

Facilitators of Sexual Health Education for Male Adolescents in Iran: A Qualitative Study

Abstract

Background: Adolescence is a period of rapid physical, social, emotional, cognitive, and sexual development. The widening gap between biological maturity and social transition to adulthood highlights the importance of adolescents' need for education, especially in sexual health. The main objective of this study was to explore the facilitators of Sexual Health Education (SHE) for male adolescents in Iran. **Materials and Methods:** In this qualitative content analysis, a total number of 45 participants were investigated from June 2018 to July 2019 through individual, semi-structured, in-depth interviews in the city of Mashhad, Iran, until data saturated. The participants were selected using a purposive sampling method. The data were analyzed using a conventional content analysis method based on the approach developed by Graneheim and Lundman (2004) using MAXQDA software. **Results:** In data analysis, 2 main categories and 9 subcategories emerged. The main categories included extrapersonal facilitators and intrapersonal facilitators. The category of extrapersonal facilitators included the 7 subcategories of appropriate policy-making, use of religious capacities, consideration of native culture, supportive family environment, school empowerment, inter-sectoral integration and collaboration, and reinforcement of parent-teacher interaction. The category of intrapersonal facilitators comprised of the 2 subcategories of supporting adolescent socialization and using distraction techniques in adolescents. **Conclusions:** The study revealed that having an action plan with a scientific, ethical, legal, religious, and cultural background, establishing a suitable home, school, and community environment, strengthening inter-sectoral integration, collaboration, and interpersonal coordination, and utilizing the capabilities and potentials of adolescents can provide an appropriate SHE for adolescent boys.

Keywords: Adolescent, education, male, qualitative research, sexual health

Introduction

Adolescence is a period of life characterized as the transitional stage between childhood and adulthood, and is accompanied by biological growth and development, changes in many roles especially in social roles, and the shifting of attention to sexual and reproductive health. Over the past century, these factors have undergone some variations. The decreasing age of puberty, lack of acceptance of social roles due to completion of education, and delayed marriage have all led to a longer transition period.^[1,2] Involvement in high-risk behaviors during adolescence, especially in boys, has also redoubled,^[3] resulting in higher morbidity and mortality rates.^[4] Sexual and reproductive health issues such as unintended pregnancies as well as infection with Acquired Immune Deficiency

Syndrome (AIDS) virus and hepatitis B are thus known worldwide to be the leading causes of deaths among adolescents. Many of these deaths can be prevented; therefore, widespread global efforts are required to promote the adolescent health status.^[2,5] Moreover, adolescence is the stage of opportunities; adolescents can get help in making informed and positive choices and adopt safe behaviors through receiving correct information.^[6,7] However, in many developing countries, including Iran, sexual and reproductive health has become a challenging issue.^[8-12] In Iran, a qualitative study on the sexual and reproductive health of adolescent girls found that the concept of reproductive health in adolescents is not well understood and is highly controversial. Policymakers and other stakeholders should strive to provide reproductive health services that are consistent with the

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cultural and religious values of adolescent girls in Iran to overcome the present challenges.^[12] Currently, there is a set of obstacles to qualified sexual and reproductive health for teenagers. At the political level, there are restrictive laws and policies.

Various social, cultural, and religious factors create a deterrent to discussing adolescent sexual health.^[13] The poor reproductive health of adolescents can be caused by conflicts about teaching these issues to adolescents.^[13] It is estimated that the incidence of new human immunodeficiency virus (HIV) infections and AIDS-related mortality rates in male individuals aged 15 years and older in Iran is, respectively, 3 times and 4 times that in their female peers.^[14] This issue illustrates adolescent boys' need for more information as well as provision of health education in a formal manner. Accordingly, Sexual Health Education (SHE) should be recognized as a political, sociocultural, and educational process.^[13] Nevertheless, in the cultural and religious context of Iran, this issue still faces challenges and has remained a taboo. Since our information on SHE provided to Iranian boys was very limited and what is available in international documents does not fit our social and cultural contexts, and our teens get various right and wrong information from cyberspace and are unable to recognize their accuracy, it seemed necessary to obtain key information and experiences in this area. Recognition of SHE facilitators in the cultural context of Iran should be based on a clear understanding of key experiences of individuals in this field. A deep understanding and illumination of this phenomenon can be achieved through a qualitative study. Therefore, this study was undertaken to determine the barriers and challenges in this area and to explore facilitators to SHE for male adolescents in Iran.

Materials and Methods

This study was carried out using a qualitative approach and an inductive conventional content analysis method between June 2018 and July 2019. The participants included a total number of 20 adolescent boys aged 12-16 years and 25 individuals aged 30-58 years including fathers, mothers, teachers, school administrators, religious clerics, sociologists, psychologists, counsellors, policymakers, experts, sexual and reproductive health professionals, and Non-Governmental Organization (NGO) representatives. They were selected using a purposive sampling method with maximum variation of level of education, occupation, and social-economic-cultural status. The required data were collected through semistructured, in-depth interviews performed individually with individuals in the cities of Mashhad and Tehran, Iran.

The participants consisted of adolescent boys aged 12-16 years who studied in primary high schools, and were Iranian, Persian language speakers, and evolutionarily and intellectually healthy with Iranian parents, parents of

adolescents aged 12-16 years who were Persian speakers and married, and whose children were evolutionarily and intellectually healthy, and other Iranian individuals who were Persian speakers, had work experience with adolescents aged 12-16 years, and were willing to participate in the study. It should be noted that if the participants did not wish to continue their cooperation with the research team, they could withdraw from the study at any stage of the study.

The interviews with adolescent boys were conducted at public gathering places such as parks, gyms, mosques, public libraries, and summer classes by a male psychologist whose field of work is child and adolescent sex education (fourth author). Interviews with the adults were conducted by the first author at educational centers, high schools, health-care centers, and the participants' workplaces.

After explaining the research objectives to the participants, a written informed consent was obtained from each participant. Since the adolescent boys were not at a legal age, a written informed consent was obtained from their parents. Prior to the face-to-face interviews, the researchers introduced themselves and the study objectives were explained to each participant. Interviews began with several open-ended questions, followed by exploratory questions to reach more clarity. Adolescent boys, parents, and other participants were interviewed with different questions. All the interviews were audio recorded on two digital recorders. Each interview lasted 45-90 minutes. In cases that required additional clarification, participants were contacted using phones and mobile applications such as telegrams. An example of the interview questions of adolescents was as follows: "Can you tell me about your experience regarding your puberty?; How did you find out that you had reached puberty?; What symptoms did you have?; How did you feel about it?; Who did you talk to about it?; To whom do you go to for answers to your questions?" Following the completion of each interview, it was transcribed verbatim and was read out repeatedly. Data analysis was performed using repeated reading and constant comparisons based on the approach developed by Graneheim and Lundman (2004) and the data was managed by MAXQDA software, 2010, VERBI GmbH, Berlin, Germany.

Accordingly, words, sentences, and paragraphs that could have meaning in relation to the research purpose were considered and coded with a word indicating their semantic units. At this stage, there were attempts to identify maximum possible codes proportional to the data. Subsequently, initial subcategories were formed and the primary categories were compared. The initial categories that were conceptually similar were merged into larger ones. This analysis was repeatedly moved back and forth in collaborative meetings and authors' discussions until data saturation was reached. Then, themes were

obtained from the initial categories with similar meanings and content. After reading out the codes repeatedly and eliminating repetitive ones, the similar codes were merged and categorized and then the main subcategories and categories were obtained. As a result, 40 codes, 9 subcategories, and 2 main categories emerged from data analysis.

To increase the accuracy and strength of the scientific data in this study, Guba and Lincoln's (1985) method was used. The researcher also attempted to select the eligible participants carefully, to have close, continuous, and long-term contact with them, to engage participants in the data interpretation process (reviewed through member checking), and to use the opinions of faculty members and participants in various stages of the study, especially in the extraction of codes, final reviews (peer-checking), and estimation of reliability. Moreover, the researcher tried to increase the credibility of the study to the extent possible by keeping the documentations of all stages of the investigation and making it possible to examine other processes through clarifying methodological decisions. In addition, the researcher attempted to provide dependability analysis with a detailed and complete description of the research process. Finally, the researcher tried to provide a context for the judgements and evaluations of others concerning transferability by presenting a comprehensive and complete description of the study setting, conditions, participants, and data analysis method.

Ethical considerations

This study was approved by the Ethics Committee of Mashhad University of Medical Sciences in Iran (IR.MUMS.REC.1397.112) and was performed according to the Declaration of Helsinki (DoH). All 45 participants received both verbal and written information about the study. They submitted their informed consent forms after being ensured of the voluntary nature of their participation, their right to withdraw from the study at any time and stage, and the confidentiality of all their information. It should be noted that each participant used an assumed name for privacy purposes.

Results

A total number of 45 participants were interviewed in this qualitative study. The characteristics of the participants are presented in Table 1. The codes, subcategories, and main categories are shown in Table 2.

Extrapersonal facilitators

This category contained the 7 subcategories of appropriate policy-making, use of religious capacities, consideration of native culture, supportive family environment, school empowerment, inter-sectoral integration and collaboration, and reinforcement of parent-teacher interaction.

Appropriate policymaking

As stated by a number of participants, one of the most important facilitators in SHE for male adolescents was adopting appropriate policies in the domain of SHE, considering the necessity of a legally and ethically backed action plan based on expert opinions, as well as approved and adjusted curricula for adolescents. In this respect, one of the participants added: *"If you ask me, the Ministry of Health and Medical Education is the main trustee that has to deal with this issue, but this has not been fulfilled yet. They cannot justify it through transferring it via education at schools. Besides, the Education Department is not justified at all because they think of a condom and bringing it to schools when we talk about sexual health education. To cope with this disapproval, there is a need to develop a program and inform them about it...."* (Health policy-maker, Female, 54 years old).

Use of religious capacities

A number of participants reiterated that use of religious teachings and strengthened religious beliefs, awareness of religious instructions, and benefiting from religious support for such programs, as well as training religious educators in the field of SHE will lead to the formation of religious capacities in SHE for adolescents. For example, one of the participants said: *"Another factor that can protect children is the correct presentation of these religious teachings. Unfortunately, children are always trained in a way that causes them to oppose the teachings. If adolescents are taught correctly and good-humoredly, most deviations can be prevented"* (Health policymaker, Female, 54 years old).

Consideration of native culture

Several participants emphasized the importance of local culture and the designing of culture-oriented programs. Moreover, they found it necessary to adapt the SHE-related experiences of other countries to the Iranian culture for adolescents. Accordingly, one of the participants stated: *"We can certainly make use of the experiences of other countries, but it needs to be in harmony with our culture, and we have to see what our society can accept and allow us to teach. We are different. They have no limitations in talking about these issues, but we do"* (Clinical psychologist, female, 36 years old).

Supportive family environments

Some participants mentioned strengthened family bonds as well as creation of an intimate and supportive environment in the family as prerequisites for SHE for adolescent boys. In this regard, one participant said: *"First, it was very difficult for me to talk about sexuality with my son because my relationship has to be maternal and we also need to observe privacy. Once we formed mutual bonds, both of us felt much more comfortable. However; my son is very shy, so he raises his questions in the absence of his father"*

Table 1: Demographic characteristics of the study participants

Participants (adults)	Age (year)	Gender/role *F/M	Education level	Profession	Participants (adolescents)	Age (year)	Education level
1	37	F/parent	PhD**	Psychologist	1	14	9 th grade
2	48	M/parent	MSc***	Health care provider	2	15	10 th grade
3	58	M	PhD	Religious Sciences	3	15	10 th grade
4	54	F	PhD	Reproductive health	4	12	7 th grade
5	50	M	MSc	School Principal	5	16	10 th grade
6	52	M/parent	PhD	Sociologist/teacher	6	13	8 th grade
7	40	M/parent	PhD	Sociologist/counselor	7	13	7 th grade
8	49	M/parent	MSc	Anthropologist/Teacher	8	15	9 th grade
9	55	F	MSc	Nurse	9	15	10 th grade
10	46	F/parent	MSc	Midwife	10	16	10 th grade
11	42	F/parent	BSc****	Family health care provider	11	12	7 th grade
12	36	F/parent	MSc	Clinical Psychologist	12	14	9 th grade
13	54	M	Religious Sciences	Clergyman	13	15	10 th grade
14	47	M/parent	MSc	School principal	14	14	8 th grade
15	48	F/parent	BSc	Engineer	15	14	8 th grade
16	55	M	MSc	Sociologist/teacher	16	13	7 th grade
17	49	M/parent	Diploma	Self-employed	17	14	9 th grade
18	39	F/parent	BSc	Housewife	18	14	9 th grade
19	38	F/parent	MSc	Housewife	19	14	8 th grade
20	48	F	PhD	Reproductive health policy-maker	20	16	10 th grade
21	50	M/parent	BSc	Employee			
22	35	F/parent	Diploma	Teacher			
23	42	M/parent	BSc	Engineer			
24	39	M/parent	Diploma	Self-employed			
25	40	M/parent	Diploma	Self-employed			

*F/M: Female/Male; **PhD: Doctor of Philosophy; ***MSc: Master of Science; ****BSc: Bachelor of Science

in private. I think it is really difficult, but it can lead to good results and we need to facilitate these issues" (Nurse/female, 55 years old).

School empowerment

A group of participants mentioned school empowerment and teachers' awareness of SHE for adolescents. They also focused on the role of school counselors and books, as well as the use of nature schools to teach adolescents the skills required for interacting with their peers. In this respect, one of the participants believed that *"In the current situation and due to the absence of sex therapists at schools or even sexuality education lessons, teachers and school counselors need to broaden their knowledge in this field and get involved in these issues. To this end, they must form friendly relationships with adolescents and make use of suitable textbooks. If they do not get involved in these issues, children may develop deviations"* (Teacher/Father, 49 years old).

Inter-sectoral integration and collaboration

Interactions between and division of educational duties and SHE between home and school, media-guided education, interactions between the Ministry of Health and Medical Education and the Ministry of Education, and inter-sectoral integration and collaboration in the field of SHE for

adolescents were also debated by a number of participants. For example, one of the participants said: *"We really need to develop a good program based on our culture. This program, of course, should not be just for boys, but their parents need to be taught too. We should tell them about the sections they need to teach and those that must be taught at school. In addition, children should also have access to a counselor at school to support them if they have a question. We can even get help from male doctors or health care providers"* (Counselor/male, 47 years old).

Reinforcement parent-teacher interaction

The role of parent-teacher associations, family and teacher meetings and consultation, sexual conversations in the family and at school, and in general, interactions with the studied adults were some of the facilitators to SHE for male adolescents. Accordingly, one of the participants stated: *"Sexual health education is a joint teamwork. Maybe, parents cannot tell everything to their children, and that is not true. But, schools can be very helpful in this regard. I think schools can help a lot. An educator who is knowledgeable and has received proper training in this field and has also become familiar with children's morale at this age should be present at schools to work alongside parents. The use of related books and magazines is beneficial and good. This is a common issue between*

Table 2: Facilitators of sexual health education for adolescent boys

Codes	Subcategories	Categories	Theme
Need for legal and ethical support	Appropriate policy-making	Extrapersonal facilitators	Perceived facilitators of adolescent boys' sexual health education
Need for an operational program			
Need for policy-making on SHE*			
Necessity of leveling curriculums based on the age and development	Use of religious capacities		
Necessity of using experts			
Using religious education			
Strengthening religious beliefs			
Training religious educators of SHE			
Increasing awareness regarding religious programs	Consideration of native culture		
Providing religious support			
Designing a culture-oriented program			
Adapting adolescent SHE experiences of other countries to the Iranian culture	Supportive family environment		
Overcoming cultural taboos			
Creating a respectful community environment for adolescents			
Strengthening family relationships			
Creating intimacy at home			
Developing spouse relationships	School empowerment		
Establishing appropriate communication between families and adolescents			
Broadening parental awareness as a guarantee for adolescent health			
Counselor's role in creating awareness among adolescents			
Empowering teachers			
Using appropriate educational texts	Inter-sectoral integration and collaboration		
Using nature schools to bring adolescents together			
Creating emotional relationships between teachers and adolescents			
Improving teachers' attitude			
Home-school interaction			
Ministry of Health and Education Interaction	Reinforcement parent-teacher interaction		
Guided training by the media			
Family meetings and consultation			
Role of parent-teacher associations	Supporting Adolescent Socialization	Intrapersonal facilitators	
Sexual conversations in the family			
Adolescents' membership in cultural and sports groups	Using distraction techniques in adolescents		
Interpersonal communication			
Highlighting adolescent-specific abilities and understanding adolescent rights			
Control of erotic thoughts through exercise			
Control of erotic thoughts through art			
Abstinence and self-control			
Physical readiness			
Optimal use of leisure time			

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parents and schools and neither of them can lead the solution alone, so everyone can assume a responsibility in this domain. But, being in harmony with each other is the most important feature" (Midwife/Mother, 48 years old).

Intrapersonal facilitators

This category was comprised of 2 subcategories of supporting adolescent socialization and constructive channeling of energy in adolescents.

Supporting adolescent socialization

Supporting adolescents in developing their abilities through membership in sport and cultural groups, establishing interpersonal communication, highlighting adolescents' specific abilities, and becoming familiar with their rights were among intrapersonal facilitators of SHE for adolescent boys. In this respect, one of the participants added: *"One thing I personally did to control my sexuality was that I registered for soccer and volleyball classes. When I exercise and I am involved in training and competing, I never ever think about sexuality. I used to masturbate, but I quit it after joining the gym"* (Adolescent, 10th Grade in Experimental Sciences, 16 years old).

Using distraction techniques in adolescents

The constructive channeling of energy in adolescents through sports, fitness activities, art, abstinence, and self-control was mentioned among the facilitators of SHE for adolescent boys. For example, one of the participants said: *"I read and write poetry and I also have a nice voice. I am really interested in the violin and I am taking music classes. This way, I am entertained and it helps me not think too much about sex"* (Adolescent, 8th Grade, 14 years old).

Discussion

Based on the interviews with the studied adults, SHE facilitators were divided into two main categories of extrapersonal and intrapersonal facilitators of SHE for male adolescents. With regard to extrapersonal facilitators and in the structural dimension, appropriate policymaking was identified as one of the most important facilitators to SHE for male adolescents. Today, in line with global developments, there have been tremendous sociocultural developments in Iran, which necessitate attention to adolescent sexual health and policymakers should pay attention to this. Other researchers have pointed out the important role of policymaking in adolescent reproductive and sexual health programs^[12] and argued that extrapersonal structural factors appropriate to social, cultural, political, and legal conditions could play a key role in establishing an active environment for this type of education.^[15] These were in line with the results of this study on policymaking and development of a legally and ethically backed action plan for SHE for adolescents. In fact, the structure of the health and education system shows that there is no specific planning for the education of adolescent boys on sexual health, and that boys are dropped out of the health care system after 8 years of age and have no access to special health cares by national health system during critical puberty. Moreover, they are not getting suitable education in schools in this regard. In fact, health policymakers need to work on evidence-based approaches to provide information to adults who play a key role in this regard, and especially the education system. They also seek to

receive technical and financial assistance from international organizations involved in adolescent health, for example UNICEF.

The next facilitator was the use of religious capacities for SHE. Accordingly, whether SHE laws for adolescents are applicable in Islamic communities or not is one of the issues that Muslim countries, including Iran, are faced with. Since Islam is recognized as an all-inclusive religion that offers programs for all aspects of human life, the issue of SHE has been also highlighted in Islamic teachings. Accordingly, sociocultural taboos should be corrected.^[16] Consistent with these findings, one researcher also stated that religion and religious leaders in Iran had key roles in sociocultural issues that rendered their support crucial.^[12] These findings were in agreement with the results of the present study in which the use of religious teachings as well as training religious educators in the field of SHE was of utmost importance. Some claim that Islam may suppress sexual instincts, although it is part of human nature. Islam is not incompatible with human nature and God has provided the psychological instincts and motivations to help survive human existence. Sexuality is one of the most important needs that must be met under specific control and must be guided in the right direction. Sexual education is highly cultural and the intertwining of culture and religion cannot be ignored; moreover, the findings of this study revealed that consideration of native culture was another facilitator in the domain of providing SHE to adolescent boys. Culture is what people live with, and it is passed on to the next generation through education. Each region can have a different culture from any other country. Designing a culture-oriented program and adapting the experiences of other countries to the Iranian culture in terms of SHE for adolescents should be thus considered as an important measure. In addition, numerous studies have highlighting the role of culture in this domain.^[7,10,12,15-18] One researcher stated that SHE for adolescents could be unexpectedly accepted, given the religious and cultural context of Iran and other countries with similar cultural atmosphere and also promoted through dealing with cultural taboos and social barriers,^[10] giving adolescents a respectable place in Iranian society, and observing their privacy.^[12] In fact, teaching adolescents on sexual health in Iran is one of the most challenging cultural and social issues. The presence of stigma and a cautious and conservative social attitude have resulted in the neglecting of this aspect of adolescent health. Public education and the use of the potential of religion can be effective in changing the views of society on this important aspect of adolescent life.

Parents are the first and foremost sex educators of children and adolescents and play a key role in preparing them to deal with the stresses and ambiguities of life, especially the sexual aspect of it.^[4] Strengthening family relationships, building an intimate home environment, and creating a supportive family environment were also acknowledged

as the facilitators of sexual conversation with adolescents within the family. Parents and other family members are role models in the formation of adolescent sexual behavior and desires. They serve as a good source of information on adolescent sexual health and fertility, provided that they can communicate with and support adolescents appropriately. Blaming and judging the teenager will maintain the stigmatization of sexual dialogue in families. Targeted and planned education for families and promotion of parent and adolescent communication skills is one of the facilitators of SHE for this age group. In this respect, studies suggested that emotional support by parents could affect physical health status and decrease the prevalence of diseases in adolescents.^[19,20] Moreover, parental attention to children's daily activities could be effective in preventing deviations, high-risk behaviors such as alcohol and substance abuse, as well as high-risk sexual behaviors.^[21-24]

Empowerment of schools, teachers, and counselors in terms of communicating with adolescents and raising their awareness was also among the facilitators of SHE for adolescent boys. According to Bostani-Khalesi *et al.*, SHE in schools is one of the empowerment-based strategies.^[25] The foundations of emotional well-being are also formed in schools, so establishment of false beliefs about sexuality at this age can have adverse effects in adulthood.^[26] Adolescents spend a significant amount of time in school, and the school is responsible for formal education. However, unfortunately the laws and regulations in our education system do not allow SHE in schools at the moment and most teachers are not able to do provide SHE. Thus, school empowerment, teacher training, provision of appropriate teaching materials, and legislation and licensing must be achieved to exploit the potential of educational environments to teach adolescent sexual health.

Furthermore, home-school interactions, dividing educational and SHE duties between home and school, as well as coordination and interactions with adults who play a key role in this regard were found to facilitate SHE for adolescent boys. Several studies have reported the same findings.^[26,27] Referring to the role of adolescents in national prosperity and development of countries, the World Health Organization (WHO) has also underlined that the general health status of this age group along with prevention of high-risk behaviors requires strengthening inter-sectoral collaboration across multiple sectors outside the health system.^[28] What is certain is that the co-ordination of health and education systems, home and school, and culture, religion, and policymaking make the education desirable, purposeful, effective, and acceptable to the community.

According to the data analysis in this study, paying attention to the abilities of adolescents and supporting them to develop such capabilities makes them feel valued and oriented towards society, establish social communications,

accept responsibilities, and understand group activities. Several studies conducted based on Social Network Theory^[29] have also suggested that strong social ties could reduce delinquency in individuals through creation of sense of attachment, belonging, and commitment, especially in informal social structures such as families and peer groups.^[30,31] Abstinence, self-control, and constructive channeling ↑ of energy and use of distraction techniques in adolescents were also noted as the facilitators of SHE in the present study. The results of a meta-analysis examining the association between abstinence in SHE programs and sexual attitudes and behaviors showed that such programs had been successful in reducing sexual behaviors and unwanted pregnancies in adolescents,^[32] which was consistent with the findings of this study. In a review of SHE programs for adolescents in the United States, it was reported that education programs merely focused on abstinence had failed to moderate relationships between sexuality and unwanted pregnancies in American adolescents.^[33] These findings were in conflict with the results of the present study. The main reason for this discrepancy was the conservative religious and cultural conditions in Iran, which overshadow public attitudes towards SHE for adolescents. Abstinence until marriage is rooted in Iranian traditions, and if it was not possible, there would be no punishment for rape in Islam.

The limitation of this study was that it was a qualitative study and only urban adolescent male students were included in the sampling, so its findings should be generalized with caution. The strength of this study was the inclusion of adults who play a key role in this regard in addition to adolescents in the main population under study. In addition, because the experiences and perceptions of participants have been acquired through a qualitative study, it is consistent with our Iranian and Islamic culture. Many of the adolescent participants in this study had experienced sexual energy moderation and abstinence. They used physical, athletic, and artistic activities to achieve this goal and they were successful in this regard. Therefore, it can be used as a guide to educate their peers in the Iranian society.

Conclusion

The results of this study revealed that SHE for Iranian adolescent boys has been neglected. Moreover, there was no clear and targeted action plan for SHE for adolescents either in the health system or in the Education Department. Therefore, appropriate policymaking with action plans, empowerment of families, schools, and adolescents, inter-sectoral integration, coordination of the health and non-health sectors, and use of religious capacities need to be considered in this regard. It is suggested that a similar study should be undertaken on the barriers and facilitators of SHE for marginalized, rural, and adolescent boys who leave education.

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Conflicts of interest

Nothing to declare.

References

- Sawyer SM, Azzopardi PS, Wickremarathne D, Patton G. The age of adolescence. *Lancet Child Adolesc Health* 2018;2:223-8.
- Sawyer SM, Afifi RA, Bearinger LH, Blakemore SJ, Dick MB, Ezech AC, *et al.* Adolescence: A foundation for future health. *Lancet* 2012;379:1630-40.
- Bell DL, Garbers S. Early sexual initiation among boys: What should we do? *JAMA Pediatr* 2019;173:522-3.
- Gersh E, Richardson LP, Katzman K, Spielvogel H, Arghira AC, Zhou Ch, *et al.* Adolescent health risk behaviors: Parental concern and concordance between parent and adolescent reports. *Acad Pediatr* 2018;18:66-72.
- Harhay MO, King CH. Global burden of disease in young people aged 10–24 years. *Lancet* 2012;379:27-8.
- Kapinga OS, Hyera DF. Pupils' perceptions of sex and reproductive health education in primary schools in Tanzania: A phenomenological study. *J Educ Pract (JEP)* 2015;6:106-13.
- Morris JL, Rushwan H. Adolescent sexual and reproductive health: The global challenges. *Int J Gynecol Obstet* 2015;131:S40-2.
- Baku E. Parent Training and Parent-Adolescent Communication about Sexuality in Accra Metropolis. Ghana: University of Ghana; 2014.
- Chothe V, Khubchandani J, Seabert D, Asalkar M, Rakshe S, Firke A, *et al.* Students' perceptions and doubts about menstruation in developing countries: A case study from India. *Health Promot Pract* 2014;15:319-26.
- Roudsari RL, Javadnoori M, Hasanpour M, Hazavehei SM, Taghipour A. Socio-cultural challenges to sexual health education for female adolescents in Iran. *Iran J Reprod Med* 2013;11:101.
- Seif SA, Moshiro CS. Caretaker-adolescent communication on sexual and reproductive health: A cross-sectional study in Unguja-Tanzania Zanzibar. *BMC Public Health* 2018;18:31.
- Shariati M, Babazadeh R, Mousavi SA, Mirzaii Najmabadi KH. Iranian adolescent girls' barriers in accessing sexual and reproductive health information and services: A qualitative study. *BMJ sexual & Reprod Health* 2014;40:270-5.
- Abdul-Rahman L, Marrone G, Johansson A. Trends in contraceptive use among female adolescents in Ghana. *Afr J Reprod Health* 2011;15:45-55.
- UNAIDS data 2018. Available from: <https://www.unaids.org/en/resources/documents/2018/unaids-data-2018>. [Last accessed on 2019 Jul 10].
- Ismail S, Shajahan A, Rao TS, Wylie K. Adolescent sex education in India: Current perspectives. *Indian J Psychiatry* 2015;57:333-7.
- Ali M. Boyshondhi Shikka is Obligatory for Religious and Medical Reasons: Bangladeshi Imams' perceptions about Adolescent Sexual and Reproductive Health Education: An In-depth Interview Study in Bangladesh. 2018. Available from: <http://urn.kb.se/resolve?urn=urn:nbn:se:uu:diva-352627> [Last accessed on 2019 July 25].
- Danquah PA. Sexual and Reproductive Health Education among Adolescents at Awukugua. University of Ghana; 2018. Available from: <http://ugspace.ug.edu.gh/handle/123456789/27608>. [Last accessed on 2019 May 23].
- Mirzaii Nagmabadi K, Babazadeh R, Shariati M, Mousavi SA. Iranian adolescent girls and sexual and reproductive health information and services: A qualitative study. *Iran J Obstet Gynecol Infertil* 2014;17:9-18. [In Persian].
- Walsh SD, Harel-Fisch Y, Fogel-Grinvald H. Parents, teachers and peer relations as predictors of risk behaviors and mental well-being among immigrant and Israeli born adolescents. *Soc Sci Med* 2010;70:976-84.
- Shahhosseini Z, Simbar M, Ramezankhani A, Alavi Majd H. Supportive family relationships and adolescent health in the socio-cultural context of Iran: A qualitative study. *Ment Health Fam Med* 2012;9:251-6.
- Kerpelman JL, McElwain AD, Pittman JF, Adler-Baeder FM. Engagement in risky sexual behavior: Adolescents' perceptions of self and the parent-child relationship matter. *Youth Soc* 2016;48:101-25.
- Ali M. Adolescent sexual reproductive health (ASRH) education: Perspectives of muslims in South Asia and Middle East countries. *J Knowl Global* 2018;10:27-48.
- Alimoradi Z, Kariman N, Ahmadi F, Simbar M. Preparation for sexual and reproductive self-care in Iranian adolescent girls: A qualitative study. *Int J Adolesc Med Health (IJAMH)* 2017;30. doi: 10.1515/ijamh-2016-0094.
- Robinson KH, Smith E, Davies C. Responsibilities, tensions and ways forward: Parents' perspectives on children's sexuality education. *Sex Educ* 2017;17:333-47.
- Bostani-Khalesi Z, Simbar M, Azin SA. An explanation of empowerment-based sexual health education strategies: A qualitative study. *J Qual Res Health Sci* 2017;6:253-65. [In Persian].
- Bleakley A, Hennessy M, Fishbein M, Jordan A. How sources of sexual information relate to adolescents' beliefs about sex. *Am J Health Behav* 2009;33:37-48.
- Breuner CC, Mattson G. Sexuality education for children and adolescents. *Pediatrics* 2016;138:e20161348.
- WHO. Strengthening Intersectoral Collaboration for Adolescent Health. World Health Organization; 2016. Available from: <https://apps.who.int/iris/handle/10665/204359>. [Last accessed on 2019 May 15].
- Hirschi T. Causes of Delinquency. 1st ed. New York: Routledge; 2017.
- Hoffmann JP, Erickson LD, Spence KR. Modeling the association between academic achievement and delinquency: An application of interactional theory. *Criminology* 2013;51:629-60.
- Andreescu V. Family, school, and peer influences on alcohol abstinence and use among American Indian and white female adolescents. *Deviant Behav* 2019;40:56-73.
- Jeynes WH. A meta-analysis on the relationship between student abstinence-only programs and sexual behavior and attitudes. *Educ Urban Soc* 2019:1-18.
- Stanger-Hall KF, Hall DW. Abstinence-only education and teen pregnancy rates: Why weneed comprehensive sex education in the US. *PLoS One* 2011;6:10.