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The Barriers of Men's Involvement in Sexual and Reproductive Health: A Mixed-Method Study

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Abstract

Objectives: Maintaining and promoting women's reproductive health is one of the main goals of healthcare system. Meanwhile, men play a substantial role in the success or failure of reproductive health programs though their role is unfortunately unknown in many countries including Iran, thereby facing many problems. The purpose of this study was to investigate the barriers to the role and understanding of men's involvement in sexual and reproductive health (SRH) of their wives.

Materials and Methods: The present study mixed-method study (review and qualitative design) was conducted in 2 steps. First, relevant data were retrieved using several online databases such as Scopus, Medline, Science Direct, Google Scholar, SID, Noormags, and Magiran. Then, additional information and supplementary codes were gathered utilizing an in-depth semi-structured individual interview with 13 married men and 2 focus groups among 14 married women after obtaining the informed consent.

Results: The study findings showed that men had a good perception of participating in reproductive health at the levels of family supervision and management, creating a suitable condition for their wives' pregnancy and overall health, and finally, taking actions regarding medical care and preventions and providing informative and helpful educations for their wives. However, a wide range of economic-occupational, psychological-mental, socio-cultural, educational-informational, and policy barriers to the healthcare system of the community have prevented their participation in SRH care and programs. **Conclusions:** Overall, policymakers and stakeholders are expected to consider these barriers to men's involvement in SRH in their policy and management plans, leading to the development of men's participation in SRH care of their women. **Keywords:** Barriers, Sexual and reproductive health, Iran, Mixed-method study

Introduction

Sexual and reproductive health (SRH) is considered as one of the most unfamiliar dimensions of our society despite being one of the main aspects of the healthcare system (1,2). Each year, from among 200 million pregnancies that occur in the world, more than one mother dies per minute due to the complications of pregnancy and childbirth. In general, 585 000 mothers die every year because of this problem (3).

SRH is not merely related to women, but one of its critical aspects links with the role of men (4,5). These responsibilities could vary from healthy sexual relationships up to childbearing, proper decision-making and supporting in economic, social and mental health areas, feeding the child to the upbringing of the children, and applying preventive methods for unwanted pregnancy to other duties and supports (6,7).

Although men are highly interested in contributing to the SRH of their wives, low-knowledge and inadequate information about women and the constraints of pregnancy prevent men from acting and supporting (8,9). According to a systematic review, educational and informational weaknesses are the main barriers to male participation in SRH (10). High-risk behaviors including drug abuse are one of the reasons for men's failure to participate in reproductive health programs (8,11). In addition, cultural differences are found to inhibit SRH communication and contribute to reproductive health (12). On the other hand, a previous study indicated that reproductive health services are not user-friendly or of need-based type (13).

Original Article

Overall, the results of previous studies significantly showed that male participation in reproductive health programs encounters a wide range of barriers that need to be addressed to improve male involvement in reproductive and maternal health promotion. Thus, providing better evidence on this issue in developing countries, especially among the Iranian population as a

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low- and middle-income country is very important (14). Accordingly, the present mixed-method study aimed to determine the barriers of a man's role and perception regarding women's SRH in Iranian population.

Research Questions

Based on the purpose of the research, 2 main questions were posed as follows.

1. What are the main perceptions and understandings of men about participation in SRH?

2. What are the main obstacles to the role of men in SHR involvement?

Materials and Methods

A mixed-method approach (including review and qualitative design) was applied based on the aim of the study. In the first step, the relevant data and codes were retrieved by searching the online databases. Then, additional information and supplementary codes were collected by a qualitative method using an in-depth semistructured interview and 2 focus groups, which are briefly described in the following sections.

1. Review Phase

Search Strategy and Selection Studies

The relevant programs, strategies, and implemented interventions (since 1994 up to the 1st of September 2018) were searched in several databases like Scopus, Medline, ScienceDirect, Google Scholar, SID, Noormags, and Magiran. In this regard, several MeSH terms and text words, along with their relevant Farsi equivalents were utilized to retrieve studies that examined men's participation in SRH in different countries. MeSH terms and text words are as follows:

"Male involvement"; "Sexual health"; "Reproductive health"; "Perception male engagement"; "Barriers to male participation"; "Men's participation facilitators"; and "Strategies, programs, and interventions for promoting male participation".

The relevant Farsi equivalents were also searched.

Further, other databases such as the World Health Organization, the United Nations Population Fund, and the United Nations Development Program were searched for additional information.

All original studies or reports were included in the present study unless those that were related to vulnerable groups including families with marital problems. Moreover, those studies which did not evaluate the related variables regarding an understanding of men's participation, the barriers to men's role, male participation facilitators, and the promotion of male participation in SRH, and finally, low-quality studies were excluded from our review research.

Quality Assessment

The quality of the included studies was assessed using

critical appraisal skills programs (15). This tool is based on information related to several domains such as participant characteristics, study design, sampling method, as well as sample size and sample size validation, study limitations, results, and statistical analysis.

2. Qualitative Phase

Settings, Sample, and Recruitment

The subjects of the present study included 13 married men as the main sample in addition to 14 married women in 2 focus groups and the study was implemented in Tehran, Iran after obtaining informed consent from the subjects using a purposive sampling technique. Individuals with comprehensive and different views on the intended phenomenon were selected by this technique (16). The inclusion criteria were being at least married, able to speak and understand Farsi, and desired to participate in the study and express their opinions, perceptions, and experiences while not having any psychiatric disorders. The characteristics of the participants are presented in Table 1.

Data Collection

The related data were collected through an in-depth semistructured interview and focused group of participants by researchers who already had experiences in interviewing and focus group management. The interview began with some questions like "What are the male's participation obstacles in SRH?", "What did you do to help maintain or improve your spouse's SRH?", or "How do you think you can be more involved in the SRH of your spouse? Please describe." Then, interview courses were continued by participants' answers and interviewers' questions. The duration of the interviews varied from 30 to 60 minutes as well. Additionally, the location and time of the interview and focus groups were based on the interviewee's preferences. Similarly, the group interview was conducted using 2 focus groups containing 14 women and lasted for 120 minutes. Two researchers guided and facilitated the discussion sections as well.

Data Analysis

The identified data and codes were analyzed using the directed and summative content analysis approach (17). In addition, MAXQDA 10 software was applied to record the data and manage the qualitative phase related to the interviews and focus groups (17). At this stage, analysis units were included in the content of interviews and review findings with which they accurately identified the meaning units that were then compressed and coded. Subsequently, the same codes were categorized under the headings of the same classes, followed by determining the main categories (17).

Results

As mentioned earlier, the first research question sought to

 Table 1. The Demographic Characteristics of Participants

Variable		
Sex Male Female	13 14	
Age	43.48 ± 6.89	
Marriage duration	14.25 ±9.11	
The median (IQR) of the number of children	2 (1-3)	
The educational level of women Illiterate or elementary school degree Middle school degree Diploma Associate and bachelor's degree Master's and Ph.D. degree	1 0 2 12 12	
The educational level of women's spouses Illiterate or elementary school degree Middle school degree Diploma Associate and bachelor's degree Master's and Ph.D. degree	2 0 10 9 6	
Participants' job Employee Housewife Freelancer	24 1 2	
Spouse' job Employee Housewife Freelancer	15 7 5	
Economic status High Good Medium Low	3 11 12 1	

SD: Standard deviation; IQR: Interquartile range.

Data are shown as number or mean \pm SD.

evaluate the main perceptions and understandings of men about participation in SRH.

Four main categories were obtained considering the review findings and qualitative analysis of the current study, as well as those of the studies at the global and national levels and given the participants' response and the mental understanding of men on participation in reproductive health in this study as follows.

- Supervising and managing the family;
- Creating a suitable circumstance for pregnancy;
- Gaining health and preventive care knowledge;
- Participating in educational affairs.

The proposed code for each theme was analyzed in 4 stages. It should be noted that the analysis unit in all 4 stages included the paragraphs which were recorded by the researcher in the process of reviewing the studies, as well as the previous programs and interviews with the participants. Nonetheless, to prevent the prolongation of this review research, we avoided explaining this analysis unit in details, but it is available in the form of supporting documents.

Table 2 represents the process of classifying the subcategories and main categories related to the concepts of understanding men's participation in the reproductive health of their wives.

In Table 2, the qualitative analysis of the obtained data from the review of previous studies and the interview with the participants concerning the 4 themes related to the perception of men about participation in the SRH of their spouses is seen:

Totally, 3 categories and 6 subcategories were extracted from the main theme of "Family Supervision and Management" each of which was applicable in the under principal categories. In the main topic of "Creating a Suitable Condition for Pregnancy", 3 categories and 6 subcategories were identified and each of them could also be evaluated and implemented following fundamental classes. Further, the main theme of "Health Awareness and Prevention" included 2 categories and 5 subcategories and each of them could be identified and implemented in the following context of the head categories. Eventually, the main theme of "Participation in Educational Affairs" was recognized with 1 category and 3 subcategories that were identifiable and applicable under the title of the main division.

In response to the second question respecting the main obstacles to the role of men in participating in reproductive health, the results of the qualitative analysis revealed that the main obstacles to the men's contribution to their wives' reproductive health in this study included 5 main topics as follows.

- Economic-occupational barriers;
- Psychological-mental barriers;
- Cultural-social barriers;
- Educational-informational barriers;
- Political and policy barriers to the health system of the community.

The codes related to the above-mentioned categories were analyzed in 5 stages. Moreover, analysis units in each of the 5 stages were the recorded paragraphs, written by the researcher, that were not mentioned for prevention the prolongation of the article, but were available as supporting documents. The process of classifying the subcategories and the main categories of the obstacles to the men's contribution to their partner's reproductive health is summarized in Table 3.

Based on the qualitative analysis (Table 3), the main theme of "economic-occupational barriers" encompassed 2 main categories and 4 subcategories which were identifiable and applicable under each of the fundamental group. As regards the main content of "psychological and mental barriers", one main category and 2 subcategories were detected that could be evaluated and applied following the primary division. In addition, 2 categories and subcategories were identified respecting the main content of "cultural-social barriers", which could be evaluated and implemented under each of the central

	Su	bcategories	Main Categories	Main Theme	Analysis Stages
1	1 "Involving the husband in sports, art, and entertainment activities;				
	2	*Providing other social benefits for the spouse (e.g., insurance and the like);	_ _ Social support	 Supervision and management of the family 	First stage
	3	*Strengthening the spirit of confidence and self-esteem of the spouse to attend in the community			
2	1	**Helping to provide the basic needs of the household (e.g., food, clothing, and the like);	– Economic support		
	2	*Providing assistance in household expenses in all educational, health, sporting, artistic, and recreational activities;			
3	1	*Providing facilities for the safety and health of the spouse and family (e.g., expressing interest, affection, and the like);	Psychological support		
1	1	*Preparing a spouse for accepting the role of a mother in the community through education and learning;		Creating a suitable	Second stage
	2	"Helping the spouse to resolve anxiety and depression problems before, during, and after pregnancy;	Psychological and social preparation		
	3	*Enhancing self-esteem, self-esteem, and the like in the spouse to accept the role of motherhood;			
2	1	*Presenting diet and weight-control schedules to keep mom and child healthy;		bed for pregnancy	
	2	**Providing health education related to pregnancy complications (e.g., gestational diabetes, depression, and the like) to maintain maternal and child health;	Promoting awareness		
3	1	**Estimating any possible needed cost from prenatal time until after the childbirth and providing it beforehand;	Economic security		
1	1	*Teaching medical treatment methods and preventing the side effects of infectious diseases;	- Infectious diseases		Third stage
	2	*Teaching methods for preventing infectious diseases such as condom use and the like;			
	1	*Training the methods and consequences of insecure abortion	Complications of pregnancy and abortion	 Earning health awareness and 	
2	2	[*] Training the diagnosis, prevention, and treatment of pregnancy complications such as genetic defects, iron deficiency anemia, gestational diabetes, depression, and the like;		prevention	
	3	*Providing care education for maternal and fetal health against unwanted abortions;			
1	1	'Teaching previous children for the birth of a newborn and helping them resolve mental and emotional issues posed by the birth of a baby;	 Child education 	Participation in educational and educational affairs	Fourth stage
	2	*Helping a spouse in the field of education and child homework;			
	3	*Helping the spouse in the care and education of children.			

Table 2. Classification of the Main Categories and Subcategories of Men's Perception of Participation in Reproductive and Sexual Health

* Identified codes in interviews with participants; ** Commonly identified codes between interviews and reviewing texts and study records.

categories. Moreover, the main themes of "educational information barriers" were 2 major categories and 5 subcategories that could be identified and implemented following the major groups.

Finally, the analysis of qualitative data showed 2 main categories and 6 subcategories in the main content of "political and government policies and barriers to the health system of the country" which could be evaluated and implemented under each of the leading groups.

Discussion

The current study was performed to investigate the obstacles to men's participation in SRH. The findings of the present mixed-method study indicated that the common barriers to men's participation in SRH were a wide range of economic, psychological-mental, socio-cultural, educational-informational, political, and government policy barriers which were related to the health system of

the community. The result of previous studies by Firouzan et al (18), Niazi and Akhavan-Akbari (7), Alimoradi and Simbar (4), Mortazavi and Mirzaii (9), Cappiello et al (10), and Browner and Ruth (19) are in line with the findings of the current study.

In our study, economic and occupational status was one of the common obstacles to men's participation in SRH, which is conformity with the findings of some other studies (18,20,21). It seems that economic interventions such as decreasing the direct and indirect financial costs on reproductive and financial supports from the government may be effective on men's involvement in SRH. The results of the study further revealed that men had a good perception of participation in reproductive health at the levels of family supervision and management thus creating a suitable condition for their wives' pregnancy and the overall health is of great importance.

Psychological-mental issues were considered as another

Table 3. The Process of Categorizing the Subcategories and the Main Categories Related to Barriers to the Role of Men in Their Partner's Reproductive
Health

	Subc	categories	Main Categories	Main Theme	Analysis Stages
1	1	*Less use of social networking sites due to heavy workload; *The absence of timely and adequate presence of men at home due	 Non-participation due to heavy workload 	Economic-	First stage
2	1	to heavy workload; "Inability to provide training, subsistence, livelihood, recreational, and welfare costs;	Financial inability	— occupational barriers	
	2	'Impotence caused by financial inability and poverty;			
1	1	*Problems due to the weakness of emotional bond and unsafe attachment between the husband and wife;	Psychological poor	Psychological	Second stage
	2	*Anxiety and depression due to the acceptance of paternal role;	- performance	barriers	
1	1	"Taboo is the participation of men in women's affairs due to cultural issues;	Taboo is a discussion of		Third stage
	2	*The taboo discussion of sexually transmitted infections;	- fertility health in society		
2	1	*Social misconceptions about the femininity of fertility health issues;		Socio-cultural barriers	
	2	**Male pattern behaviors in home and community;	Patriarchal culture		
	3	*The lack of understanding by male and his supporting role;	-		
1	1	"The lack of awareness about the sexual function of sexually transmitted infections;	Training and a farm	Educational-	Fourth stage
	2	*The lack of awareness of problems during pregnancy and delivery stages;	 Training needs of men 		
	1	*Initial marriage counseling;		information barriers	
2	2	"The poor role of universities, schools, and health centers in educating fertility health in society;	Inadequacy of educational systems		
	3	**The failure of media in providing fertility health information;	-		
	1	**Women's health look at fertility health;	_ Removal of men in the definition of reproductive health	Policy barriers of the health system	Fifth stage
1	2	"The lack of specific health plans and services for men to participate;			
2	1	*The lack of male personnel;	Inappropriate structure of health centers in providing services to men		
	2	"The non-availability of contraceptives for men;			
	3	**The lack of suitable space for providing services to couples;			
	4	**Information and poor performance of health personnel.			

Symbol * denotes the identified codes in interviews with participants and symbol ** indicates the identified common codes between interviewing participants and reviewing the literature and study records.

obstacle to men's involvement in SRH. Kaye et al found that the existence of the relationship between personality factors and men's involvement during pregnancy and the care of women (22). Additionally, our results are consistent with those of previous research that highlighted the mental and psychological problem, which is usually neglected, as one of the important barriers to men's participation in SRH (23). Therefore, there is a need for evaluating and finding the underlying psychological-mental causes of men's participation in SRH.

Another issue related to men's involvement in SRH was a socio-cultural barrier that was detected by the participant's opinions and based on review findings. This finding highlighted that there are significant socio-cultural barriers which prevent the men's involvement in SRH care, especially in low- and middle-income country and such complications are one of the fundamental obstacles in this area (18,24-25). Thus, paying attention to socio-cultural sensitivities and planning to eliminate

these sensitivities to SRH care can significantly improve the man's participation in the reproductive health of his wife (26). In this regard, Mengesha et al discussed that cultural contradictions had a profound effect on men's involvement in SRH and it was impossible to observe men's participation in SRH protection as long as the men's role in the areas of SRH care is unaccepted as a cultural and social norm (12). Therefore, these issues are subject to further investigation so that to improve SRH care.

Likewise, other barriers included inadequate information and health literacy. Our results corroborate with those of Kabagenyi et al which indicated that the men's lack of participation in SRH care was related to their lack of information or knowledge (25). In addition, based on the reports of another study, men who were listening to radio educational programs on SRH care further engaged in SRH care as compared to the other men (27). Nonetheless, there were men who could control the situation problems while not having awareness and information about women care (28). In another study, Fathnezhad Kazemi et al (29) indicated that increasing women's expectations and the nucleation of families or the men's participation in SRH are considered necessary. However, they further demonstrated that barriers such as the men's lack of knowledge, as well as their problems with the health system and policymakers are the impediments for men to participate in prenatal care, which is consistent with the finding of this research. Therefore, increasing the required education for men and planning for their awareness and knowledge improvement at the national and regional levels is regarded as a necessity. Accordingly, the intended authorities should involve men in SRH care process by presenting the required policy-making and support. Similarly, assisting in the responsible and comprehensive implementation of such programs should be the foundation of state and community policies in the field of reproductive and sexual health education (30). On the other hand, improving men's contribution to SRH care is a global aim that can be achieved by training and increasing the awareness and knowledge of men.

Government policy barriers related to the health system were another obstacle that was emphasized by the participants. Our study similar to some previous studies recognized several barriers such as the lack of specific health plans and programs for men's involvement in SRH care, along with inadequate information and performance among the health personnel (18,31). Therefore, the results of the current study can help SRH stakeholders and policymakers to identify barriers to men's participation in SRH care and thus make appropriate decisions in their policy plans on SRH.

This mixed-method study had several limitations. In the first phase, all types of studies and reports were included in the study, and in the second phase, a qualitative approach was also used, therefore, the results should be generalized cautiously. However, the researchers attempted to assess the quality of the included studies and enrolled participants with a maximum variation until increasing the precision and accuracy of the findings. Accordingly, the use of national quantitative studies for the assessment of man's participation in SRH care in this reign is needed in future research.

Conclusions

Based on the results of this study, men's perception of and participation in SRH encountered critical issues at the levels of family supervision and management, the creation of a suitable condition for pregnancy, medical and preventive healthcare, and informative educational proceedings. Such complications included economicoccupational, psychological-mental, socio-cultural, and educational-informational barriers, along with political and government policy impediment to the health system of the community. Thus, policymakers and stakeholders should take into account these impediments in their policy and management plans in order to help men get involved in SRH care.

Conflict of Interests

The authors declare that there is no conflict of interest.

Ethical Issues

To observe ethical principles, first, all participants were given informed consent and were assured of the confidentiality of their personal information. The participants were then provided with explanations regarding study purpose and method. Considering that this article is part of the doctoral thesis submitted in Tehran University of Medical Sciences and the Health Services, the paper was published with the permission of the Research Deputy and the Ethics Committee of this university so that to protect the intellectual property right of the work..

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References

- Alhusen JL, Wilson D. Pregnant mothers' perceptions of how intimate partner violence affects their unborn children. J Obstet Gynecol Neonatal Nurs. 2015;44(2):210-217. doi:10.1111/1552-6909.12542
- Simbar M, Ramezani Tehrani F, Hashemi Z. The needs of reproductive health of the university students. The Journal of Qazvin University of Medical Sciences. 2003;7(4):5-13. [Persian].
- 3. Wilmoth JR, Mizoguchi N, Oestergaard MZ, et al. A new method for deriving global estimates of maternal mortality. Stat Politics Policy. 2012;3(2).
- 4. Alimoradi Z, Simbar M. Male Involvement in Reproductive and Sexual Health: A Systematic Review of Iranian Litreture. Hakim Health Systems Research Journal. 2014;17(3):209-222. [Persian].
- Greene M, Mehta M, Pulerwitz J, Wulf D, Bankole A, Singh S. Involving men in reproductive health: Contributions to development. UN Millennium Project; 2017.
- Davis J, Vyankandondera J, Luchters S, Simon D, Holmes W. Male involvement in reproductive, maternal and child health: a qualitative study of policymaker and practitioner perspectives in the Pacific. Reprod Health. 2016;13(1):81. doi:10.1186/s12978-016-0184-2
- Niazi M, Akhavan-Akbari P. The role of men in promoting reproductive health services. 3th Student Congress of Ardabil University of Medical Sciences; March 1, 2012; Ardabil University of Medical Sciences.

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- Shahjahan M, Mumu SJ, Afroz A, Chowdhury HA, Kabir R, Ahmed K. Determinants of male participation in reproductive healthcare services: a cross-sectional study. Reprod Health. 2013;10:27. doi:10.1186/1742-4755-10-27
- Mortazavi F, Mirzaii K. Reason of, barriers to, and outcomes of husbands' involvement in prenatal and intrapartum care program based on midwives' experiences: A qualitative study. Journal of Arak University of Medical Sciences. 2012;15(1):104-115. [Persian].
- Cappiello J, Coplon L, Carpenter H. Systematic review of sexual and reproductive health care content in nursing curricula. J Obstet Gynecol Neonatal Nurs. 2017;46(5):e157-e167. doi:10.1016/j.jogn.2017.04.132
- 11. Gabrielson AT, Liu J, Sikka SC. Posttraumatic Stress Disorder and Its Effects on Men's Sexual and Reproductive Health. In: Sikka SC, Hellstrom WJ, eds. Bioenvironmental issues affecting men's reproductive and sexual health. Academic Press; 2018:541-556.
- 12. Mengesha ZB, Perz J, Dune T, Ussher J. Talking about sexual and reproductive health through interpreters: The experiences of health care professionals consulting refugee and migrant women. Sex Reprod Healthc. 2018;16:199-205. doi:10.1016/j.srhc.2018.03.007
- Panjalipour S, Bostani Khalesi Z, Mirhaghjoo SN. Iranian female adolescents' reproductive health needs: a systematic review. International Journal of Women's Health and Reproduction Sciences. 2018;6(3):226-232. doi:10.15296/ ijwhr.2018.39
- Alishah A, Ganji J, Mohammadpour R, Kiani Z, Shahhosseini Z. Women's Reproductive Empowerment: A Comparative Study of Urban and Rural Females in Iran. International Journal of Women's Health and Reproduction Sciences. 2019;7(3):294-300. doi:10.15296/ijwhr.2019.49
- 15. Bahri N, Latifnejad Roudsari R. A critical appraisal of research evidence on Iranian women's attitude towards menopause. The Iranian Journal of Obstetrics, Gynecology and Infertility. 2015;18(178):1-11. [Persian].
- 16. Gentles SJ, Charles C, Ploeg J, McKibbon KA. Sampling in qualitative research: Insights from an overview of the methods literature. Qual Rep. 2015;20(11):1772-1789.
- 17. Hsieh HF, Shannon SE. Three approaches to qualitative content analysis. Qual Health Res. 2005;15(9):1277-1288. doi:10.1177/1049732305276687
- Firouzan V, Noroozi M, Farajzadegan Z, Mirghafourvand M. Barriers to men's participation in perinatal care: a qualitative study in Iran. BMC Pregnancy Childbirth. 2019;19(1):45. doi:10.1186/s12884-019-2201-2
- Browner CH, Root R. Cultural Contexts of Reproductive Health. In: Quah SR, ed. International Encyclopedia of Public Health. 2nd ed. Oxford: Academic Press; 2017:187-190.
- 20. Inhorn MC, Fakih MH. Arab Americans, African Americans, and infertility: barriers to reproduction and medical care. Fertil Steril. 2006;85(4):844-852.

doi:10.1016/j.fertnstert.2005.10.029

- 21. Audet CM, Chire YM, Vaz LM, et al. Barriers to male involvement in antenatal care in rural Mozambique. Qual Health Res. 2016;26(12):1721-1731. doi:10.1177/1049732315580302
- 22. Kaye DK, Kakaire O, Nakimuli A, Osinde MO, Mbalinda SN, Kakande N. Male involvement during pregnancy and childbirth: men's perceptions, practices and experiences during the care for women who developed childbirth complications in Mulago Hospital, Uganda. BMC Pregnancy Childbirth. 2014;14:54. doi:10.1186/1471-2393-14-54
- Simbar M, Nahidi F, Ramezankhani A. Fathers' educational needs about perinatal care: a qualitative approach. Hakim Health Systems Research Journal. 2009;12(2):19-31. [Persian].
- 24. Filby A, McConville F, Portela A. What prevents quality midwifery care? A systematic mapping of barriers in low and middle income countries from the provider perspective. PLoS One. 2016;11(5):e0153391. doi:10.1371/ journal.pone.0153391
- 25. Kabagenyi A, Jennings L, Reid A, Nalwadda G, Ntozi J, Atuyambe L. Barriers to male involvement in contraceptive uptake and reproductive health services: a qualitative study of men and women's perceptions in two rural districts in Uganda. Reprod Health. 2014;11(1):21. doi:10.1186/1742-4755-11-21
- Mosavi SA, Babazadeh R, Najmabadi KM, Shariati M. Assessing Iranian Adolescent Girls' Needs for Sexual and Reproductive Health Information. J Adolesc Health. 2014;55(1):107-113. doi:10.1016/j.jadohealth.2013.11.029
- 27. Zamawe C, Banda M, Dube A. The effect of mass media campaign on Men's participation in maternal health: a cross-sectional study in Malawi. Reprod Health. 2015;12:31. doi:10.1186/s12978-015-0020-0
- Brunson J. Confronting maternal mortality, controlling birth in Nepal: the gendered politics of receiving biomedical care at birth. Soc Sci Med. 2010;71(10):1719-1727. doi:10.1016/j.socscimed.2010.06.013
- 29. Fathnezhad Kazemi A, Sharifi N, Simbar M. A review on different aspects of men's participation in antenatal care. Jorjani Biomedicine Journal. 2017;5(1):1-13. [Persian].
- Karimi L, Mirzaii Najmabadi KH, Ebadi A, Makvandi S, Mahdavian M. Exploring the educational structure needed for reproductive health in men related to sexually transmitted diseases and HIV/ AIDS: A qualitative study. Razi Journal of Medical Sciences. 2016;23(147):82-90. [Persian].
- 31. Davis J, Luchters S, Holmes W. Men and maternal and newborn health: benefits, harms, challenges and potential strategies for engaging men. Melbourne, Australia: Compass: Women's and Children's Health Knowledge Hub; 2012.

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