

# The Educational Needs Of Reproductive And Sexual Health For Iranian Adolescents: A Systematic Review

Forough Farzollahpour<sup>1,2\*</sup>, Shahrbanoo Salehin<sup>3</sup>, Mohammad Javad Maleki<sup>4</sup>

<sup>1</sup> Department Of Midwifery, Faculty Of Medical Sciences, Khalkhal, Iran.

<sup>2</sup> Student Research Committee, School Of Nursing And Midwifery, Shahroud University Of Medical Sciences, Shahroud, Iran.

<sup>3</sup> Department Of Midwifery, School Of Nursing And Midwifery, Shahroud University Of Medical Sciences, Shahroud, Iran.

<sup>4</sup> Bsc Of Nursing, Fatemi Hospital, Ardebil University Of Medical Sciences, Ardebil, Iran.

**Received:** 5th Jan, 2026; **Revised:** 25th Jan, 2026; **Accepted:** 20th Feb, 2026; **Available Online:** 10th Mar, 2026

## Abstract

Adolescence is one of the life stages in which reproductive health becomes a significant concern. Identifying and addressing the unique needs of adolescents in the area of reproductive and sexual health is a crucial step for targeted planning and appropriate resource allocation. This study aims to investigate the educational needs related to reproductive and sexual health for Iranian adolescents. This review study searched reputable national and international databases using keywords such as "reproductive health, educational needs, sexual health, adolescents, Iranian," along with their English equivalents. After evaluating the articles, 53 studies conducted in Iran between 1996 and 2022 were included in the analysis. The study results were categorized into three main themes: adolescents' perspectives (28 studies), parents' perspectives (26 studies), and key informants' perspectives (18 studies). Eight articles appeared in all three categories, and three articles were common between parents and key informants. The adolescents' needs were extracted under the following themes: human growth and development, communication and interpersonal skills, values and attitudes, sexual behaviors, sexual health, and culture and society. The concept of reproductive and sexual health for adolescents in Iran remains highly challenging and is not well understood. The results indicate that educating adolescents on all aspects of reproductive and sexual health is essential. Policymakers should make efforts to provide reproductive health information and services that align with the religious and cultural values of society for adolescents.

**Keywords:** Reproductive Health, Sexual Health, Adolescents, Iranian, Educational Needs.

**How To Cite This Article:** Farzollahpour F, Salehin S, Maleki Mj. The Educational Needs Of Reproductive And Sexual Health For Iranian Adolescents: A Systematic Review. *Int J Drug Deliv Technol.* 2026;16(26s):130-140.

Doi: 10.25258/ijddt.16.26s.13

**Source of support:** Nil.

**Conflict of interest:** None

## INTRODUCTION

According to the definition of the World Health Organization, adolescence refers to the age group of 10 to 19 years (1). Adolescence is the transition period from childhood to adulthood and the time when reproductive capacity is acquired (2). This period is one of the most valuable and important phases of an individual's life, as it marks the beginning of physical, social, and psychological transformations (3). During this time, individuals acquire abilities and competencies that will be used throughout adulthood (4). The impact of adolescence on the subsequent years of life is significant (5). Adolescents are a vulnerable group within society because many physical, psychological, social problems, and unhealthy behaviors such as unsuccessful marriages, high-risk pregnancies, infertility, sexually transmitted infections (STIs),

HIV/AIDS, mortality, and improper habits have their roots in adolescence (6,7). Today, adolescent health is recognized as an independent and important issue worldwide (8). At both the international level, in recent population and development conferences, and nationally, there has been increasing emphasis on the reproductive and sexual health needs of adolescents (9). The type of attitudes, the breadth of knowledge, and behaviors acquired during adolescence have a significant impact on the healthy transition to sexual and reproductive maturity (10). In this context, health education should aim to raise awareness about puberty issues through three primary channels: public education, schools, and the family as the first social unit (11). According to the World Health Organization's recommendations, one of the national strategies for adolescent health education is to gather more information about adolescents in the Eastern Mediterranean region (including Iran), as there is a lack of data regarding their

reproductive health (12). Sexual education is a process that contributes to healthy sexual development and involves cognitive (knowledge), emotional (feelings, values, and attitudes), and behavioral (communication skills and decision-making) aspects (13). The information provided in sexual education programs helps adolescents protect themselves from emotional harm, unwanted pregnancies, STIs, and HIV/AIDS (14). In the absence of sexual education, young people turn to pornography, websites, and provocative television programs for sexual information (15). Research supports a comprehensive approach to sexual education, showing that such programs ultimately help reduce risky behaviors and increase self-control among adolescents and young adults (16). Many psychological problems, infectious diseases, unsuccessful marriages, and dangerous pregnancies stem from improper management of this phase in adolescents (17). Understanding the opinions and attitudes of adults regarding the sexual and reproductive health needs of adolescents is crucial for effectively addressing these needs (18). Studies indicate that most adolescents in our society face limitations in accessing reliable sexual health resources and have not received effective education in this regard. Additionally, there have been no specific training programs designed for them (19). Despite preventive programs against AIDS that target high-risk individuals, there is still no clear program for adolescents and students in Iran (20-22). Adolescents have unique needs compared to adults that must be identified and addressed (23). Research highlights various cultural, structural, and operational challenges in acquiring necessary information about reproductive and sexual health for adolescents and young adults (24). Our country, with a large population of adolescents, requires careful planning and attention to the health needs of this group (25). Since determining the precise nature of educational needs requires in-depth studies, the present study has been designed to address this issue.

### Materials and Methods

This study is a systematic review of articles related to the educational needs of reproductive and sexual health for Iranian adolescents. The presentation of the study follows the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. The results of this study are based on published studies by Iranian authors in both domestic and international journals. The scientific articles used in this study were retrieved from international

databases (Scopus, Google Scholar, PubMed, Science Direct) and national databases (SID, Magiran, IranMedex, Irandoc) by using advanced search strategies. Initially, articles were searched based on their titles, and later, keywords were used to refine the search. To narrow down the search, keywords and phrases such as "reproductive health," "sexual education," "educational needs," "high school students," "adolescents," and "sexual health" were used, along with their English equivalents for electronic databases. Additionally, the terms were combined using Boolean operators (AND, OR, NOT). For international databases, equivalent English terms were used with the MeSH (Medical Subject Headings) search strategy, including terms such as "Reproductive health," "Sex education," "Educational needs," "High school students," "Adolescents," and "Sexual health."

After the search was conducted, relevant English and Persian articles published between 1996 and early 2022 were collected using EndNote software. Irrelevant, duplicate, abstract-only, and review articles were removed based on eligibility criteria. The titles and abstracts of the articles were examined according to the inclusion and exclusion criteria. The inclusion criteria for this study included research articles by Iranian authors published in Persian or English, original research papers, full-text articles, and studies published from 1996 to early 2022, with a target population of Iranian adolescents. Exclusion criteria included articles with inaccessible full texts. The full texts of the articles were then reviewed to ensure their relevance. To identify additional relevant articles, references from the retrieved articles were also checked. To avoid bias, the database search was conducted independently by two researchers, and any disagreements between them were resolved through discussion with a third researcher.

For data extraction, two authors independently reviewed the acceptance of articles based on the study objectives, and articles that met the criteria were thoroughly examined. A summary of the articles, categorized by the perspectives of adolescents, parents, and key informants, is presented in **Tables 1-3**. The search, screening, and selection process for the included studies is illustrated in **Figure 1**. Out of 821 articles reviewed, 53 studies were found eligible for inclusion, consisting of 28 qualitative studies, 19 quantitative studies, 2 clinical trials, 1 quasi-experimental study, and 3 mixed-methods studies (quantitative-qualitative).

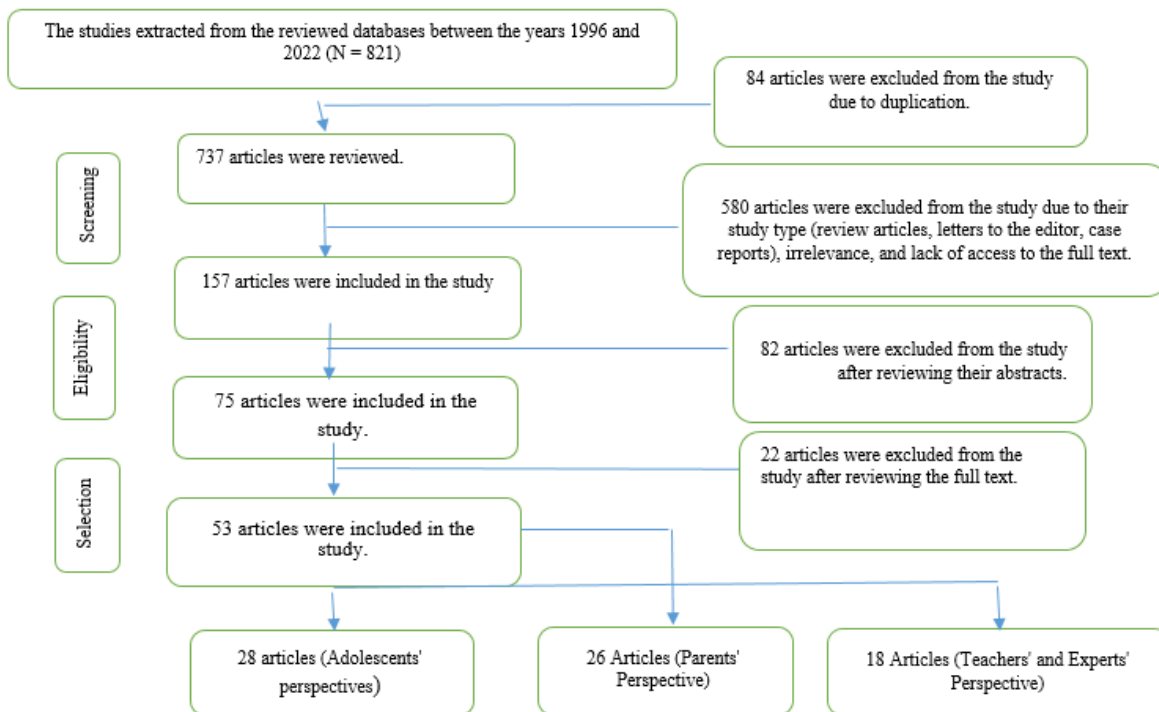


Figure 1 - Flowchart of the Article Selection and Inclusion Process in the Study Based on PRISMA Guidelines

Author/Year	Study Type	Sample Size &	Author/Year
<b>Broomandfar et al. (2001)</b>	Cross-sectional descriptive	396 male students, Isfahan	Educational needs during puberty included: physical and sexual changes, physical health, emotional changes, and mental health.
<b>Hadi et al. (2001)</b>	Cross-sectional	546 female students, Shiraz	Educational needs: awareness of the maximum permissible age for childbearing and sexually transmitted infections (STIs).
<b>Mohammadi et al. (2002)</b>	Descriptive-analytical	1385 boys aged 15–18, Khoy & Chaypareh	Educational needs: reproductive physiology, accurate information about condoms, STIs, and HIV/AIDS. Risk factors for sexual activity: lack of religiosity, absence of parents, father's death, poor communication with mother, access to satellite TV, smoking, and alcohol use.
<b>Azizi et al. (2002)</b>	Descriptive	360 students, Bushehr	Educational needs: awareness of contraceptive methods and STIs.
<b>Abdollahi et al. (2003)</b>	Descriptive	1746 individuals, Mazandaran	Educational needs: increasing parental literacy and improving psychological attitudes toward menstruation.
<b>Azizi et al. (2003)</b>	Qualitative	64 students, Shiraz	Main themes: educational outcomes included improved emotional relationships, women's quality of life, and

			family culture; educational need: organizing pre-marital counseling sessions.
<b>Zare et al. (2005)</b>	Field trial	370 cases & 370 controls, Semnan	Effective educational methods: family-based education, especially by mothers, and use of health intermediaries.
<b>Olfati et al. (2008)</b>	Cross-sectional	300 adolescent girls, Qazvin	Main theme: poor awareness of reproductive health among adolescent girls.
<b>Sistani et al. (2008)</b>	Qualitative	12 students, Tehran	Main themes: identifying health priorities of adolescent girls and determining educational priorities.
<b>Nikmanesh et al. (2008)</b>	Qualitative	20 students, Zahedan	Main themes: prevention of risky sexual behaviors via family functioning—warm parent-child relationships, persuasive control, and stable family structure.
<b>Kohestani et al. (2009)</b>	Qualitative	22 adolescents aged 15–19, Arak	Main themes: parental conflict, biological changes, financial needs, educational status, sexual issues, religious rulings.
<b>Simbar et al. (2009)</b>	Qualitative	67 girls aged 12–18 & 11 key individuals, Sari	Main themes: aligning education with needs and promoting public involvement. Educational needs: reproductive health, personal hygiene, life skills, and risky behavior prevention.
<b>Keramati et al. (2009)</b>	Quasi-experimental	192 girls aged 12–14, Mashhad	Puberty health education significantly improved knowledge, attitudes, and general health of adolescent girls.
<b>Malek et al. (2010)</b>	Descriptive	2600 students, Tabriz, Urmia, Ardabil	Ranking of information sources on reproductive and sexual health: peers, media, books, school, doctors, religious figures, counseling centers, and family.
<b>Javadnoori et al. (2011)</b>	Qualitative	Girls aged 14–18, Ahvaz & Mashhad	Justifications for sexual health education: misinformation, cultural transitions, rising adolescent issues, and supportive religious views.
<b>Khalajabadi Farahani et al. (2011)</b>	Mixed-method (Quantitative-Qualitative)	1378 girls, Tehran	Main themes: parental income and education (especially mothers), family support, and modernity impact adolescent interactions with the opposite sex.
<b>Kazemi et al. (2012)</b>	Mixed-method (Quantitative-Qualitative)	400 students, Tehran	Findings: significant correlation between family income, parental education, and awareness of puberty health.
<b>Simbar et al. (2012)</b>	Qualitative	67 girls aged 12–19, Mazandaran	Family is a crucial determinant of adolescent social health. Challenges: weak emotional communication, need for family support and supervision.
<b>Simbar et al. (2012)</b>	Qualitative	67 girls aged 12–18 & 11 key informants, Sari	Main findings: need for public and specialized services, removal of service barriers, and effective management.

<b>Pazhoohide et al. (2012)</b>	Cross-sectional descriptive	810 girls aged 11–14, Dezful	Common sources of information: mothers, peers, and sisters.
<b>Babazadeh et al. (2012)</b>	Qualitative	247 girls & 71 adults, Tehran, Mashhad, Shahrud, Qom	Reasons for reproductive and sexual health education: lack of knowledge, unreliable sources, social changes, risky behaviors, religious emphasis, and cultural taboos.
<b>Javadnoori et al. (2015)</b>	Cross-sectional	363 girls, Ahvaz & Mashhad	Main theme: authoritarian parental communication styles on sexual topics.
<b>Shariati et al. (2016)</b>	Qualitative	247 girls & 14 adults, Shahrud & Mashhad	Characteristics of adolescent-friendly reproductive health services: staff, environment, management, and motivational factors.
<b>Yazdani Charati et al. (2016)</b>	Descriptive	655 female students, Mazandaran	Focus: enhancing communication between mothers and daughters, addressing communication barriers.
<b>Shakour et al. (2016)</b>	Qualitative	Focus groups (7 & 10 girls; 10 boys), Isfahan	Needs of adolescent boys: awareness of physical changes, puberty health, and signs of full puberty.
<b>Babazadeh et al. (2017)</b>	Qualitative	247 girls & 71 adults, Tehran, Mashhad, Shahrud, Qom	Main themes: barriers in sexual health education—political, cultural, structural, and religious underutilization.
<b>Pourabbasi et al. (2018)</b>	Qualitative	20 girls aged 12, Ahvaz	Girls' perspectives: trusted individuals and sources; maternal concerns: awareness of daughters' sources and worries.
<b>Bostani Khalesi et al. (2021)</b>	Analytical cross-sectional	352 boys, Rasht	Main finding: the sexual dimension was the most critical among adolescents' health needs.

**Table 2. Educational Needs of Iranian Adolescents Regarding Reproductive and Sexual Health from the Perspective of Parents**

<b>Author(s) / Year</b>	<b>Study Type</b>	<b>Sample / Location</b>	<b>Main Findings / Educational Needs</b>
<b>Azizi et al. (2003) (33)</b>	Qualitative	48 parents / Bushehr	Puberty health (physical changes, reducing fear, avoiding misinformation), AIDS, marriage-related issues
<b>Azizzadeh et al. (2007) (83)</b>	Descriptive	554 participants (275 couples) / Kerman	Educating the opposite sex, teaching respect for adolescent rights, sexual education
<b>Sistani et al. (2008) (61)</b>	Qualitative	12 parents, 12 students, 7 teachers / Tehran	Lack of comprehensive understanding of sexual health education in schools
<b>Simbar et al. (2009) (47)</b>	Qualitative	11 key informants / Sari	Needs-based education, community participation, reproductive health, life skills, risk behavior prevention
<b>Bahri et al. (2010) (60)</b>	Cross-sectional, Analytical	324 fathers / Gonabad	Inadequate awareness among fathers
<b>Jalali Aria et al. (2010) (38)</b>	Descriptive	400 parents (200 couples) / Gorgan	Ideal time for education: at marriage and early high school; preferred method: access to midwife at school

<b>Javadnoori et al. (2011) (29)</b>	Qualitative	Parents of girls aged 14–18 / Ahvaz, Mashhad	Lack of proper sexual knowledge, cultural and social transitions, increased sexual health issues, supportive religious perspective
<b>Simbar et al. (2012) (46)</b>	Qualitative	11 key informants / Sari	Public and specialized services, facilitators/barriers, proper service management
<b>Babazadeh et al. (2012) (30)</b>	Qualitative	26 mothers / Tehran, Mashhad, Shahroud, Qom	Barriers to sexual health education: political, socio-cultural (taboos), structural (health system), underused religious capacity
<b>Shariati et al. (2012) (72)</b>	Qualitative	14 adults / Shahroud, Mashhad	Characteristics of youth-friendly reproductive services: staff, environment, management, motivation
<b>Javadnoori et al. (2013) (90)</b>	Qualitative	Mothers, teachers, officials / Ahvaz, Mashhad	Challenges: taboos, denial of premarital sex, shame, lack of discourse, cultural resistance, legal gaps, religious ambiguity
<b>Ghana et al. (2013) (84)</b>	Qualitative	24 mothers of adolescents aged 6–18 / Gorgan	Maternal role in puberty prep, menstruation education, religious guidance, indirect sexual education
<b>Mokari et al. (2013) (85)</b>	Descriptive Cross-sectional	400 individuals / Tehran	Parents believe RH education improves adolescent health; ideal time: marriage; preferred source: school and parents
<b>Mazaheri (2014) (86)</b>	Descriptive, Survey	420 participants / Rey	Needs: behavioral problems, academic and occupational issues, sexual education and marriage, physical health and nutrition of children
<b>Haji Kazemi et al. (2014) (34)</b>	Descriptive, Cross-sectional	400 parents / Tehran	Parents unprepared to educate children about reproductive health; restrict other sources from discussing these topics
<b>Vaghari Zamhariri et al. (2015) (87)</b>	Quantitative	247 parents / Mashhad	Positive attitudes towards sexual education beliefs among parents with bachelor's degree or higher
<b>Shariati et al. (2016) (35)</b>	Qualitative	Mothers of girls aged 11–15 / Shahroud, Mashhad	Themes: information provision, emotional support, supervision, establishing close relationships
<b>Tabibi et al. (2016) (59)</b>	Qualitative	13 mothers of girls aged 11–18 / Mashhad	Themes: puberty and menstruation education, sexual relationship education, suitable age and educator for sexual topics
<b>Babazadeh et al. (2017) (31)</b>	Qualitative	247 girls and 71 adults / Tehran, Mashhad, Shahroud, Qom	Barriers and challenges: political, cultural and social taboos, structural and implementation problems, underutilization of religion
<b>Shams et al. (2017) (63)</b>	Field trial	140 mothers / Mahshahr	Significant differences in mothers' awareness and attitude scores
<b>Pour Abbasi et al. (2018) (45)</b>	Qualitative	20 mothers / Ahvaz	Main theme: mothers' concerns about sources of their children's sexual information and awareness of children's concerns
<b>Memari et al. (2018) (88)</b>	Qualitative	8 participants / Qom	Main theme: formation of sexual health within inefficient socio-cultural structures and weak parental and adolescent sexual health education programs

<b>Torbati et al. (2019) (36)</b>	Qualitative	Parents of adolescents aged 13–15 / Tehran	Themes: religious awareness, parents' understanding of sexual issues and their physical and psychological effects, appropriate parental behavior, communication skills, school-based sexual education, parental training, socialization and transmission of sexual norms and values, school supervision and collaboration with parents. Challenges categorized as familial, educational/extrafamilial, and social factors.
<b>Tahmasbzadeh Sheikhlari et al. (2020) (71)</b>	Mixed (Qualitative & Quantitative)	20 participants / Khoy and Chaipareh	Sexual education strategies: overcoming cultural barriers, socio-cultural considerations, capacity building in education system and parents, organized teaching principles and methods
<b>Tahmasbzadeh Sheikhlari et al. (2021) (37)</b>	Qualitative	20 participants / Tabriz	Main themes: causal factors, intervening conditions, contextual factors, strategies, and outcomes reflecting the adolescent sexual education process model

**Table 3. Educational Needs of Iranian Adolescents Regarding Reproductive and Sexual Health from the Perspective of Teachers**

<b>Author(s) / Year</b>	<b>Study Type</b>	<b>Sample / Location</b>	<b>Main Findings / Educational Needs</b>
<b>Azizi et al. (2003) (33)</b>	Qualitative	50 teachers / Bushehr	Needs: Puberty health (physical changes, fear reduction, and avoiding misinformation), AIDS, and marriage-related issues
<b>Farahani (2004) (91)</b>	Descriptive	780 parents and educators / 9 districts of Tehran	Needs: Managing sexual urges, puberty-related hygiene, peer influence on sexual morality, awareness of sexual diseases
<b>Sistani et al. (2008) (61)</b>	Qualitative	7 teachers / Tehran	Prioritization of girls' reproductive health education needs, identifying key areas of concern, and setting health education priorities
<b>Jalali Aria et al. (2010) (38)</b>	Descriptive	50 teachers / Gorgan	Ideal timing for education: fertilization and pregnancy in 3rd grade of high school, family planning during marriage, STDs and AIDS in pre-university year
<b>Abolghasemi et al. (2010) (70)</b>	Qualitative	Health educators / Tehran	Challenges: weak teacher competence, policies, limited educational resources, cultural barriers; Needs: cultural shift, clear guidelines, enhanced educator skills
<b>Javadnoori et al. (2011) (29)</b>	Qualitative	Female teachers (students aged 14–18) / Ahvaz, Mashhad	Necessity of education due to lack of knowledge and correct attitudes, misinformation, social-cultural changes, increased adolescent sexual health risks, religious support
<b>Simbar et al. (2012) (26)</b>	Qualitative	11 key informants / Mazandaran	Main theme: Family as key to adolescent social health; Need for emotional support, responsible and aware parenting, supervised freedom
<b>Simbar et al. (2012) (46)</b>	Qualitative	11 key informants / Sari	Themes: Public and specialized services, facilitating factors, removing barriers, effective management of sexual health services
<b>Babazadeh et al. (2012) (30)</b>	Qualitative	71 adults / Tehran, Mashhad, Shahroud, Qom	Barriers to reproductive and sexual health education: political, cultural, structural challenges, underutilized religious capacity
<b>olfati et al. (2012) (89)</b>	Qualitative	12 teachers / Qazvin	Needs: Menstrual health, STDs, sexual topics, life skills; Teachers opposed premarital sex but stressed need to address the issue educationally
<b>Kamalikhah et al. (2014) (39)</b>	Qualitative	61 teachers / Zahedan	Educational barriers: parental resistance and cultural biases

<b>Asadi Malekabadi et al. (2015) (40)</b>	Descriptive-Applied	70 participants (26 instructors, 44 principals) / Kuhdasht	Training priorities: life skills, sexual safety education (for boys and girls), common infectious diseases in youth
<b>Karami et al. (2015) (41)</b>	Descriptive	University faculty, health teachers, principals / Tehran	Need for sexual health education across all societal groups
<b>Shariati et al. (2016) (35)</b>	Qualitative	14 adults / Shahroud, Mashhad	Features of youth-friendly reproductive health services: staffing, physical setting, management, and motivational factors
<b>Babazadeh et al. (2017) (31)</b>	Qualitative	71 adults / Tehran, Mashhad, Shahroud, Qom	Reiteration of systemic, cultural, and political challenges in implementing reproductive and sexual health education
<b>Tahmasbzadeh Sheikhlar et al. (2020) (71)</b>	Mixed Methods (Qual + Quant)	20 qualitative, 345 quantitative participants / Khoy & Chaypareh	Themes: Overcoming cultural barriers, socio-cultural considerations, capacity building in education system and families
<b>Abbasi et al. (2021) (42)</b>	Qualitative	13 experts / Tehran	Challenges: Inadequate curriculum coverage of sexual education in elementary school; Needs: body awareness, identity formation, safety; Empowerment through formal/informal education

In this research, to evaluate the quality of the studies, the quality of reporting in the 19 quantitative studies was assessed using the STROBE checklist. In case of ambiguity regarding compliance with the STROBE statement, the article was re-examined to ensure an accurate understanding of the report for critique. For each item, a score of 1 was assigned if adequately mentioned, and a score of 0 was given if not. Subsequently, the scoring was reviewed by another researcher, and complete agreement was reached. Additionally, the validity of the 2 clinical trials was assessed using the Jadad scale. If the corresponding item was appropriately reported, a score of 1 was assigned, and a score of 0 was given otherwise. The validity of the 28 qualitative studies was assessed based on the SRQR (Standards for Reporting Qualitative Research) checklist.

**Results and Discussion**

In the initial search, 821 articles were found. After removing 84 duplicate articles, 580 articles were excluded based on their titles. Ultimately, 53 full-text articles that were entirely relevant to the topic were selected. The findings from the existing studies in this field can be categorized into three main themes: adolescents' perspectives (28 studies), parents' perspectives (26 studies), and specialists and teachers' perspectives (18 studies), as shown in **Tables 1-3**. Additionally, 8 studies appeared in all three groups, and 3 studies were shared between parents and specialists (teachers, senior school trainers, health education specialists, psychologists, sociologists, reproductive health experts, etc.), resulting in a total of 11 shared studies.

The educational needs of adolescents were summarized under the following concepts:

**-Human Growth and Development:** Understanding the anatomy and physiology of the reproductive system, puberty, changes during puberty, issues during puberty, puberty health, reproduction, and sexual identity.

**-Communication and Interpersonal Skills:** How to communicate with family members, friends, resilience, marriage, and acquiring life skills.

**-Values and Attitudes:** Learning about the correct values of life, the skill of saying no, and the need to seek help and express it when necessary.

**-Sexual Behaviors:** Sexual desires and instincts, sexual self-control, and sexual disorders.

**-Sexual Health:** Reproductive health, pregnancy prevention, teenage pregnancies and their complications, abortion and its consequences, sexually transmitted infections, AIDS, sexual violence, and abuse.

**-Culture and Society:** Religion and sexual issues, mass media, and social media.

This study aimed to determine the educational needs of Iranian adolescents regarding reproductive and sexual health. Based on the extracted details from the studies, it can be stated that the family is one of the main pillars of adolescent health needs. Educating families based on the needs and characteristics of adolescence can be a highly effective approach to solving adolescent problems (26). Family dynamics, such as warmth and acceptance in parent-adolescent relationships, parental control, and family structure, are crucial in preventing risky sexual behaviors in adolescents (27). Given the pivotal role of mothers and fathers as the primary source of information transfer to their sons and daughters, educating families through health educators is the most suggested solution (28).

Despite abundant information available, adolescents still have numerous uncertainties and questions regarding puberty, its causes, physical and mental changes, and ways to solve physical, psychological, and social problems. They acknowledge their need for precise information on these topics (29). Based on the prioritization of adolescents' educational needs, health topics such as menstruation, reproductive physiology, nutrition, and adolescent exercise should be addressed between the ages of 10-14, while sexual health aspects like family planning, marriage counseling, fertilization, sexually transmitted diseases, female cancers, and infertility should be covered for those aged 14-19 (30).

In one study, adolescents raised the need for appropriate educational content and suitable teaching methods (31). In another study, most mothers were found to adopt an authoritarian style when discussing sexual issues with their adolescents (32).

Cultural biases and a lack of acceptance from parents were cited as significant barriers to effective education (33). Kohistani and colleagues identified the lack of sufficient and scientific knowledge among parents as the reason for the lack of questions regarding puberty from boys to their parents (34). In most studies on reproductive and sexual health education, sexual education was prioritized. In one study, youth identified sexual education as essential (35), emphasizing that the knowledge and attitudes of parents significantly influence their children's perception, thus fostering positive views in children (36).

Girls obtained most of their reproductive health information from peers, relatives, and satellite TV, which aligns with the findings of Forouzi (36) and Kamali Khah (33) (37). Studies in developing countries emphasize that reproductive and sexual health information is rarely provided by teachers or health professionals, and parents are not the primary source of such information. Instead, friends and mass media are the most significant sources, which can lead to harmful consequences (38-39).

Today, Muslims' reluctance to discuss sexual matters with their children is primarily due to cultural upbringing rather than religious teachings. Islam views human sexual behavior as a divine gift and emphasizes parents' role in providing sexual education to their children (40-41). In Iran, students' primary source of sexual information is friends, while family ranks sixth (42). In the contemporary world, adolescents are highly vulnerable, as they are exposed to various forms of media that stimulate sexual activity, yet lack accurate information about reproduction and sexual health (43).

The most common challenges adolescent girls face in accessing reproductive and sexual health information and services are cultural and social issues, with social stigma being a prominent barrier (44). In one study, four main concepts were emphasized: education on puberty and menstruation, education on sexual relationships, the appropriate age for sexual education, and the ideal person for teaching sexual matters (45). A study highlighted that fathers lack adequate knowledge about puberty and specific issues boys face, which could jeopardize their future (46).

Educational priorities for mothers in Javad Noori's study included physical and sexual health, parental behavior with adolescents, psychological changes during puberty, understanding puberty physiology, and the reproductive system (47). Vihra and Fernandez's research highlighted parents' difficulties in providing sexual education and their requests for schools to address these issues (48). In Iran, open discussions on sexual topics are taboo, leading to adolescents' lack of necessary knowledge and decision-making skills in this area (49-51).

Sexual education for adolescents is a critical and sensitive aspect of their learning. It involves awareness of human body physiology and anatomy, reproduction, sexual acts, prevention of sexual disorders and unintended pregnancies, and related topics (52). According to the World Health Organization, sexual education programs are necessary both for those who have started sexual activity and for those who have not (53).

Among the limitations of this study were the inability to access the full text of some articles and unpublished reports. The review was also limited to articles written in Persian or English, and the assessment of mixed-method studies posed additional limitations. However, the strength of this study lies in the inclusion of articles from the perspectives of adolescents and key informants, providing a comprehensive view of adolescents' challenges and needs. Another strength

was the wide geographical distribution of the studies, covering various regions and ethnic groups of the country.

### Conclusion

The results indicated that due to low awareness and skills, coupled with significant cultural changes, educating adolescents on all aspects of reproductive and sexual health is essential. Therefore, designing and implementing reproductive health education protocols and sexual education for adolescents is crucial. It is recommended that educational content be prioritized and tailored based on the current and real needs of adolescents and their parents, derived from educational assessments, to effectively address their issues. It is also essential for policymakers to develop and implement appropriate strategies in line with Iran's cultural and religious context.

**Acknowledgments:** We express our gratitude to Khalkhal School of Medical Sciences and Shahroud University of Medical Sciences and for their spiritual support in the preparation of this article.

### References

1. Arsanjani Shirazi A, Javadifar N, Javadnoori M, Haghighi Zadeh M. A study of health-related quality of life among female high schools adolescents in Ahvaz in 2014. *J Rafsanjan Univ Med Sci*. 2015;14(8):643-54. [In Persian]
2. Susan G. Puberty gone wild. *Soc Sci Public*. 2009;3(11):4-8.
3. Klein JD, Wilson KM. Delivering quality care: adolescents' discussion of health risks with their providers. *J Adolesc Health*. 2002;30:190-5.
4. Hatami H, Razavi SM, Eftekhari AH, Majlesi F, Sayed Nozadi M, Parizadeh SM. Text book of public health. Tehran, Iran: Arjmand Publications; 2006. [In Persian]
5. Ministry of Health and Medical Education. [Healthy young]. Tehran: Family Health Press; 2006. [In Persian]
6. Koff E, Rierdan J. Preparing girls for menstruation: recommendations from adolescent girls. *Adolescence*. 1995;30(120):795-811.
7. Laible DJ, Watson MW, Koff E. Continuity of styles in the drawings of adolescent girls. *New Dir Child Adolesc Dev*. 2000;(90):65-80.
8. Afshari P, Pazhoohide Z, Yazdizade H, Mohamadi S, Tabesh H. Assessing educational needs of 11-14-year-old girls about sexual health. *J Nurs*. 2014;26(7):1-9. [In Persian]
9. UNFPA O. Reproductive rights are human rights: a handbook for national human rights institutions. Copenhagen: The Danish Institute for Human Rights; 2014. Accessed 2020 Feb 29.
10. Villareal M. Adolescent fertility: socio-cultural issues and programme implications. *South Asia Conference on the Adolescent*; 1998.
11. Baharishargh R, Aminshokravi F, Anoshe M, Goudarzi A. Assessing educational needs of female blind students in Tehran. *J Marital Sci*. 2016;3(4):257-63. [In Persian]
12. Anndenise B, Shireen J, Iqbal S, Kathryn M. Sexual relations among young people in developing countries: evidence from WHO case studies. Geneva: WHO; 2001.
13. Islam Awareness. Sex education [Internet]. Available from: <http://www.islamawareness.net/sex/ducation.htm>
14. UNESCO. International technical guidance on sexuality education. Paris: UNESCO; 2009.
15. Refaei Shirpak K, Eftekhari Ardebili H, Mohammad K, Maticka-Tyndale E, Chinichian M, Ramezankhani A, et al. Developing and testing a sex education program for the female clients of health centers in Iran. *Sex Educ*. 2007;7(4):333-49.

16. SIECUS. Guidelines for comprehensive sexuality education: kindergarten–12th grade. 3rd ed. Fulton Press; 2004.
17. Ahunbar S, Mohammadian F. Effectiveness of education on girl students' awareness of puberty in secondary schools of the city of Ilam. *Sci J Ilam Cult*. 2017;17(52-53):51-62. [In Persian]
18. Avusabo-Asare K, Bankole A, Kumi-Kyereme A. Views of adults on adolescent sexual and reproductive health: qualitative evidence from Ghana. New York: Guttmacher Institute; 2008.
19. Razaghi R, Borjali A, Sohrabi F, Delavar A. Sexual health challenges of out of home adolescents. 2013;13(48):73-92. [In Persian]
20. Abolghasemi N, Merghatikhoei E, Taghdissi H. Teachers' perceptions of sex education of primary school children. *J Sch Public Health Inst Public Health Res*. 2010;8(2):27-39. [In Persian]
21. Faghihi AN, Shokoochi-Yekta M, Parand A. Sexual education of children and adolescents based on Islamic view and psychological studies. *J Islamic Educ*. 2009;3(7):51-80. [In Persian]
22. Sobhaninezhad M, Homaei R, Eliein R. Analytical study of sexual training style of families in Tehran province. *Couns Res Dev*. 2007;6(21):27-48.
23. Alimoradi Z, Simbar M. Puberty health education for Iranian adolescent girls: challenges and priorities to design school-based interventions for mothers and daughters. *Payesh*. 2014;13(5):621-36. [In Persian]
24. Hamedani Z, Ahmadi G. Investigating knowledge and attitude of Karaj students in the field of reproductive health and its related factors in 2021. *Toloo-E-Behdasht*. 2022;20(6):85-99. [In Persian]
25. International Conference on Population and Development. Programme of action of the international conference on population and development. New York: UNFPA; 1994.
26. Shahhosseini Z, Simbar M, Ramezankhani A. Female adolescents' health needs: the role of family. *Payesh*. 2012;11(3):351-9. [In Persian]
27. Nikmanesh Z, Khosravi Z, Kazemi Y. Examining the role of family structure and function in adolescents' sexual behavior. *J Educ Psychol Stud*. 2009;5(8):89-111. [In Persian]
28. Shakour M, Yamani N, Ehsanpou S, Alizadeh S. Reproductive health needs assessment of girl and boy teenagers. *Armaghanj*. 2016;21(8):816-29. [In Persian]
29. Tehrani Moghadam M, Pour Abbasi A. Assessing the concerns of adolescent girls regarding puberty issues and checking their alignment with the concerns of their mothers. *Med Cultiv*. 2017;27:52-61. [In Persian]
30. Shahhosseini Z, Simbar M, Ramezankhani A. Female adolescents' reproductive health needs: a qualitative study. *Payesh*. 2012;11(6):815-22. [In Persian]
31. Shahhosseini Z, Simbar M, Ramezankhani A. Female adolescents health-information needs: a qualitative study. *J Mazandaran Univ Med Sci*. 2011;20(80):82-5. [In Persian]
32. Javadnoori M, Torki Harchegani M, Shiralinia K. The relationship between parenting style and mother-daughter communication. *Int J Bioassays*. 2015;4(11):4479-82. [In Persian]
33. Khamalikhah T, Rahmati Najarkolaei F, Karimi. Barriers of reproductive health education in schools. *Zahedan J Res Med Sci*. 2012;14(2):71-5. [In Persian]
34. Koohestani HR, Roozbahani N, Baghcheghi N. Adolescent boys' lived experience of puberty: a qualitative study. *Iran J Nurs*. 2009;22(57):53. [In Persian]
35. Noohi S, Shafii Kandjani A, Tajik A. Knowledge and beliefs of couples attending marriage counseling centers toward correct sexual relationships. *Hayat*. 2007;13(3):77-83. [In Persian]
36. Foroozi Aziz-Zadeh M, Mohammad Alizadeh S. Kirmani parental attitudes toward sex education. *J Sadoghie Yazd Univ Med Sci Health Serv*. 2007;15(2):93-9. [In Persian]
37. Afshary P, Pazhohideh SZ, Yazdizadeh H, Mohammadi S, Tabesh H. Survey educational needs of 11-14 years old girls about sexual health. *J Holist Nurs Midwifery* [Internet]. 2016;25(79):1-9. [In Persian]
38. Lincoln YS, Guba EG. Competing paradigms in qualitative research. In: Lincoln Nday, editor. *Research*. Thousand Oaks, CA: Sage; 1994. p.105-17.
39. Langille DB, Hughes J, Murphy GT, Rigby JA. Contraception among young women attending high school in rural Nova Scotia. *Can J Public Health*. 2002;93(6):461-4.
40. Orgocka A. Perceptions of communication and education about sexuality among Muslim immigrant girls in the US. *Sex Educ*. 2004;4(3):255-71.
41. Zare M, Malek Afzali H, Jandaghi J, Allameh MR. Study of educational needs of 12-14 years old girls about adolescent health and determines appropriate and effective strategies for adolescent health education. *Koomesh*. 2000;1(2):39-47. [In Persian]
42. Malek A, Abbasi Shokoochi H, Faghihi A, Bina M, Shafiee-Kandjani A. A study on the sources of sexual knowledge acquisition among high school students in northwest of Iran. *Arch Iran Med*. 2010;13(6):537-42. [In Persian]
43. Utomo D. Adolescent reproductive health in Indonesia: status, policies, programs and issues. *Policy Report*; 2003.
44. Roy S, Rangari K. Comprehensive health care including sexual and reproductive health of adolescents and youths is of vital importance to the nation. *Health Popul Perspect Issues*. 2007;30(4):243-67.
45. Abedini E, Tabibi Z, Ziaee P, Zarezade Kheibari S. A qualitative study on mothers' experiences from sex education to female adolescents underlining cultural factors. *J Fundam Ment Health*. 2016;18(4):202-11. [In Persian]
46. Sajjadi M, Moshki M, Abasnezhad A, Bahri N. Educational needs of fathers about boys puberty period and its related factors. *Zahedan J Res Med Sci*. 2012;14(2):66-70. [In Persian]
47. 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. [In Persian]
48. Vieira I, Fernandes O, Vieira RX. Evaluation of parents as partners in sex education. *Sexologies*. 2008;17:16.
49. Kirby DB, Laris B, Rolleri LA. Sex and HIV education programs: their impact on sexual behaviors of young people throughout the world. *J Adolesc Health*. 2007;40(3):206-11.
50. Ozer EM, Adams SH, Lustig JL, Millstein SG, Camfield K, El-Diwany S, et al. Can it be done? Implementing adolescent clinical preventive services. *Health Serv Res*. 2001;36(6 Pt 2):150-65.
51. Eggleston E, Jackson J, Rountree W, Pan Z. Evaluation of a sexuality education program for young adolescents

- in Jamaica. *Rev Panam Salud Publica*. 2000;7(2):102-12.
52. SIECUS. Fact sheet [Internet]. Available from: <https://www.siecus.org/pubs/fact/factoot.htm/>
53. Family Health International. Network. 1997 [Internet]. Available from: <https://www.fhi.org/en/Rh/Pubs/Network/V17-3/nt1734.htm>