

Reproductive Health Need Assessment of Adolescent Boys and Girls during Puberty: A Qualitative Study

*Mahsa Shakour¹, Kobra Salehi², Nikoo Yamani³

¹Assistance Professor, Educational Development Center, Arak University of Medical Sciences, Arak, Iran.

²PhD Candidate of Reproductive Health, Student Research Committee, School of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran.

³Associated Professor, Medical Education Research Center, Isfahan University of Medical Sciences, Isfahan, Iran.

Abstract

Background

Adolescence is the transient period from childhood to adulthood and the beginning of physical, mental and social changes. Understanding and meeting adolescents' needs may have important effects on reducing their dangerous behaviors and therefore, will result in a more health society. This study aimed to assess the reproductive health needs of Iranian adolescent.

Materials and Methods

This qualitative design study explored the reproductive health needs among Iranian adolescent boys and girls. Purposeful sampling method was used until data saturation was reached. Data was gathered using focus group for girls and face to face interviews for boys. The interviews used semi-structured questions. Data analysis was carried out using the method proposed by Altschuld for need assessment. Trustworthiness of the data was assessed using Guba and Lincoln Indicators.

Results

Participants were 10 adolescent girls (age range from 13-15) and ten 14-17 year age male adolescences. The reproductive health needs of girls included 4 categories: Menarche and puberty health, Discrimination in family and society, Sexual orientation, education and Consultation demands. The needs extracted from interviews of adolescent boys included adaptation with changes in puberty, sexual orientation, educational and consultation demands.

Conclusion

Despite some differences between males and females needs, their reproductive health needs are greatly similar. Adolescents need more Education and consultation support about puberty which will be possible with education of families and teachers.

Key Words: Adolescent, Iran, Need, Sexuality, Reproductive Health.

*Please cite this article as: Shakour M, Salehi K, Yamani N. Reproductive Health Need Assessment of Adolescent Boys and Girls during Puberty: A Qualitative Study. Int J Pediatr 2018; 6(9): 8195-8205. DOI: **10.22038/ijp.2018.29648.2602**

*Corresponding Author:

Dr. Mahsa Shakour, Assistance Professor, Educational Development Center, Arak University of Medical Sciences, Arak, Iran.

Email: ms.shakour@gmail.com

Received date: Jan.12, 2018; Accepted date: Mar. 22, 2018

1- INTRODUCTION

Adolescence is the most important and valuable stage (1). This transitional stage and going from childhood toward adulthood is the start of physiological, physiological and social changes that can affect people's lives during their adult years (2). The highest number of teenagers belongs to the current generation in which close to half of the world's population is under 25 years and one fifth of the world's population is people between ages 10 to 19 years old. Young population distribution is one of the characteristics of eastern Mediterranean countries including Iran (3). In Iran, according to the national census (2011) 17% of the population or a total of 12 million and 200 thousand people are teenagers between 10 to 19 years old. The most important change in this stage of life is puberty (4), and according to recent evidence along with decrease in the mean puberty age, the marriage age has greatly increased in Iran (3). On average in the year 1996, the average marriage age in Iran was 18 years for women and 24 for men while in year 2011 these numbers are 26.7 and 23.4, respectively which shows a large time gap between puberty and marriage (5).

Several factors such as decrease in the age of puberty, development of educational achievements, access to global media and changes in cultural values of unmarried young people all can expose youth to ideas and thoughts which affect their reproductive and sexual life (1, 6). In the statement of International conference on Population and Development which is a turning point in reproductive health worldwide, it is emphasized that teenagers have needs that are unique to those of adults and the countries committed to this statement are asked to identify these needs and attempt to satisfy them. One of these needs is reproductive health needs (3). One of the other important matters in this conference was the need for attention

toward reproductive health needs of young boys because not only behaviors related to reproductive health by boys can directly affect reproductive health of young girls, these behaviors also greatly affect the health situation of these young boys in their adulthood (7). Issues about maturity period and how to pass this period in both genders are very important, because it has noticeable effect on the social and sexual function in adulthood (1). In Iran the concept of reproductive and sexual health for teenagers is novel and controversial (8) and in recent years, policy makers in Iran health care system have felt the need for designing studies that include the needs of adolescents more than ever in order to use these results to propose suitable methods for satisfying these needs that are acceptable according to the local culture (3). People's needs are based on their cultural, social and economic situations in the society and are based on people's shared understanding, experience and beliefs (7).

However, it seems that there haven't been enough endeavors for creating a deep understanding of reproductive health needs of adolescent boys and girls in Iran and studies regarding health, especially reproductive health, needs of teenagers are usually limited to investigating teenagers' knowledge regarding puberty using quantitative methods (9) which have limited use for creating real understanding about people's needs (8). What Iranian teenagers need and experience in regards to reproductive health needs, must be investigated in a more in-depth fashion (7). It is necessary to use qualitative methods that are based on general philosophy in order to create a deeper understanding about the subject. Despite the fact that a large portion of Iranian population consists of adolescents and teenagers, very few studies has carried out a full investigation of reproductive health needs of these people. Due to some

cultural sensitivity, studies regarding topics such as puberty in girls have been limited to family planning (3) and important topics such as reproductive and sexual health has mostly turned into forbidden, taboo topics. This vacuum along with the importance of adolescents and their numbers in the age pyramid of Iran and vulnerability of Iranian teenagers to reproductive health related behaviors emphasizes the need for this study (7). The limited number of studies about sexual behavior of young people or reproductive and sexual needs of women also shows the important of investigating the reproductive health needs of young men and women (10). In this regard, adolescent boys are the largest group whose reproductive and sexual needs are ignored (5).

Understanding the health needs of adolescents is important in reducing and preventing dangerous behaviors in teenage years and providing care services for these people and can improve the health situation of the teenagers and society as a whole. The first step for creating a comprehensive plan is need assessment of the target group in the society. Need assessment is also one of the first steps in reaching acceptable puberty health (11). By ignoring reproductive – sexual needs of adolescents, one can't reach a positive outcome, instead leading to great and irreversible damage (5). Therefore, this study aimed to assess the reproductive health needs of Iranian adolescent boys and girls.

2- MATERIALS AND METHODS

This qualitative design study explored the reproductive health needs among Iranian adolescent boys and girls. The research was approved by the Medical Research Ethical Committee of Isfahan University of Medical Sciences (ID code: 389284). Sampling was done in city of Isfahan, Iran. All of youth were Iranian

and Muslim. To collect data, semi-structured interviews were used. Boys' and girls' needs assessment was separated. In order to investigate the needs of girls more efficiently, focus group method was used. After getting permission from relevant departments, for conducting the focus groups, two high schools were visited in coordination with the health care center. Sampling of the focus groups was carried out from 13-15 years female adolescents on convenient sampling. Two focus groups of 7 and 10 individuals were established in the school laboratory. Participants came together in one place and were asked about their needs, problems and desires in regards to reproductive health issues using semi-structured questions. Adolescents were assured that this was a research about reproductive health from Medical University. Participants were encouraged to describe their problems with each other and comment on each other's experiences and questions and express their views as clear as possible. So, we made use of their experiences and sessions were approximately lasted for one hour. The leader of the focus group, the first author, was responsible for encouraging people to talk to each other.

Because of boys hardly state their adolescent issues in a group. To collect data from boys, the individual interview was done by a male questioner who was a nurse and was familiar with reproductive health issues. He was trained by the researcher and initial recordings of interviews were checked. Interviews were prearranged, and took place in a quiet place in the high schools. Participants were 15 to 17 years old. Sampling was carried out based on accessibility and agreement to participate. Interviews were conducted until both authors agreed data reached saturation that is, until there was conceptually a new topic in the answers, sampling was continued. After obtaining informed consent, interviews were

audiotaped using KINGSTONE voice recorder and notes taken. In two cases of boys who did not consent to recording, the researcher used observation and taking notes. In every interview, researcher asked about participant's experiences and asked subsequent questions according to their responses. The general questions which were asked from the adolescents included: (Except for questions which were sometimes slightly modified and expanded according to the responses) please talk about your experiences on the puberty, sexual and physical changes and problems on which you suspect that someone was able to help you? What expectations do you have from the health system to solve these problems? (In the field of infectious-genital diseases, sexual health) talk about experiences and problems related to your sexual issues. If there were a person as a specialist in reproductive health in the clinic, what problems would do you refer to for? What about the past?

After interview, the researcher reviewed the tape and noticed if it was intelligible or needed to follow ups and asking other questions. Then, reviews were transcribed verbatim and the main concepts indicating their reproductive health were extracted using analysis proposed by Altschuld et al., through a multi-step process (12). First, without analyzing data, only responses were considered so that their feeling on what they had said can be understood and then, while considering the range of needs analysis, an initial analysis was carried out and by observing each response, the main concepts inferred from responses were extracted and then became significant and shortened. Afterwards, the same concepts were incorporated and themes related to each other by various questions and being more general were determined and generally titled. These were initially classified in the different health areas and as a health problem, demand or preference and thus identified

data categories (IDCs) were created. Cases extracted from the last stages were studied with emphasis on the identified data categories and relationships with themes related to each question have been diagnosed and by ensuring the correct flow and detailed trend of analysis, themes were finalized. In the present study, for validity and integrity of the data, Lincoln and Guba criteria were used; that is in order to make the study to be accepted, beside long-term involvement of researchers in collecting and analyzing data, a review by one of the research colleagues being familiar with qualitative research and the study issue was also conducted (13).

3- RESULTS

This study aimed to assess adolescent boys' and girls' reproductive health needs. Interviews was carried with 10 female adolescents aged 13-15 years in two focus groups, and face to face interview with 10 male adolescents aged 14 to 17 years old. Girls' and boys' experiences about their needs in reproductive health are presented separately.

3-1. Girls' Experiences

Female adolescents had several experiences that were classified in four categories: Menarche and Puberty Health, Social and Family Discrimination, Sexual orientation and Educational and Consultation Demands.

3-1-1. Menarche and Puberty Health

Menarche and Puberty health had three sub-categories: Health of Menarche, Hygiene and Emotional problems. Menarche and puberty health were important for girls. Some of girls' experience for health of menarche are as following: The difficulty of coping with the crisis of menarche, Considering the pathological delayed menarche; Menorrhagia; Dysmenorrhea; Comparison of their menstrual cycles with the experience of menarche of their sisters and

friends; Lack of awareness on how to regulate the menstruation at puberty; Lack of awareness on how to bathe during the menstruation; Lack of training about menstruation. Problems in the field of hygiene related to reproductive health were Infections, Genital diseases, Lack of knowledge of infections, Lack of knowledge of hygiene in puberty, Anxiety due to strong body odor and Genital diseases in menstruation. One participant stated about anxiety due to strong body odor: "From last year, I usually have bad odors, I don't know how to get rid of body odors, and one time our teacher blamed me!"

Emotional problems for girls were also highlighted. Embarrassment of the maturity changes; Lack of knowledge of puberty and feeling of fear; Shame of puberty changes and menstruation, Mood swings and irritability and emotional problems were categorized in this subtheme, declining social mobility at puberty. One participant said: "...Our teacher told us about menstruation, but my mother didn't". One participant said: "I didn't know about menstruation, but I was ashamed to ask, then I was shocked".

3-1-2. Social and Family Discrimination

Social and family issues including two sub-categories: Families and society with low education and Sexual Identity in the society. Families and society with low education was including having less educated families with low information about maturation; Low awareness of mothers about emotions of girls and having out of date mothers; Wrong health teachings by families and having superstitious families; Lack of awareness of fathers in regards to menstruation in girls and religious laws; Lack of discussion to mothers for changes in life style. One participant said: "When I am menstruating, I don't pray and then my father warns me! Someone should tell fathers about the religious law..." [In Islam when a woman

is menstruating, she shouldn't pray (14)]. Also, Sexual Identity in Society was including following codes: Reluctance to being female and tendency to desire being male; Hatred of the opposite sex; Feeling of imprisonment because of being female; constraints created by families because of being female and Inattention to the female puberty. One of the participants said: "I wish I was not a girl".

3-1-3. Sexual Orientation

The other mentioned need was Sexual Orientation. It included two sub-categories of Heterosexual desire and Lack of training on the sexual issues. For Heterosexual desire, girls mentioned issues about Heterosexual desire; Having a friend of the opposite sex to show themselves; Exacerbating the sense of heterosexual desire; having no boyfriend being a sign of not being modernized; Attracting the attention of boys with specific behaviors; Feeling the magnitude of interacting with boys. One participant said about having boyfriend as a sign of modernization: "we should have boyfriends, everybody who doesn't have a boyfriend is (considered) uncivilized" (and then some her classmates confirmed her words). Another participant believed: "Most students have boyfriends and it is common" (She didn't want to speak about herself and her boyfriend).

3-1-4. Educational and Consultation Demands

This common category between girls and boys included two sub-categories of Educating adolescents themselves, parents and teachers and Proper consultation about puberty. For the issues raised, adolescents also had demands from their parents and school educators including teaching the puberty health to parents; educating teachers on how to deal with the puberty and training and transferring this knowledge to adolescents; educating and informing children about puberty and menstruation issues in elementary school

and before the puberty to prepare for that period; consultation about menstruation and puberty changes and dealing with it in this stage by school teachers and parents; consultation with counselor on privacy issues which they cannot share with the family; sexual consultation at low age and before high school.

3-2. The Boys' experiences

In examining the reproductive health needs of boys, they mentioned three need categories in their interviews: adaptation with Changes in Puberty, Sexual Orientation, Educational and Consultation Demands.

3-2-1. Adaptation with Changes in Puberty

In this category, boys believed they are not being prepared for Physical and Mental Changes in Puberty and they are confused about the changes. Also, they don't have enough knowledge about changes. On Confusing and Surprising changes in puberty, they mentioned issues such as strange physical changes in puberty, not being happy with the changes; lack of synchronization of maturity changes with other friends; lack of knowledge on how to cope with physical changes and getting incorrect information from their teen friends. Also, they noted that they didn't have enough knowledge about puberty including lack of knowledge on puberty's conclusion, lack of knowledge on what is considered to be natural, lack of knowledge about adolescent health and symptoms of urinary tract or other infections. One boy said: "One night I felt I am wet, but I didn't know why. I was afraid, and then my friends told me about it". The issues rose in the context of psychological problems in adolescence included different moods and lack of focus, feeling a lack of understanding from family and depression and abuse of opium and reproductive health. One boy said:

"my mood has changed, I am upset, but my family doesn't understand me".

3-2-2. Sexual orientation

The sub-categories of sexual orientation include: Heterosexual desire and Problems to get awareness of sexual matters. To communicate with girls, lack of knowledge about heterosexual relationships, mental ambiguity about the opposite sex, lack of awareness about pregnancy process and marital relationship, and the impossibility of asking about sexual matters were mentioned. One participant said: "I like to know how genital system of female is".

The other said: "I don't know if I have a sex, will she be pregnant or no, but I can't ask anyone".

3-2-3. Educational and Consultation Demands

This category related to adolescents' requests to Educating parents and teachers to understand adolescents, educating adolescents themselves about changes during the puberty in schools, especially from first year of high school, and providing Proper consultation about puberty at schools about the aforementioned problems.

4- DISCUSSION

Results of the present study on investigating the problems of reproductive health during the puberty on male and female adolescents have mentioned physical changes, puberty health, sexual and psychological issues. One of important findings was about preparing for physical and mental changes in puberty. This finding can also be seen in other studies carried out in Iran. The results of study by Olfati and Aligholi (2008) among female high school students showed that girls' awareness was poor on reproductive health and they found the current trainings inadequate and not applicable (9). Puberty characteristics and specific physical and

mental conditions of this period, related needs and their fundamental role in reproduction have a significant effect on their whole aspect of their life (15). The results obtained from other studies have shown that the majority of Iranian male adolescents expressed lack of awareness on sexual problems including issues which they are faced during this period (16-17). The importance of knowledge, attitude and education of adolescents on the reproductive health has been emphasized by numerous researches in this field around the world and studied done in Canada (18), Norway (19), Greece (20) and Turkey (21) are among such studies. Studies show that lack of understanding in regards to reproductive physiology and dangerous behaviors and lack of life-skills for preventing risky behavior in this stage of life can threaten the health of adolescents, damage their personal and social connections and expose them to unprotected and risky reproduction, discrimination, forced sexual intercourse, unwanted pregnancies and other similar harms (3,10, 22-23).

Along with lack of understanding and limited knowledge about puberty, shame and unwillingness for asking questions was among other concerns mentioned by the interviewees. Parents are often not the first information sources, instead making the first information sources to be friends and media which can lead to damaging consequences (24). In this study, it was determined that according to teenagers, there is not enough support for them during this period from their families. Boys felt that their families don't understand them. Teenage girls stated that families have had unsatisfactory performance in teaching them about puberty and menstrual cycle and in other situations, they were unable to connect with their mothers due to generational differences which have led to hatred for their gender and a desire to be male.

According to other studies, uncomfortable relation between mothers and daughters for reasons such as fear of shamelessness and general shame is among the cultural taboos. The method for dealing with reproductive and sexual issues is different in Iran compared to other societies. In Iran, due to some cultural – traditional beliefs, the environment of families is such that doesn't allow for open discussion of sexual issues. Therefore, girls refuse to talk to their mothers (4, 8) and parents don't have a suitable relation with their children. Some parents believe that informing teenagers can lead to sexual activity and sexual promiscuity and not only refuse to talk to their children about reproductive and sexual issues, but also obstruct other sources such as schools and health care centers from providing the necessary information. However, it must be remembered that due to technological improvements and access to sources such as internet and satellite TVs, children will inevitably be exposed to this type of information. Therefore, lack of guidance into proper channels by parents, schools and other authorities can result in damaging consequences for teenagers. If this connection is correctly created, teenagers can protect themselves from dangerous and risky behavior (5).

Families play an important role in creating a positive attitude and correct health behavior in puberty, especially for girls. A qualitative study by Shah-Hossieni and Hamzehgardeshi (2014) about reproductive health needs of 12-19 years Iranian girls showed that informed and enlightened families help in physiological, physiological and social evolution of their children and with the use of correct parenting techniques can be a suitable guide for their children in their decision making periods. Also, close relation with parents, prevents teenagers from seeking shelter from their peers who, due to lack of proper experience, are often not suitable

consultants (7). Adolescent boys' mental preoccupation about opposite sex, curiosity about female reproductive organs and desire for relation with opposite sex was among the issues mentioned about sexual issues. Friendship and relations between men and women before marriage is a new issue in Iranian society. This phenomenon happened for a short period before the Islamic revolution for upper class urban citizens and after the revolution such relations were forbidden. In recent years, due to increased urbanization, increased presence of mass media and women in various social situations, this phenomenon has again started to reappear. According to previous studies one of the reasons behind these relations is lack of emotional satisfaction inside the family which can increase the number of such relations during adolescent years. Families forbid such relations but refuse to talk and discuss the issue with their children in a clear and obvious manner and are somehow ashamed of the issue. The social environment is another reason behind relations with the opposite sex and people believe these relations before marriage to be important in society such as for friends, peers and in school and university and therefore attempt such relations in order to prevent themselves from being excluded (10).

In this study, most adolescents had expressed the need for education on the reproductive health in order to resolve their problems and asked for training these areas. In other studies, teenagers have stated that they need to know more about adolescence (9). According to the recommendations of World Health organization (WHO), informing teenagers about reproductive health is one of the main elements in starting national plans for improving teenagers' health situation. On the other hand, according to the reproductive rights in the national law which accepts the international documents

related to human rights and United Nations, access to the highest standards of reproductive and sexual health and decision-making about reproduction without any discrimination, pressure and violence is among teenagers' basic rights (8). On the other hand, in recent years and due to great social and cultural changes, the marriage age has increased in Iran which has increased the probability of sexual activities outside of marriage and possibility of infectious and sexually transmitted diseases such as Human Immunodeficiency Virus (HIV) (25). Therefore, educating adolescents regarding reproductive health not only won't cause stress and sexual promiscuity but instead access to proper and timely information from parents can prevent risky sexual relations and premature sexual relations (4). This positive effect has been emphasized in various studies. Some Iranian researchers in their studies concluded that health education has a significant effect on increasing the rate of knowledge, attitude and performance of female towards maturity health. Thus, the maturity education should be emphasized in order to improve the health behaviors of girls during adolescent (3, 26).

After 1994, International Conference on Population and Development in Cairo (ICPD), Iran has accepted the necessity of proper health education, including sexual and reproductive education, for children and adolescents based on Islamic principles. In Iran, reproductive and sexual health services is included in basic health services which has coverage for the entire country, but these services, except for pre-marriage consulting, is available to married women in childbearing age (28). Although some educational programs for topics such as puberty, family life, acquired immune deficiency syndrome (AIDS) and life skills are also available for single teenagers, these programs are incomplete and ineffective and education

curriculum doesn't encompass sexual education and reproductive and sexual services for single adolescents are severely limited (4). Also, the education of these issues isn't clear in schools, media and families. Due to cultural and religious sensitivities, the most suitable form is to provide such education through mothers which was also the desired situation for teenagers including those interviewed in this study. Involving families, especially mothers, is one of the best methods for transferring these types of information to adolescent girls (22). In regards to education or reproductive – sexual health it must be noted that these needs change based on puberty age (10). Evidence shows that plans that take into account the need of their target audience are more successful and can improve the motivation for learning in their audience (7).

Teenagers participating in this study desired consultation, education and familiarity with sexual – reproductive issues before start of puberty in order to prepare for this stage of life. This need is also in line with scientific evidence which emphasizes in starting the education at lower ages. In other words, it is better to educate children at the start of teenage years (10-14 years) about issues of menstruation health, anatomy and physiology of pregnancy, nutrition, physical activities and puberty problems and use the later years (14-19) for other dimensions of reproductive health such as family planning, marriage consulting, sexual diseases, AIDS, female cancers and infertility (9). Taking into account the suitability of education curriculum with age and preparedness of teenagers for puberty related problems can prevent providing premature information that can cause misunderstandings and future adverse consequences (7). In every society, education of reproductive health is of a sensitive nature and requires cooperation of society, parents and

education system. In a study in this regard, teachers have stated that providing information about every aspect of reproductive health in schools is a great responsibility, and there is a need for centers that can provide necessary consultation services for teenagers and their families (8). Therefore, it is necessary to pay more attention to creation of centers and organizations that provide teenagers and their families with necessary consultation services in normal hours. Creating and advancing more innovative methods such as free phone lines, postal boxes and using the virtual environment can improve the coverage of these services. It is evident the needs of such a numerous group especially in the reproductive health area, is a complicated endeavor that is beyond the scope of any one organization or institution and requires the cooperation of multiply organizations. Providing the necessary education through media, especially national TV, due to its national coverage, can create a suitable framework for this type of education (7).

Except for parents, health professionals, teachers and peers can also be appropriate sources of information. In this study, the majority of adolescents stated that due to shame and lack of comfort with their parents, they receive information from their peers. This habit of adolescents is sometimes used as a preventive strategy from high risk behaviors. Today, using the peer education is applied in the reproductive health and sexual programs in some developing countries (28). Also, it is recommended that the identified reproductive health needs of adolescents be considered in the curriculum for medical and midwifery students as providers of health services and reproductive health educators. Given the fact that religious beliefs are one of the main norms of Iranian society, (10) another method for improving the education in regards to reproductive health

is to use religious principles. Islam is not against sexual education of children. According to Quran (the Muslims' holy book), sexual need is a gift (29) and it describes human's sexual life from conception to other stages of life. Prophets and religious leaders have also provided guidance in their teachings about sexual needs (30) and most clerics participating in a study about reproductive needs of teenagers believed that it is necessary to provide teenagers with correct information about reproduction and sexuality in order to counter the destructive effects of mass media. According to religious teachings, such education needs to be carried out before there is a possibility of corruption (27). According to Islam and Iranian culture, families and religious beliefs have central roles in reducing risky sexual behavior in teenagers. However, one can't ignore the role of teachers in preserving ethical principles (22).

5- CONCLUSION

Despite some differences between males and females needs, their reproductive health needs are greatly similar. Beside inappropriate health teachings by families and society, adolescents knowledge about puberty changes are not enough; they need Education and consultation support about puberty. Presence of religious and social taboos in the society can complicate the matter. Therefore, a multidimensional approach with emphasis on improving the skills of mothers and teachers in providing sexual and reproductive education, using available religious systems in the society as a framework for sexual education and suitable use of mass media as a medium for reproductive education are suggested strategy for improving the understanding and behavior of teenagers in the area of reproductive health.

6- CONFLICT OF INTEREST: None.

7- ACKNOWLEDGMENT

This study was sponsored by Vice chancellor for research, Isfahan University of Medical Sciences. The authors would like to thank this center as well as the adolescents who participated in this study.

7- REFERENCES

1. Valizadeh R, Taymoori P, Yousefi F, Rahimi L, Ghaderi N. The Effect of Puberty Health Education based on Health Belief Model on Health Behaviors and Preventive among Teen Boys in Marivan, North West of Iran. *Int J Pediatr* 2016; 4(5): 3271-81.
2. Simbar M, Alizadeh S, Hajifoghaha M, Golezar S. Review of Iranian Adolescents' Educational Needs for Sexual and Reproductive Health. *J Isfahan Med Sch* 2017; 34(412): 1563-72.
3. Mohammadi M, Mohammad K, Farahani F, Alikhani S, Zare M, Ramazani-Tehrani F. Reproductive Knowledge, Attitude and Practice of Tehranian adolescent boys aged 15-18 years, 2002. *Journal of Reproduction and Infertility* 2003; 4 (3):237-51.
4. Hajikazemi E, Oskouie F, Faghanipour S, Mokari H, Hosseini A. Parents' Views about Teaching Contraceptive Methods to Female Adolescent Students Iran *Journal of Nursing* 2014;27(87):55-66.
5. Mosavi S-A, Babazadeh R, Mirzaii-Najmabadi K, Shariati M. Assessing Iranian Adolescent Girls' Needs for Sexual and Reproductive Health Information. *Journal of Adolescent Health* 2014; 107:113.
6. Movahhed M, Abbsi Shavzi MT. Traditional and modern values among girls residing in Shiraz. *Women's Studies (Sociological and Psychological)* 2006; 4(1): 67-99.
7. Shah-hosseini Z, Hamzehgardeshi Z. How do Iranian female adolescents express their health education needs: A Needs Assessment with Qualitative Thematic Analysis? *International Journal of Adolescent Medicine and Health* 2014; 26(1):123-9.
8. Mirzaii-Najmabadi K, Babazadeh R, Shariati M, Mosavi S. Iranian Adolescent Girls and Sexual and Reproductive Health Information

and Services: A Qualitative Study. *IGOGI* 2014; 17(92):9-18.

9. Olfati F, Aligholi S. A study on educational needs of teenage girls regarding the reproductive health and determination of proper strategies in achieving the target goals in Qazvin. *The Journal of Qazvin University of Medical Sciences* 2008; 12(2):76-82.

10. Keramat A, Mousavi A, Vakilian K, Chaman R. Premarriage relationship: perspectives of male students. *Journal of the Iranian Institute for Health Sciences Research* 2013; 12: 233-42.

11. Noori-Sistani M, Marghati-Kooi E, Taghdisi M. Comparison among viewpoints of mothers, girls and teachers on pubertal health priorities in guidance schools in District 6, Tehran. *SJSPH* 2008; 6(2):13-22.

12. W.Altschuld J, White JL. *Needs Assessment Analysis & Prioritization*: SAGE; 2010.

13. Lincoln YS, Guba EG. *Competing paradigms in qualitative research* In: Lincoln NDaY, editor. *Handbook of Qualitative Research* Thousand Oaks, CA: Sage; 1994. p. 105-17.

14. Quran e Karim, Surah Bagharah, verse 222.

15. Afsari A, Valizadeh S, Fatahi S, Abbasnezhad M, Assdollahi M. Predictors of Knowledge and Practice of Girl Students about Puberty Health. *Int J Pediatr* 2017; 5(7): 5229-36.

16. Boromand-far k, Abedi M, Hasanzadeh A. Investigation of High School Boys' Educational Needs Concerning Adolescence Period, in Isfahan City, 2002. *Iranian Journal of Medical Education* 2002; 2(2):15-20.

17. Koohestani H, Roozbahani N, Baghcheghi N. Adolescent Boys' Lived Experience of Puberty: A Qualitative Study. *Iran Journal of Nursing* 2010; 57(22):53-65.

18. Ianqille D, Hughes J, Murphy G. Contraception among young women attending high school in rural Nova Scotia. *CAN J public Health* 2002; 93(6):461-9.

19. Hansen T, Skjeldestad F. Communication about contraception and knowledge of oral contraceptives amongst Norwegian high school students. *J Adoles* 2003; 26(4):481-93.

20. Kollipolitis G, Stefanidis K, Loutardis D. knowledge, attitude and behavior of female students concerning contraception in Athens. *J Psychosom Obstet Gynaecol* 2003; 24(3):145-51.

21. Gokengin D, Yamazhan T, Ozkaya D. sexual knowledge, attitude and risk behavior of students in Turkey. *J Sch Health* 2003; 73(7): 258-63.

22. Haji-khani G, Hamzegardeshi Z, Fakhri M, Hamzegardeshi L. The experience of puberty in Iranian adolescent girls: a qualitative content analysis. *BMC Public Health* 2012; 12:698-705.

23. Javdani S, Rodriguez E, Nichols S, Emerson E, Donenberg G. Risking it for Love: Romantic Relationships and Early Pubertal Development Confer Risk for Later Disruptive Behavior Disorders in African-American Girls Receiving Psychiatric Care. *Journal of abnormal child psychology* 2014; 42(8):1325-40.

24. Peyman N, Jangi M. The Effect of Educational Intervention on Knowledge, Attitude and Performance of High School Girl Students about AIDS. *Int J Pediatr* 2015; 3 (2-4): 833-39.

25. Hildebrand M, Ahumada C, Watson S. Crowd out AIDS: Crowdsourcing youth perspectives for action. *RHM* 2013; 21(41):57-68.

26. Bobhate P-S, Shrivastava S-R. A Cross Sectional Study of Knowledge and Practices about Reproductive Health among Female Adolescents in an Urban Slum of Mumbai *Journal of Family and Reproductive Health* 2011; 5(4):117-24.

27. Mirzaii Najmabadi Kh, Babazadeh R, Mousavi SA, Shariati M. Iranian Adolescent Girls' Challenges in Accessing Sexual and Reproductive Health Information and Services, *Journal of Health* 2018;8(5): 561-74.

28. Price N, Knibbs S. How Effective Is Peer Education in Addressing Young People's Sexual and Reproductive Health Needs in Developing Countries? *Children & Society* 2009; 23(4):291-302.

29. Quran e Karim, Surah Noor, verse 58.

30. Quran e Karim, Surah Nesa (versa 21), Surah Bagharah (Versa 187), Surah Maedeh (Versa 6).