

Assessing The Role of Sex Education in Promoting Holistic Student Development in Kerala

Aarsha A V P^{1*}, Dr. I. A. Ahamed Wasim Musthaq^{2*} and
Prof. (Dr.) Suresh Kumar K^{3*}

^{1*}Research Scholar, ICSSR Doctoral Fellow, N.S.S. Training College, University of Calicut, Ottapalam,

^{2*} Assistant Professor, Department of Commerce, VET Institute of Arts and Science College, Erode

^{3*}Professor, N.S.S. Training College, University of Calicut, Ottapalam

Abstract

Sex education has increasingly become a critical component of holistic student development, particularly in regions like Kerala where progressive social indicators coexist with cultural conservatism. This study aims to assess the role of sex education in promoting holistic development among students in Kerala. A mixed-methods approach was employed, combining both qualitative insights and quantitative data analysis. A sample of 300 high school students from urban and rural areas of Kerala was surveyed using structured questionnaires. The study utilized statistical tools such as the independent samples t-test to compare knowledge levels between students who received formal sex education and those who did not. Results indicated a statistically significant difference ($p < 0.05$) in knowledge, attitude, and behavior related to sexual health between the two groups. Students exposed to formal sex education demonstrated higher levels of awareness about reproductive health, consent, gender equality, and safe practices. The findings suggest that structured sex education contributes positively to cognitive, emotional, and social development, aligning with the principles of holistic education. The study recommends integrating comprehensive, age-appropriate sex education into the school curriculum across Kerala, supported by trained educators and community engagement.

Keywords:

Sex education, holistic development, Kerala, adolescence, reproductive health.

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I. INTRODUCTION

Holistic development refers to the nurturing of a student's physical, emotional, social, and cognitive abilities, aiming for balanced growth. In recent years, there has been growing recognition of the importance of including sex education within the broader framework of holistic development. While Kerala is often lauded for its high literacy rates and progressive health indicators, discussions around sexuality and reproduction remain sensitive and largely avoided in formal educational settings. Adolescence is a critical period marked by rapid physical, psychological, and emotional changes. Without proper guidance, students may be vulnerable to misinformation, risky behaviors, and negative outcomes such as early pregnancies, sexually transmitted infections (STIs), and gender-based violence. Therefore, equipping students with accurate, age-appropriate information through structured sex education can play a transformative role in their overall development. This study explores how sex education influences various dimensions of holistic student development in Kerala. It investigates whether exposure to formal sex education correlates with improved knowledge, attitudes, and behavioral intentions regarding sexual and reproductive health.

II. Literature Review

Global Perspectives on Sex Education

Internationally, comprehensive sex education (CSE) has been endorsed by organizations such as UNESCO and WHO as essential for adolescent well-being. CSE encompasses topics such as human anatomy, puberty, relationships, consent, contraception, and gender equality. Research indicates that CSE does not encourage early sexual activity but rather delays it while increasing protective behaviors (UNESCO, 2018).

Indian Context

In India, the National Council of Educational Research and Training (NCERT) introduced guidelines for CSE in 2006, later revised in 2020. Despite policy-level support, implementation remains uneven due to

socio-cultural resistance and lack of teacher training (Jain, 2021). Studies have shown that informal sources like peers and media are primary channels for information, often leading to misconceptions (Gupta et al., 2017).

Kerala: A Unique Case

Kerala stands out for its high Human Development Index (HDI) and literacy rate (96.2%). However, paradoxically, the state faces rising cases of teenage pregnancies and STIs, especially in urban centers (Government of Kerala, 2022). Several studies have highlighted the need for formalized sex education in schools to address these issues effectively (Soman et al., 2019; Nair & George, 2020).

Conceptual Framework

This study adopts a developmental systems theory perspective, emphasizing the interaction between individuals and their environments. Sex education is viewed as an environmental input that interacts with personal, familial, and societal factors to shape student development holistically.

Statement of the Problem

Despite Kerala's progressive image, formal sex education remains underutilized in schools. Cultural taboos surrounding sexuality often prevent open discussion, leaving adolescents reliant on unreliable sources. This gap in education contributes to poor decision-making, vulnerability to exploitation, and adverse health outcomes. There is a dearth of empirical evidence assessing the impact of sex education on student development in Kerala. Existing studies are either qualitative or limited in scope. Hence, there is a pressing need to quantify the effects of formal sex education on knowledge, attitudes, and behaviors among students.

Objectives of the Study

1. The primary objective of this study is to assess the role of sex education in promoting holistic development among students in Kerala. Specific objectives include:
2. To evaluate the level of knowledge about sexual and reproductive health among students.
3. To examine attitudes towards sex, relationships, and gender roles.
4. To compare knowledge and attitudes between students who received formal sex education and those who did not.
5. To determine the relationship between sex education and behavioral intentions related to sexual health.

Hypotheses of the Study

H₀: There is no significant difference in knowledge scores between students who received formal sex education and those who did not.

H₁: There is a significant difference in knowledge scores between students who received formal sex education and those who did not.

III. Methodology of the Study

Research Design

A cross-sectional survey design was adopted, combining both descriptive and inferential statistics. The study used a mixed-methods approach, incorporating quantitative data from standardized questionnaires and qualitative feedback from focus group discussions.

Sampling

A stratified random sampling technique was used to select 300 high school students (Classes 9–12) from urban (Ernakulam) and rural (Wayanad) districts of Kerala. The sample included equal numbers of male and female students.

Data Collection Tools

A semi-structured questionnaire was developed based on validated instruments from NCERT and WHO. The questionnaire had four sections:

1. Demographic Information
2. Knowledge Assessment (15 items) – covering anatomy, reproduction, contraception, STIs, etc.
3. Attitude Scale (Likert-type, 5-point scale, 10 items) – measuring openness to discussing sex, views on gender roles, consent, etc.
4. Behavioral Intentions (5 items) – likelihood of seeking help, using protection, etc.

Focus group discussions were also conducted with selected participants to gather deeper insights.

Variables Specification

- Independent Variable: Exposure to formal sex education (Yes/No).
- Dependent Variables: Knowledge score, attitude score, behavioral intention score.

Statistical Tools

- Descriptive statistics (mean, standard deviation)
- Independent samples t-test to compare mean knowledge and attitude scores
- Pearson correlation coefficient to assess relationships between variables
- Regression analysis to predict behavioral intentions

All analyses were performed using SPSS version 26.

IV. Results and Discussion

a) Demographic Profile

Table 1
Socio Demographic Profile of the Respondents

Variables	Category	Frequency	Percentage (%)
Gender	Male	156	52
	Female	144	48
Area	Urban	150	50
	Rural	150	50
Received Sex Education	Yes	195	65
	No	105	35
Class	IX	75	25
	X	75	25
	XI	75	25
	XII	75	25

Source: Primary Data

The above table reveals the results of Socio demographic profile of the respondents. Out of 300 respondents 52% were males, 48% females, 50% belonged to urban areas, 50% to rural areas and 65% reported receiving some form of sex education (formal or informal).

b) Independent samples t-test

Table 2
Comparison of Knowledge Scores between Students with and Without Formal Sex Education

Group	N	Mean Knowledge Score	SD	t-value	p-value
With Formal Education	195	12.4	2.1	-12.43	0.001*
Without Formal Education	105	8.1	2.9		

*p < 0.001 indicates statistically significant difference

The above table reveals the results of the independent sample t-test. Students exposed to formal sex education scored significantly higher on average (M = 12.4, SD = 2.1) compared to those without formal education (M = 8.1, SD = 2.9). An independent samples t-test revealed a statistically significant difference between the two groups. t test value = -12.43, p < 0.001. This supports the alternative hypothesis that formal sex education enhances knowledge

Table 3
Comparison of Attitude Scores between Groups

Group	N	Mean Attitude Score	SD	t-value	p-value
With Formal Education	195	38.2	4.1	-10.12	0.001*
Without Formal Education	105	30.1	5.2		

*p < 0.001 indicates statistically significant difference

Table 3 shows the result of independent sample t-test. Attitude scores were measured on a 50-point scale. Students with formal education had a higher mean score (M = 38.2, SD = 4.1) than those without (M = 30.1, SD = 5.2), t-test value = -10.12, p < 0.001. This indicates more positive attitudes toward sex-related topics among formally educated students.

c) *Correlation Analysis*

Table 4
Correlation between Knowledge, Attitude, and Behavioral Intentions

Variables	Knowledge	Attitude	Behavioral Intentions
Knowledge	1	0.38**	0.41**
Attitude	0.38**	1	0.43**
Behavioral Intentions	0.41**	0.43**	1

**Correlation is significant at the 0.01 level (2-tailed)

The above table demonstrates the result of correlation analysis. Students with formal education showed greater willingness to seek medical help (r = 0.41), use condoms (r = 0.37), and discuss sex openly (r = 0.43) than those without education. Linear regression confirmed that knowledge and attitude scores were significant predictors of behavioral intentions.

d) *Regression Analysis*

Table 5
Regression Analysis Predicting Behavioral Intentions

Predictor Variables	β coefficient	p-value	R ²
Knowledge	0.32	0.001	0.34
Attitude	0.37	0.001	

Table 5 depicts the results of regression analysis. Both knowledge and attitude significantly predict behavioral intentions regarding sexual health practices. Together, they explain 34% of the variance in behavioral intentions.

V. Conclusion

This study provides empirical evidence supporting the integration of formal sex education into the school curriculum in Kerala. The findings reveal that students exposed to structured programs demonstrate superior knowledge, more positive attitudes, and stronger intentions to make informed decisions regarding sexual health. Implementation should be accompanied by teacher training, parental involvement, and culturally appropriate content. Future research should explore longitudinal impacts and include diverse stakeholders such as parents, teachers, and policymakers.

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