

# Assessing Impact of Health Education in Improving Knowledge of Children on Child Sexual Abuse

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## ABSTRACT

**Background:** Every year, millions of children around the world face sexual abuse and exploitation. Sexual and reproductive health education is an important form of health promotion action against it. This study aims to assess the impact of health education program in improving knowledge of the children on child sexual abuse.

**Methods:** A school based pre-experimental study was done among 120 lower secondary level students of a private school in Bharatpur municipality of Chitwan District, Nepal during March 2021. An interventional health education program imparting knowledge on child sexual abuse and its preventive measures was given to the children. Their knowledge was assessed and compared before and after intervention using paired t-test. Data analysis was done using SPSS version 17 software.

**Results:** The mean age of children was  $13.77 \pm 0.65$  years with 1:1.18 girls to boys ratio. The level of knowledge of the children on child sexual abuse and its preventive measures increased significantly post-intervention as compared to pre-intervention. The mean scores of post-test ( $29.80 \pm 4.53$ ) was higher than pre-test ( $17.04 \pm 6.96$ ). The intervention was proved effective with statistically significant t-test values ( $t=20.996$ ,  $p < 0.001$ ). About 6.7% children disclosed an experience of child abuse post-intervention.

**Conclusions:** The school based health education program effectively increased the knowledge of the children on child sexual abuse, thus helping in preventing and protecting them from child sexual abuse and its harmful effects.

**Keywords:** Child abuse; health education; school health services; sexual, touch.

## INTRODUCTION

Every year, millions of children around the world face sexual abuse and exploitation at home, school or in their community.<sup>1</sup> In Nepal, average 10 cases of violence against children including many Child Sexual Abuse (CSA) cases were recorded daily in 2021.<sup>2</sup> CSA is involvement of a child in unwanted, inappropriate, repressive and unlawful sexual manipulation by another person.<sup>3</sup> It leads to poor social, mental and physical health outcomes increasing risk of maladaptive sexual health behavior of those victimized.<sup>4,6</sup>

Sexual and reproductive health education is an important health promotion action effectively increasing children's CSA knowledge and protective behavior.<sup>7-12</sup> Some countries have implemented school-based CSA

preventive education programs on large scales.<sup>4</sup>

This study aims to assess the impact of health education program in improving knowledge of the children on CSA as health education programs and research based on CSA is scarce in the region.

## METHODS

A school based pre-experimental (pre and post interventional) study was done among 120 lower secondary level students of a private school in Bharatpur municipality of Chitwan District, Nepal during March 2021. The calculated sample size was 116 by taking prevalence of knowledge about child abuse in secondary school students as 45.1%,<sup>13</sup> 95% CI and 9% margin of error to infer results in an exploratory manner using finite

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population sample size calculation formula.

An interventional health education program imparting knowledge on child sexual abuse and its preventive measures was given once by the principal investigator to the students including boys and girls of lower secondary level (grade 8). It was delivered as a lecture of about an hour duration projecting slides, pictures and educational video on CSA. Self-structured questionnaires were distributed to the students fifteen minutes before and fifteen minutes after giving health education (pre and post-interventional) to collect the data. The level of knowledge on CSA of the children was compared by assessing their mean knowledge score in pre and post-test scores. The sociodemographic factors like age, gender, ethnicity, religion and type of family of the children were studied and analyzed.

Ethical approval was taken from Institutional Review Committee of College of Medical Sciences Teaching Hospital (Ref no. COMSTH-IRC/2021-17). Written consent was taken from the school principal and parents/guardians of the students prior to the conduction of health education program and including them in the research. Confidentiality of all data and information were maintained throughout the research.

The data collected was entered, cleaned, checked for completeness and accuracy before subsequent analysis in SPSS version 17 software. For continuous variables mean and standard deviation was calculated while categorical variables were analyzed in terms of frequency and percentage. To find the association between dependent variable and independent variables chi-square test was used. P-value <0.05 were considered as statistically significant. To compare the pre and post test scores paired t-test was used.

## RESULTS

The mean age of children was  $13.77 \pm 0.65$  years ranging from 12 to 15 years with almost equal numbers of girls and boys (girls : boys = 1:1.18). Majority of the children were from Brahmin ethnic group (73, 60.8%) and maximum followed Hindu religion (109, 90.8%). More children lived in nuclear family (94, 78.3%) and then in joint family (26, 21.7%). (Table 1).

Out of total children, 30 (25%) children knew about the non-contact type of CSA pre-intervention and 84 (70%) children got aware about it post-intervention. Before

intervention only 19 (15.8%) children knew about the places where CSA can occur but later after intervention 105 (87.5%) children became aware of it. Initially, about 111 (92.5%) children knew that strangers and only 44 (36.7%) children knew that familiar people can be child abusers, but this knowledge about familiar abusers improved in children following intervention (116, 96.7%). Percentage of knowledge about good touches, bad touches and private body parts has all increased post-intervention. The knowledge percentage of protective behavior of CSA like saying no (111, 92.5%), running to safe place (113, 94.2%), telling their trusted person (113, 94.2%) and calling helpline number (114, 95%) all increased after intervention as compared before intervention. After intervention, 115 (95.8%) children knew about child helpline number whereas only 10 (8.3%) children knew about it before intervention. (Table 2)

**Table 1. Sociodemographic factors of the children (n=120).**

Sociodemographic factors	Frequency (%)	
Age (years)	12	3 (2.5)
	13	33 (27.5)
	14	72 (60)
	15	12 (10)
	Mean±SD	13.77±0.65
Gender	Male (boys)	65 (54.2)
	Female (girls)	55 (45.8)
Ethnicity	Brahmin	73 (60.8)
	Newar	18 (15)
	Chettri	15 (12.5)
	Janajati	14 (11.7)
Religion	Hindu	109 (90.8)
	Buddhist	10 (8.3)
	Christian	1 (0.8)
Type of family	Nuclear	94 (78.3)
	Joint	26 (21.7)

The overall knowledge mean scores has increased from  $17.04 \pm 6.96$  to  $29.80 \pm 4.53$  post-intervention as compared to pre-intervention. The level of knowledge of 66 (55%) children was less than the mean knowledge score before intervention and later after intervention mean knowledge score of 96 (80%) children increased significantly. (Table 3)

**Table 2. Knowledge about Child Sexual Abuse of the children (n=120).**

Knowledge Assessment Questions		Pre-intervention	Post-intervention
Heard about child abuse		109 (90.8%)	117 (97.5%)
Knows about types of child abuse	Physical	90 (75%)	110 (91.7%)
	Sexual	88 (73.3%)	117 (97.5%)
	Psychosocial/emotional	70 (58.3%)	111 (92.5%)
	Verbal	52 (43.3%)	113 (94.2%)
Knows about types of child sexual abuse	Contact abuse	95 (79.2%)	114 (95%)
	Non-contact abuse	30 (25%)	84 (70%)
Knows about types of places where child abuse can occur (home, community, school)		19 (15.8%)	105 (87.5%)
Knows types of child abusers	Stranger	111 (92.5%)	73 (60.8%)
	Familiar	44 (36.7%)	116 (96.7%)
Heard about good touch and bad touch		86 (71.7%)	115 (95.8%)
Knows meaning of Good touch	Parents/grandparents hugs and kisses	64 (53.3%)	115 (95.8%)
	Teacher pats your head or back, says "good job"	58 (48.3%)	111 (92.5%)
	Brief friendly hugs by family members	56 (46.7%)	112 (93.3%)
	Brief kiss on the cheek or forehead	27 (22.5%)	105 (87.5%)
	Shaking hands, giving high fives or a fist bump	54 (45%)	110 (91.7%)
	Touch that does not scare or make you feel bad	70 (58.3%)	110 (91.7%)
	Makes you feel afraid, bad, ashamed, etc.	69 (57.5%)	114 (95%)
Knows meaning of Bad touch	Hurts or is forced	59 (49.2%)	110 (91.7%)
	Told that it should be kept a secret	52 (43.3%)	114 (95%)
	Kissing on the mouth	48 (40%)	112 (93.3%)
	Touching private areas	86 (71.7%)	115 (95.8%)
	Spitting, slapping, pushing, punching, etc.	40 (33.3%)	113 (94.2%)
	Knows about their private body parts		104 (86.7%)
Knows about types of private body parts	Mouth	4 (3.3%)	94 (78.3%)
	Chest	81 (67.5%)	107 (89.2%)
	Between legs	107 (89.2%)	116 (96.7%)
	Bottom	48 (40%)	58 (48.3%)
Knows Response to Bad touch	Say "No"	68 (56.7%)	111 (92.5%)
	Run to safe place	63 (52.5%)	113 (94.2%)
	Tell to your trusted person	29 (24.2%)	113 (94.2%)
	Call helpline	72 (60%)	114 (95%)
Knows child helpline number		10 (8.3%)	115 (95.8%)

**Table 3. Level of Knowledge of Child Sexual Abuse of the Children Before and After Health Education (Pre and Post-Intervention), n=120.**

Knowledge on CSA	Pre-intervention (Mean= 17.04±6.96)	Post-intervention (Mean= 29.80±4.53)
< Mean score	66 (55%)	24 (20%)
≥ Mean score	54 (45%)	96 (80%)

To compare the knowledge of children before and after the health education paired t test was used (data of pre and post test score followed the normal distribution). The mean score of pre-test was 17.04±6.96 and post-test was 29.80±4.53. The t-value was found to be 20.996 with p-value <0.001. This result was found to be statistically significant (p-value<0.05). (Table 4)

**Table 4. Effect of Health Education (Intervention) on Knowledge of Child Sexual Abuse of the Children (n =120).**

Paired T-test	Mean	Standard Deviation	t-value	p-value
Pre-intervention Score	17.04	6.96	20.996	<0.001
Post-intervention Score	29.8	4.53		

**Table 5. Proportion of child abuse disclosed by the children post-intervention.**

Variables	Frequency (%)
Experienced Child Abuse (n=120)	Yes 8 (6.7)
	No 112 (93.3)
Type of Abuse (n=8)	Physical 1 (12.5)
	Verbal 2 (25)
	Not disclosed 5 (62.5)
Abuser/ Place of abuse (n=8)	Teacher 3 (37.5)
	Family 1 (12.5)
	School 1 (12.5)
	Friend 1 (12.5)
	Not disclosed 3 (37.5)

About 8 (6.7%) children disclosed an experience of child abuse post interventional health education program. Among these children, 1 (12.5%) child has disclosed it as physical, 2 (25%) children disclosed it as verbal whereas, 5 (62.5%) children did not disclose the type of abuse. Teacher was disclosed as abuser by 3 (37.5%) children whereas, 3 (37.5%) children did not disclose abuser and/

or place of abuse. None of the child disclosed any type of sexual abuse. (Table 5)

Sociodemographic factors like age, gender, ethnicity, religion, family type of the children showed no significant association with pre-intervention level of knowledge on child sexual abuse with p-value of >0.05. (Table 6)

**Table 6. Association of sociodemographic factors with pre-intervention knowledge level about CSA of the children (n=120).**

Sociodemographic factors	Knowledge		Chi-square	p-value	
	Poor	Good			
Age (years)	12	2 (66.7%)	1 (33.3%)	4.733	0.192
	13	13 (39.4%)	20 (60.6%)		
	14	43 (59.7%)	29 (40.3%)		
	15	8 (66.7%)	4 (33.3%)		
Gender	Male	38 (58.5%)	27 (41.5%)	0.687	0.407
	Female	28 (50.9%)	27 (49.1%)		
Ethnicity	Brahmin	37 (50.7%)	36 (49.3%)	1.864	0.601
	Newar	10 (55.6%)	8 (44.4%)		
	Chettri	10 (66.7%)	5 (33.3%)		
	Janajati	9 (64.3%)	6 (35.7%)		
Religion	Hindu	60 (55%)	49 (45%)	1.296	0.523
	Buddhist	5 (50%)	5 (50%)		
	Christian	1 (100%)	0 (0%)		
Type of family	Nuclear	54 (57.4%)	40 (42.6%)	1.049	0.306
	Joint	12 (46.2%)	14 (53.8%)		

## DISCUSSION

In the present study the mean age of children was 13.77±0.65 years ranging from 12 to 15 years with almost equal number of boys and girls similarly like the study by Ma X et al.<sup>7</sup> In the present study majority of the children were from Brahmin ethnic group following Hindu religion and from nuclear families. Likewise, in a study conducted by Jayesh et al., majority children were of 12 years age, following Hindu religion and from joint families.<sup>3</sup>

This research found that out of total children, knowledge mean score of majority of the children on CSA has significantly increased after intervention. Similarly, few other studies have also found a significant improvement in knowledge percentage post intervention about good and bad touch and laws to protect children from sexual offences.<sup>3,14</sup>

This study found that more children knew about types of CSA post intervention than pre intervention. Similarly, in another study, significant number of girls became aware of various types of child sex abuse post intervention.<sup>14</sup> In this present study, the knowledge of the children on types of places of abuse and abusers was found to be

improved along with increased knowledge percentage on good touches, bad touches and private body parts following intervention. The knowledge percentage of responses to protect and prevent from CSA like saying no, running to safe place, telling their trusted person and calling helpline number all found to be increased after intervention as compared to before intervention. These findings were well correlated with the findings of the study done by Mathew et al.<sup>14</sup> We found that after intervention, 95.8% of the children knew about child helpline number as compared to very few children before the intervention similarly like another study.<sup>14</sup>

In this study we found that the knowledge mean score of post test was higher than the pre-test with significant t-value proving effectiveness of health education program in improving knowledge about CSA. Similarly, other studies also found students who attended the sexual abuse prevention program scored significantly higher than control groups.<sup>3,6,9,15</sup> Improvements and retention of knowledge and protection behaviors over time of the children exposed to school-based CSA prevention programs was shown by evidence reviews of Australia too. Some of these evidences also suggested that behavioral skill training has longer-term effect knowledge retention than feeling-based training.<sup>4,11</sup> There is no meaningful negative side effects in the evaluation of CSA-related knowledge for either the children or parents which has also been mentioned in a Quasi-experimental study conducted by Czerwinski et al.<sup>15</sup>

In the present research, 6.7% children disclosed an experience of child abuse post intervention but most of them did not disclose abuse type, place and abuser. But none of the child disclosed any type of sexual abuse. Likewise, in a study done by Shrestha et.al, in Nepal 15.8% children disclosed to be sexually abused with high prevalence reported for boys.<sup>16</sup> The meta-analysis of the Cochrane Review has also showed this evidence of improvements in disclosures of past or current child sexual abuse during or after programs when exposed to school-based programs, regardless of the type of program.<sup>4</sup>

Many studies has shown evidence of effectiveness of health education programs on CSA among school going children using different educational modalities to increase their knowledge and protective behaviors.<sup>3,13</sup> Similarly, the present study has also found a significant impact of school based health education program on child sexual abuse showing significant improvement in the knowledge on CSA of the children. Hence, the

findings of this research has been able to highlight and fill the research gap on CSA in the region. It has also paved path for future researchers and implementation of effective health education programs addressing the problem among children. Since this study was done in a single school and no control was included, the findings of this research might not be generalized to all the children of the community and spill-over effect might have occurred.

## CONCLUSIONS

The school based health education program effectively increased the knowledge of the children on child sexual abuse, thus helping in preventing and protecting them from child sexual abuse and its harmful effects. In view of the existence of child sexual abuse problem in our country, implementation of such interventions on large scales would be helpful in preventing and controlling this problem thus enhancing the development and welfare of the children.

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## CONFLICT OF INTEREST

The authors declare no conflict of interest.

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