Published online 2016 January 1.

Research Article

Premarital Sexual Intercourse-Related Individual Factors Among Iranian Adolescents: A Qualitative Study

Mohtasham Ghaffari,^{1,2} Zabihollah Gharlipour Gharghani,^{3,*} Yadollah Mehrabi,⁴ Ali Ramezankhani, and Majeed Movahed⁵

Received 2014 June 16; Revised 2014 July 9; Accepted 2014 August 9.

Abstract

Background: Understanding sexual behavior before marriage is relatively rare in the East, especially in Islamic societies, because sexuality is a sensitive subject for many Muslims.

Objectives: The purpose of this study was to identify premarital sexual intercourse-related individual factors among Iranian adolescents. Patients and Methods: This qualitative study was performed on 30 students of Payame Noor university of Shiraz city, Iran, in 2014. The study sample includes male and female university students selected using the convenience sampling method. Semistructured interviews were used to collect data. All interviews were conducted by the researcher in a comfortable atmosphere and carried out without the presence of others. Each interview lasted between 30 - 20 minutes. Interviews continued until data saturation occurred. Data were analyzed using the qualitative content analysis method. Participation in the study was voluntary by obtaining an informed consent.

Results: The study included 30 participants, 56.6% (n = 17) males and 43.4% (n = 13) females. The age range of study participants was from 19 to 25 years of age. Data analysis showed that three main categories extracted in shaping premarital sexual intercourse in adolescents: health beliefs, religious-spiritual beliefs, and character.

Conclusions: This study can help find a culturally appropriate intervention to delay sexual initiation and prevent sexual behavior before marriage in adolescents and young adults. The results of the present study have both experimental and theoretical implications for future research. Finally, this study is a form of shared experience that can help similar studies.

Keywords: Premarital Sex Behavior, Qualitative Research, Students

1. Background

Although sexual behavior before marriage has been a key part of investigations in this area and the literature concerning this issue is abundant, the understanding of premarital sexual behavior in the east countries, especially in Islamic societies is relatively rare. It is because sexuality is a sensitive subject for many Muslims (1). In Iran, the average age of marriage has increased for both sexes. Moreover, there are large numbers of single young people who cannot afford to be married at a younger age (2). While waiting for marriage, the young people may involve potentially in sexual activities before marriage. Although study is very limited in this area, sexual relations before marriage are reported. For example, Mohammadi et al. stated that 28% of people aged 15 - 18 years reported having sexual contact at least once (including all types of sexual experiences from hugging, kissing and touching to sexual intercourse) (3). Like most Islamic countries, sexual relations before marriage is considered unlawful

and taboo in Iran (4) and is considered a major sin (5). Also, premarital sexual intercourse is forbidden in Islam (1, 5, 6) and those committing the sin of fornication will be punished (1). Declining influence of family, increasing urbanization, modernization, migration and the exposure to mass media and western culture have led to erosion of traditional beliefs and values and decreased the importance of virginity in marriage. They have contributed to major changes in social and sexual behavior among teenagers (7, 8). Some negative consequences of sex outside of marriage include the potential for unwanted pregnancies, transmission of sexually transmitted diseases, disruption of the families and marriages (in cases of adultery), and emotional and psychological difficulties resulting from the lack of loyalty and commitment to relationships outside of marriage (5). Researchers suggest that teenagers' beliefs, attitudes and sexual behaviors differ by age, sex, ethnicity/race, educational

Copyright © 2016, Iranian Red Crescent Medical Journal. This is an open-access article distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (http://creativecommons.org/licenses/by-nc/4.0/) which permits copy and redistribute the material just in noncommercial usages, provided the original work is properly cited.

¹Environmental and Occupational Hazards Control Research Center, Shahid Beheshti University of Medical Sciences, Tehran, IR Iran

²Department of Public Health, Faculty of Health, Shahid Beheshti University of Medical Sciences, Tehran, IR Iran Department of Public Health, Faculty of Health, Qom University of Medical Sciences, Qom, IR Iran Department of Epidemiology, Faculty of Health, Shahid Beheshti University of Medical Sciences, Tehran, IR Iran

⁵Department of Sociology, Shiraz University, Shiraz, IR Iran

^{*}Corresponding Author: Zabihollah Gharlipour Gharghani, Department of Public Health, Faculty of Health, Qom University of Medical Sciences, Qom, IR Iran. Tel: +98-9171105478, E-mail: gharlipour@yahoo.com

status and sexual experiences (9-11). In addition, the literature suggests that individual, family and peer factors have a significant impact on the sexual behavior of young people (6). Paradise et al. stated that female adolescents frequently reported beliefs and values as reasons for not having sex. Religious beliefs were cited as an incentive for adolescents to avoid sex more than those who had experienced sexual intercourse (12). On the other hand, from research and programmatic perspectives, it would be desirable to thoroughly document reasons for avoiding from sexual intercourse prior to the development of programs and curricula intended to foster delay of onset of sexual behavior (13). To avoid any conflict with people's concerns, especially with their religious beliefs, previous studies in Iran limited questions and purposes related to risk behaviors or sexual activity (3, 14). Due to the specific cultural and religious context in Iran (15), the reasons why some adolescents and young adults avoid sexual intercourse and some are not completely known yet. Therefore, more studies are needed to clearly identify factors that may affect early sexual activity.

2. Objectives

The present study aimed to investigate premarital sexual intercourse-related individual factors among Iranian adolescents.

3. Patients and Methods

This research is a qualitative study carried out in 2014 that investigates individual factors that determine having or not having premarital sexual intercourse among students of Payame Noor university of Shiraz, Iran. The study sample includes male and female university students selected using the purposive sampling method. Sample selection criteria included being single and voluntarily declaration to participate in the study. The criterion for exclusion of participators was married students. Semistructured interviews were used to collect data. Considering that this type of interview is in-depth and flexible, it is suitable for qualitative research (16). The study was approved with 8992.3/A/D/P Code (Dec 4 2013) by the ethical committee of Shahid Beheshti University of Medical Sciences, Tehran, Iran. A written informed consent was obtained from all participants prior to interviews. The interviewers explained the objectives of the study to all participants. Participants were informed that any information collected was to be kept confidential. No identifying information was obtained from any of the participants. Interviewers were mindful of the sensitivity of the topics discussed and ensured that the research was undertaken in such a way as to establish a warm, empathetic relationship with the participants, thereby encouraging them to converse openly. We were careful to maintain confidentiality and show respect towards participants' responses. Participants were not coerced to reveal their sexual behaviors.

The following key questions were used to guide the interview:

- 1. In your opinion, what are the reasons that some students in your age have premarital sexual intercourse against Sharia?
- 2. What do you think about the reasons that some students in your age can remain committed to not having premarital sexual intercourse?
- 3. I would like to ask you whether 'you have had sex against Sharia (you are free not to respond). Regardless of your current conditions, how much do you think you can remain committed to not having premarital sexual intercourse? What are factors important and decisive in this regard?
- 4. What is your opinion about sexual relations between boys and girls in your age?
- 5. What is the role of religious beliefs about premarital sexual intercourse?
- 6. In your opinion, what is Islam's view toward sex outside of Sharia?
- 7. What are benefits of not having premarital sexual intercourse for a person?

All interviews were conducted by the researcher in a comfortable atmosphere and carried out without the presence of others. Interviewers had sufficient knowledge of the topic and collecting qualitative data and selected homogeneity in gender. Each interview lasted between 20 - 30 minutes. Although data saturation, occurred after 25 interviews, and had not any extra information, a further five interviews were carried out to validate the saturation. So, total number of participants in the study was 30 students. In this study, 7 people refused to participate due to sensitivity of the issue. As allowed by participants, all interviews were recorded using a voice recorder. Data were analyzed using qualitative content analysis. The data analysis began during the first field activities, and as the study proceeded, we made revisions in research questions and refined the analysis. We initiated reading and coding while the data were being collected in the field. We wrote "memos" to help us clarify that how concepts fully integrated with one another and how analysis resulted in the research report. The 'framework' method was used for the analysis. This method includes five steps of 'familiarization', 'identifying a thematic framework', 'indexing', 'charting', and 'mapping and interpretation' (17). For the 'familiarization' step, we listed key ideas and recurrent themes by listening to tapes, reading transcripts, and studying notes. We used a content summary form which was developed for each interview. The form included preliminary codes in the columns and the participants' characteristics in the rows. For the second step, 'identifying a thematic framework', we developed a preliminary thematic framework based on the interviews and the theoretical frameworks (18, 19). Then, for the 'indexing' step, we applied the thematic framework to all the data in textual form by annotating the transcripts with numerical codes from the index. The two coders discussed codes and reconciled coding decisions. For the 'charting' step, one table was produced for each 'theme'. The rows were assigned to the interviews and columns to the subthemes. The analysis 'charts' allowed us to transfer data onto the tables to compare the views of participants across different themes and to compare the views of different participants about each theme. Depending on how often the themes appeared across the data and how rich or complex the ideas related to that theme, we incorporated the subthemes into the coding scheme. Finally, for the 'mapping and interpretation', we found associations between themes with a view to providing explanations for the findings. The thematic framework was updated in the process of the analysis by noticing that certain labels began to cluster and others separated out.

The rigor of the data was achieved through prolonged engagement over 3 months and 25 hours of interviews. The audiotapes, transcriptions, adequate paraphrases, and the analysis and coding documents constituted the audit trail. Potential researcher bias was overtly examined through personal reflection, consultation with experts in research involving qualitative studies. Copies of an exhaustive description of the findings were sent to a random selection of eight of participants for their review, verification, and comments.

Data were analyzed using the qualitative and mixed methods data analysis software (MAXQDA) 10 software. As regards this study is part of a Ph.D. thesis, and is not financially supported by any organization, there is no conflict of interest.

4. Results

The 30 participants in this study included 56.67% (n = 17) males and 43.33% (n = 13) females. Participants' age ranges from 19 to 25 years (Table 1). Analysis of handwritten notes on individual factors affecting premarital sexual intercourse from the students' perspective showed three main categories of factors (Table 2).

Table 1. Demographical Characteristics of the Participants^a

Variable	Values ^b
Gender	
Male	17 (56.67)
Female	13 (43.33)
Age, y	
19	6 (20)
20	8 (26.67)
21	5 (16.67)
22	5 (16.67)
23	4 (13.33)
24	1(3.33)
25	1(3.33)

 $^{^{}a}N = 30.$

Table 2. Frequency of Categories and Subcategories Category Values a Health belief Attitude 8 (26.66) Perceived susceptibility 5 (16.66) Perceived severity 7 (23.33) Perceived benefits 20 (66.66) Perceived barriers 12 (40) Normative beliefs 15 (50) 13 (43.33) Motivation to comply Perceived self-efficacy 10 (33.33) Religious and spiritual beliefs Religion 22 (73.33) **Spirituality** 10 (33.33) Character Self-esteem 6(20) Instinct 9 (30)

4.1. Health Beliefs

Health beliefs in this study include attitudes, perceived susceptibility, perceived severity, perceived benefits, perceived barriers, normative beliefs, motivation to comply, and perceived self-efficacy.

7 (23.33)

4.1.1. Attitude

Some of the students said they had a positive attitude to having sex. Some of them believed that the premarital sexual intercourse is necessary. Others had a negative attitude towards premarital sexual intercourse. For example, one student stated: "Sex before marriage is not a bad thing, everyone should try it. If you have premarital sexual intercourse you can understand things and get more mature. If you do not try it before getting married you are confused." (A 24-year-old boy).

4.1.2. Perceived Susceptibility

Perceived susceptibility refers to beliefs about the likelihood of getting a disease or condition. Some of the students were afraid of the possibility of getting some diseases, such as HIV/AIDS and hepatitis B following sexual relations before marriage. For instance, one of the students said that: "Some believe diseases such as HIV/AIDS and hepatitis B transmit via sexual intercourse and this issue makes fear among them about the risk of getting diseases." (A 24-year-old boy).

Another participant stated that: "Well, my health is important. If you have sex you may become infected as it is not known whether the person is healthy or not." (A 22-year-old girl).

bValues are presented as No. (%).

Sense of independence

aValues are presented as No. (%).

4.1.3. Perceived Severity

Perceived severity is a person's belief about the seriousness of contracting a disease or health problem. The students thought that having premarital sexual intercourse has bad consequences. Some students expressed that sexual activity can have negative social consequences. For example, a student stated: "In my opinion, sexual relations, if not controlled can have very bad consequences for the individual, such as AIDS, which is very dangerous." (A 21-year-old boy).

Another student said: "In addition to leading to common diseases, sex has many social consequences as well. Sometimes sex may lead to committing suicide or killing another person." (A 19-year-old girl).

4.1.4. Perceived Benefits

Perceived benefits refer to belief in efficacy of the advised action to reduce risk or seriousness of impact. Benefits identified in this study include having physical and mental health, being aware of the disadvantages and complications of premarital sexual intercourse, perceived social benefits like keeping honor or dignity of themselves and their families, and psychological benefits such as mental and spiritual peace. For example, one student stated: "I do not want to lose my personality and my family's dignity and that is why I do not want to have premarital sexual intercourse." (A 20-year-old girl).

Another participant said: "Well, if I do not have premarital sexual intercourse, I will certainly have a calm mind and thought and my mind is not involved." (A 25-year-old girl).

4.1.5. Perceived Barriers

Perceived barriers are beliefs about the tangible and psychological costs of the advised action, such as being uncomfortable with preventive or therapeutic measures. In this study, perceived barriers cited by students include the inability to control emotions, ladies' unsuitable hijab and the feeling of being inferior to others. For example, a student said: "at university, some girls do not have appropriate hijab that can have some effects [on boys]. This might lead to sexual stimulation." (A 22-year-old boy).

4.1.6. Normative Beliefs

The normative beliefs are beliefs about whether each referent approves or disapproves of the behavior. Regarding sexual behavior, many of the students state that their friends considered this kind of sex as ordinary. For example, one participant stated:

"Many of my friends have premarital sexual intercourse and it is normal for them. When I'm with them, they talk about sexual affairs." (A 21-year-old boy).

4.1.7. Motivation to Comply

Motivation to comply is belief about whether each referent approves or disapproves of the behavior. Many of

the students stated that they acted based on what their families accept as important. Others stated that they acted according to their friends' norms. For example, one participant said: "The most important factor that prevents me from having premarital sexual intercourse is my family, because I have a family that is committed to a set of principles. It is for their sake that I am not going to go have sex." (A 23-year-old girl).

4.1.8. Perceived Self-Efficacy

Self-efficacy is one's confidence in his/her ability to perform or not to perform a behavior. In this study, a number of students reported that they had efficacy required to face problematic situations and some others stated that they 'did not have the ability to avoid premarital sexual intercourse. However, some students said that they had high self-efficacy for overcoming barriers. For instance, one of students said: "Some people can control themselves against sexual stimulation and avoid sex, but some cannot. I cannot control myself against sexual stimulation and I am going to experience it if possible." (A 20-year-old boy).

4.2. Religious and Spiritual Beliefs

Religious and spiritual beliefs constitute the second main category of factors extracted from data and include subcategories of religion and spirituality cited frequently by the students in this study.

4.2.1. Religion

In this study, religion was repeatedly mentioned by participants as a shield to avoid premarital sexual intercourse. Even students who had experienced sexual intercourse reported religion as a deterrent to sexual behavior before marriage. Sex before marriage was considered a sin based on religious beliefs of many students. For example, one student said:

"Religious beliefs are very important. People who really adhere to Islamic religion will never experience premarital sexual intercourse, and if they have sex, it is adultery, sin and forbidden in Islam." (A 22-year-old boy).

4.2.2. Spirituality

Some students reported moral and humanitarian issues as factors affecting sexual intercourse. They deemed sex as inappropriate in their opinions. For example, one participant stated in this regard:

"I personally think premarital sexual intercourse is not right. Regarding having unpermitted affairs with a person, one should imagine oneself in her shoes. This is what I always do. This is related to ideological issues." (A 21-year-old boy).

4.3. Character

Character is the third main category of factors extracted from the data. Some of the factors that influence whether

or not to avoid premarital sexual intercourse from the students' view were related to character. They include self-esteem, instinct and sense of independence.

4.3.1. Self-Esteem

Some participants stated that they value themselves and respect their privacy. For example, one student said: "The most important factor that prevents me from having premarital sexual intercourse is that I value my character, my body and my arms and I do not allow everybody to be with me or can have access to me." (A 20-year-old girl).

4.3.2. Instinct

The sexual instinct is an internal desire for the opposite sex present in all people. A large number of students reported the libido and sexual drive, inner passion and precocious puberty as the reasons for having sex. One of the participants stated in this regard:

"Many of the students think there is no reason they should not have premarital sexual intercourse. We have passion and sexual instinct. Therefore, we should have sex." (A 22-year-old boy).

4.3.3. Sense of Independence

Some of the participants thought that feeling independent and grown up can encourage a person to have sex outside of marriage. In these cases, people are willing to make their own decisions. For example, a student said:

"I am grown up, I must be independent. At my age I should decide or think for myself and decide whether I should have sex or not." (A 24-year-old boy).

5. Discussion

In this study, health beliefs, religious and spiritual beliefs and character were the main categories of individual factors affecting premarital sexual intercourse. Subcategories of health beliefs include attitude, perceived susceptibility, perceived severity, perceived benefits, perceived barriers, perceived self-efficacy, normative beliefs and motivation to comply.

Since most health problems are closely related to human behavior, theories and models of behavior can provide insights into finding ways to prevent health problems (20). Conceptual validity of the factors identified in this study was supported by numerous health behavior theories which used to understanding sexual behavior of adolescents and young people (21). Various models and theories have been used to explain the attitudes and sexual behaviors in adolescents worldwide (1, 22). The Health Belief Model (HBM) and the Theory of Planned Behavior (TPB) are most common frameworks that used to understand the behavioral patterns in adolescent (18, 19). The theory of planned behavior suggests that the most important predictor of behavior is the individual's

intention to do or not to do the behavior (23). Attitude toward behavior and subjective norm are included in the theory of planned behavior (24). The HBM is based on the assumption that individuals will take a specific healthrelated behavior if they have a positive expectation of avoiding the negative health condition (19). Perceived barriers, perceived benefits, perceived susceptibility, and perceived severity are health belief model constructs (25). In this model, behaviors to reduce health risks (e.g. to delay the onset of sexual intercourse) are done when people can understand that the risks are real and serious (e.g. AIDS and deaths) and feel they are at risk and know the desired behavior (avoiding sex) can reduce their health risks. Also, when people decide to act, first they evaluate costs of a disease such as AIDS against the costs of preventing it by avoiding sex or using a condom (26). Perceived severity and perceived susceptibility to HIV/ AIDS can indirectly affect adolescents' intention to avoid

Self-efficacy was originated from the Bandura's selfefficacy theory (28). In a study, self-efficacy in sexual abstinence was most strongly predicted by previous sexual activity. Based on attitudes and norms toward sex with a steady girlfriend/boyfriend in Iran, in which any type of sexual contact before marriage is unacceptable (29). In the study by Rijsdijk et al. (2012), attitudes, perceived social norms, and self-efficacy were identified as predictors of adolescents' intentions to delay intercourse in Uganda (30). It seems that in Iran, due to cultural norms which considered talking about sexual topics in public as taboo, formal education about such issues in schools, universities and community is nonexistent and communication with parents about them is rare. Religious and spiritual beliefs are another major category of factors identified in this study. Islamic religious beliefs play an important role in people's attitudes toward a disease (31). Another study has revealed that greater religious involvement was a protective factor to have unsafe sexual behavior, so that students who had higher religious scores were significantly more likely higher self-efficacy to refuse sex and their attitude were positive toward avoiding sex. These students were more likely never to have had premarital sexual intercourse. It is consistent with social norms and religious values in Islamic societies that inhibit unmarried people from high-risk sexual behavior (29). In a study by Mohammadi et al. the boys who regarded themselves as religious had less knowledge of sexual issues compared to those who regarded themselves as being somewhat religious or not religious (3).

Spirituality as an inherent image in humanity is experienced by all people with both the emotional and intellectual elements (32). A number of studies has reported that a high level of spirituality was associated with lower levels of risk behaviors by youth. In the studies by Weaver et al. (2000) and Josephson and Mabe (2004), spiritual and religious involvement of the adolescents and their families are associated with delaying sexual behavior (33,

34). Involvement and attendance in religious communities can provide opportunities for young people to be exposed to social and spiritual teachings and value for avoiding of risky behaviors in adolescents (35).

In this study, character was another category of individual factors affecting premarital sexual intercourse. In their study, Ma et al. (2008) showed that character strengths may be associated with lower levels of sexual behaviors among African-American adolescents (36). Mico et al. (2013) found that inhibitory aspects of the personality have deeper effects on sexual motivation than excitatory aspects of the personality (37). High selfesteem was reported as a predictor of out-of-school girls' sex avoidance (38). On the other hand, low self-esteem and high sexual maturity in adolescents were associated with early sex in adolescents (39). Also, the increase in premarital sex among male students can be attributed to the fact that they were more independent from their families and had greater access to young women for sex (6). In general, the use of multiple theories makes combining important variables possible and allows us to provide a holistic and comprehensive explanation (40).

In this study, there are certain limitations including first, we were unable to determine the number of people who had sex before marriage. Second, the fact that socially sensitive behavior is likely to be under-reported especially when face to face interviews are used instead of self-administered questionnaires (29). Third, sampling strategy can be biased because people who speak more comfortably about sexual issues are more likely to be included in the study.

The strong points of the current study include maintaining strict privacy and observing rights of the participants. The study also successfully includes unmarried students in an in-depth qualitative study and obtains sensitive information associated with sexual issues. Finally, the results of this study have both theoretical and empirical implications for future research.

The current study identified premarital sexual intercourse-related individual factors among students. Also, areas where health professionals should assess and target for intervention were determined (health beliefs, religious-spiritual beliefs). This study also shows some characteristics and beliefs associated with sexual behavior which are related to behavior change models and theories. Therefore, the importance of using behavior change theories and models for designing interventions aimed at reducing sexual activity and controlling and preventing premarital sex is stressed. Nonetheless, due to the nature of qualitative research, further research is required to explore the relationship between the identified variables, identify causal determinants and evaluate generalizability of the findings. Finally, this study is a form of shared experience that can help similar studies. Similar research is recommended to identify the determinants of having or not having sex in adolescents and young adults outside the campus.

Acknowledgments

The authors would like to thank the managers of Payame Noor University of Shiraz, Iran. Also, they warmly express their gratitude to the adolescents who participated closely in the present study. This article has been extracted from a PhD thesis on health education and health promotion in Shahid Beheshti University of Medical Sciences, Tehran, Iran.

References

- Wong LP. Qualitative inquiry into premarital sexual behaviours and contraceptive use among multiethnic young women: implications for education and future research. *PLoS One*. 2012;7(12):e51745. doi: 10.1371/journal.pone.0051745. [PubMed: 23272156]
- Aghajanian A, Mehryar AH. Fertility transition in the Islamic Republic of Iran: 1976-1996. Asia Pac Popul J. 1999;14(1):21–42. [PubMed:12295288]
- 3. Mohammadi MR, Mohammad K, Farahani FK, Alikhani S, Zare M, Tehrani FR, et al. Reproductive knowledge, attitudes and behavior among adolescent males in Tehran, Iran. *Int Fam Plan Perspect*. 2006;**32**(1):35-44. doi:10.1363/ifpp.32.035.06. [PubMed: 16723300]
- Wong LP, Chin CK, Low WY, Jaafar N. HIV/AIDS-Related Knowledge Among Malaysian Young Adults: Findings From a Nationwide Survey. J Int AIDS Soc. 2008;10(6):148. doi: 10.1186/1758-2652-10-6-148. [PubMed: 19825143]
- MWLUSA. Muslim Women's League. An Islamic Perspective on Sexuality. 1999. Available from: http://www.mwlusa.org/topics/sexuality/sexuality_pos.html.
- Adhikari R, Tamang J. Premarital sexual behavior among male college students of Kathmandu, Nepal. BMC Public Health. 2009;9:241. doi:10.1186/1471-2458-9-241. [PubMed:19604383]
- Brotto LA, Chik HM, Ryder AG, Gorzalka BB, Seal BN. Acculturation and sexual function in Asian women. Arch Sex Behav. 2005;34(6):613–26. doi: 10.1007/s10508-005-7909-6. [PubMed: 16362246]
- 8. Gubhaju BB. Adolescent Reproductive Health in Asian. *Asia Pac Popul I.* 2002;17(4):97–119.
- De Gaston JF, Weed S, Jensen L. Understanding gender differences in adolescent sexuality. Adolescence. 1996;31(121):217–31. [PubMed: 9173787]
- Ott MA, Millstein SG, Ofner S, Halpern-Felsher BL. Greater expectations: adolescents' positive motivations for sex. Perspect Sex Reprod Health. 2006;38(2):84–9. doi: 10.1363/psrh.38.084.06. [PubMed:16772189]
- Santelli JS, Kaiser J, Hirsch L, Radosh A, Simkin L, Middlestadt S. Initiation of sexual intercourse among middle school adolescents: the influence of psychosocial factors. J Adolesc Health. 2004;34(3):200-8. doi: 10.1016/j.jadohealth.2003.06.004. [PubMed:14967343]
- Paradise JE, Cote J, Minsky S, Lourenco A, Howland J. Personal values and sexual decision-making among virginal and sexually experienced urban adolescent girls. J Adolesc Health. 2001;28(5):404-9. [PubMed: 11336870]
- Loewenson PR, Ireland M, Resnick MD. Primary and secondary sexual abstinence in high school students. J Adolesc Health. 2004;34(3):209-15. doi: 10.1016/j.jadohealth.2003.05.002. [PubMed:14967344]
- Montazeri A. AIDS knowledge and attitudes in Iran: results from a population-based survey in Tehran. Patient Educ Couns. 2005;57(2):199–203. doi: 10.1016/j.pec.2004.05.014. [PubMed: 15911193]
- Najarkolaei FR, Niknami S, Aminshokravi F, Tavafian SS, Joneidi Jafari NA, Golabchi A. Promoting sexual abstinence intention among female university students: A quasi-experimental study. J Res Med Sci. 2013;18(1):37–43. [PubMed: 23900294]
- Polit DF, Beck CT. Essentials of Nursing Research: Methods, Appraisal, and Utilization. 6th ed. Philadelphia: Lippincott; 2006. pp. 227, 200

- Rashidian A, Eccles MP, Russell I. Falling on stony ground? A qualitative study of implementation of clinical guidelines' prescribing recommendations in primary care. *Health Policy*. 2008;85(2):148–61. doi: 10.1016/j.healthpol.2007.07.011. [PubMed: 17767976]
- Carmack CC, Lewis-Moss RK. Examining the theory of planned behavior applied to condom use: the effect-indicator vs. causalindicator models. J Prim Prev. 2009;30(6):659-76. doi: 10.1007/ s10935-009-0199-3. [PubMed: 19949867]
- Rosenstock IM, Strecher VJ, Becker MH. Social learning theory and the Health Belief Model. Health Educ Q. 1988;15(2):175–83.
 [PubMed: 3378902]
- Najarkolaei FR, Niknami S, Shokravi FA, Tavafian SS, Fesharaki MG, Jafari MR. Sexual behavioral abstine HIV/AIDS questionnaire: Validation study of an Iranian questionnaire. J Educ Health Promot. 2014;3:10. doi: 10.4103/2277-9531.127564. [PubMed: 24741650]
- Rasberry CN, Goodson P. Predictors of secondary abstinence in U.S. college undergraduates. Arch Sex Behav. 2009;38(1):74–86. doi:10.1007/s10508-007-9214-z. [PubMed: 17851748]
- Li X, Zhang L, Mao R, Zhao Q, Stanton B. Effect of social cognitive theory-based HIV education prevention program among high school students in Nanjing, China. *Health Educ Res*. 2011;26(3):419–31. doi:10.1093/her/cyr001. [PubMed: 21330355]
- Webb TL, Sheeran P. Does changing behavioral intentions engender behavior change? A meta-analysis of the experimental evidence. *Psychol Bull.* 2006;132(2):249–68. doi: 10.1037/0033-2909.132.2.249. [PubMed:16536643]
- Harakeh Z, Scholte RH, Vermulst AA, de Vries H, Engels RC. Parental factors and adolescents' smoking behavior: an extension of The theory of planned behavior. *Prev Med*. 2004;39(5):951-61. doi: 10.1016/j.ypmed.2004.03.036. [PubMed:15475029]
- 25. Rosenstock IM. The Health Belief Model and Preventative Health Behavior. *Health Educ Behav.* 1974;**2**(4):354–86.
- Tenkorang EY, Rajulton F, Maticka-Tyndale E. Perceived risks of HIV/AIDS and first sexual intercourse among youth in Cape Town, South Africa. AIDS Behav. 2009;13(2):234–45. doi: 10.1007/ s10461-008-9470-5. [PubMed: 18846419]
- Fishbein M. The role of theory in HIV prevention. AIDS Care. 2000;12(3):273-8. doi: 10.1080/09540120050042918. [PubMed: 10928203]
- Bandura A. Self-efficacy. New York: W. H. Freeman and Company; 1997.
- Shirazi KK, Morowatisharifabad MA. Religiosity and determinants of safe sex in Iranian non-medical male students. J Relig Health. 2009;48(1):29–36. doi: 10.1007/s10943-008-9174-1. [PubMed:19229622]

- Rijsdijk LE, Bos AE, Lie R, Ruiter RA, Leerlooijer JN, Kok G. Correlates of delayed sexual intercourse and condom use among adolescents in Uganda: a cross-sectional study. BMC Public Health. 2012;12:817. doi: 10.1186/1471-2458-12-817. [PubMed: 22998762]
- 31. Movahed M, Shoaa S. On attitude towards HIV/AIDS among Iranian students (case study: high school students in Shiraz City). *Pak J Biol Sci.* 2010;**13**(6):271-8. [PubMed: 20506714]
- 32. Jose N, Taylor E. Spiritual health: A Look at Barriers to its Inclusion in the Health Education Curriculum. *Eta Sigma Gamman*. 1986;**18**(2):16–9.
- Weaver AJ, Samford JA, Morgan VJ, Lichton AI, Larson DB, Garbarino J. Research on religious variables in five major adolescent research journals: 1992 to 1996. J Nerv Ment Dis. 2000;188(1):36-44. [PubMed: 10665459]
- Mabe PA, Josephson AM. Child and adolescent psychopathology: spiritual and religious perspectives. Child Adolesc Psychiatr Clin N Am. 2004;13(1):111-25. [PubMed: 14723303]
- 35. Kang PP, Romo LF. The role of religious involvement on depression, risky behavior, and academic performance among Korean American adolescents. *J Adolesc*. 2011;34(4):767-78. doi: 10.1016/j. adolescence.2010.08.003. [PubMed: 20813402]
- 36. Ma M, Kibler JL, Dollar KM, Sly K, Samuels D, Benford MW, et al. The relationship of character strengths to sexual behaviors and related risks among African American adolescents. *Int J Behav Med*. 2008;15(4):319–27. doi: 10.1080/10705500802365573. [PubMed: 19005932]
- 37. Mico U, Scimeca G, Bruno A, Pandolfo G, Romeo VM, Mallamace D, et al. The relationship between personality and sexual motivation: an investigation based on Cloninger's model in non-clinical Italian subjects. *Riv Psichiatr*. 2013;48(4):307-14. [PubMed: 24180030]
- Sangowawa AO, Adebiyi AO. Factors associated with sexual abstinence among out-of-school females in a transitional town in Oyo State, South-Western Nigeria. Health Care Women Int. 2013;34(10):917-32. doi: 10.1080/07399332.2013.769998. [PubMed: 23638653]
- Price MN, Hyde JS. When two isn't better than one: predictors of early sexual activity in adolescence using a cumulative risk model. J Youth Adolesc. 2009;38(8):1059-71. doi: 10.1007/s10964-008-9351-2. [PubMed: 19636771]
- Reid AE, Aiken LS. Integration of five health behaviour models: common strengths and unique contributions to understanding condom use. *Psychol Health*. 2011;26(11):1499–520. doi: 10.1080/08870446.2011.572259. [PubMed: 21678166]