual conversations among treatment workers. This study aimed to explore the challenges of sexual education to midwives and general practitioners.

Materials and Methods: This study is qualitatively based. For data analysis, a combination of Hsieh, Shannon, Graneheim, and Lundman methods was used. As part of this study, 27 midwives and general practitioners at the Mashhad University of Medical Sciences were selected through targeted sampling. The data collection methodology was carried out through in-depth, one-on-one, and in-person interviews. The MAXQDA software version 10.0 was used in the data analysis.

Results: In an inductive process, 38 codes were revealed in nine sub-categories, two categories, and a theme. The theme "lack of clinical knowledge and skills regarding women and sex" emerged from the conclusions of the study. Most of the participants indicated a lack of adequate training or poor formal or informal training programs. The participants' experiences in this area consisted of two sub-categories: "inefficiency of informal education programs", and "inefficiency of formal clinical education programs for women and sex".

Conclusion: Barriers to sexual conversation among midwives and general practitioners are associated with inadequate access to effective education programs and ineffective formal education programs at universities.

Key Words: Challenges, General Practitioners, Midwives, Sex Education, qualitative study.

*Please cite this article as: Khadivzadeh T, Latifnejad Roudsari R, Ghazanfarpour M. Explaining the Challenges of Sex Education of Midwives and General Practitioners: a Qualitative Study. Med Edu Bull 2021; 2(3): 231-41.
DOI: **10.22034/MEB.2021.310024.1028**

****Corresponding Author:***

Masumeh Ghazanfarpour, Student Research Committee, Kerman University of Medical Sciences, Kerman, Iran.

Email: Masumeh.ghazanfarpour@yahoo.com

Received date: Jun. 10, 2021; Accepted date: Aug.22, 2021

1- INTRODUCTION

Although sexual health assessment is needed for healthcare providers and sexual rights are a human right (1), various studies show that only 2% of general practitioners pay attention to the sexual problems of their patients (2). Many doctors avoid discussing sexual problems with their patients and instead prioritize their other issues, such as contraception and infection tests (2). The failure of the health care providers to conduct sexual health assessments has led to the negligence of this health sector (3). Got et al. (2004) cited several reasons why healthcare providers did not offer sexual counseling, including time and resource constraints as uncontrollable barriers (4). Barriers identified by healthcare providers in the study by Stead et al. (2003) include feelings of shame, lack of adequate private environment, time constraints, and lack of information (4). The barriers introduced by Humphery et al. (2001) include a lack of education and the inability to obtain patients' sexual history (5). Another study in the UK cited barriers such as not knowing how to express sexual issues, fear of insufficient or limited personal knowledge and skills about sexual evaluation, lack of training in sexual history skills, concerns about misdiagnosis, and unfamiliarity with sexual therapy (1).

Most of the studies in this area have highlighted the lack of clinical knowledge and skills of medical personnel in sexual conversations (6-11). The literature review indicates that few studies in Iran have examined the role of barriers to sex education among treatment staff. The study by Ozgoli et al. (2014) in Tehran showed that while 84.2% of health care providers agreed with the need for sexual health assessments, only 14% conducted such assessments. In this study, 58% of people cited lack of knowledge and skills as a reason for not completing a sexual health assessment, 62% lack of personal skills, 2% lack of education, 75.5% lack of adequate private space, and 71.5% reported time limitations (1). Also, Bagheri et al. (2014) pointed at insufficient sexual information as one of the barriers to sexual conversation among nurses in heart and CCU wards in selected hospitals in Yazd (12). Considering the importance of the role of midwives and general practitioners as the first line of treatment and considering the limitations of qualitative studies in this field, this study aimed to explain the challenges of sex education to midwives and general practitioners.

2- MATERIALS AND METHODS

2-1. Study design and population

This is a qualitative descriptive study with a content analysis approach. The aim of the present study was to explain the midwives' and general practitioners' perception and experience of sexual conversation with postmenopausal women based on the theory of planned behavior: Designing, determining psychometric properties and testing the predictive behavioral assessment questionnaire, explaining the understanding and experiences of midwives and general practitioners of barriers of sexual conversation with postmenopausal women.

Samples were selected by purposive sampling. Participants of the present study included 14 midwives and 13 general practitioners working in the public and private sectors. The midwives aged 25-60 years and the physicians aged 32- 70 years. Both groups of midwives and general practitioners had between 3 to and 44 years of work experience (**Table.1**).

Table-1: Baseline characteristics of medical staff participating in qualitative research.

Age	Gender	Work experience	Degree of education	Marital status	Menopausal condition	Participate in a sex education workshop	Interview duration (minutes)	Place of interview
40	F	10	MSc	Single		Yes	90	School of nursing
37	F	8	MSc	Married		Yes	60	Participating home
50	F	25	BSc	Married	Menopause	Yes	65	Participating home
40	F	3	BSc	Married		No	60	Office
25	F	3	BSc	Single		No	45	Office
59	F	21	BSc	Married		No	60	Clinic
38	F	10	BSc	Married		No	60	clinic
44	F	18	BSc	Married		No	60	Office
60	F	30	BSc	Married	Menopause	No	70	Office
50	F	20	PhD	Married	Menopause	Yes	40	School of nursing
35	F	5	MSc	Married		Yes	65	Office
37	F	4	BSc	Married		Yes	35	Clinic
59	F	3	BSc	Married	Menopause	Yes	40	Clinic
70	F	44	MD	Married	Menopause	No	60	Office
32	F	5	MD	Married		No	45	Office
33	F	5	MD	Married		No	45	Clinic
39	F	14	MD	Married		No	40	Clinic
38	F	10	MD	Married		No	50	Office
45	F	19	MD	Married		No	50	Office
42	F	16	MD	Married		No	45	Clinic
60	M	35	MD	Married		No	45	Office
32	M	6	MD	Single		No	60	Office
45	M	18	MD	Married		No	60	Clinic
45	M	8	MD	Married		No	60	Clinic
47	M	18	MD	Married		No	60	Office
50	M	22	MD	Married		No	90	Office

F: Female, M: Male.

2-2. Inclusion and exclusion criteria

Inclusion criteria included willingness to participate in the study, being Iranian, and having at least two years of experience in a clinic or private office.

2-3. Methods

Interview began with a general question such as "Can you tell us about your experience of important factors influencing sexual conversation?" and continued with semi-structured questions. In order to clarify the subject matter, the participants were asked exploratory questions to provide further explanation. At the end of the interviews, participants were asked to write down any additional experiences or material that came to mind later and submit it to the researcher. Data saturation was obtained when no new data was reported in the interviews. Each interview with midwives and general practitioners lasted 40 to 90 minutes. The recorded interviews were transcribed verbatim immediately after the interview and were

initially analyzed and coded. In order to determine the strategy of qualitative data analysis, the researcher after reviewing several relevant articles on the method of qualitative content analysis by famous people including Granheim and Landman (2004), Hsieh Shannon (2005), Satu Elo & Helvi Kynga (2007), and Mayring (2000) used a combination of Granheim & Landman and Hsieh Shannon methods (13, 14). In this study, the researcher used a deductive approach by placing codes in predetermined themes (attitudes toward sexual conversation, perceived behavioral control of sexual conversation, subjective norms toward sexual conversation, intention to have sexual conversation, and sexual conversation). The researcher also used the inductive approach by forming sub-categories and categories in predetermined themes. In qualitative research, reliability is measured using four criteria: credibility, dependability, confirmability, and transferability (13, 14).

2-4. Ethical consideration

This article is part of the dissertation of the PhD course in Midwifery & Reproductive health. The proposal of the present study was approved by the Ethics Committee of the Research Council of Mashhad University of Medical Sciences (ID-code: 930568). First, the researcher introduced himself / herself and stated the purpose of the research to the participant and asked him / her for permission to conduct an interview and record his / her voice. The participants were assured of the confidentiality of their data. Participants then signed a written informed consent form.

3- RESULTS

To analyze the data, a combination of Hsieh and Shannon (2005), and Graneheim and Lundman (2004) methods was used. From 27 interviews with midwives and general practitioners, 1156 initial codes were originally extracted. Similar codes were then merged and finally, during this inductive process, 38 codes were revealed in nine subclasses, two classes, and a theme of "lack of sexual education and clinical skills among women" (**Table.2**).

3-1. Theme "lack of sexual education and clinical skills among women"

Most of the participants indicated a lack of adequate training or poor formal and informal training programs. Participants' experiences in this area included two sub-categories: "inefficiency of informal education programs" and "inefficiency of formal sexuality education programs and clinical competence of women". All participants believed that adequate theoretical and clinical training has never been provided.

3-2. Category "lack of effectiveness of formal sexual education and women's health programs"

Participants believed that the sexual education programs did not adequately prepare women for post-graduation sexual conversation. The "ineffective formal education programs for women and sexual health" sub-category emerged from the following sub-categories: "issues in the sexual education programs and its implementation", "lack of educational skills", "lack of general educational competence of teachers", and "failure to use new technologies in education".

3-3. Category "insufficient access to reliable educational programs"

All participants stated that they have not received adequate formal education in their university education and resorted to self-study through books, websites, and training courses to receive the necessary information to help their clients.

Table-2: Codes, categories, subcategories, and themes extracted from the interviews.

Codes	Subcategories	Exact replies	Categories	Theme
Limited hours allocated to the menopause subject; Limited hours devoted to internships on women studies; The need to design two-week internships on menopause; Limited hours devoted to the subject of sexual dysfunction for midwifery students; Absence of a course subject on sexual dysfunction for medical students; No internship unit on sexual dysfunction; No subjects on couples therapy and treatment of sexual problems	Problems of sex education program and its implementation	"For example, if someone wants to teach about that period, see, a two-week part might be required".	Lack of scientific validity of the content presented on personal websites	Lack of clinical knowledge and skills
Lack of a subject on counseling principles; Lack of clinical training on the principles of counseling; Lack of training in sexual history	Lack of teaching of counseling skills	"Nowadays they teach the students how to obtain the history of patients, but we were never taught how to take a sexual history. It's always absent in the medical history of patients".		
Not teaching sexually explicit subjects due to shame; Assigning sex teaching to residents and students; Not using teaching aids; Insufficient clinical skills of professors; Lack of human resources specialized in training sexual subjects; Not engaging in sexual matters due to fear of inappropriate student jokes; The need to teach clinical skills in further internships by gynecologists	Poor teaching quality of professors	"After almost half of the previous year, the group manager had not been able to find someone to teach the sexual dysfunction course".		
Lack of educational facilities; Lack of access to related websites in the university environment; Blocking sex education sites	Not using modern technologies in education	"Most of the college books were from the medieval times. You could perhaps find one or two new text books or CDs and they belonged to other people" (Participant No. 9, 25 years old, midwifery graduate with three years of experience).		
Lack of scientific validity of the content presented on personal sites; Low quality content of sex education CDs	Invalidity of non-academic and informal information sources	"Because in the websites, the material is also mostly experimental. People reach some conclusion and publish it on the Internet, like, this treatment to solve that problem" (Participant No. 1, 50 years old, midwifery graduate with 25 years of experience).	Lack of access to valid educational programs	
Uploading educational sexual content on credible academic websites	Enriching university websites	"On the website of, for example, the Medical System, the university website, every site that doctors have to visit, put a couple of links, questions about the things one knows about		

Focusing of counseling sites on pregnancy and family planning		sexual problems during menopause etc." (Participant No. 10, 42 years old, male, general physician with 13 years of experience).		
The need to add menopause and sexual counseling services to counseling websites				
Not receiving giving retraining points in to private workshops	Not being cost-effective	"If I attend a sex education workshop, all I get at the end is a certificate to hang on the wall. Retraining is not worth it. I have to skip work, and the commuting expenses are too high as most workshops are held in Tehran" (Participant No. 21, 32 years old, male, general physician with six years of experience).		
Financial loss due to closing clinics and attendance at sex workshops				
The high cost of sexual training courses				
The high cost of commuting to workshops held outside of Mashhad				
Mixed Mixed-sex gender sexual workshops	Lack of attention to cultural sensitivities in private workshops	"For example, I am a very religious person, when I went to the classroom, the atmosphere was not appropriate. I asked many questions from the professor but she could not give explicit explanations. This is not the right way to educate, education must be clear and open. I understand that she couldn't talk explicitly because of the male students sitting there" (Participant No. 1, 50 years old, midwifery graduate with 25 years of experience).		
Practical exercises education contrary to cultural and Islamic customs				
Repetitive content of retraining courses	Lack of proper organization of training courses	"Many of our classes are held only twice a year, such as safe delivery and neonatal resuscitation" (Participant No. 4, 37 years old, midwifery graduate with eight years of experience).		
Lack of sexual retraining courses				
Low credibility of private workshops				
No scores given to retraining courses				
Lack of coordination between the length of the course and the volume of sex workshop content				
False post-test score in sex workshops				
Crowded sex workshops				
Lack of sufficient information about holding workshops				

4- DISCUSSION

The objective of this study was to explain the challenges of sexual education to midwives and family physicians. The category "lack of sexual knowledge and clinical skills of women" was one of the classes emerged from the qualitative data. This category included three sub-categories: "lack of access to valid educational programs", "ineffectiveness of formal women's education programs and sexual health", and "superficial sexual knowledge". Although many participants in this study did not consider formal and informal education programs to be satisfactory, only a few participants believed that their sexual knowledge is limited. In addition, to increase their clinical knowledge and skills, many of the participants in this self-taught study with CDs and books, Work in a gynecologist's office, participate in sex workshops, psychology, and communication skills. Their actions seemed effective, as most participants assessed their knowledge and skills for appropriate sexual conversations. According to the findings of this study, the lack of sexual education programs was one of the main barriers to participants' sexual

conversations, so that it was the subject of a large number of interview codes. Most participants rated their sexual knowledge as inadequate. They believed that formal women's education and sexual health programs were ineffective due to shortcomings and the lack of teaching counseling skills, inadequate general teaching skills of teachers, and lack of use of new technologies in the education for sexual dialogue programs. Participants rated the hours devoted to teaching menopause and women's internships and sexual dysfunction as inadequate. The midwives who participated in this study believed that the focus of undergraduate education programs is on prenatal and obstetric care. Both midwives and general practitioners stated that they had no internships in sex education.

In line with this study, Ozgoli et al. (2014) conducted a study titled "Assessing the need to assess women's sexual health and its barriers by health care workers" in health centers under the auspices of Tehran Shahid Beheshti University of Medical Sciences on 200 medical staff from among midwives, nurses, gynecological residents, surgical and internal medicine residents. Participants emphasized the need for menopause training and sexual dysfunction to acquire skills. Most medical staff assessed their sexual knowledge as limited and only 16.5% had obtained their information from the course units (1).

Of the cardiologists participating in the study by Salehian et al., 47.6 stated that they did not have sufficient knowledge and information to have sexual conversations with their patients (15). American-Iranian physicians who had completed their general medical education in Iran and those who had completed their general medical education in the United States considered their sexual knowledge insufficient and an obstacle to sexual conversations (16).

In old and even more recent sources in other Western countries, the negligence of addressing the issue of sex education in medical education is significant. In 1964, for example, only three North American medical schools had formal sex education courses. A recent study by Solursh et al. in 2003, the most comprehensive study of undergraduate sexual health education courses, found that 54% of colleges in the United States and Canada had between three and ten hours of sex education. The educational content of these programs included the causes of sexual dysfunction (94%), treatment of sexual dysfunction (85%), gender identity disorders (79%), and sexual problems associated with diseases and disabilities (69%), and only 43% had a clinical program of sexual education (17). Participants in the present study stated that they had received brief training on sexual cycles and sexually transmitted diseases during their student years. Midwives participating in the qualitative part of the present study stated that midwifery training programs were focused on maternity care, and general practitioners stated that the focus of their training programs in the relevant sections was on gynecological diseases.

A systematic review of sex education programs in US medical schools found that the focus of sex education programs is on unwanted pregnancies and sexually transmitted infections and sexual issues such as abortion, sexual function, and sexual dysfunction are less addressed. Kingsberg (2003) stated that sex education programs for undergraduate and graduate students are not a high priority. Despite recognizing the growing need for sex education, most schools suffer from a lack of sex education faculty (18). In the present study, many participants believed that midwifery graduates did not have sufficient clinical skills to perform the examination, diagnose vaginal atrophy and fistula, and diagnose pelvic infections.

Participants attributed this inefficiency to the lack of educational models and courses offered by young and novice professors. Abraham et al. (1995) studied the understanding of medical students of their psychomotor skills in Australia. Medical students rated their clinical skills as inadequate, and only 10% of students felt high self-confidence in detecting vaginal abnormalities, and only 14% rated their ability to perform Pap smears as appropriate (19). Using teaching aids to better understand educational materials can help improve learning. Some participants in the qualitative part of the present study pointed to the lack of educational facilities such as computers, overheads, and video projectors during their studies and others pointed to the lack of appropriate teaching aids for teachers. Khadivzadeh et al. conducted a study titled "Study of the strengths and weaknesses of clinical education from the perspective of state-funded and tuition-paying students of Mashhad School of Nursing and Midwifery" in 2003. A total of 72% of midwifery students suffered from not using appropriate teaching aids such as modeling and film, and 86% of them suffered from lack of necessary educational facilities and equipment (20).

One of the goals of midwifery training is to train people with sufficient ability and knowledge in solving sexual problems and issues (21). In Iran, midwives play an important role in promoting sexual health and solving sexual problems. However, midwives do not seem to have sufficient knowledge and skills in sexual counseling (22). Lack of connection between training courses and professional needs in the workplace is an important issue in midwifery training (23). One of the most important needs of midwifery students is education in sexual counseling (24). The curriculum and clinical environment should provide sufficient knowledge and skills to midwifery students as it will contribute to student performance in the clinical setting. Therefore, there is a need to modify curricula for students to achieve basic learning goals (25). In the study of Mohamadi-Bolbanabad et al., a low score on midwifery students' sexual knowledge and awareness indicated an insufficient time and amount of sex education in the curriculum (26). In another study, it was shown that although sexual counseling is one of the educational goals of midwifery, the skills and knowledge of midwives in this field are not satisfactory (27). Toulabi et al. proposed a revision of the midwifery education system to improve graduates' ability in care of the patient, greater use of theoretical courses, and vocational training (28). In their study examining the challenges of medical education, Amiresmaili et al. concluded that lack of comprehensiveness of courses and topics and inconsistency between the set educational goals and the real needs of society, as well as the emphasis on theory rather than practice in educational centers, are the most important challenges (29).

In the study by Ozgoli et al., participants stated that the lack of adequate training courses had a significant effect on their poor performance in the field of sexual health (1). For the necessary sexual health education, most of the existing undergraduate curricula need to be constantly modified. However, this goal is not easily achievable, because implementing suggestions to change the curriculum usually takes a lot of time and effort. It is also probable that the attitudes of some teachers toward women's issues are conservative and difficult to change (30). The second category in this research was the necessity of professors' empowerment. One of the foundations of fruitful education is the presence of competitive professors. The use of teaching aids and new technology are among the effective factors in empowering teachers. The teaching methods used by

the professors make the students interested in learning and doing homework. Teachers use teaching aids to better define the content and objectives of teaching for students. On the other hand, students who study in environments full of educational facilities will be more successful. Therefore, using educational tools leads to better and deeper learning of courses (31, 32). Also, the use of professional teachers specializing in sexual disorders has an important role in improving students' knowledge and skills. In the study of Ozgoli et al., the presence of non-professional teachers in sex education is mentioned as one of the factors in student inefficiency (1). The inadequate cultural context of sex education was the third category of this study. Sex education, due to its unique characteristics, is associated with various challenges in all countries and cultures and requires unique moral considerations (33). Furthermore, talking about these issues is taboo in some countries (34).

A sex education program must be culturally appropriate and skillfully implemented. All societies need culture-sensitive sexual health programs, of which Iran is no exception. Undoubtedly, in medical education curricula, there is a need to create sexual health education programs based on the culture of Iranian society and the accepted societal norms. One of the effective factors in sex education programs is the need to get acquainted with the principles of counseling and communication skills. In their study, Nayebi et al. showed that 60% of students did not receive training in communication skills (35) while learning communication skills at the beginning of the university education is necessary. Taghizadeh et al. showed that the majority of midwives have poor verbal and non-verbal skills (36). Special attention should therefore be paid to communication skills in medical education curricula (30).

5- CONCLUSION

Lack of access to credible educational programs, the inefficiency of formal education programs in universities, and superficial sexual knowledge acquired by medical staff were some of the barriers to sex education for midwives and physicians. It is recommended that medical staff acquire the necessary clinical knowledge and skills for sexual conversations by participating in sex education and communication skills training workshops, self-study through multimedia, and working in obstetricians' offices.

6- AUTHORS' CONTRIBUTIONS

Study conception or design: TK, RL, and MG; Data analyzing and draft manuscript preparation: MG; Critical revision of the paper: TK; Supervision of the research: TK and RL; Final approval of the version to be published: TK, RL, and MG.

7- CONFLICT OF INTEREST: None.

8- REFERENCES

1. Ozgoli G, Sheikhan Z, Dolatian M, Valaee 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):175-83.

2. Read S, King M, Watson J. Sexual dysfunction in primary medical care: prevalence, characteristics and detection by the general practitioner. Journal of Public Health. 1997;19(4):387-91.

3. Refaei Shirpak K, Chinichian M, Eftekhar Ardebili H, Pooreza A, Ramezankhani A. The sexual health education needs of women attending family planning health centers in Tehran. Payesh; 2010.

4. Stead ML, Brown J, Fallowfield L, Selby P. Lack of communication between healthcare professionals and women with

ovarian cancer about sexual issues. British journal of cancer. 2003;88(5):666-71.

5. Humphery S, Nazareth I. GPs' views on their management of sexual dysfunction. Family Practice. 2001;18(5):516-8.

6. Karani S, McLuskey J. Facilitators and barriers for nurses in providing sexual education to myocardial-infarction patients: A qualitative systematic review. Intensive and Critical Care Nursing. 2020;58:102802.

7. Hoekstra T, Lesman-Leegte I, Couperus MF, Sanderman R, Jaarsma T. What keeps nurses from the sexual counseling of patients with heart failure? Heart & Lung. 2012;41(5):492-9.

8. Haboubi N, Lincoln N. Views of health professionals on discussing sexual issues with patients. Disability and rehabilitation. 2003;25(6):291-6.

9. Stokes T, Mears J. Sexual health and the practice nurse: a survey of reported practice and attitudes. BMJ Sexual & Reproductive Health. 2000;26(2):89-92.

10. Oskay U, Can G, Basgol S. Discussing sexuality with cancer patients: oncology nurses attitudes and views. Asian Pacific journal of cancer prevention. 2014;15(17):7321-6.

11. Harsh V, McGarvey EL, Clayton AH. Physician attitudes regarding hypoactive sexual desire disorder in a primary care clinic: A pilot study. The journal of sexual medicine. 2008;5(3):640-5.

12. Survey of nurse's perspective about barriers to education of sexual activity in patients with myocardial infraction. Education and Ethics in Nursing. 2015;4(1):33-42.

13. Hsieh H-F, Shannon SE. Three approaches to qualitative content analysis. Qualitative health research. 2005;15(9):1277.

14. Graneheim UH, Lundman B. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. Nurse education today. 2004;24(2):105-12.

15. Salehian R, Naserbakht M, Mazaheri A, Karvandi M. Perceived barriers to addressing sexual issues among cardiovascular patients. Iranian Journal of Psychiatry and Behavioral Sciences. 2017;11(2).

16. Rashidian M, Minichiello V, Knutsen SF, Ghamsary M. Barriers to sexual health care: a survey of Iranian-American physicians in California, USA. BMC health services research. 2016;16(1):1-11.

17. Solursh D, Ernst J, Lewis RW, Prisant LM, Mills T, Solursh L, et al. The human sexuality education of physicians in North American medical schools. International journal of impotence research. 2003;15(5):S41-S5.

18. Kingsberg S, Malemud C, Novak T, Cole-Kelly K, Wile M, Spanos P, et al. A comprehensive approach to enhancing sexual health education in the Case Western Reserve University School of Medicine. International journal of impotence research. 2003;15(5):S51-S7.

19. Abraham S. Vaginal and speculum examination in medical curricula. Australian and New Zealand Journal of Obstetrics and Gynaecology. 1995;35(1):56-60.

20. Khadivzade T, Farokhi F. The study of the strength and weak points of clinical education from nursing and midwifery students in Mashhad Medical Science University. Iranian Medical Science Education J. 2003;10:67.

21. Thompson JB, Fullerton JT, Sawyer AJ. The international confederation of midwives: global standards for midwifery education (2010) with companion guidelines. Midwifery. 2011;27(4):409-16.

22. Karimian Z, Azin SA, Javid N, Araban M, Maasoumi R, Aghayan S, et al. Reaching consensus: a review on sexual health training modules for professional capacity building. Health promotion perspectives. 2018;8(1):1.

23. Nourdadgar A, Ghaffari R, Behshid M, Ghoreishizadeh F, Feizi AAHP. Comparing the professional role and tasks approved in curriculum with the ongoing role and tasks of midwives employed in Tabriz health care units. Research and Development in Medical Education. 2017;6(1):34-44.

24. Khaki I, Eskandari N, Bakouie S, Jafarbegloo E, Khalajinia Z, Raisi M, et al.

Determining and Prioritizing the Educational Needs of Midwives. Iranian Journal of Medical Education. 2020;20:298-309.

25. Dadgari A, Kasaeian A, ATASH SG, NASERI FL, Dadvar L, KALATEH JM. Efficacy of Midwifery Clinical Curriculum in Achieving Core Learning Goals: Tutors and Students'point of View. 2009.

26. Mohamadi-Bolbanabad S, Farnam F, Pakgohar M. The effect of virtual education on midwifery students' knowledge of child sexual training. Iranian journal of nursing and midwifery research. 2019;24(5):337.

27. Khadivzadeh T, Ardaghi M, Mazloum SR, Modaresi E. The relationship between midwifery students' attitudes towards couples' sexual relationships and their clinical skills in providing sexual health of counseling services. Journal of Midwifery and Reproductive Health. 2016;4(1):530-9.

28. Toulabi T, Alhani F. A Comparative Study of Educational Programs'objectives for Professional Needs From The Viewpoints of Nursing Graduates in Three Periods of Three Years. 2010.

29. Amiresmaili M, Nekoei Moghadam M, Moosazadeh M, Pahlavan E. Challenges of general practice education in Iran: A qualitative study. Strides in Development of Medical Education. 2013;9(2):118-31.

30. Haslegrave M, Olatunbosun O. Incorporating sexual and reproductive health care in the medical curriculum in developing countries. Reproductive Health Matters. 2003;11(21):49-58.

31. Salehi M, Arianpoor A, Ghafoorian Norooz i, editors. A Study of the Employ of Educational Aid Instruments and Technology in Learning and Teaching Quality. 11th National Accounting Conference of Iran; 2013: Tehran.

32. Kirkwood A, Price L. Technology-enhanced learning and teaching in higher education: what is 'enhanced'and how do we know? A critical literature review. Learning, media and technology. 2014;39(1):6-36.

33. Latifnejad Roudsari R, Nouri MJ, Hasanpour M, Hazaveyi SMM, Taghipour A. The necessity of sexual-health education for Iranian female adolescents: a qualitative study. Iranian Journal of Obstetrics, Gynecology and Infertility. 2012;15(12):7-17.

34. Kalantary S, Ghana S, Sanagoo A, Jouybari L. Puberty and sex education to girls: experiences of Gorganians' mothers. Journal of Health Promotion Management. 2013;2(3):74-90.

35. Nayebi N, Majd Teymouri R. Communication skills and related factors within patient by nursing student. Journal of Holistic Nursing and Midwifery. 2015;25(2):93-101.

36. Taghizadeh Z, Rezaeipour A, Mehran A, Ali Mz. Usage Of Communication Skills By Midwives And Its Relation To Clients'satisfaction. 2007.