Original Article

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Public Health Section

Relationship between Sexual Harassment Prevention Knowledge, Self-esteem and Assertiveness among Adolescent Girls: A Cross-sectional Study in Mangaluru, Karnataka, India

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ABSTRACT

Introduction: Adolescent girls face a heightened vulnerability to sexual harassment, underscoring the critical importance of their understanding and application of prevention strategies for their safety and overall well-being.

Aim: To investigate the relationship between knowledge of sexual harassment prevention strategies, self-esteem, and assertiveness among adolescent girls.

Materials and Methods: The present cross-sectional study was conducted in Mangaluru, Karnataka, India. Data were collected from 142 adolescent girls in the 8th and 9th standards. The parameters studied were knowledge of sexual harassment prevention strategies, self-esteem, and assertiveness. Data collection tools included a structured knowledge questionnaire, the Rosenberg Self-Esteem Scale, and the Rathus Assertiveness Schedule. Statistical Package for Social Sciences (SPSS) version 27 was used for statistical analysis, and a p-value of less than 0.05 was considered statistically significant.

Results: The study primarily included adolescent girls with a mean age of 13.54±0.59 years. The majority of participants (70.42%) demonstrated good knowledge of sexual harassment prevention. However, a significant proportion exhibited low self-esteem (59.15%) and were situationally non assertive (64.79%). Correlation analysis revealed no statistically significant linear relationships between knowledge and self-esteem (r=-0.061, p=0.469), knowledge and assertiveness (r=0.084, p=0.320), or self-esteem and assertiveness (r=0.148, p=0.079).

Conclusion: Despite possessing knowledge of sexual harassment prevention, adolescent girls in this study did not necessarily demonstrate higher levels of self-esteem or assertiveness. This suggests that comprehensive interventions should focus on enhancing self-esteem and assertiveness skills alongside knowledge dissemination to empower young women and create safer environments.

Keywords: Empowerment, Prevention and control, Self-concept, Violence prevention

INTRODUCTION

Adolescence is a crucial developmental phase marked by substantial physical, emotional, and social transformations that shape an individual's life course. During this time, young girls grapple with evolving identities, peer dynamics, and a growing understanding of social interactions, including their safety and potential vulnerabilities [1]. This period can also expose teenagers to a wide range of experiences, from positive to negative, including abuse, rights violations, and trauma. Unfortunately, adolescent girls globally are particularly susceptible to sexual harassment. In India, this is often referred to as 'eve teasing', and legally, under Section 354A, it encompasses unwelcome physical contact, explicit sexual advances, demands for sexual favors, non-consensual display of sexual images, and unwelcome sexual comments [2].

The World Health Organisation (WHO) defines sexual harassment as 'any unwelcome sexual advance, unwelcome request for sexual favour, verbal or physical conduct or gesture of a sexual nature, or any other behaviour of a sexual nature that might reasonably be expected or be perceived to cause offence, humiliation or intimidation to the person [3]. According to a 2023 prevalence study, India recorded that over 30% of girls and 13% of boys had experienced sexual violence prior to reaching 18 years of age. The analysis, which covered over 200 countries between 1990 and 2023, identified South Asia as the region with the highest rates of sexual violence against girls, with India reporting the highest at 30.8% [4]. Adolescents face common vulnerabilities to sexual abuse regardless of the perpetrator's age, but specific risk factors differ between adult and peer offenders [5].

Sexual harassment is a significant issue affecting adolescent girls, highlighting the critical need to empower them with their rights and ensure a violence-free environment. A cross-sectional study in Egypt, involving 650 adolescent girls, revealed a high prevalence of sexual harassment at 72.9%, with verbal harassment being the most common form. Another study found that stronger social and psychological empowerment was significantly associated with lower rates of experienced sexual harassment among these girls [6]. Evidence suggests that sexual harassment is a widespread issue impacting female students, occurring across various settings and by different perpetrators [7]. Although many possess basic knowledge about harassment, there's a noted deficiency in awareness concerning specific anti-harassment initiatives and support units [7,8]. These findings collectively point to a crucial need for focused educational programs and active student engagement to address this persistent challenge.

Assertiveness is the quality of being self-assured and respecting others as well. They are neither passive nor allow others to abuse them. Moreover, assertive people pursue tactfully respecting others' wants and needs. Those with poor assertiveness may be passive (low assertiveness) or aggressive (aggressive behaviours)

[9]. In Southeast Texas, a study primarily focused on sexual assertiveness in the context of reproductive health behaviours found that among 18-21-year-old, low sexual assertiveness was significantly associated with reporting forced sexual contact. This suggests a potential link where lower assertiveness may make individuals more vulnerable to experiencing sexual harassment or unwanted sexual experiences [10]. A study of 322 female students at UIN Malang found that overall, assertiveness and the experience of sexual harassment influenced attitudes toward seeking help, with more severe experiences of sexual abuse leading to greater reluctance to seek professional assistance. Specifically, victims of less severe gender harassment were more inclined to seek help, while those who experienced severe sexual coercion were more hesitant [11].

Self-esteem refers to how positively individuals view their own qualities and capabilities. A strong sense of self-esteem provides adolescents with confidence in their abilities to navigate life's challenges, whereas lower self-esteem may make them more susceptible to engaging in risky behaviours [12]. A cross-sectional study in Baghdad involving 1000 participants examined the impact of Angiotensin Converting Enzyme (ACEs) on adult self-esteem. The study found that while most participants reported confidence, a notable percentage felt like failures or useless at times; importantly, strong family bonding during childhood was significantly associated with higher adult self-esteem, while higher levels of education were linked to a slight decrease in self-esteem [13].

To effectively prevent sexual harassment, adolescent girls need more than just facts. A proactive approach focuses on building knowledge, fostering self-esteem, and developing assertiveness. The current study aimed to investigate the relationship between sexual harassment prevention knowledge, self-esteem, and assertiveness among adolescent girls.

MATERIALS AND METHODS

The present cross-sectional study was conducted after obtaining approvals were obtained from the Scientific review Board and Ethics Committee of the university (YEC-1 with protocol no. YEC1/2020/039 dated 30.01.2021). After obtaining permission from the Block education officer, Mangaluru South three Government high schools from seven clusters were randomly selected from Mangaluru south zone.

Sample size calculation: Based on the pilot study results the estimated sample size (G* power) was 142. Among the From the selected schools based on inclusion criteria samples were recruited. The study included girls studying in 8th and 9th standard with Kannada or English medium, girls suffering from chronic illness were excluded. Data was collected using socio demographic proforma, structured knowledge questionnaire on prevention of sexual harassment, Rosenberg self-esteem scale [14] and Rathus assertiveness scale [15].

Study Procedure

Sociodemographic proforma: Of the tool consisted of twelve items including age (in years), type of family, number of siblings, number of male sibling , number of female sibling, father's education, mother's education, father's occupation, mother's occupation, Source of information regarding sexual harassment, Have you undergone behaviour training? Have you undergone physical training? (Ex: Martial arts, Karate, Kung fu etc.,)

Structured knowledge questionnaire on prevention of sexual harassment for adolescent girls: A structured knowledge questionnaire specifically designed for adolescent girls on the prevention of sexual harassment was developed by the researcher in English and Kannada language. This 29-item tool, administered in Kannada, integrated concepts from relevant literature, educational objectives, and expert consultations. Its content validity was confirmed by 11 experts. The reliability of this questionnaire was assessed using the Split-half method, yielding a Spearman-Brown coefficient of r=0.812. This indicates good internal consistency, meaning the different halves of the questionnaire measured similar constructs reliably. The questionnaire employed diverse item types, including multiple-choice questions, picture identification, and matching exercises. Scoring assigned one point for a correct answer and zero for an incorrect one. Adolescent girls read and answered the tool themselves. The questions were divided into five (5) domains as mentioned below:

a. Human reproductive system, reproduction and sexuality relation (2);
b. Physical and psychological changes during puberty (1);
c. Sexuality (1);
d. Sexual harassment (meaning, causes, effects) (15);
e. Prevention of sexual harassment (10).

The grading of the knowledge questionnaire was done arbitrarily based on the quartiles. The classification of knowledge score was done as follows:

Maximum possible score: 46

- Score <15: Poor knowledge
- Score 16-30: Average knowledge
- Score 31-46: Good knowledge

Rathus Assertiveness Schedule (RAS) [15]: It was developed in 1973 by Rathus SA is a prevalidated instrument designed to gauge an individual's assertiveness levels and track behavioural changes during assertion training. This scale, freely accessible in the public domain, consists of 30 items, each rated on a spectrum from "very characteristic of me" to "very uncharacteristic." To determine a score, all "plus" responses are summed, as are all "minus" responses, with the latter total then subtracted from the former. The resulting score, which can range from -90 to +90, offers an interpretation of assertiveness: scores from -90 to -20 indicate "Very Non-Assertive," -20 to 0 suggest "Situationally Non-Assertive," 0 to +20 imply "Somewhat Assertive," and +20 to +40 denote "Assertive." The RAS has demonstrated strong reliability, with a Cronbach's alpha of r=0.81 (p=0.010) obtained through a test-retest method.

Rosenberg self-esteem scale [14]: It was developed in 1965 by sociologist Morris Rosenberg, is a 10-item instrument designed to assess global self-worth by capturing both positive and negative sentiments about oneself. Each item is rated on a 4-point Likert scale, ranging from "strongly agree" to "strongly disagree," with scores for each item typically ranging from 0 to 3. The total scale score can range from 0 to 30. Scores between 15 and 25 are considered the normal range, while scores below 15 may indicate low self-esteem. This scale exhibits very high internal consistency, as evidenced by a Cronbach's alpha of 0.96 (p=0.001), derived from a test-retest methodology. After obtaining permission from block education officer and school authority, parental consent and assent by the adolescent girls were obtained. Data was collected in the month of September 2023.

STATISTICAL ANALYSIS

The statistical calculations were performed using computer-based statistical software Statistical Package for the Social Sciences (SPSS) version 27. Correlation between variables done using Pearson Correlation coefficient. The p-value of less than 0.05 was considered statistically significant.

RESULTS

A total of 142 subjects successfully filled out and returned the questionnaires. [Table/Fig-1] shows the study primarily included

adolescent girls aged 13 and 14, with a smaller representation of 15-year-old. Mean age of 13.54±0.59 years. Half of the subjects were from nuclear families. The majority of fathers had a high school education, while approximately 44.4% of mothers had no formal education. No subjects had undergone training in sexual harassment prevention, assertive training, or self-defense training. The mean scores for the knowledge, self-esteem and assertiveness scales is shown in [Table/Fig-2].

Variables		n (%)
Age in years	13	72 (50.7)
	14	63 (44.4)
	15	7 (4.9)
Type of family	Nuclear	104 (73.2)
	Joint	37 (26.1)
	Extended	1 (0.7)
Number of siblings	0	6 (4.2)
	1	39 (27.5)
	2	40 (28.2)
	3-4	48 (33.8)
	5-6	9 (6.3)
Number of male siblings	0	42 (29.6)
	1	51 (35.9)
	2	33 (23.2)
	3-4	16 (11.3)
Number of female siblings	0	40 (28.2)
	1	61 (43.0)
	2	25 (17.6)
	3-4	16 (11.3)
Parent education (father)	No formal education	9 (6.3)
	1-5th std	40 (28.2)
	6-10 std	88 (62.0)
	Above 10th std	5 (3.5)
Parent education (mother)	No formal education	4 (2.8)
	1-5th std	40 (28.2)
	6-10 std	96 (67.6)
	Above 10th std	2 (1.4)
Father's occupation	Expired	5 (3.5)
	Unemployed	2 (1.4)
	Coolie	110 (77.5)
	Business	20 (14.1)
	Agriculture	1 (0.7)
	Professional	4 (2.8)
Mother's occupation	Home maker	89 (62.7)
	Coolie	51 (35.9)
	Agriculture	1 (0.7)
	Professional	1 (0.7)
Source of information regarding sexual harassment	School teacher	82(57.74)
	Parents or family	35 (24.65)
	Health personnel	25 (17.61)
Have you undergone behaviour training?	Yes	0 (0)
	No	142 (100)
Have you undergone physical training Eg.,: Martial arts, Karate, Kung Fu etc.,?	Yes	0 (0)
	No	142 (100)

[Table/Fig-1]: Sociodemographic characteristics of adolescent girls. (N=142)
The data are presented in frequency (n) with percentage in parenthesis (%)

The distribution of participants based on the knowledge scores regarding the prevention of sexual harassment is presented in

Variables	Mean±SD
Knowledge on prevention of sexual harassment	16.39±2.86
Assertiveness [15]	-4.87±13.38
Self-esteem [14]	13.72±2.76

[Table/Fig-2]: Mean scores of knowledge on prevention of sexual harassment, assertiveness and self-esteem among adolescent girls. (N=142)
SD: Standard deviation

[Table/Fig-3]. The findings revealed that the majority 70.42% had good knowledge, and 29.58% had moderate knowledge. [Table/Fig-4] depicts the distribution of participants based on the self-esteem scores, 58 (40.85%) participants had normal self-esteem, and 84 (59.15%) participants had low self-esteem. [Table/Fig-5] shows that the majority 92 (64.79%) participants was situationally non-assertive, 24 (16.90%) participants were somewhat assertive, 16 (11.27%) participants were very non-assertive, and 10 (7.04%) participants were assertive.

Knowledge level	Number of participants (n)	Percentage (%)
Good knowledge	100	70.42
Average knowledge	42	29.58
Total	142	100.00

[Table/Fig-3]: Distribution of participants based on knowledge levels (N=142).

Self-esteem level	Number of participants (n)	Percentage (%)
Normal range	58	40.85
Low self-esteem	84	59.15
Total	142	100.00

[Table/Fig-4]: Distribution of participants based on self-esteem levels (N=142).

Assertiveness level	Number of participants (n)	Percentage (%)
Situationally non-assertive	92	64.79
Somewhat assertive	24	16.90
Very non-assertive	16	11.27
Assertive	10	7.04
Total	142	100.00

[Table/Fig-5]: Distribution of participants based on assertiveness levels (N=142).

In this study, no statistically significant linear relationships were found between overall knowledge, self-esteem, and assertiveness scores. A very weak negative correlation (r=-0.061, p=0.469) was observed between overall knowledge and self-esteem, while a weak positive correlation (r=0.084, p=0.320) was noted between overall knowledge and assertiveness. Although a weak positive correlation (r=0.148, p=0.079) was found between self-esteem and assertiveness, this association did not achieve statistical significance at the conventional 0.05 level [Table/Fig-6]. The high p-values across all comparisons suggest that the observed weak correlations are likely due to chance, preventing conclusive generalisations about these relationships in the wider population.

Variables	Correlation (r)	p
Overall knowledge and self-esteem score [14]	-0.061	0.469
Overall knowledge and assertiveness score [5]	0.084	0.320
Self-esteem score [14] and assertiveness score [15]	0.148	0.079

[Table/Fig-6]: Correlation between Knowledge on prevention of sexual harassment, self-esteem and assertiveness among adolescent girls (N=142).
r=Pearson Correlation coefficient, non-significant p >0.05, significant p≤0.05*

DISCUSSION

The current study revealed that while a substantial majority (70.42%) of participants possessed good knowledge regarding the prevention

of sexual harassment, a notable portion (29.58%) exhibited only average knowledge. Interestingly, a larger proportion of participants (59.15%) exhibited low self-esteem compared to those with high self-esteem (40.85%). In terms of assertiveness, the majority (64.79%) were classified as situationally non-assertive. Correlation analysis indicated no statistically significant linear relationship between overall knowledge about sexual harassment prevention and self-esteem ($r=-0.061$, $p=0.469$), nor between overall knowledge and assertiveness ($r=0.084$, $p=0.320$). Similarly, the correlation between self-esteem and assertiveness scores ($r=0.148$, $p=0.079$) was not statistically significant at the conventional $p<0.05$ level, although it trended towards significance.

These findings contrast with those of Kalaimani D and Komalavalli T (2022) who observed that a significant portion of respondents demonstrated a poor understanding of sexual abuse and exhibited varied reactions (assertive and avoidant) in hypothetical situations [16]. Their respondents generally showed moderate self-confidence and assertiveness, and importantly, a significant connection ($p<0.05$) was found between knowledge about sexual abuse and both assertiveness and self-confidence levels. This suggests that the type of knowledge (understanding abuse vs. preventing harassment) might have a differential impact on these psychological factors. It could be argued that a deeper understanding of the dynamics and impact of sexual abuse empowers individuals more directly than knowledge focused solely on prevention strategies, as in the current study. Furthermore, the current study's findings also differ from those of Elis Rani E and Sharma CP (2020), who revealed among 50 adolescent girls the majority of adolescent girls were somewhat assertive {26 (52%)} and 11 (22%) were assertive, with 44 (88%) having average and 5 (10%) having high self-esteem [17]. Their study found a significant positive Spearman's Rank Order correlation ($r=0.6667$) between assertive behaviour and self-esteem. In contrast to the current findings, Kumar L and Rathi K (2020) found a positive correlation ($r=0.14$) between assertiveness and self-esteem in adolescents, suggesting that developing assertiveness can help build self-esteem ($p<0.05$) [18].

However, aligning with the current findings, Bhapri AC et al., (2024) findings indicate a widespread issue of poor self-esteem among adolescents, affecting 87% of the sample [19]. Paradoxically, 87% also showed strong assertive behaviour. A minor negative correlation (-0.074) suggests that as self-esteem slightly decreases, assertiveness tends to increase, or vice versa. Additionally, gender appears to play a role in self-esteem levels, ($\chi^2=11.89$; $p<0.05$), but not in how assertive adolescents are ($\chi^2=0.03$; $p>0.05$).

Knowledge provides the "what" and "how" of understanding sexual harassment. Self-esteem gives girls the inner strength and belief in their right to safety. Assertiveness then provides the courage and skills to act on that knowledge, driven by their self-worth. Together, these elements build psychological resilience and empowerment. This enables young women to confidently navigate social interactions, identify and deter unwanted advances, and advocate for their own well-being. By understanding how these strengths work together, we can create targeted interventions that empower girls to foster safer environments.

Limitation(s)

This study's limitations primarily stem from its cross-sectional design, which collects data at a single point in time, thereby preventing the establishment of cause-and-effect relationships between variables. Furthermore, the limited generalisability of the findings is a concern, as the research was conducted on a specific, small sample in Mangaluru, meaning the results may not be broadly applicable to diverse populations. The reliance on self-report bias through questionnaires also poses a limitation, as participants' responses might have been influenced by a desire to provide socially acceptable answers. Additionally, the study did not account for unmeasured variables that could be crucial in influencing resilience or vulnerability to sexual harassment. Lastly, the absence of significant correlations between the key variables suggests that any existing relationships might be weak, non-linear, or influenced by factors not explored within this research.

CONCLUSION(S)

This study of adolescent girls in Mangaluru found no significant link between knowledge of sexual harassment prevention and their self-esteem or assertiveness. While a trend suggested higher self-esteem might relate to higher assertiveness, it wasn't statistically significant. This implies that teaching prevention alone may be insufficient; interventions should also target building self-esteem and assertiveness. Further research with larger groups is needed to confirm these findings and explore other influencing factors for more effective empowerment strategies.

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