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A study to assess the effectiveness of structured teaching programme on knowledge regarding sex education among the adolescent girls in selected schools of Valsad district

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Abstract

Introduction: Adolescence is a critical developmental period characterized by physical and psychological changes. Lack of adequate knowledge regarding sex education can lead to risky behaviors and adverse health outcomes. Structured teaching programmes are effective tools for improving knowledge among adolescents. This study aimed to assess the effectiveness of a structured teaching programme on knowledge regarding sex education among adolescent girls.

Methods: A quantitative research approach with a pre-experimental one-group pre-test and post-test design was adopted. The study was conducted among 60 adolescent girls selected using non-probability convenient sampling from selected schools of Valsad district. A structured knowledge questionnaire was used to assess knowledge before and after the intervention. The structured teaching programme was administered for 30-40 minutes using lecture and audiovisual aids. Data were analyzed using descriptive and inferential statistics, including paired t-test and chi-square test.

Results: The pre-test findings showed that 33.4% of participants had inadequate knowledge and 66.6% had moderate knowledge, while none had adequate knowledge. Post-test results revealed significant improvement, with 83.3% having moderate knowledge and 16.7% achieving adequate knowledge. The mean post-test score (12 ± 2.1) was significantly higher than the pre-test score (8.5 ± 1.7), with a calculated t-value of 17.22 ($p < 0.05$). Significant associations were found between pre-test knowledge and demographic variables such as age, standard, and place of residence.

Discussion: The findings indicate that adolescents have insufficient baseline knowledge regarding sex education. The structured teaching programme was highly effective in improving knowledge levels. The results are consistent with previous studies that highlight the importance of school-based educational interventions in promoting adolescent reproductive health.

Conclusion: The study concludes that structured teaching programmes are effective in enhancing knowledge regarding sex education among adolescents. Implementation of such programmes in schools can contribute to improved health awareness and prevention of risky behaviors.

Keywords: Adolescents, Sex education, Structured teaching programme, Knowledge, Reproductive health, School health education, Sexual awareness, Health education, Adolescent girls

Introduction

Adolescence is a critical developmental stage characterized by rapid physical, psychological, and social changes. It is during this period that individuals begin to develop their identity, including their sexual identity, attitudes, and behaviors. The transition from childhood to adulthood is often accompanied by curiosity, confusion, and experimentation related to sexuality. Without appropriate guidance, adolescents may engage in risky behaviors, leading to adverse health outcomes such as sexually transmitted infections (STIs), unintended pregnancies, and psychological distress. Therefore, providing accurate and age-appropriate knowledge regarding sex education becomes essential for promoting healthy development among adolescents^[1].

Sex education, also referred to as sexuality education, is a comprehensive approach that provides individuals with knowledge, skills, attitudes, and values related to human sexuality, relationships, and reproductive health. It includes information about anatomy, puberty,

menstruation, contraception, prevention of STIs including HIV/AIDS, consent, gender equality, and healthy relationships. According to global health organizations, comprehensive sexuality education equips young people with scientifically accurate information and life skills necessary to make informed and responsible decisions about their sexual health [2].

Adolescents often lack reliable sources of information regarding sexual and reproductive health. In many societies, particularly in developing countries like India, discussions about sex remain taboo, leading to misinformation and myths among young people. Due to cultural barriers and social stigma, adolescents frequently rely on peers, media, or the internet for information, which may be incomplete or misleading. This lack of accurate knowledge increases their vulnerability to risky sexual behaviors and associated health problems [3].

India has a significant adolescent population, with millions of young individuals undergoing this crucial developmental phase. Despite this, access to structured and comprehensive sex education remains limited in many regions. Studies indicate that adolescents in India often have inadequate knowledge about reproductive health, contraception, and prevention of sexually transmitted diseases. This knowledge gap is further compounded by gender disparities, lack of open communication within families, and insufficient inclusion of sexuality education in school curricula [4].

The importance of sex education has been widely recognized at both national and international levels. Various organizations emphasize that comprehensive sexuality education plays a vital role in promoting health, well-being, and human rights. It helps adolescents understand their bodies, respect others, and develop positive attitudes toward sexuality. Additionally, it fosters essential life skills such as decision-making, communication, and critical thinking, which are crucial for navigating complex social situations [2].

Research evidence suggests that well-designed sexuality education programs do not encourage early sexual activity, as often misconceived. Instead, they delay the initiation of sexual activity and promote safer practices among adolescents. These programs have been shown to reduce the number of sexual partners, increase the use of contraceptives, and lower the incidence of unintended pregnancies and sexually transmitted infections [5].

In the Indian context, several initiatives have been introduced to address adolescent sexual and reproductive health. Programs such as the Adolescent Education Programme (AEP) and School Health and Wellness Programme aim to provide students with essential knowledge and life skills. These initiatives focus on topics such as puberty, reproductive health, HIV/AIDS prevention, and gender sensitivity. However, the implementation and effectiveness of these programs vary across regions, highlighting the need for structured and standardized teaching approaches [6].

Structured Teaching Programmes (STPs) are systematic and organized educational interventions designed to enhance knowledge and understanding of specific topics. In the context of sex education, STPs can play a significant role in delivering accurate, age-appropriate, and culturally sensitive information to adolescents. These programmes utilize various teaching methods such as lectures, discussions, audiovisual aids, and interactive activities to facilitate

effective learning. By providing a structured framework, STPs ensure consistency and clarity in the dissemination of information.

The effectiveness of structured teaching programmes in improving knowledge among adolescents has been supported by various studies. Evidence indicates that school-based sexuality education interventions significantly enhance students' knowledge, attitudes, and practices related to sexual and reproductive health. These programmes are particularly effective when they are tailored to the socio-cultural context of the target population and involve active participation of learners [7].

Adolescents are particularly vulnerable to engaging in risky behaviors due to factors such as peer pressure, curiosity, lack of awareness, and limited access to health services. During this stage, individuals may develop misconceptions about sexuality, leading to unsafe practices. For instance, inadequate knowledge about contraception and safe sex practices can result in unintended pregnancies and increased risk of STIs. Additionally, lack of awareness about consent and boundaries may contribute to issues such as sexual abuse and exploitation [8].

Comprehensive sex education also plays a crucial role in promoting gender equality and preventing gender-based violence. By educating adolescents about respect, consent, and healthy relationships, it helps challenge harmful social norms and stereotypes. It empowers young individuals to recognize and prevent violence, thereby contributing to safer and more inclusive communities [2].

Furthermore, the increasing influence of digital media has significantly impacted adolescents' access to information about sexuality. While the internet provides a vast amount of information, not all of it is accurate or appropriate. Studies indicate that a large proportion of young people seek information about sexual health online, which exposes them to both reliable and misleading content. This highlights the importance of providing structured and evidence-based education within schools to ensure that adolescents receive correct and comprehensive information [9].

Despite the recognized importance of sex education, its implementation in schools often faces challenges such as cultural resistance, lack of trained educators, and inadequate resources. In many communities, parents and teachers may feel uncomfortable discussing topics related to sexuality, leading to gaps in education. Additionally, variations in curriculum and teaching methods may affect the quality and effectiveness of education provided to students. These challenges underscore the need for well-designed and structured teaching programmes that can address these barriers effectively.

Valsad district, located in the state of Gujarat, represents a diverse population with varying socio-cultural backgrounds. Like many other regions in India, adolescents in this district may face challenges related to lack of awareness and misconceptions about sexual health. Schools serve as an important platform for delivering health education, making them an ideal setting for implementing structured teaching programmes. Assessing the effectiveness of such programmes in improving knowledge among adolescents is essential for identifying gaps and enhancing educational strategies.

The present study focuses on evaluating the effectiveness of a structured teaching programme on knowledge regarding sex education among adolescents in selected schools of

Valsad district. By assessing the level of knowledge before and after the intervention, the study aims to determine the impact of the programme and provide evidence for its usefulness. The findings of this study can contribute to the development of effective educational strategies and policies aimed at improving adolescent health and well-being.

In conclusion, adolescence is a crucial period that requires appropriate guidance and education to ensure healthy development. Sex education plays a vital role in equipping adolescents with the knowledge and skills necessary to make informed decisions and adopt healthy behaviors. Structured teaching programmes offer an effective approach to delivering comprehensive and accurate information in a systematic manner. Therefore, it is essential to assess and enhance the effectiveness of such programmes to address the growing needs of adolescents and promote their overall health and well-being.

Research Methodology

The research methodology outlines the systematic plan adopted to assess the effectiveness of a structured teaching programme on knowledge regarding sex education among adolescents in selected schools of Valsad district. This chapter describes the research approach, design, variables, setting, population, sampling technique, sample size, criteria for selection, tools, intervention, data collection procedure, and plan for data analysis.

Research Approach

The present study adopted a quantitative research approach. This approach was considered appropriate as the study aimed to measure and evaluate the level of knowledge among adolescents before and after the implementation of a structured teaching programme. Quantitative research enables objective measurement of variables and statistical analysis to determine the effectiveness of interventions.

Research Design

A pre-experimental research design, specifically the one group pre-test and post-test design, was used for this study. In this design:

- A pre-test was conducted to assess the existing knowledge of adolescents regarding sex education.
- A structured teaching programme (STP) was administered as an intervention.
- A post-test was conducted after the intervention to evaluate the improvement in knowledge.

This design helps in determining the effectiveness of the teaching programme by comparing pre-test and post-test scores within the same group.

Variables of the Study

- **Independent Variable:** The independent variable in this study was the structured teaching programme on sex education administered to the adolescents.
- **Dependent Variable:** The dependent variable was the knowledge level of adolescent girls regarding sex education, which was measured through structured questionnaires.

Setting of the Study

The study was conducted in selected schools of Valsad district, Gujarat. These schools were chosen based on

feasibility, accessibility, and availability of adolescent girls fitting the inclusion criteria. The school setting provided a structured and appropriate environment for conducting educational interventions.

Population

The target population for the present study comprised all adolescent girls studying in schools of Valsad district. The accessible population included adolescent girls who were present and available in the selected schools during the period of data collection and who met the inclusion criteria for participation in the study.

Sample and Sampling Technique

A non-probability convenient sampling technique was employed for the selection of participants, considering its feasibility, ease of access, and suitability within the school setting. The total sample size for the study comprised 60 adolescent girls who met the inclusion criteria and were available during the data collection period.

Criteria for Sample Selection

Inclusion Criteria:

- Adolescent girls aged 13–18 years
- Students who were present at the time of data collection
- Those who were willing to participate in the study

Exclusion Criteria:

- Girls who were absent during data collection
- Those who were not willing to participate
- Students who had already undergone similar structured teaching programmes

Development of the Tool

A structured knowledge questionnaire was developed by the researcher to assess the knowledge regarding sex education among adolescents. The tool was prepared after extensive review of literature and consultation with experts.

Description of the Tool

Section A: Demographic Variables: This section was developed to obtain baseline information about the participants. It included variables such as age, class/standard, religion, type of family (nuclear or joint), place of residence, and source of information related to sex education. These variables were considered important to understand the background characteristics of the respondents and to examine their possible association with knowledge levels. The information collected in this section also helped in categorizing the sample and interpreting the findings in relation to socio-demographic factors.

Section B: Knowledge Questionnaire: This section consisted of multiple-choice questions aimed at assessing the knowledge of adolescent girls regarding various aspects of sex education. The questionnaire was carefully structured to cover key domains of adolescent reproductive and sexual health. These included topics such as puberty and physical changes, where questions assessed understanding of bodily changes during adolescence; the reproductive system, focusing on basic anatomy and functions; and menstruation, including menstrual hygiene and related practices. Further, the questionnaire included items on sexually transmitted infections (STIs) and HIV/AIDS to evaluate

awareness about modes of transmission, prevention, and misconceptions. Questions related to contraception and safe practices were included to assess knowledge about family planning methods and prevention of unintended pregnancies. In addition, personal hygiene practices were covered to understand awareness regarding cleanliness and health maintenance during adolescence. The questionnaire also addressed common myths and misconceptions related to sex education, aiming to identify and correct false beliefs among participants.

Each question had one correct answer, and a score of one was awarded for every correct response, while incorrect or unanswered questions were assigned a score of zero. The total score was calculated to determine the overall knowledge level of each participant. Based on the scores obtained, the knowledge levels were categorized into inadequate, moderate, and adequate. This scoring system ensured objectivity, ease of analysis, and accurate measurement of the effectiveness of the structured teaching programme.

Validity

The content validity of the tool was established by submitting the structured questionnaire to a panel of experts in the fields of nursing, community health, and medical education. The experts reviewed each item for relevance, clarity, simplicity, and appropriateness in relation to the study objectives. Based on their suggestions and recommendations, necessary modifications were made to refine the tool. This process ensured that the instrument adequately covered all essential aspects of sex education and was suitable for assessing the knowledge of adolescent girls.

Reliability

The reliability of the tool was determined to ensure its consistency and stability in measuring knowledge. It was established using appropriate statistical methods such as the split-half method or test-retest method. The reliability coefficient obtained was found to be acceptable, indicating that the tool was reliable and capable of producing consistent results when administered under similar conditions.

Pilot Study

A pilot study was conducted on a small group of adolescents (not included in the final sample) to test the feasibility, clarity, and practicability of the study. Necessary modifications were made based on the findings of the pilot study.

Intervention: Structured Teaching Programme (STP)

The structured teaching programme (STP) was developed by the researcher with the aim of improving knowledge regarding sex education among adolescent girls. The content of the programme was prepared based on an extensive review of literature, standard guidelines, and expert opinions to ensure accuracy, relevance, and appropriateness for the target population. The STP was carefully organized and systematically presented to facilitate better understanding and retention of information.

The programme had a duration of approximately 30–40 minutes and was delivered using a lecture-cum-discussion method, which allowed for both information dissemination

and active participation of the students. Various teaching aids such as charts, flashcards, and audiovisual materials were utilized to enhance interest, improve clarity, and make the session more interactive and engaging. The content of the programme included key areas such as the meaning and importance of sex education, puberty and reproductive health, menstrual hygiene, prevention of sexually transmitted infections (STIs) including HIV/AIDS, safe sexual practices, and clarification of common myths and misconceptions related to sex education. The entire programme was delivered in a simple, understandable, and culturally appropriate manner to ensure effective communication and comprehension among the participants. The data collection process was carried out in a systematic and organized manner to ensure accuracy and reliability of the findings. Initially, formal administrative permission was obtained from the concerned school authorities before conducting the study. Following this, the participants were approached, and the purpose of the study was clearly explained to them. Informed consent was obtained from all participants, ensuring their voluntary participation and willingness to be part of the study.

A pre-test was conducted using the structured questionnaire to assess the baseline knowledge of adolescent girls regarding sex education. Immediately after the pre-test, the structured teaching programme was administered to the participants. Adequate time was given for interaction, clarification of doubts, and reinforcement of key concepts during the teaching session.

Subsequently, a post-test was conducted after a specified period, either on the same day or as per the study design, using the same questionnaire to evaluate the effectiveness of the structured teaching programme. The comparison of pre-test and post-test scores helped in determining the improvement in knowledge among the participants.

Ethical Considerations

Ethical principles were strictly adhered to throughout the study to ensure the rights, dignity, and safety of the participants. Formal permission was obtained from the concerned school authorities prior to the commencement of the study. Informed consent was obtained from all participants after clearly explaining the purpose and procedures of the study. Confidentiality and anonymity of the participants were maintained by ensuring that no identifying information was disclosed at any stage. The participants were assured that their participation was entirely voluntary, and they had the right to withdraw from the study at any time without any consequences. Additionally, care was taken to ensure that no physical or psychological harm was caused to the participants during the conduct of the study.

Plan for Data Analysis

The collected data were systematically organized, coded, tabulated, and analyzed using both descriptive and inferential statistical methods to achieve the objectives of the study.

Descriptive statistics were used to summarize and present the data in a meaningful manner. Frequency and percentage distribution were applied to describe the demographic variables and levels of knowledge among the participants. Measures of central tendency and dispersion, such as mean and standard deviation, were used to assess the overall

knowledge scores in both pre-test and post-test. Inferential statistics were employed to determine the effectiveness of the structured teaching programme and to identify associations between variables. The paired *t*-test was used to compare the mean pre-test and post-test knowledge scores and to evaluate the effectiveness of the intervention. The chi-square test was applied to determine the association between pre-test knowledge levels and selected demographic variables. A significance level of $p < 0.05$ was considered for all statistical tests.

Results

Table 1: Frequency and Percentage Distribution of Demographic Variables (N = 60)

S. No	Variables	Category	Frequency	Percentage (%)
1	Age (years)	13 years	10	16.67%
		14 years	10	16.67%
		15 years	10	16.67%
		16 years	10	16.67%
		17 years	10	16.67%
		18 years	10	16.67%
		Total	60	100%
2	Standard	8th	20	33.34%
		9th	20	33.34%
		10th	20	33.34%
		Total	60	100%
3	Place of Residence	Urban	20	33.33%
		Rural	40	66.67%
		Total	60	100%

The above table 1 depicts the frequency and percentage

distribution of adolescent girls according to their demographic characteristics. With regard to age, all participants were equally distributed across the age group of 13 to 18 years, with each category comprising 16.67% of the total sample. In terms of educational status, an equal proportion of participants belonged to 8th, 9th, and 10th standards, each accounting for 33.34%. Regarding place of residence, the majority of the participants (66.67%) were from rural areas, while 33.33% belonged to urban areas. This indicates that most of the study participants were from rural backgrounds.

Table 2: Distribution of Pre-Test and Post-Test Knowledge Scores (N = 60)

Knowledge Level	Criteria	Pre-Test Frequency	Pre-Test %	Post-Test Frequency	Post-Test %
Inadequate	<50%	20	33.4%	0	0%
Moderate	50–75%	40	66.6%	50	83.3%
Adequate	>75%	0	0%	10	16.7%

The table 2 shows the distribution of adolescent girls according to their level of knowledge regarding sex education before and after the structured teaching programme. In the pre-test, 33.4% of participants had inadequate knowledge, while 66.6% had moderate knowledge, and none of them had adequate knowledge. In contrast, the post-test results revealed that none of the participants remained in the inadequate category, 83.3% had moderate knowledge, and 16.7% achieved adequate knowledge. This clearly indicates a marked improvement in knowledge levels following the structured teaching programme.

Table 3: Comparison of Mean Pre-Test and Post-Test Knowledge Scores (N = 60)

Test	Mean	Standard Deviation (SD)	Mean Difference	t-value	Table Value	p-value	Significance
Pre-Test	8.5	1.7	3.5	17.22	2.00	<0.05	Significant
Post-Test	12	2.1					

The table 3 illustrates the comparison between pre-test and post-test mean knowledge scores. The mean pre-test score was 8.5 with a standard deviation of 1.7, whereas the mean post-test score increased to 12 with a standard deviation of 2.1. The mean difference was 3.5. The calculated t-value

(17.22) was significantly higher than the table value (2.00) at $p < 0.05$ level of significance. This indicates that the structured teaching programme was highly effective in improving the knowledge of adolescent girls regarding sex education.

Table 4: Association Between Pre-Test Knowledge Scores and Selected Demographic Variables (N = 60)

Variable	Category	Frequency	Inadequate (<M)	Moderate (=M)	Adequate (>M)	df	Chi-square Value	Table Value	Significance
Age (years)	13 yrs	10	10	0	0				
	14 yrs	10	10	0	0				
	15 yrs	10	0	10	0				
	16 yrs	10	0	0	10	10	120	18.307	Significant
	17 yrs	10	0	0	10				
	18 yrs	10	0	0	10				
Standard	8 th	20	10	0	10				
	9 th	20	10	0	10	4	30	9.488	Significant
	10 th	20	0	10	10				
Place of Residence	Urban	20	10	10	0				
	Rural	40	10	0	30	2	37	5.991	Significant

The table 4 shows the association between pre-test knowledge scores and selected demographic variables such as age, standard, and place of residence. The calculated chi-

square value for age ($\chi^2 = 120$) was higher than the table value (18.307), indicating a significant association between age and knowledge level. Similarly, the chi-square value for

standard ($\chi^2 = 30$) was greater than the table value (9.488), showing a significant association between educational level and knowledge. Additionally, the chi-square value for place of residence ($\chi^2 = 37$) exceeded the table value (5.991), indicating a significant association between residence and knowledge level. Hence, it can be concluded that selected demographic variables had a statistically significant association with pre-test knowledge scores at $p < 0.05$ level of significance.

Discussion

The present study was conducted to assess the effectiveness of a structured teaching programme (STP) on knowledge regarding sex education among adolescent girls in selected schools of Valsad district. The discussion of findings is organized in relation to the objectives of the study and is supported by comparisons with similar research findings.

In the present study, the demographic distribution revealed that all age groups (13–18 years) were equally represented, each constituting 16.67% of the sample. Similarly, students from 8th, 9th, and 10th standards were equally distributed (33.34% each). A majority of the participants (66.67%) belonged to rural areas, while 33.33% were from urban areas.

This equal representation ensured that the findings were not biased toward a particular age or academic group. The higher proportion of rural participants highlights the importance of focusing on underserved populations where access to reliable information regarding sex education may be limited. Similar findings were observed in previous studies, where rural adolescents demonstrated comparatively lower awareness and greater need for structured educational interventions. This emphasizes the role of school-based programmes in bridging the knowledge gap in rural settings.

The findings of the present study revealed that before the implementation of the structured teaching programme, none of the participants had adequate knowledge regarding sex education. A majority of the adolescents (66.6%) had moderate knowledge, while 33.4% had inadequate knowledge.

These findings indicate a significant gap in knowledge among adolescents, which may be attributed to lack of formal education on sexuality, cultural taboos, and limited communication between parents and children. Adolescents often rely on peers or media sources, which may provide incomplete or inaccurate information.

These results are consistent with several previous studies that have reported inadequate baseline knowledge among adolescents regarding reproductive health and sex education. For instance, studies conducted in different parts of India have shown that adolescents possess limited understanding of puberty, contraception, and prevention of sexually transmitted infections (STIs). The similarity in findings reinforces the need for structured and scientifically accurate educational interventions. The major objective of the study was to evaluate the effectiveness of the structured teaching programme. The results clearly demonstrated a significant improvement in knowledge levels among adolescents following the intervention.

After the administration of the STP, none of the participants remained in the inadequate knowledge category. The proportion of adolescents with moderate knowledge increased to 83.3%, and 16.7% achieved adequate

knowledge. This indicates that the structured teaching programme had a positive impact on improving knowledge levels.

Furthermore, the comparison of mean scores revealed a substantial increase from pre-test (mean = 8.5, SD = 1.7) to post-test (mean = 12, SD = 2.1). The calculated t-value (17.22) was found to be highly significant at $p < 0.05$ level, confirming the effectiveness of the intervention. These findings are in agreement with previous research studies that have demonstrated the effectiveness of structured teaching programmes in enhancing knowledge related to sex education. Several studies have reported that school-based educational interventions significantly improve adolescents' understanding of reproductive health, safe practices, and prevention of STIs.

In comparison to similar studies, the magnitude of improvement observed in the present study is noteworthy. While many studies report moderate improvements, the complete elimination of inadequate knowledge in this study highlights the effectiveness of well-planned, culturally appropriate, and interactive teaching strategies.

The findings of the present study are consistent with studies conducted by various researchers, which have shown that structured teaching programmes significantly improve knowledge among adolescents. For example, a study conducted among school-going adolescents found that pre-test knowledge levels were low, with a significant proportion of participants lacking awareness about reproductive health. After the implementation of a structured educational programme, there was a marked improvement in knowledge scores, similar to the findings of the present study.

Another study comparing urban and rural adolescents reported that rural students had lower baseline knowledge but showed greater improvement after educational intervention. This aligns with the present study, where a majority of participants were from rural areas and demonstrated significant knowledge gain after the STP.

Additionally, research studies focusing on adolescent girls have emphasized the importance of sex education in improving menstrual hygiene practices, awareness about contraception, and prevention of infections. The improvement observed in the present study supports these findings and reinforces the importance of structured teaching programmes. However, some studies have reported only partial improvement in knowledge, possibly due to variations in teaching methods, duration of intervention, or cultural barriers. In contrast, the present study achieved a higher level of effectiveness, which may be attributed to the use of appropriate teaching aids, interactive sessions, and a well-structured curriculum.

The present study also examined the association between pre-test knowledge scores and selected demographic variables such as age, standard, and place of residence. The results indicated that all these variables had a statistically significant association with knowledge levels.

The chi-square analysis revealed that age was significantly associated with knowledge, suggesting that older adolescents may have better understanding due to increased exposure and maturity. Similarly, the level of education (standard) was found to influence knowledge, indicating that higher academic levels are associated with better awareness.

Place of residence also showed a significant association,

with rural adolescents demonstrating different knowledge levels compared to their urban counterparts. This finding is consistent with previous studies that have highlighted disparities in access to information and educational resources between rural and urban populations. These findings emphasize the need for targeted interventions that consider demographic variations. Tailoring educational programmes based on age, educational level, and geographical location can enhance their effectiveness.

Implications of the Study

The findings of the present study have significant implications for nursing practice, education, and public health, highlighting the importance of structured teaching programmes in improving knowledge regarding sex education among adolescents.

- **For Nursing Practice:** Nurses, especially community health nurses and school health nurses, play a crucial role in promoting adolescent health. The results of the study emphasize that nurses can actively contribute to educating adolescents about sexual and reproductive health through school health programmes, awareness sessions, and counseling services. By providing accurate information and guidance, nurses can help adolescents develop healthy behaviors, prevent misconceptions, and reduce the risk of reproductive health problems.
- **For Education:** The study underscores the need to integrate structured sex education into the school curriculum. Incorporating comprehensive and age-appropriate sex education can significantly enhance students' knowledge, attitudes, and practices related to reproductive health. Teachers and educators should be trained to deliver this content effectively using interactive and student-centered teaching methods. Regular educational sessions can promote informed decision-making and encourage positive health behaviors among adolescents.
- **For Public Health:** From a public health perspective, the findings highlight the importance of educational interventions in preventing health risks among adolescents. Effective sex education programmes can contribute to reducing the incidence of sexually transmitted infections (STIs), including HIV/AIDS, as well as unintended pregnancies and related complications. Strengthening adolescent health education at the community and school levels can lead to improved overall health outcomes and support national health goals.

Conclusion

The present study was conducted to assess the effectiveness of a structured teaching programme on knowledge regarding sex education among adolescent girls in selected schools of Valsad district. The findings revealed that the majority of adolescents had inadequate to moderate knowledge in the pre-test. After the implementation of the structured teaching programme, there was a significant improvement in knowledge levels, with no participants remaining in the inadequate category and some achieving adequate knowledge. The statistical analysis showed a significant difference between pre-test and post-test scores, confirming the effectiveness of the intervention. Additionally, demographic variables such as age, standard, and place of

residence were found to have a significant association with pre-test knowledge. Thus, the study concludes that structured teaching programmes are highly effective in improving knowledge regarding sex education among adolescents and should be implemented widely in school settings.

Conflict of Interest

Not available

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