

Reproductive and sexual health challenges in Iranian adolescents: a qualitative study

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Abstract

Introduction:

Adolescents are considered one of the main pillars of every society and at the same time a vulnerable group that faces unique reproductive health challenges. Adolescent reproductive health is one of the world's health priorities. This study was designed with the aim of explaining the challenges of reproductive and sexual health of adolescents and discovering the deep points of view of parents and experts in this field.

Materials and methods

The current research is a qualitative descriptive study with a conventional content analysis approach. Data were collected through in-depth semi-structured interviews with 14 mothers of adolescents aged 12 to 18 and 34 key adults specializing in various fields of reproductive and sexual health. All interviews were recorded and analyzed and data analysis was done using MAXQDA version 20 software.

Findings:

In this study, participants' perceptions of reproductive and sexual health challenges of adolescents included 12 subthemes and 29 categories. The profiles included individual challenges of current generation teenagers, political, religious, economic, school and education, mental health, virtual space, puberty and its changes, smoking and alcohol consumption, risky sexual behaviors, Ministry of Health and family and parents.

Conclusion

The state of reproductive and sexual health of adolescents is considered an important and serious challenge in the country, and unfortunately, providing information and services to this age group has been neglected due to cultural barriers in the society. Therefore, it is necessary for policy makers and decision makers to plan and make policies at the macro level and to improve the health of this age group with the cooperation and interaction of relevant bodies, adopt and implement appropriate strategies in the cultural and religious field of Iran.

Introduction

Adolescence is one of the most critical developmental stages of life, characterized by rapid physical, psychological, and social changes that shape decision-making patterns, social interactions, and long-term health trajectories (1–3). The World Health Organization defines adolescence as the period between 10 and 19 years of age (3). Globally, adolescents constitute nearly one-fifth of the world's

population, with approximately 85% residing in developing countries (4). In Iran, according to the 2015 national census, nearly 13 million individuals were aged 10–19 years (5). Given this substantial demographic proportion, adolescent health is considered a key development indicator and a public health priority (6). International health agendas emphasize reducing adolescent mortality, sexually transmitted infections, obesity, unintentional injuries, violence, substance use, depression, unintended pregnancy, suicide, and tobacco consumption, while promoting physical activity and safe sexual practices (7). Adolescents are simultaneously recognized as a vital social asset and a vulnerable population group facing multiple health risks. Rapid social changes, evolving lifestyles, and technological expansion have altered adolescents' exposure to risk factors and reshaped health-related behaviors (8). Major concerns during this period include road traffic injuries, unsafe sexual behaviors, substance use, mental health disorders, suicide attempts, and unemployment, all of which may have long-term consequences extending into adulthood (9).

In addition, earlier puberty, delayed marriage, epidemiological transitions, increased access to digital media, and shifting cultural norms have created new contexts in which adolescents navigate their sexual and reproductive development (10). Evidence suggests that high-risk behaviors—including smoking, alcohol consumption, drug use, and unsafe sexual activity—may begin at early ages (11–12). Emerging patterns of interpersonal relationships, including cross-gender friendships, multiple concurrent relationships, and virtual interactions, reflect broader sociocultural transitions that may influence adolescent sexual behaviors (13). These changes highlight the need for context-sensitive approaches to adolescent reproductive and sexual health.

Despite global policy efforts, substantial gaps remain in addressing adolescent reproductive and sexual health, particularly in low- and middle-income countries (14). In Iran, access to accurate reproductive health information among adolescents remains limited, often due to sociocultural sensitivities. Consequently, many adolescents rely on informal or unreliable sources of information, potentially increasing vulnerability to adverse physical and psychological outcomes (15). The World Health Organization emphasizes that educating adolescents and their families and sensitizing policymakers to adolescents' psychological, social, and health needs are fundamental components of national health strategies (16). Sexuality constitutes an important dimension of social life, and age-appropriate sexual knowledge and skills play a significant role in promoting individual and societal well-being (17). However, evidence indicates that Iranian adolescents' knowledge regarding reproductive and sexual health and sexually transmitted infections remains limited, and misconceptions about the consequences of unsafe sexual practices persist (18). Achieving sexual health requires the integration of psychological, physical, social, cultural, educational, economic, and spiritual dimensions (19–20).

In the Iranian health system, reproductive and sexual health services are predominantly designed for married women and do not adequately address adolescents' specific needs (22). In addition, the absence of comprehensive written policies and divergent perspectives among institutional stakeholders have contributed to inconsistencies in service provision and policy direction (17, 21). Neglecting adolescents' reproductive and sexual health needs may adversely affect their current and future well-being (23).

Strengthening adolescents' sexual and reproductive health literacy can enhance risk perception, promote safer behaviors, reduce unintended pregnancies and sexually transmitted infections, and ultimately contribute to improved family and societal health outcomes (24–26). Given that adolescent and youth health is a key indicator of national development, and considering the substantial proportion of young people in Iran, the development of evidence-informed reproductive health programs aligned with the country's sociocultural and religious context is essential. Rapid sociocultural transitions and expanding media exposure further emphasize the need for context-sensitive and sustainable policy responses (27).

Although prior studies in Iran have primarily focused on the prevalence of high-risk behaviors or levels of adolescent knowledge, limited research has systematically examined how sociocultural and religious contexts shape reproductive and sexual health policies and service delivery for adolescents. In particular, the perspectives of key experts and stakeholders in health, education, and social policy have not been comprehensively explored. Accordingly, the present qualitative study aimed to explore expert perspectives on the sociocultural and religious determinants influencing adolescent reproductive and sexual health in Iran and to develop contextually grounded policy recommendations consistent with the country's cultural and social framework.

Methods

This qualitative descriptive study with a conventional content analysis approach was conducted between October 2023 and February 2024 (Mehr to Bahman 1402) to examine the sexual and reproductive health challenges of adolescents from the perspective of mothers of adolescents aged 12 to 18 residing in Khalkhal County and experts in related fields from various regions of Iran. Experts included reproductive health specialists, social medicine professionals, health educators, psychiatrists, psychologists, sociologists, clergy, public health scientists, senior managers, school counselors, and adolescent specialists affiliated with medical universities.

Mothers of adolescents were selected from comprehensive health service centers in Khalkhal County using the SIB system (Integrated Health Information System of Iran), which manages individuals' preventive and health services. Key experts were identified through purposeful sampling based on experience and expertise in adolescent sexual and reproductive health and were contacted via telephone or email. Interviews were mainly conducted in the participants' offices or by phone. To increase sample diversity, characteristics such as age, socio-economic status, and geographic location were considered, and sampling continued until data saturation was reached.

Inclusion criteria for mothers: having an adolescent child aged 12 to 18 in Khalkhal County, being Iranian, not having mental or physical disabilities, willingness to participate, and providing written consent.

Inclusion criteria for experts: experience in providing educational, counseling, or therapeutic services to adolescents, current employment in a related field, and willingness to participate.

Exclusion criterion: inability to communicate in Persian.

Data were collected through in-depth and semi-structured individual interviews. The semi-structured interview guide for this study was designed and validated through a systematic multi-step process. In the first stage, to identify conceptual dimensions related to adolescent sexual and reproductive health, a comprehensive review of scientific resources, research articles, and policy documents was conducted. Based on identified gaps and study objectives, an initial framework of questions was prepared. Then, the questions were designed to be open-ended, exploratory, and indirect so that participants could freely express their experiences, perceptions, and viewpoints. The sequence of questions was organized from general topics to more specific issues to maintain the natural and gradual flow of the interview. For each main question, probing questions (such as “How?”, “Why?”, and “Please explain further”) were included to deepen data collection if necessary.

In the next stage, the initial draft of the interview guide was provided to several experts in related fields and qualitative research for content validity assessment. They reviewed the questions in terms of clarity, alignment with research objectives, comprehensiveness, logical order, and potential bias. Based on the feedback received, some expressions were rewritten for clarity, the order of some questions was changed to improve the flow of conversation, and additional questions were added to better cover the cultural and social dimensions of the topic.

To assess the feasibility and comprehensibility of the questions, prior to the main study, the interview guide was pre-tested through several pilot interviews with individuals similar to the main sample. Pilot interviews were recorded, transcribed, and analyzed preliminarily to examine the clarity of questions, interview duration, cultural sensitivity, and the effectiveness of probing questions. The pre-test results indicated that some terms needed simplification and some sensitive questions were better asked after establishing rapport and trust. Accordingly, necessary adjustments in wording, sequence, and questioning approach were applied. The final version of the interview guide was prepared with sufficient flexibility to guide the conversation based on participants’ responses and was used in the main study.

Interviews lasted between 45 and 60 minutes and were conducted in a calm and comfortable environment. Follow-up interviews and member checking were conducted to ensure data accuracy. Researchers continuously reflected on the influence of their assumptions and experiences on data collection and analysis, maintaining daily notes, group discussions, and methodological reviews to reduce bias.

Transcriptions were analyzed using MAXQDA version 20 and the conventional content analysis approach (Graneheim & Lundman, 2004). The analysis steps included precise transcription, repeated reading of the text to familiarize with the data, line-by-line coding, grouping codes into subcategories, combining subcategories to form main themes, organizing themes to reflect logical relationships, and validation through independent coding by two researchers and review by participants. Top of Form Bottom of Form

Data trustworthiness was ensured using Lincoln and Guba’s criteria(28). Credibility was verified through participant review, external supervision, and independent coding. Dependability was ensured through systematic documentation of all research steps. Confirmability was achieved by complete recording of

the data collection and analysis process. Transferability was assessed by comparing results with the perspectives of two additional mothers and two additional experts who did not participate in the study.

Findings

In this study, a total of 14 in-depth interviews were conducted with mothers of adolescents aged 12 to 18 years in Khalkhal city, representing diverse age, educational, and socio-economic backgrounds (Table 1), and 34 interviews were conducted with key adults, specialists, and experts in this field (Table 2).

In this study, participants' perceptions of adolescent sexual and reproductive health challenges were categorized into 12 main themes and 29 subcategories. These themes include: Individual Challenges of the Current Generation of Adolescents, political challenges and barriers, economic challenges, religious challenges and barriers, challenges related to education and schools, challenges related to adolescent mental health, puberty, sexual ignorance and lack of systematic education, challenges related to the consumption of cigarettes, alcohol, and drugs, the role of cyberspace and media, risky sexual behaviors and their consequences, challenges and barriers related to the Ministry of Health, and challenges and barriers related to family and parents.

Theme 1: Individual Challenges of the Current Generation of Adolescents

The findings of the study indicated that the current generation of adolescents faces a set of intrapersonal, identity-related, and contextual challenges that distinguish them from previous generations. This theme was extracted into two main categories: "Intrapersonal characteristics and challenges of the current generation of adolescents" and "Interactional and contextual challenges of adolescents in the era of modernity."

Intrapersonal Characteristics and Challenges of the Current Generation of Adolescents

Participants believed that today's adolescents are characterized by high levels of emotion, energy, and boldness and have a greater tendency to experience different life phenomena at an earlier age. Although these characteristics may indicate dynamism and cognitive curiosity, in the absence of appropriate guidance and education, adolescents are exposed to risky behaviors. One participant highlighted this generational difference:

"We are facing a generation that has many emotions and wants to know and experience things much earlier than previous generations."

(Key Informant, Sociologist)

In terms of identity, non-acceptance of certain religious and social norms, hopelessness about the future, and reduced sense of social and national belonging were among the most important challenges reported. According to participants, social despair and the tendency to migrate among adolescents have increased significantly, which can influence their decisions and behaviors in various health domains.

Interactional and Contextual Challenges of Adolescents in the Era of Modernity

In this category, participants referred to the expansion of adolescents' social relationships, complexity of communication patterns, and weakening of the family and school role. Generational gaps and value differences between parents and adolescents have led many interactions to occur in informal and hidden spaces, reducing effective supervision and support from adults.

"Cultural confrontation between generations has caused many adolescent interactions to remain hidden, and parents and schools are practically excluded from the communication cycle."

(Key Informant, Health Sciences Expert)

Theme 2: Political Challenges and Barriers

The theme of "political challenges and barriers" was identified as one of the structural layers affecting adolescent sexual and reproductive health and included two main categories: "Lack of clear and committed strategy and policy" and "Unresponsive national and governance structures."

Lack of Coherent Programs and Policies

Participants repeatedly referred to the absence of a comprehensive national program in the field of adolescent sexual health and considered this gap a fundamental barrier to responding to adolescents' real needs. From their perspective, social and political sensitivity of this domain has prevented sexual health from becoming a policy priority.

"In the field of adolescent sexual health, there is practically no overarching national program, and this issue has been marginalized."

(Key Informant, Health Education Specialist)

Unresponsive Governance Structures and Misperceptions of Sexual Issues

Findings indicated that fear, conservatism, and misperception of the concept of sexual health education at decision-making levels are the main obstacles to designing and implementing effective interventions. Many participants emphasized that sexual health education is mistakenly equated with the promotion of sexual behavior, and this misunderstanding limits the policy-making space. Participants stressed the necessity of intersectoral collaboration, particularly structured interaction between the Ministry of Health and the Ministry of Education, and considered it the first operational step in responding to adolescents' needs:

"Sexual health education should be delivered regularly and in the framework of formal collaboration between education and health sectors, similar to a mandatory course."

(Key Informant, Psychiatrist)

Theme 3: Economic Challenges

The findings showed that economic conditions, particularly poverty and social inequality, play a decisive role in shaping and exacerbating challenges related to adolescent sexual and reproductive health. This theme was extracted into two main categories: “Consequences of poverty on sexual and reproductive health” and “Need for social support and equitable access to health services.”

Consequences of Poverty on Sexual and Reproductive Health

Participants considered poverty a multidimensional factor that can lead to weakening of individual and social values, increased risky behaviors, and reduced utilization of health services. From their perspective, economic pressures create conditions for misconduct such as delinquency, substance use, and prostitution, exposing adolescents to serious sexual and reproductive health risks:

“When poverty comes, many values fade, and an individual may engage in behaviors for survival that they would not even have imagined before.”

(Key Informant, Health Sciences Specialist)

Participants also noted reduced use of healthcare services and increased likelihood of unintended pregnancies in low-income families, considering poverty a serious barrier to effective prevention and care.

Need for Social Support and Equitable Access to Health Services

In this category, participants emphasized the need to identify vulnerable groups, design supportive policies, and provide targeted services. They believed that the lack of appropriate social support, especially for at-risk adolescents, can exacerbate psychological and social consequences. They called for coherent policies, institutional collaboration, and early intervention to support these groups:

“Vulnerable children and adolescents need special care, and this cannot be achieved without policy-making and institutional collaboration.”

(Key Informant, Psychologist)

Theme 4: Religious Challenges and Barriers

The theme of “religious challenges and barriers” was identified as one of the cultural–value dimensions affecting adolescent sexual education and behaviors, and included two main categories: “Lack of utilization of religious capacities and potentials” and “Decline of religious beliefs and values and their impact on adolescent behavior.”

Lack of Utilization of Religious and Spiritual Capacities

Participants believed that religious teachings can provide significant capacity for guiding, moderating, and structuring sexual health education, but these capacities have not been effectively utilized. From their perspective, ambiguities in certain jurisprudential issues, lack of consensus among religious

authorities, and the unawareness of educational implementers are the main barriers to leveraging these potentials:

"Islam is not opposed to sexual education, but the method and framework of its delivery are important."
(Key Informant, Cleric)

Participants also noted the unpreparedness of schools and families to provide sexual education within a religious framework, considering this gap a factor in adolescent confusion.

Decline of Religious Beliefs and Values and Their Impact on Adolescent Behavior

Findings showed that, according to participants, weakening of religious beliefs and fading moral values in some adolescents is associated with changing behavioral patterns and an increase in risky behaviors. They emphasized that ignoring these changes not only fails to solve the problem but may also exacerbate individual and social crises:

"Instability in religious beliefs is a serious challenge, and ignoring it will not make it manageable."
(Key Informant, Social Medicine Specialist)

In this context, the role of family in strengthening values, preserving modesty in private life, and creating healthy behavioral models was emphasized as an important protective factor.

Theme 5: Challenges and Barriers Related to Education and Schools

The findings indicated that the education system, as the most important formal institution for adolescent training, plays a decisive role in shaping knowledge, attitudes, and behaviors related to sexual and reproductive health. However, participants considered it faced with multiple structural and operational challenges. This theme was extracted into six main categories.

Importance and Key Role of Education

From participants' perspective, school is the main platform for delivering health education to adolescents and has the potential for systematic sexual education. They emphasized that the school's role in this domain is even more pronounced than the family because educational messages from teachers have greater credibility among adolescents:

"If education is to be provided in the field of sexual health, the best place is school."
(Key Informant, Social Medicine Specialist)

Unresponsive Structure and Limited Scope of School Function

Participants described the current education structure as inflexible, conservative, and restrictive. According to them, fear of legal and social consequences has led schools to resist addressing sensitive

issues, including sexual health. These limitations have prevented teachers and counselors from effective involvement, resulting in institutional silence:

"Schools practically do not have permission to enter this field, and even the smallest action can have serious consequences for the teacher."

(Key Informant, Psychologist)

Findings indicated that the lack of targeted and scientific education in schools has led to low awareness, misconceptions, and insufficient skills among adolescents regarding sexual and reproductive health. Participants believed that the existing educational content does not meet adolescents' real needs and is often delivered superficially and non-practically:

"Adolescents do not even have sufficient knowledge about basic issues such as diseases or the consequences of smoking."

(Key Informant, School Counselor)

A prominent finding was the shortage of specialized counselors, absence of full-time counselors, and insufficient counseling time in schools. Participants emphasized that many counselors either lack the necessary specialized training or are not present continuously in schools, which limits adolescents' access to professional support:

"In many schools, either there is no counselor, or the counselor does not have the required expertise."

(Key Informant, School Counselor)

As a result, some adolescents preferred to receive counseling services outside school in a safer environment.

Use of Effective Educational Strategies Appropriate to Adolescents' Needs

Participants emphasized the necessity of employing modern educational methods, including interactive workshops, role-playing, videos, and multimedia content. They believed that education is effective when delivered in the adolescents' language and adapted to the needs of the new generation:

"Education should be in the language of the adolescents and use tools like videos and workshops."

(Key Informant, Psychiatrist)

Need to Change Principles, Content, and School-Family Interaction

Findings showed that fundamental revision of the timing, content, quality of education, and selection of trusted educators is essential. Additionally, participants considered effective interaction between schools and families a prerequisite for the success of any educational program, emphasizing two-way collaboration between these institutions:

"If the family and school are not coordinated, education will not be effective."

(Key Informant, Health Center Counselor)

Theme 6: Challenges Related to Adolescent Mental Health

The findings showed that adolescent mental health plays a central role in shaping attitudes and behaviors related to sexual and reproductive health. Participants believed that many risky sexual behaviors of adolescents originate from psychological, emotional, and affective problems. This theme was extracted into three main categories.

High Prevalence of Psychological Problems Among Adolescents and Relationship Between Mental Health and Risky Sexual Behaviors

From participants' perspective, today's adolescents face a wide range of mental health problems, including anxiety, depression, loneliness, suppressed anger, and emotional instability. They believed that in many cases, these problems are neither identified nor treated and silently affect adolescents' decision-making and behaviors:

"Many risky behaviors of adolescents stem from an emotional gap or an unresolved psychological problem."

(Key Informant, Psychiatrist)

Findings showed that mental health disturbances can lead adolescents toward unsafe emotional and sexual relationships, impulsive decision-making, and inability to say no. Participants emphasized that under psychological pressure, adolescents are more likely to accept behaviors that have serious consequences for their sexual and reproductive health:

"An adolescent who is not in good mental health usually has weaker behavioral boundaries."

(Key Informant, Psychologist)

According to participants, ignoring mental health in educational programs significantly reduces the effectiveness of interventions related to sexual health.

Weak Support System and Limited Access to Mental Health Services

Participants referred to the lack of specialized mental health services, social stigma associated with visiting a psychologist, and absence of structural support in schools and health centers. From their perspective, many adolescents either cannot access specialized services or avoid seeking professional help due to fear of social judgment:

"An adolescent who needs psychological help usually either has no access or avoids visiting due to fear of being labeled."

(Key Informant, Counselor)

In this regard, participants emphasized the necessity of integrating mental health education into sexual and reproductive health programs and providing early supportive services.

Theme 7: Puberty, Sexual Unawareness, and Lack of Systematic Education

The study findings indicated that early puberty and adolescents' sexual unawareness, alongside the lack of formal and scientific education, constitute fundamental challenges in the field of sexual and reproductive health. Participants believed that many adolescents enter the stage of physical and emotional puberty before receiving any credible education, and this mismatch exposes them to confusion and risky behaviors. This theme was derived from three main categories.

Early Puberty and Mismatch of Physical and Psychological Development

From the participants' perspective, the decrease in the age of physical puberty in recent years has occurred while adolescents' psychological, cognitive, and decision-making development has not progressed correspondingly. This developmental gap exposes adolescents to emotions, desires, and questions for which they lack appropriate responses.

"The adolescent's body is ready, but their mind and awareness are not yet." (Key informant, Social Medicine Specialist)

Sexual Unawareness and Formation of Misconceptions

Findings indicated that the absence of age-appropriate scientific education leads to the spread of misinformation, sexual myths, and incorrect perceptions among adolescents. Participants emphasized that adolescents often obtain their information from informal sources, peers, or cyberspace, which are not only unreliable but can also be harmful.

"Adolescents obtain answers to their questions from sources that are not necessarily accurate or safe." (Key informant, Psychologist)

This situation may lead to anxiety, fear, shame, or normalization of risky behaviors.

Participants highlighted the taboo of discussing sexual issues within families and schools and identified this silence as a key factor contributing to adolescents' unawareness. From their perspective, parents and teachers either lack the necessary skills for discussion or avoid the topic due to fear of cultural and social repercussions.

"Neither the family talks about it, nor the school; the adolescent remains alone with their questions." (Key informant, Family Counselor)

Consequently, the adolescent's natural need for awareness remains unaddressed without proper guidance.

Theme 8: Challenges Related to Cigarette, Alcohol, and Substance Use

This theme was identified as one of the emerging and expanding issues among adolescents. It was derived from two main categories: “Increasing cigarette and alcohol use among adolescents of both genders and the need for appropriate strategies” and “Adolescents’ perspectives on the causes and consequences of cigarette and alcohol use.”

Increasing Use Among Adolescents of Both Genders

Findings revealed that cigarette, alcohol, and certain substance use is highly prevalent among adolescents and has become a serious and concerning challenge. Some participants referred to the normalization and even display of substance use in public spaces as indicative of the depth of the crisis.

“We now see young people pretending to consume alcohol and other substances. It is clearly an important issue, a serious challenge, and a crisis that cannot be ignored.” (Key informant, Social Medicine Specialist)

From families’ perspectives, easy access to new types of tobacco and substances, including flavored and rechargeable hookahs, has facilitated increased use, and adolescents learn these patterns directly from their social environment.

“Now there are rechargeable hookahs; I had not seen them before. I went for a walk in the park and was told that kids go for alcohol, hookah, and substances. They learn from society.” (Mother, 41 years old)

Participants also emphasized the weakness of regulatory laws and lack of effective supervision over the sale of cigarettes and related items to adolescents. Easy access to cigarettes and lighters plays an important role in increasing consumption.

“Cigarette use is very high among adolescents, especially girls. We have a supermarket; they come in, ask for lighters, buy a few cigarettes, or get them from friends. There is no law against selling cigarettes.” (Mother, 39 years old)

One notable finding was the sharp increase in cigarette, alcohol, and substance use among adolescent girls. Participants considered this trend concerning and emphasized the psychological, behavioral, and addictive consequences.

“Now, cigarette, alcohol, and cannabis use is high among adolescents, especially girls. Alcohol is present in their parties and recreational activities. Most adolescents consume hookah and cigarettes. We do not have recreational-only use; once they start, it continues. Cigarettes and hookah are cheap and difficult to quit, making adolescents even aggressive and irritable. The situation of adolescents in these areas is not satisfactory.” (Key informant, Psychologist and Health Center Counselor)

Adolescents’ Perspectives on Causes and Consequences of Cigarette and Alcohol Use

Findings indicated that adolescents often associate cigarette and alcohol use with concepts such as “being classy,” social acceptance, and peer pressure. In some contexts, adolescent girls are more

exposed to such social pressures than boys.

“An adolescent thinks that if a friend offers it and they refuse, it is considered ‘uncool.’ Sometimes we see this more in girls, which may vary city by city. I observe it more among females.” (Key informant, Psychiatrist)

Additionally, low awareness among adolescents and some families regarding the negative consequences of alcohol and cigarettes was identified as an exacerbating factor. Some families consider alcohol use harmless or controllable, while participants highlighted the direct link between alcohol consumption and risky behaviors, particularly unsafe sexual practices.

“Some families believe it is safe if their child drinks with them so they can manage it. They think alcohol is not harmful. About ten years ago, injection drug use was the main cause of HIV; now unsafe sexual behavior is the most common. Alcohol consumption facilitates unsafe sexual relations in parties, where adolescents cannot understand the risks and lack awareness, so preventive education becomes necessary.” (Key informant, Health Sciences Specialist)

Theme 9: The Role of Cyberspace and Media in Shaping Adolescents’ Risky Sexual Behaviors

Findings indicated that cyberspace and new media are among the determining factors in shaping adolescents’ attitudes, curiosities, and sexual behaviors. Participants believed that adolescents’ widespread and uncontrolled access to digital content, in the absence of effective education and supervision, exposes them to unhealthy and risky behavioral models. This theme was derived from four main categories.

Early and Unsupervised Access to Sexual Content

Participants noted that adolescents are exposed to various sexual content at an early age through social media, websites, and messaging apps. This early exposure, without the necessary cognitive and psychological preparedness, can lead to premature sexual arousal, emotional confusion, and normalization of risky behaviors.

“Adolescents are exposed to sexual content much earlier than their readiness allows.” (Key informant, Psychiatrist)

Media’s Role in Shaping Unrealistic Norms and Expectations

Findings showed that media representations of romantic and sexual relationships are often exaggerated and unrealistic, creating false expectations, normative pressure, and harmful comparisons among adolescents. Participants emphasized that in the absence of healthy role models, adolescents perceive these media images as standards of “normal” behavior.

“What is displayed in cyberspace becomes the norm for adolescents.” (Key informant, Health Communication Specialist)

Weakening of Family and School Roles Against New Media

Participants believed that the speed and attractiveness of cyberspace weaken the traditional role of families and schools in transmitting values and education. In many cases, adolescents encounter contradictory and sometimes harmful messages before receiving formal education, making guidance and supervision difficult.

“Media moves ahead of families and schools.” (Key informant, Educational Counselor)

Lack of Media Literacy and Digital Self-Care Skills

A key finding was the absence of media literacy education and skills for safe engagement with cyberspace among adolescents. Participants emphasized that many adolescents lack the ability to differentiate between healthy and harmful content, manage emotions, and maintain privacy, exposing them to sexual exploitation and harm.

“Adolescents do not know how to protect themselves in cyberspace.” (Key informant, Psychologist)

Theme 10: Risky Sexual Behaviors and Their Individual, Social, and Health-Related Consequences

The study findings indicated that a combination of individual, familial, social, and structural factors expose adolescents to risky sexual behaviors. Participants emphasized that these behaviors do not emerge suddenly but result from a complex interaction of unawareness, peer pressure, psychological problems, poverty, cyberspace exposure, and educational gaps. This theme was derived from four main categories.

Prevalence of Risky Sexual Behaviors Among Adolescents

From the participants’ perspective, behaviors such as unprotected sexual intercourse, multiple sexual partners, early initiation of romantic and sexual relationships, and difficulty in saying “no” are increasing among some adolescents. They considered this trend a direct consequence of the absence of skill-based scientific education.

“When adolescents have not received education, they make riskier decisions.” (Key informant, Health Education Specialist)

Consequences of risky sexual behaviors (health-related and psychosocial)

Findings indicated that risky sexual behaviors may lead to unintended pregnancies, sexually transmitted infections, unsafe abortions, and physical and psychological harm. Participants believed that many of these outcomes remain hidden in adolescents and are often not identified or treated promptly due to fear of social stigma.

“The physical and psychological consequences of these behaviors are usually recognized late.” (Key informant, Gynecology Specialist)

Participants identified guilt, shame, anxiety, academic decline, social isolation, and weakened family relationships as common consequences of risky sexual behaviors. According to them, these outcomes can disrupt adolescents’ healthy development and place them in a cycle of recurring harm.

“After engaging in risky behaviors, adolescents often experience severe psychological stress.” (Key informant, Psychologist)

Need for Prevention, Early Intervention, and Comprehensive Education

In summary, participants emphasized the necessity of primary prevention, comprehensive sexual health education, life skills enhancement, and early multisectoral interventions. They argued that focusing solely on consequences without addressing structural and psychological roots is insufficient.

“Without education and prevention, we are only fighting the consequences.” (Key informant, Psychiatrist)

Theme 11: Challenges and Barriers Related to the Ministry of Health

This theme comprises two main categories: the lack of programs and adolescents’ limited access to sexual and reproductive health information and services, and structural and organizational barriers within the Ministry of Health.

Lack of Programs and Limited Access to Adolescent Sexual and Reproductive Health Information and Services

This main category includes two subcategories: “The necessity of providing services to adolescents and having an integrated care system for them” and “The absence of culturally tailored interventions.” The study revealed that adolescents’ limited access to appropriate services and information is associated with weak planning and the absence of a specialized care system.

“The Ministry of Health should be very proactive. Classes and workshops should be conducted, and doctors should be utilized. Media and health sectors play an important role, and even if they do not participate, it is important that the message reaches the subconscious of adolescents.” (Key informant, Psychiatrist)

Furthermore, the absence of culturally and socially adapted interventions hinders adolescents from benefiting from effective education:

“The Ministry of Health can play a leadership role in influencing the educational content of the Ministry of Education... Education is the main authority, but the Ministry of Health should guide the content.” (Key informant, Social Medicine Specialist)

Structural and Organizational Barriers within the Ministry of Health

Four subcategories were identified: “The need for specialized adolescent counseling centers and services,” “Inefficient and unresponsive organizational structure of the Ministry,” “Policymakers’ disregard of research findings,” and “Underutilization of competent human resources.” Key informants emphasized the necessity of establishing specialized centers and services for adolescents.

“We should have adolescent service centers... there is no knowledgeable personnel; it should be integrated into primary healthcare levels.” (Key informant, Reproductive Health Specialist)

Structural inefficiency of the Ministry and neglect of research findings were identified as major barriers:

“The Ministry of Health must engage and declare that adolescent sexual health is at risk. They should have accurate data and statistics.” (Key informant, Health Education Specialist)

Additionally, the importance of identifying vulnerable groups and providing supportive services was highlighted:

“Some children may be sexually abused; there should be a place where these children can receive services.” (Key informant, Psychologist)

Theme 12: Challenges and Barriers Related to Family and Parents

This theme comprises two main categories: the importance and role of the family in adolescents’ sexual education, and the deficiency of parents’ knowledge, skills, and capacity.

Importance and Role of the Family in Adolescents’ Sexual Education

This category includes two subcategories: “The family as the primary pillar of education” and “Lack of education provided by families and the necessity to offer it.” Studies showed that the family plays a central role in adolescents’ sexual socialization.

“Parents have an important role in educating their children... fathers and mothers should set certain rules and standards at home that everyone follows.” (Key informant, Health Education Specialist)

Insufficient family education leads adolescents to rely on unreliable sources, increasing the risk of misinformation:

“If parents inform their children early, they will not search on Google and receive incorrect information.” (Mother, 36 years old)

Deficiency in Parents’ Knowledge, Skills, and Competencies

This category includes eight subcategories: “Low awareness and knowledge of families,” “Poor parent-adolescent communication,” “Need to create a happy and friendly environment,” “Lack of proper

understanding of adolescents' sexual needs," "Weak monitoring and supervision," "Parents' misconceptions about counselors," "Parental concerns about adolescents' maladaptive social behaviors," and "Parents' resistance to sexual education."

"Even families themselves do not have sufficient awareness and knowledge and do not know how to transmit this information." (Key informant, Health Education Specialist)

The necessity of empowering parents and teaching communication skills with adolescents was also highlighted:

"Parents absolutely need education and play a key role in raising their children." (Key informant, Psychologist)

Additionally, parents' anxiety about adolescents' sexual behaviors and misinterpretation of their actions was identified as another challenge:

"When they see a child who was previously modest displaying behaviors with sexual undertones, parents become upset and misinterpret it." (Key informant, Psychologist)

Discussion

The present study was conducted with the aim of elucidating the challenges of adolescent sexual and reproductive health, and from the perspectives of parents, experts, and specialists, 12 main themes and 29 subcategories were extracted.

Individual Challenges of Adolescents

According to the results of this study, one of the most important and fundamental challenges in the field of reproductive and sexual health of adolescents is the individual characteristics of current adolescents, known as the Z generation or the unknown generation, which has made them different from the previous generation. The results of the study by Askari et al. showed that uncontrolled adolescent emotions, adolescent rebellion, informational and communication weaknesses, and adolescent concerns about being judged by others are some of the intrapersonal barriers to teaching sexual health to adolescent boys (29) and also in the study of Sridawruang et al. in Thailand. One of the main themes of the generation gap has been mentioned (30). These results are consistent with our findings in the present study.

Political Challenges and Barriers

The lack of a suitable policy and the failure to adopt a clear, transparent, bold and specific strategy by the government is one of the most effective obstacles in the youth's access to reproductive and sexual health information and services. The results of this study showed that the view and performance of policymakers and the government in relation to the reproductive and sexual health of adolescents is very

conservative, and due to the incorrect and unrealistic view of the government, no macro-level planning has been done in this area. These findings are in line with the results of other studies conducted in Iran and other countries, which are related to the important role of politics, the lack of clear planning and policy making, the weakness of the appropriate policy to support sex education within the framework of Islamic education, the lack of a specific strategy by the government, the necessity of existence The responsive national structure, the need to change the macro policies, ignoring the disturbing facts in the society, intense pressures from the political groups of the society as reasons for the lack of political support of the governments for the programs of providing reproductive and sexual health information and services are consistent (31-36).

Economic Challenges

The results of the present study indicate that poverty and economic problems as one of the important and serious challenges and concerns can affect reproductive behavior and reproductive and sexual health in all age groups, including adolescents. These results are consistent with the results of the study by Farahani, Roemer and Kirby, who reported the negative effect of low household income on high-risk sexual contact (37-39). The impact of family economy on adolescent health has been strongly emphasized and it has also been shown that the experience of economic deprivation had material and non-material consequences on adolescent health (40). Physical, financial and information environments can have a supporting or inhibiting role on the behaviors and health outcomes of adolescents (41).

Religious Challenges and Barriers

The findings of the present study showed that incorrect religious prejudices, lack of use of religious capacities, misunderstanding of religious foundations, weakening of beliefs and values are considered as obstacles to providing reproductive and sexual health education and services for adolescents and obtaining information within the framework of religious teachings. It can have a significant effect in reducing deviations. These findings are in agreement with the results of Tahmasabzadeh's study, which raised false religious and religious prejudices from the intervening conditions of the sexual education process of adolescents (32) and the findings of Mohammadi's study, which stated that one of the obstacles in the sex education curriculum is personal and unsupported perceptions of religious foundations. is (34) Also, the results of Mirzaei's study, which considered not using the potential of religion as one of the main challenges for teenage girls in accessing sexual and reproductive health services (35), are consistent with the need to be aware of religious issues in relation to education in another study. The sexuality of adolescents has been emphasized (42). The spirituality of people and their religious beliefs is one of the most important factors that can prevent a society from deviation and corruption. In a study, it is stated that one of the most important systems is the internal control system of humans, and one of the most important components of the internal control system of humans is religion (43). Spirituality and religion are among the factors that affect the sexual behavior of young people. Through the establishment of moral and semantic order, religion causes a positive feeling of self-worth and purposefulness of life and can influence risky behaviors, including risky sexual behavior

(44). Different studies conducted in Iran concluded that having more and conservative dependence on religion or religiosity reduces engaging in premarital sex (45). In another study, it was shown that in teenagers who understood the importance of spirituality, the possibility of committing high-risk behaviors during adolescence, including smoking, drinking alcohol, and having sex, was less (46). A solid connection and a strong link between religious beliefs and society and the adoption of strategies and policies for sexual issues and behaviors in the age of modernity and the collapse of communication and information boundaries that people are more isolated and exposed to all kinds of western and cultural invasions are necessary for some It seems.

Challenges Related to Education and Schools

According to the results of this study, one of the most important challenges and concerns is the lack of sufficient knowledge, attitude and skills regarding the various dimensions of sexual health and fertility in teenagers. This issue is consistent with the results of other studies conducted in Iran and other developing countries (47-50). The necessity of sexual health education, the need to support sex education in the framework of Islamic education and sex education in the form of school education has been emphasized in studies (34-42-51) and it is consistent with the results of our study. In developing countries such as Iran, where more 85% of its teenagers are enrolled in schools, designing educational programs and sex education for schools is one of the most effective investments in improving the health of adolescents, which, while improving the health of adolescents, reduces the sensitivity of this topic and breaks the taboo in the society will also help a lot (52). In Graf et al.'s study, people with formal school sex education in adolescence had significantly higher safe sex knowledge than people without formal school sex education and people with formal school sex education in adolescence and adulthood (24). In Rahmani's semi-experimental study in 2017, the results showed that sex education based on Iranian culture can increase social self-efficacy and reduce sexual risk in female students (53). The failure of the education providers to adhere to the principles of sexual ethics and the extreme weakness in their awareness of how to implement sexual education have been proposed as two important factors among the reasons for the undesirable nature of sexual education in society (54). Due to the lack of understanding of the necessity of sex education and the missing role of the school in sex education, the necessity of empowering parents to educate their children along with the institutionalization of formal sex education training in the form of parenting methods seems necessary (55). An expert in the field of sex education in education, the weakness of the appropriate policy and the challenge of the optimal interaction between school and home are among the organizational factors that hinder the presentation of the model of sex education (34). In Torbati's study, it has been emphasized on the need of schools to monitor the activities of children and teenagers at school and to cooperate with parents in this field (42). Among the reproductive health needs of boys, we can mention the educational needs, the lack of adolescent skills and the need to improve them, the people who are related to the education of adolescents, and the lack of information (56). In Shah Hosseini's study, one of the main themes extracted is matching education with needs, which includes two main categories of need for appropriate educational content and appropriate educational method (15). Improving the level of knowledge and awareness of teenage girls about the concepts related to reproductive health and improving life skills is

one of their most basic educational needs, and also the need to teach reproductive health through school midwives, mothers and teachers seems necessary for Iranian girls. 2 and 15). The development of sexual education based on religious thoughts and paying attention to the knowledge of sexual health is considered as one of the essential contents in the design of the theoretical framework of the sexual ethics education curriculum (57). In Vanwesenbeeck's study in 2015 in the Netherlands, the results and suggestions include increasing the sensitivity of programs for normative and practical barriers to sexual health, the wide spread of comprehensive forms of teacher training and coaching, and the serious increase of multi-level "whole school" approaches (58).

Challenges Related to Adolescent Mental Health

According to the results of this study, the unmanaged emotions of adolescence, violence and self-harm among adolescents and the lack of acceptance of psychological problems are among the challenges of mental health of adolescents, and the necessity of training regarding the prevention of violence and the importance of paying attention to the mental health of adolescents are emphasized according to the experts' point of view. Is. These findings are in line with the results of Samadai et al.'s studies in 1400, which emphasized the need to help build culture against any kind of violence in children and adolescents (31) and the results of another study, which stated that adolescent rebellion and uncontrolled adolescent emotions are among the challenges extracted by adolescents. has been consistent with (29). Research on the mental health of Iranian adolescents shows that a significant number of adolescents (more girls than boys) experience mental disorders. Mental health has a special place in the lives of teenagers because the more stressful factors are, the commitment and identity of teenagers will be weakened (59). In another study, the need to educate and make teenagers aware of the psychological changes of puberty as a part of the model of sexual education has been emphasized based on the views of Muslim thinkers (60). Among the many problems and needs of teenage boys and girls, according to Shakur et al.'s study, mental and psychological issues are mentioned as one of the most important issues and needs, and among the issues raised in this context, the feeling of lack of understanding from the family and the feeling of depression in teenagers can be mentioned. pointed out (18). Iranian teenagers have considered factors such as will, active desire for health, security of mind, correct thinking, self-cultivation, vigilance, evolution, determination for health, justice, sense of usefulness and positive indoctrination to be effective in relation to mental health (61). Having mental health skills, including adaptability skills, problem solving and increasing family and social supports can lead to mental health of adolescents and increase the quality of life in adulthood.

Puberty, Sexual Unawareness, and Lack of Systematic Education

The findings of this study showed that teenagers have little information about puberty and its changes, lack of adequate education from parents and schools, parents' lack of knowledge about puberty and how to provide information, receiving incorrect information from friends and cyberspace, and lack of awareness. Regarding how to properly manage the challenges of puberty, one of the concerns raised is that there is a lot of room for discussion and reflection in this field. These findings are consistent with

the results of other studies that have considered adolescents' awareness of puberty and reproductive health to be weak (63-62, 18, 15). In a study, the priorities of pubertal health education from the point of view of girls are: sexual, psychological, social and physical matters, while from the point of view of mothers, teaching issues related to mental, social, physical and sexual maturity are prioritized. Like girls, teachers also believed in the priority of teaching sexual, psychological, social and physical issues in puberty education (64). In this study, it was found that the main source of information for adolescent girls and boys about puberty is mainly mothers, while the source of receiving sexual information It is mainly virtual space and friends, which is consistent with the results of studies in Iran and other countries (22,62,64).

Challenges Related to Cigarette, Alcohol and Substance Use

The findings showed that the consumption of cigarettes and alcohol was high among teenagers, especially It has increased in girls compared to previous decades, and the stigma of using it in girls has disappeared, and the age of starting to use it has also decreased. These results are consistent with the findings of previous research on the risk-taking status of teenagers in the field of smoking and alcohol consumption in Iran. Smoking among adolescents has caused many concerns and its increasing prevalence among adolescents has been considered as one of the most important problems in the world (66). Soleimani Nia, in the study of high-risk behaviors in boys and girls in 6 areas of violence, suicide, smoking, alcohol, drugs, and unsafe sexual behaviors, found the most common high-risk behaviors among adolescents to be alcohol consumption, smoking, unsafe sexual behavior, and violence, drug use and attempted suicide (67). The average age of smoking in Iran among smokers is 16.6 years (68) and the highest proportion of drug addicts (45%) have started using drugs between the ages of 17 and 22 (69).

Porasal et al, in a study in Tabriz, found that 12.7% of them consumed alcohol and 2% experienced drugs (70). Ayatollahi et al. found that 16.9% of students have tried cigarettes and 2.5% have smoked cigarettes regularly (71). In an epidemiologic study in 2013 about the prevalence of drug use among high school students in Rasht city, it was reported that smoking and alcohol use is common among students and its prevalence is higher among boys. In this report, the frequency of cigarette consumption is 18.4 percent, alcohol is 12.6 percent, opium is 1.4 percent, hashish is 1.3 percent, ecstasy is 0.7 percent, and heroin is 0.3 percent (72). Based on the results obtained from the study of Alaei et al, 57% of the studied students reported that they have tried a type of substance at least once in their lifetime, including cigarettes, hookah, alcoholic beverages, and other substances. The amount of consumption of light substances in order of prevalence included hookah, cigarettes, alcoholic beverages and heavy substances including ecstasy pills and opium, hashish, glass and crack and heroin (73). The findings of Sediq Sarostani's research showed that 23.3% of middle school and high school students are at risk of smoking, 15.8% are at risk of alcohol consumption, and 13.3% are at risk of drug use (74). Another study showed that teenagers with more social support are less infected with alcohol, cigarettes and drugs (75). These results are consistent with the findings of our study regarding the causes of consumption. To reduce risk factors and prevent addiction, which is one of the social problems of today's world,

especially teenagers who are a group at risk for all kinds of challenges and social deviations such as alcohol consumption, psycho-moral problems such as anxiety and depression, and delinquency, education to reduce Smoking is a suitable lever for teenagers. Continuous and long-term training along with social support is needed for the health of young people (75).

Role of Cyberspace and Media

According to the results of our study, the targeted dissemination of unconventional sexual content, the weakness of the culture of using virtual space in parents and teenagers, and the targeted and attractive structure of virtual space and the Internet to attract audiences to unconventional sexual content, and the inefficiency and unresponsiveness of schools and families in empowering young people and teenagers. Using the Internet is one of the other challenges raised in the field of reproductive and sexual health of adolescents, unfortunately, no comprehensive and codified educational intervention at the micro and macro level has been done to protect the mental, behavioral and sexual health of adolescents and young people in the country. Today, the access of teenagers to cyberspace and global media has increased the distance between teenagers and their parents, which in turn causes them to interact more with their peers, receive information from them, and shape their behavior according to the abnormalities of their peers.

Despite the very important, positive and developmental role of the Internet in the transformation of the lives of the current generation, wide access to the Internet among teenagers and young people and their inevitable exposure to unconventional sexual content, there is a lot of concern about the adverse effects on all aspects of their health, including mental health. has created a behavioral and social impact on them. The Internet has provided a bed for sexual stimulation, expression and expression of sexual desires and interaction with the opposite sex in a society where sexual conversation is associated with a lot of taboos (76).

In Askari's study in 2020, cyber threats were raised as one of the external barriers to sexual health education for adolescent boys (29). In the research focused on the effects of different media on young people and adolescents, the connection between media and access to sexual content with high-risk sexual behaviors has been shown (77), as well as exposure to sexual content in the media with attitudes such as sexual arousal, attitudinal changes (open It is related to sexual relations) and behavioral results (increased intention of sexual behavior, early start of relationship, increased probability of pregnancy during adolescence) (78-79). In Farahani's study, exposure to unconventional sexual content (pornography) in mass media is one of the potential factors in the early initiation of sexual relations among teenagers (76). In Fasih Ramandi's study, the anonymity of internet users, ease of access, lack of supervision and lack of media literacy are considered to be the reasons for using pornography among young people (80) and in another study it has been shown that frequent viewing and exposure to non-sexual content on the internet And virtual space causes sexual stimulation in teenagers (81). A study in Sweden regarding pornography among teenagers also showed that the higher level of pornography use has a direct relationship with the higher prevalence of sexual behavior and alcohol consumption, and

teenagers compare the content received in pornography with the messages received from the law and national health policy of their country. considered inconsistent and contradictory (82). Research shows that in Iran, despite the relatively high price of the Internet, young people have access to the Internet more and more. The survey of youth values and attitudes in 2012 showed that about two-thirds of 15-19-year-olds (68.3%) used the Internet, (31.5%), used it daily, (19.4%) chatted and (11.6%) had a relationship with the opposite sex, while only (2.2%) are looking for general and health information on the Internet (83). Studies have shown that media literacy training can protect young people from possible harm to a large extent. For example, a media literacy educational intervention program at the Boston Health Commission between 2016 and 2019 for 9 sessions focusing on pornography for adolescents showed that the training had significant effects on adolescents' attitudes, awareness, and behavioral intentions (84).

Risky Sexual Behaviors and Consequences

Adolescence is a period when a person accepts new responsibilities and learns social skills to assume responsibilities and duties, so if an accurate, clear and comprehensive model and framework in the field of appropriate behavior is not defined and defined for him, to He deals with the experience of behaviors and in some cases, by ignoring the principles and frameworks, he engages in risky behaviors)85).

In recent years in Iran, the prevalence of high-risk behaviors among teenagers and young people has become a social issue and has caused deep and widespread concerns at various levels, including public and managerial levels in the society (86). One of the risky behaviors that has been seen in recent years in the age of modernity and the tradition and culture of the society in this field is influenced by other cultures, is relationships with the opposite sex before marriage. Despite the fact that intimate relationships with the opposite sex before marriage are forbidden in Iran from religious, cultural and legal aspects, friendship and sexual relationships with the opposite sex are not uncommon among student girls in Tehran. These findings are somewhat compatible with the findings of other studies among students in Iran (87-88). In another study, premarital sex in teenagers was reported between 12.8% and 28% (89). According to experts and experts in social sciences, sexual relations before marriage is increasing rapidly and this itself is the basis of a widespread crisis. The formation of this type of relationship secretly and away from parental supervision has caused the emergence and expansion of sexual relationships among young people, which will affect not only their current relationships, but also future relationships, and more importantly It is a factor in the formation of the third wave of AIDS in Iran (91).A research was conducted in 2016 with the aim of determining the health knowledge of school students, attitudes and behaviors related to sexual health in eastern Turkey, and the results of this research show data that 8% of girls and 35.1% of boys had sexual activities. The sexual health knowledge of school students is insufficient and their behaviors and attitudes are influenced by traditional views and the understanding of sexual desires between the two sexes is different (91). In a legal study with the aim of investigating the sexual deviant behavior model of 12-15-year-old girls into 9 main categories of technology-oriented sexualized action, risky leisure, passive self-stimulation, emotional disorders, unfavorable parental support system, lack of desirable sex education, lack of

motivational self-regulation skills, Religious identitylessness and environmental stimuli of self-stimulation and the core category of "abnormal sexual socialization" have been emphasized (92). In the analysis carried out by Bostani Khalsi et al. in 2019 on 352 teenage boys, the most important dimension of health needs in the research units was the sexual dimension (93). In another study regarding the assessment of reproductive health needs of adolescents, in the field of needs and sexual issues, they raised the desire of boys to communicate with girls and the lack of knowledge about relationships and the like (18). In the era of modernity, people who have less ability are more exposed to negative reproductive and sexual consequences, including contracting AIDS and sexually transmitted diseases; While having correct information increases the possibility of making informed, responsible and free decisions in the field of sexual performance (94). In Yazdi et al.'s study, only 13% of the 13-14-year-old teenagers who participated in the study were aware of the preventive effect of condoms against sexually transmitted diseases (95). The research showed that several factors play a role in creating high-risk behaviors in young people; Among them, low self-confidence, inappropriate peer group, lack of interest in education, weak parent-child relationship, weak family control and lack of family support, unfavorable economic-social situation, lack of proper education, etc. (96). One of the psychological factors that play a role in high-risk sexual behaviors is exposure to traumatic events (97). This has caused the concern of parents and various politicians, so that it is necessary to design appropriate programs that fit the culture to prevent high-risk behaviors, including high-risk sexual behaviors. It is felt more than before among young people. In this regard, policymakers emphasize the role of the family in preventing the aforementioned high-risk sexual behaviors among young people in recent years (98).

Challenges Related to Ministry of Health

In the findings of the present study, there is no reproductive and sexual health policy and program at the level of the Ministry of Health for adolescents. It does not exist and the structures are inappropriate and practically unresponsive, and also the findings of this study indicate weak inter-sectoral cooperation in this field in Iran, and the Ministry of Health, Treatment and Medical Education has not made an effort to involve other ministries, especially the Ministry of Education and Culture in this regard. Is. One of the duties of the Ministry of Health and social institutions that play a role in providing public health is to adopt policies and implement educational programs with a priority on preventing injuries and then rehabilitating people in the field of sexual health. The status of sex education in Iran is unclear and there is no written policy on this matter, and this is despite the fact that the statistics related to sexual abuse among children and adolescents are high, and the age of starting sexual relations has also decreased (98).

In examining the structure of the health system, it is clear that the health policy makers have not made a special plan to cover this age group, i.e. teenage girls aged 10-19. In fact, a girl receives health care from the beginning of her birth to the age of 8, and then she is left to her own devices and returns to the health system when she gets married and decides to get pregnant. Thus, during the turbulent period of puberty, which requires the most physical and mental support, a place in the health system has not been defined for her (47). Service providers should have a non-judgmental and friendly attitude when providing

services to teenagers. This positive attitude allows them to better understand the problems of adolescents and will increase the willingness of adolescents to return to health centers for treatment in order to share their concerns in the field of reproductive and sexual health with service providers (99). According to the results of Shariati's study in 2015, adolescent-friendly reproductive health services in Iran have different characteristics and features, which include personnel factors (ideal technical knowledge of the service provider, desirable appearance characteristics of the service provider, appropriate ethical and behavioral characteristics of the service provider), physical factors. and the environment of the service provider center (suitable atmosphere of the center, comfortable facilities and equipment of the center), managerial factors (correct management of service provision, optimal management of personnel) and motivational factors (participation of teenagers in providing services, provision of consulting services, government status of the center, cost In addition to confirming the lack of health care services for adolescents, the findings of this study show the inappropriate structure of Iran's health system regarding the lack of technical and personnel preparation of the existing centers. According to the guidelines of the World Health Organization, these centers are in the medium and weak group in terms of meeting the standard and acceptable conditions (100). Structural and operational challenges, such as the inappropriate structure of the health system, are among the challenges faced by Iranian adolescent girls in accessing reproductive and sexual health information and services (35). In another study, emphasizing the high level of high-risk behaviors, it has been recommended to establish special health centers for adolescents and to review the education of adolescents (100). The Ministry of Health, Treatment and Medical Education can use the potential capacities of international organizations such as UNICEF and the World Health Organization, which have provided a number of services in the field of adolescent sexual health in Iran as a pilot, in order to improve health. fertility and sexuality of adolescents, and it is necessary for statesmen and policymakers to make efforts to provide reproductive health services for adolescents in harmony with the religious and cultural values of the society in order to overcome the challenges of access.

Challenges Related to Family and Parents

The family environment is the first base where a child grows and his personality is formed. The favorable family support system can shape the adolescent's identity in a conventional way and prevent him from deviating. The results of the present study showed the lack of knowledge and ability of parents to convey reproductive and sexual health information to adolescents, as well as the insufficient skill of parents in communicating with adolescents, especially boys. A significant part of it originates from cultural taboos, including the fear of breaking sanctity between parents and children, and shame and modesty, and these results are consistent with other studies conducted in Iran and other countries (101 and 55). In Simbar's study, adolescents have raised the family as the main axis of social health needs of adolescents and have emphasized four aspects of family emotional support, the need for responsible parents, the need for informed parents, and the need for freedom with family supervision, as well as the weakness in emotional communication. Appropriate between parents and children is indicated (102). One of the most important barriers to reproductive health education in schools is the non-acceptance of students' parents and cultural prejudices (103), which is consistent with the findings of our study, as well as

shame and uncertainty in all parents, especially in the field of teaching boys, including The challenges of parents in teaching sex to their children have been mentioned, and most parents welcomed educational programs or reliable information sources in this field (101). In another study, barriers to communication with teenagers, conflicting views of parents, confusion of parents and cultural taboos have been raised among the challenging issues of sexual education in teenage boys (104 and 55). In examining mothers' views on sex education for adolescent girls, the most important obstacles from the mothers' point of view were their insufficient knowledge about sexual matters, shyness and shame about discussing sexual matters, fear of girls' insolence and curiosity, and not having enough skills to communicate effectively (105). The data obtained from Torbati et al.'s study led to the formation of categories such as parents' awareness of sexual issues and their physical and mental effects, providing appropriate behaviors in the family by parents, parents' awareness and mastery of a series of communication skills in order to communicate. Better with children, education of parents and socialization and correct transfer of gender norms and values to children, emotional connection in the family and cooperation of schools and parents in this field have led (42). Family factors such as parents' resistance and reluctance towards children's sexual education, weak communication skills between parents and children, and the dominance of adults' views on adolescents' sexual issues, and the challenge of favorable interaction between parents and schools have been mentioned as obstacles to the curriculum of sex education at the secondary level. (34) and in another study, the quality of parent-child relationships and the educational needs of mothers are mentioned as one of the challenges and concerns (51). The findings of a rare study showed that mothers can prevent the harms of puberty by preventing sexual stimulation and curiosity of the adolescent, managing social relationships, strengthening and improving their relationship with the adolescent, talking with the adolescent and making him aware that these methods overcome control patterns. based on abstinence and self-centered care and teen-centered care among different models of sex education and education (6). In the phenomenological study conducted by Boland Hemmatan, parents had no knowledge of what sexual education is and how to teach sexual ethics. Their approach in dealing with their children was a contingent approach. Parents had panic, widespread fears and worried about their children in terms of sexual ethics, which is consistent with the results of our study (106). Sexual health education programs for parents and teenagers are influenced by some social, family and individual factors, and the results of Khanfir's study have emphasized the weakness of these educational programs (107). In Farahani's study, unbalanced control and supervision of parents, communication and emotional problems in the family, cognitive weakness and media literacy of parents as family factors underlying the consumption of unconventional sexual content in teenagers and balanced control and supervision of parents, verbal and emotional communication that builds trust in the family, family adherence Value and moral principles and emotional support in the family have been expressed as family inhibiting factors (37). Therefore, it seems necessary to empower parents for the sexual education of their children, along with the institutionalization of formal sex education training in the form of parenting methods.

Its main innovation lies in collecting in-depth and multi-source data, identifying 12 themes and 29 categories related to adolescents' needs and barriers in sexual health, and providing both short- and

long-term culturally and religiously appropriate recommendations. Furthermore, the study emphasizes the necessity of coordination among families, schools, and governmental as well as international organizations to promote adolescent sexual and reproductive health, highlighting its distinctive contribution and novelty.

Conclusions

The findings of this study indicate that comprehensive sexual and reproductive health education for adolescents is essential, given their limited knowledge and skills and the high prevalence of risky sexual behaviors. The results underscore the critical need for policymakers and relevant authorities to provide culturally and religiously appropriate sexual and reproductive health information and services.

Participants emphasized the importance of coordinated action among key institutions, including the Ministry of Health, Ministry of Education, and Ministry of Sports and Youth, as well as collaboration with international organizations, to address adolescents' sexual health needs, protect vulnerable groups, and develop effective policies and programs.

Furthermore, implementing school-based health education under the supervision of the Ministry of Health, employing trained health professionals and counselors, establishing adolescent-focused care systems, and designing culture-sensitive interventions are crucial for promoting adolescents' well-being.

Overall, sexual education and training are pivotal in reducing risky sexual behaviors, improving adolescents' knowledge and attitudes, and ultimately enhancing their health outcomes. Therefore, adolescents should be prioritized in educational and preventive programs targeting sexual and reproductive health.

Limitations and Recommendations

Limitations:

Due to the qualitative nature of this study and the limited sample size (14 mothers and 34 specialists), the findings cannot be generalized to all adolescents and parents in the country.

Moreover, cultural taboos related to sexual health may have influenced the honesty and completeness of the responses.

The primary focus of the study was on the perspectives of parents and specialists, and the direct viewpoints of adolescents were less extensively examined.

In addition, the findings are constrained by the specific cultural, religious, and social contexts of the participants.

Recommendations:

Based on the results, the recommendations are categorized into short-term and long-term measures.

1. Short-term Measures:

- Integrate sexual and reproductive health education into school curricula, taking cultural and religious frameworks into account.
- Organize workshops and educational sessions for parents and educators to raise awareness and reduce taboos related to adolescent health.
- Utilize virtual platforms and official media to provide adolescents with reliable and accessible information.
- Establish local and regional counseling centers and mental-health services specifically for adolescents.

2. Long-term Measures:

- Develop and implement national policies on adolescent sexual and reproductive health in collaboration with the Ministry of Health, Ministry of Education, and relevant organizations.
- Create inter-ministerial and cross-sectoral programs to coordinate educational, health, and psychosocial services for adolescents.
- Review and amend laws and regulations related to adolescents' access to sexual and reproductive health services, while respecting cultural and religious considerations.
- Continuously monitor and evaluate programs to ensure their effectiveness and alignment with the needs of the younger generation.

Ethics approval and consent to participate

In this study, all procedures were conducted in accordance with the guidelines and regulations pertaining to human subjects research. This study was conducted following the approval of the experimental protocol by the local ethics committee, and informed written consent was obtained from each participant prior to the commencement of the study. This article is derived from a doctoral dissertation in reproductive health, assigned the ethics code IR.SHMU.REC.1402.052, and was supported by Shahrood University of Medical Sciences in the country of Iran. During the research, ethical considerations such as obtaining an ethics code, coordinating with Shahrood University of Medical Sciences and Khalkhal Medical Sciences School, securing informed consent from participants, providing written consent forms if desired, respecting the dignity and status of participants, fostering a sense of safety for participants, maintaining confidentiality and safeguarding participant information, allowing the right to withdraw from the study at any time, attending to the cultural context of participants, and the right to request audio recordings and transcriptions were upheld.

Declarations

Consent for publication

Not applicable for this section.

Availability of data and materials

The datasets generated and/or analysed during the current study are not publicly available due to the need to protect the privacy and confidentiality of the participants, but are available from the corresponding author on reasonable request.

Conflict of Interest

The authors affirm that they have no conflicts of interest regarding the authorship or publication of this article.

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Authors' contributions

Study concept and design: F.F, SH.S, R.CH and T.J; analysis and interpretation of data: F.F and SH.S; drafting of the manuscript: F. F; critical revision of the manuscript for important intellectual content: F. F, SH.S, R.CH and T.J.

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