Original research article

Parental Communication on Sexual and reproductive Health: An Adolescent Perspective in Kerala, India

ABSTRACT

Introduction: "Adolescent sexual and reproductive health" describes the mental and physical health of adolescents, as well as their capacity to avoid unintended pregnancy, unsafe abortion, sexually transmitted infections (including HIV/AIDS), and any kind of coercion or sexual assault. Promoting healthy sexual and reproductive activities among adolescents' requires open and honest communication between parents and their adolescent children.
Objectives: To estimate the proportion of parental communication with adolescent on sexual and reproductive health (SRH) matters, to determine the relationship of adolescents' knowledge on SRH matters and attitude towards communication with parents on SRH matters and to determine the factors associated with the parent- adolescent communication on SRH matters.
Methods: A cross-sectional study was conducted among 262 students from 10th and 11th grades studying at schools in Kottayam District and were selected by convenient sampling.
Results: Out of the 262 adolescents, nearly half 115 (43.9%) reported having discussions with their parents about SRH matters. Among those who communicated, 57.4% (66 adolescents) stated that such conversations occurred rarely and the nearly two third 64(55.7%) mentioned that the discussions were based on the situation. Pubertal changes and menarche were the major topics of conversation (87.8%). Among the 262 adolescents, 147(56.1%) did not discuss SRH matters with parents and the most frequently reported reasons for lack of communication between parents and adolescents as perceived by adolescents were shame 68 (26%), followed by fear 19 (7.3) and a belief that they knew more than their parents 13(5%). The minimal perceived reasons reported were less knowledge and communication ability of parents, aadolescents' inability to initiate the conversation and discouragement of parents etc. There is significant relation between adolescents' knowledge on SRH matters and attitude towards communication with parents on SRH matters ($p<0.05$ level). Majority of adolescents had 222(84.7%) poor knowledge on SRH matters and while only 3 (1.1%) had good knowledge. With respect to attitude towards communication with parents on SRH matters nearly half of the adolescents 48.9% had unfavorable attitude, whereas just over half 51.1% had favorable attitude. Age ($p <0.05$), gender ($p <0.05$), class of study ($p <0.05$), presence of elder siblings at home ($p <0.05$), previous information on SRH ($p <0.05$) and attitude towards SRH communication with parents ($p <0.05$) were significantly associated with the parent- adolescent communication on SRH matters. **Conclusion:** The findings showed limited discussion between parents and adolescents on SRH matters and also areas of discussion also limited to pubertal changes and menstruation. Shame was perceived by the adolescents as the most common reason for not discussing SRH matters for those who had no discussion with parents. Strategies need to be developed and implemented by stakeholders in this regard to empower parents and also strengthen the knowledge and attitude of adolescents so that they can take informed decisions and develop positive self-image.

KEYWORDS: *Sexual and reproductive health, Parent- adolescent communication, Knowledge, Attitude, Pubertal changes.*

1. INTRODUCTION

The adolescent population, aged 10 to 19 years, comprises 1.2 billion individuals, accounting for 16% of the global population. Of this group, 650 million are located in Asia [1]. Twenty percent of India's population consists of 253 million teenagers [2]. Adolescents at this stage of development have unique demands that differ according to their gender, socioeconomic

background, and the community's prevailing cultural beliefs [3]. They are greatly influenced by their parents, schools, neighbourhoods and policymakers [4].

Many teenagers have misconceptions and lack of thorough knowledge regarding STIs, contraception, and sexual health [1,5,6]. Their views on sex and relationships are shaped by peer pressure, family beliefs, and cultural norms [7].
More-over it is often the time when many risk-taking activities begin [8]. But adolescents who grow up in stable family environments with morally and financially stable parents are more likely to behave well, even when their surroundings change [9]. Parental support, whether in the form of encouragement, modelling, or other forms of assistance, is crucial and can positively impact the adoption of a healthy lifestyle [10].

But majority of parents were found to have limited understanding of concerns related to adolescents' sexual health [11]. The fast-paced nature of modern living may make it difficult for parents to find the time and energy required to build a true relationship with their adolescent children [12]. Parents hardly ever discuss sexual health concerns with their adolescent offspring, even though they believe that sexual health education is essential for adolescents. They often struggle with discussing sexual health issues with their adolescent children due to feelings of shame, cultural barriers, social stigma, poor understanding, and a lack of SRH communication skills [13]. Issues such as inadequate parent-child attachment, the generational divide between adolescents and their parents, inadequate interaction, and parental delinquency erode the family's support structure, resulting in inappropriate guidance for adolescent [9]. Most parents do not communicate with their adolescent children on sexual health topics, although they feel sexual health education is essential to adolescents. The majority of parents were found inadequately aware of adolescent sexual health issues [11].

Lack of knowledge about SRH, curiosity and experimentation, peer pressure and influence, reliance on social media for SRH information, limited knowledge and access to healthcare and resources, exposure to violence and substance abuse lead to majority of SRH issues [6,13] such as unwanted pregnancies, unsafe abortions, and sexually transmitted diseases like HIV/AIDS etc [14].

Studies found that exposure to sexually explicit media during early adolescence had strongly associated with risky sexual behaviours in late adolescence [15]. The WHO reports that adolescents worldwide, in Asian countries, and in India begin sexual engagement by the age of 15 and give birth before the age of 18 [5,6]. In Kerala, annual Vital Statistics Report 2021 reported that 15,501(3.69%) babies were born to females in the 15 to 19 age group [16].
Parents must provide sufficient information to enhance children's understanding of these matters [17]. But even in Kerala seems to be high literate state in India, most parents gave limited information, unwillingly answered the question, or avoided most questions. The feeling of shame, cultural unacceptability, and lack of communication skills in parents were perceived as significant barriers to communication18. Only few studies have conducted to identify the perspective of parent - adolescent communication on SRH matters in Kerala. This study aimed to assess the adolescents' perspective of parental communication on SRH matters in Kottayam District, Kerala, India. The purpose of the study was to estimate the proportion of parental communication with adolescent on SRH matters, to determine the relationship of adolescents' knowledge on SRH matters and attitude towards communication with parents on SRH matters and to determine the factors associated with the parent-adolescent communication on SRH matters.

2. MATERIALS AND METHODS

2.1 Research design: Cross-sectional study
2.2 Research setting: Selected Schools in Kottayam District.
2.3 Population: Students from 10^{th} and 11^{th} grades of schools in Kerala.
2.4 Sample: Adolescents who fulfil the eligibility criteria. *Inclusion criteria were a*dolescents willing to participate, and were present during the study period. *Exclusion criteria* were adolescents who were with developmental disabilities and who were absent during data collection
2.5 Sample size: The sample size was calculated using the formulae n= Z (1-α/2)2 pq / d2 for a cross-sectional study with 80 % of the power.
Where:
n = required sample size;

Z = Z-value associated with the desired level of confidence (i.e. 95% confidence level, Z = 1.96)
p = estimated proportion of the population with the characteristic of interest, i.e. 19.8% proportion (p) for parental communication with the adolescent child on SRH issues from the Indian context was considered [18].
q = 1-p (the complement of the proportion with the characteristic of interest);
d = is the desired margin of error, i.e. 5% margin of error was considered. Assuming a 5% non-response rate, the total calculated sample was 256. The data was collected from 262 samples.

2.6 Sampling procedures: convenient sampling technique were used.

2.7 Study tools: A pre-tested and validated structured questionnaire prepared was used to collect data.

Tool 1: *Socio-demographic details of the adolescents*: age, religion, class of study, type of family, fathers and mother's education and occupation, place of residence, presence of elder siblings at home and source of information on SRH.

Tool 2: *Communication on SRH matters*: The SRH matters were divided into pubertal changes, menstrual cycle, secondary sexual characteristics, consequences of early marriage, sexual intercourse, unintended pregnancy, unsafe abortions, awareness about contraception, reproductive tract infections/ sexually transmitted infections including HIV/AIDS and non-consensual sex/ sexual abuse, premarital sex, and availability of RH services.

Tool 3: *Adolescents' knowledge on SRH matters:* It consists of knowledge on pubertal changes, SRH issues and reproductive health services. Total score was 30. The knowledge level was categorized into three levels as poor, average and good based on scores less than 15, between15 to 22 and score more than 22 respectively.

Tool 4: *Attitude of adolescents' towards SRH communication*. This tool consisted of 20 statements. Each statement rated as strongly agree, agree, neither agree nor disagree, disagree, strongly disagree and was assigned with numerical scores 1,2,3,4,5 respectively for positive items and the negative items were scored reversely. The total score is ranged from 20 to100 and was categorized into two levels such as positive attitude (scores more than 60) and negative attitude (scores less than 60). The reliability of the questionnaire was assessed with a Cronbach's alpha (0.83). A pilot study was conducted to validate the questionnaire before the study period.

2.8 Method of data collection: After obtaining permission from Institutional Ethical committee and the Head of the institution, the schools were visited, and an overview was provided regarding SRH to the students. The purpose of the study was explained, Informed and written permission was obtained from each of the study participants and following this, questionnaires were distributed, and students were asked to fill them. The confidentiality of their responses was assured.

2.9 Data analysis: The data obtained was coded and entered in a Microsoft Excel worksheet and analysed using the statistical software Statistical Package for Social Sciences (IBM SPSS Statistics 27). The results of baseline characteristics of the study subjects and assessment of proportion of parent adolescent communication were explained in terms of frequency and percentage. Relationship between adolescents' knowledge on SRH matters and attitude towards communication with parents on SRH matters were tested using Spearman rho. Pearson's chi-square test analysed the association between the level of communication and factors. The significance level was estimated with 95% confidence intervals and p-value < 0.05.

3. RESULTS

Nearly half 128(48.9%) of the study population belonged to 15 years of age, as shown in (Table 1). A significant majority, 188 (71.8%), were females and most of them were Christians (64.9%). More than half of the adolescents, 138 (52.7 %), were in class 11thand 124 (47.3 %) were in 10th. With respect to education of parents, 40.8% of fathers had secondary education and 40.1% of mothers had degree/diploma (Figure1). With regard to occupation, 149(56.9%) were doing unskilled job and 140(53.4%) of mothers were housewives (Figure 2). Majority belonged to nuclear family 210 (80.2%). Most of the adolescents were residents of rural areas, 205 (78.2%). Only a few, 57 (21.8 %), belonged to urban areas. Out of the 262 adolescents, more than half, 152(58 %), had elder siblings. Out of 262 subjects, majority of the adolescents (92%) reported that they received the information about SRH matters. Among them 75% received from school, followed by (60%) from parents (56%) from social media and (40%) from friends respectively. (Figure 3). The

most preferred sources of information on SRH matters for adolescents were parents (47%), followed by school (29%)and social media (20%). The least preferred sources were friends (3%) and books (1%). (Figure 4).

Table 1: Demographic characteristics of adolescents (n=262)

Demographic Variables		Frequency	Percentage
Age	14	36	13.7
	15	128	48.9
	16	90	34.4
Gender	Female	188	71.8
	Male	74	28.2
Religion	No religion	4	1.5
	Christian	170	64.9
	Hindu	88	33.6
Class of study	class 10	124	47.3
	class 11	138	52.7
Type of family	Nuclear	210	80.2
	Joint	52	19.8
Place of residence	Rural	205	78.2
	Urban	57	21.8
Presence of elder siblings at home	Yes	152	58.0
	No	110	42.0

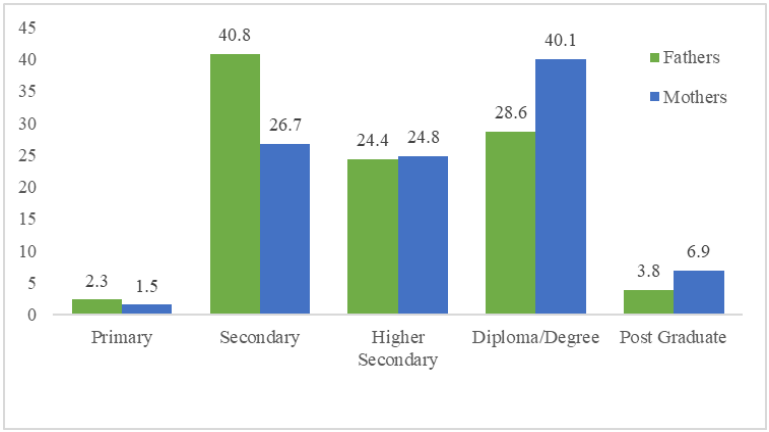

Figure 1. Educational qualification of parents (n=262)

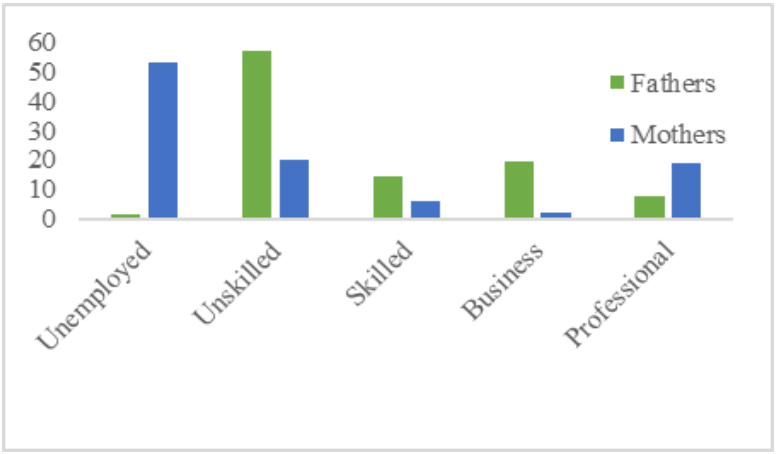

Figure 2. Occupation of parents (n=262)

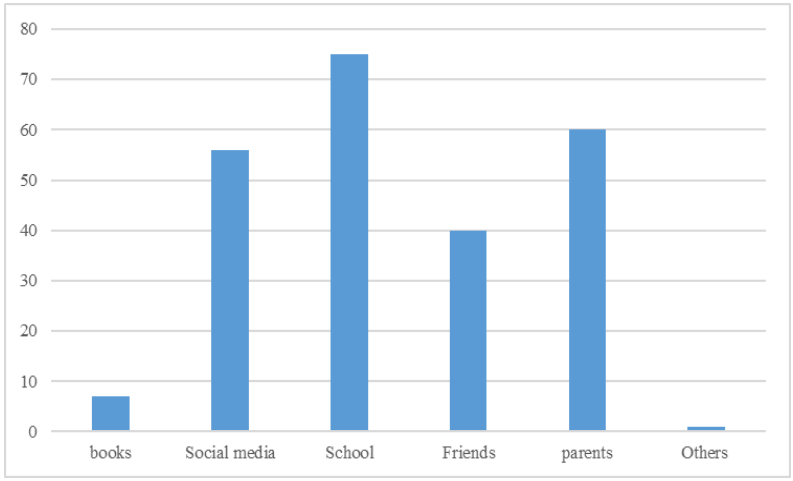

Figure 3. Source of information on SRH (*Multiple answers) **(n=262)**

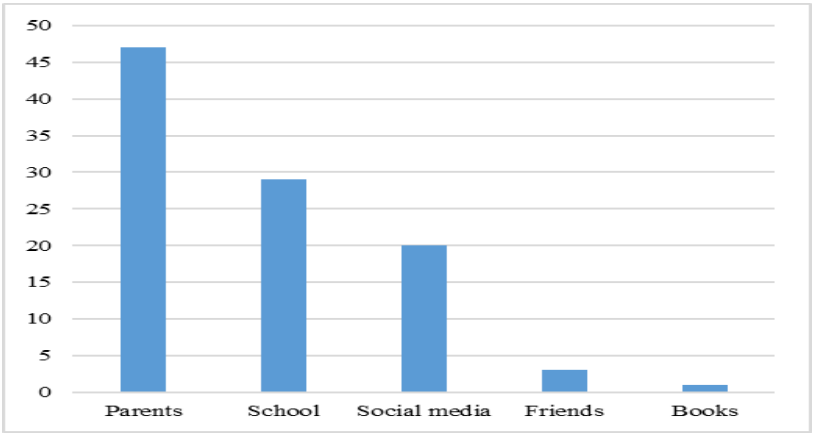

Figure 4: Most preferred Source of information on SRH (n=262)

Parent-adolescent communication on SRH matters

Out of 262 adolescents studied, 115 (43.9 %) reported communication with parents on SRH matters (Table 2). Out of them, the interval of talk was rarely for 66 (57.4%) and the more than half 64 (55.7%) had a discussion based on the situation. (Figure 5). In terms of topic-specific discussions on sexual and reproductive health (SRH) issues, the most commonly addressed topics were pubertal changes and menarche, covered by 87.8% of parents. Discussions on pregnancy were held by only 30.4%, while 26.8% addressed sexual abuse. Less than one-third of parents (24.3%) talked about issues related to early marriage, and the least discussed topics were contraception (10.4%) and STI prevention (16.5%). Interestingly, only a small percentage (6.9%) of parents had discussions about the availability of adolescent-friendly sexual and reproductive services (Figure 6). Among the 262 adolescents, 147 (56.1%) did not discuss SRH matters with parents (Table 2) and the most preferred reason mentioned by them were shame 68 (26%), followed by fear 19 (7.3) and feeling knowledgeable than parents 13 (5%) (Figure 7).

Table: 2 Frequency and percentage of adolescents reported communication with parents on SRH matters. (n=262)

Discussed with Parents	Female	Male	Total
Discussed	100(87%)	15(13%)	115 (43.9%)
Not Discussed	88(59.9%)	59(40.1%)	147(56.1%)

Figure: 5. Percentage of interval and initiation of talk between adolescents and parents on SRH matters (n = 115)

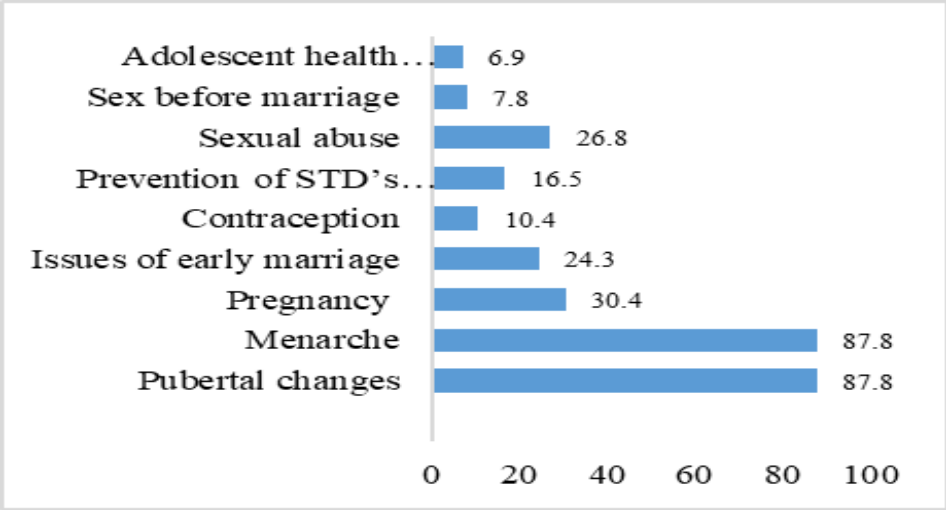

Figure: 6. Percentage of topic wise communication on SRH issues between parents and adolescents (n=115)

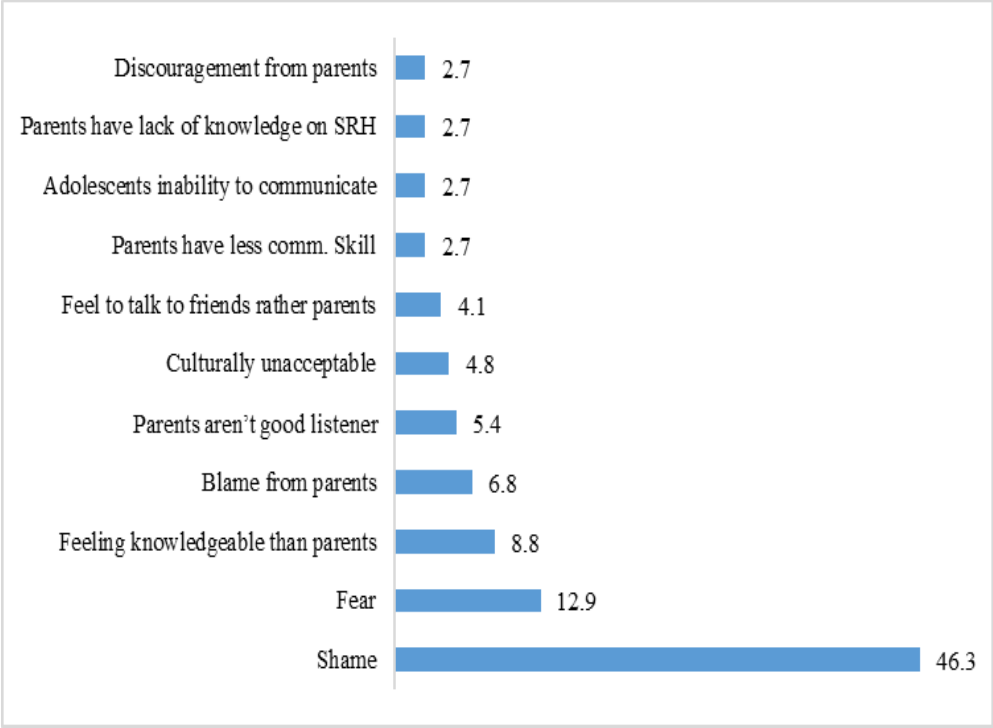

Figure: 7. Reasons for lack of communication between parents and adolescents on SRH issues as perceived by adolescents (n=147)

Adolescents' knowledge on SRH and attitude towards communication with parents on SRH matters.

As shown in Table 3, the majority, 222 (84.7%), had poor knowledge, while only 3 (1.1%) demonstrated good knowledge. Regarding attitudes toward communication with parents about SRH, 48.9% had an unfavorable attitude, while 51.1% displayed a favorable attitude (table 4). There is significant relation between adolescents' knowledge on SRH matters and attitude towards communication with parents on SRH matters ($p< 0.001$ level) showed in table 5.

Table 3: Knowledge score of adolescents' on SRH matters (n=262)

Knowledge	Frequency	Percentage
Poor	222	84.7
Average	37	14.1
Good	3	1.1

Table 4: Attitude score of adolescents' regarding communication of SRH issues between parents and adolescents (n=262)

Attitude	Frequency	Percentage
Unfavourable	128	48.9
Favourable	134	51.1

Table 5: Relation between Adolescents' knowledge on SRH matters and attitude towards communication regarding SRH issues between parents and adolescents (n=262)

	Spearman's rho	p value
knowledge on SRH matters and attitude	0.355	<0.05*

*** correlation significant at 0.05 level*

Factors associated with the parent- adolescent communication on SRH matters

The analysis revealed significant associations between parent-adolescent communication on sexual and reproductive health (SRH) matters and factors such as age ($p < 0.05$), gender ($p < 0.05$), class of study ($p < 0.05$), presence of elder siblings at home ($p < 0.05$), prior information on SRH ($p < 0.05$), and attitudes toward SRH communication with parents ($p < 0.05$). However, group differences were not statistically significant for variables such as religion, parents' education and occupation, type of family, place of residence, and knowledge of SRH matters (table 6).

Table: 6 Factors associated with the parent- adolescent communication on SRH matters (n=262)

Factors	Chi square	df	p value
Age	17.229	3	<0.001
Gender	23.368	1	<0.001
Religion	5.88	2	0.053
Class of study	26.31	1	<0.001*
Fathers education	2.048	4	0.727
Fathers Occupation	5.69	4	0.227
Mothers education	1.30	4	0.86
Mothers occupation	2.863	4	0.581
Type of family	0.982	1	0.351
Place of residence	2.294	1	0.13
Presence of elder siblings	6.009	1	0.014*
Previous information on SRH	17.860	1	<0.001*
Knowledge on SRH	1.68	2	0.467
Attitude	16.24	1	<0.001*

** significant at 0.05 level*

4. DISCUSSION

This study looks at communication of adolescents and their parents about SRH, as well as their knowledge and attitudes towards communication. The present study revealed that 43.9% of adolescents discussed sexual and reproductive health (SRH) topics with their parents. This finding aligns with an institutional-based cross-sectional study involving 360 students, where 48.5% reported having such discussions with their parents [19]. Similar results were observed in studies conducted in Nepal (40.9%) [11], Gondar town, northwest Ethiopia (37.7%) [20] and Oromia, Ethiopia (37.6%) [21]. In contrast, a study in Vientiane Prefecture, Lao PDR, found that only 21.3% of adolescents had communication with their parents about SRH issues [22].

Out of 262 students only 115 reported communications between parents and adolescents on SRH matters and among them the most frequently discussed topics were pubertal changes and menarche, covered by 87.8% of parents. In contrast, only 30.4% of parents talked about pregnancy, and 26.8% addressed sexual abuse. Fewer than one-third (24.3%) discussed early marriage, while contraception (10.4%) and HIV/STI prevention (16.5%) were among the least covered topics. Notably, only 6.9% of parents discussed the availability of adolescent-friendly sexual and reproductive health services. This indicates a severe breakdown in communication that may result in risky actions and inaccurate information.

A study by Paul, A.S., et al. on sexual and reproductive health communication among high school students found that 82.3% of adolescents received parental guidance about pubertal changes, and 73.5% discussed menstruation. However, only 31.9% of adolescents had conversations with their parents about sexual contact. Communication on adolescent pregnancy was reported by 38.0%, and 52.7% addressed sexual abuse. Regarding STDs, 23.7% of adolescents were informed by their parents, while only 12.4% discussed contraception18. Similarly, a study by Singh D.R., et al. revealed that 62.7% of adolescents had discussion with parents on hygienic practices for menstrual health, 47% addressed STI prevention, 29.4% discussed contraception, and just 17.5% talked about the availability of adolescent-friendly sexual and reproductive services [11].
In this study, among the 115 adolescents who discussed sexual and reproductive health (SRH) matters with their parents, 57.4% did so rarely, 39.1% occasionally, and only 3.5% frequently. Similar findings were reported in a study conducted in Thrissur, where 47.4% of adolescents discussed SRH matters with their parents rarely, 37.5% occasionally, and 12.5% frequently [22]. In the present study, only 7.8% of adolescents initiated discussion,

while 36.5% were initiated by parents. In contrast, a study by Paul, A.S., et al. found that 51.5% of discussions were initiated by adolescents and 16.5% parents initiated the conversations [22].

Feeling of shame was the major barrier in communication followed by fear, feeling knowledgeable than parents and blame from parents etc. Several studies supported this finding that feeling of shame, as a key barrier in communication about sexual health between adolescent's ad parents [11,18].

The present study showed that majority had 222 (84.7%) poor knowledge on SRH matters. With regard to attitude 48.9% had unfavorable attitude towards communication with parents on SRH matters and 51.1% had favorable attitude. The study also showed a significant relation between adolescents' knowledge on SRH matters and attitude towards communication with parents on SRH matters ($p< 0.001$ level).

Reproductive health awareness among adolescent girls of a government school in an urban slum of Pune City showed that the overall knowledge regarding reproductive health awareness was poor in 163 (77.2%), average in 29 (13.7%) and good only in 13 (9%) of the respondents [23]. Several studies reported the same finding [17, 24]. Ignorance on SRH matters may result in false information, dangerous actions, and negative health consequences. More open communication was shown by those who knew more about SRH, indicating that increased education could facilitate conversations.

In the present study, age ($p <0.001$), gender ($p <0.001$), class of study ($p <0.001$), presence of elder siblings at home ($p <0.05$), previous information on SRH ($p <0.001$) and attitude towards SRH communication with parents ($p <0.001$) were significantly associated with the parent- adolescent communication on SRH matters.
Gender, school type, father's educational status, accepting the necessity of sex education, source of information about SRH issues (school and media), and mother's openness to communicate about SRH issues were found to be significantly associated with discussing SRH issues [21].
Female students and the students who had positive attitudes toward sexual reproductive health issues were significantly more likely to discuss SRH issues with parents [19,20,22].
In the present study school was the major source of information. Studies also reported that school (68.45%) was the major source of information on SRH [21].
On the contrary most of the adolescent girls (65%) acknowledged their mothers as the primary source of knowledge on SRH matters [24] especially like private parts, type of touch, response to sexual assault and menstruation [17].

In the present study mother was the preferred source of information. But studies reported that school [19,21] and the mass media were preferred sources of sexual and reproductive health information [19]. The inclusion of themes such as gender perspective and sexual variation, which extend beyond harmful behaviours, is necessary, according to a meta-analysis and systematic review of programs on sex education in adolescents [25]. To improve the health and well-being of adolescents, these challenges must be addressed through supporting policies, parental participation, and education.

5. CONCLUSION

According to this study, parents and teenagers did not talk much about sexual and reproductive health (SRH) issues. Talking to adolescents about SRH with active listening and frequent conversations helps them to deal with the mental and physical changes that occur with puberty. The implementation of education on SRH themes, including healthy relationships, communication skills, sexually transmitted diseases, contraception, and interpersonal dynamics, is essential. Furthermore, it offers a chance to resolve issues, dispel misunderstandings, and build a relationship of trust in which teenagers feel at ease asking for help and thereby parents can empower their teens to take informed decisions and develop a positive self-image. Policymakers, educators, and healthcare professionals can create global efforts to enhance SRH education, plan initiatives to raise community

awareness, and strengthen SRH curricula and family-based communication strategies for both parents and adolescents so that they can make educated decisions.

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CONFLICT OF INTEREST

Authors have declared that no competing interests exist.

CONSENT AND ETHICAL APPROVAL

Consent and ethical approval was gained from relevant stakeholders before data collection

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