DETERMINANTS OF CHILD SEXUAL ABUSE AMONG HIGH SCHOOL FEMALE STUDENTS, GONDAR, NORTH WEST ETHIOPIA

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ABSTRACT

Objective: The main objective of this study is to investigate the major determinants of child sexual abuse of female students in Gondar town high schools.

Methods: In realizing this objective across-sectional study was conducted by using both quantitative and qualitative research methods. The quantitative method, as the dominant method, was used to collect data about the major determinants of child sexual abuse from 335 randomly selected high school female students. The data collection was done by standardized self administered questionnaires that was analyzed with descriptive and explanatory (Binary logistic regression model) statistics. The qualitative method was used to supplement the quantitative method by collecting data using key informant interviews.

Results: The model revealed that, sexual abuse is prevalent in the study area due to the following factors; emotional disturbance, absence/shortage of education, measures taken against the abusers, counseling services, gender club, student maladaptive behavior and others. The qualitative data also assures those factors are very influential for the prevalence of the problem among female students.

In conclusion, the result of this study revealed that the problem of child sexual abuse in Gondar town high schools is prevalent as a result of major socio-demographic, individual and situational factors.

Keywords: Sexual abuse, Determinants and logistic regression

INTRODUCTION

Today's children who are socialized in a safe and healthy environment are the adults of tomorrow and the bases for the future development of a country. Unless children are properly socialized, there is a chance to become challenging for their personal and societal development. In this regard, schools are among the institutions entrusted with the responsibility of providing children with healthy environment and basic information. Schools are responsible agents to provide children with primary socialization that is essential for the healthy continuation of the social harmony and their own personal, physical, emotional, social and cognitive development [1].

Though schools play great roles for the proper socialization of students, they are affected by different internal and external factors such as; social, economic, political, legal and spiritual ones [2]. A social institution, like school, which lacks the necessary inputs that are required for the healthy execution of its activities, faces a high probability of confronting inadequacies in fulfilling the social expectation directed to it [3].

One of the challenges of school environment is the presence of various forms of child maltreatment/abuse.[4] Child maltreatment refers to behaviors towards a child which are outside the norms of conduct and entail a substantial risk of causing physical, psychological or emotional harm. Basically, it can take different forms which include labor, emotional, physical, psychological and sexual abuse [5]. Sexual abuse, perhaps the worst form of exploiting children, ranges from simple touching to penetration and involves engaging a child in sexual act including fondling, rape and exposing a child to other sexual activities [6].

Many factors may play a role in the sexual abuse and exploitation of children and youth at different levels. At the societal level, the dynamics of socialization as well as society's collective history of denial of child sexual abuse and exploitation may contribute to environments in which opportunities for abuse and exploitation can occur [7].

Empirical evidences suggested that the sexual abuse as well as the commercial sexual exploitation of children is very rampant in Ethiopia. A study in the city of Adama indicates that 161cases of sexual abuse were reported to the Adama Hospital Child Abuse and Neglect Unit alone between April 2005 – June 2006, out of which the majority of victims were young girls between the ages of 7 – 12 but in some cases, as young as 2 years old [8]. Another study conducted in Bahir Dar shows that 80% of the female students interviewed reported incidences of sexual harassment or abuse in schools mainly by male students (but at times teachers as well) with students forcing or threatening and enticing through gifts and the like [9].

Though the above studies explain child sexual abuse, they did not show the specific determinant factors of sexual abuse comprehensively at the local and national level. It also failed to give a full insight about the determinant factors of child sexual abuse at school level. This means none of the literatures reviewed in this research have focused on school based determinant factors of female sexual abuse.

More specifically, it is not easy to find research done on the determinant factors of child sexual abuse in Gondar town specifically at high school level except Yemataw's related study on the psychosocial consequences of child sexual abuse in Ethiopia including Gondar town Fasilledes High school gives a clue for the prevalence of child sexual abuse in the form of early marriage, prostitution and rape [10]. In addition, most of the studies reviewed were conducted at national and global level which can't be generalized to the local context because the presence of variation in different circumstances.

Therefore, this research claims its own uniqueness due to the reason that, firstly, it is an initial scientific attempt that assesses the

determinant factors of sexual abuse at school. Secondly, most of the previous studies were done out of Gondar and not on school based determinant factors rather concerned on general factors. Thus, this research was done to fill those gaps through explaining the major determinant factors of female sexual abuse in Gondar Town high schools via addressing the following research question;

What contributing factors are responsible for child sexual abuse in the study area?

METHODS

Study Design
The research design for this study was cross-sectional survey design. For realizing the objectives of this study, both qualitative and quantitative (mixed method) research methods were used**.** Specifically, the approach is dominant less dominant which means the quantitative survey becomes the dominant method and the qualitative method was concurrently used to validate those quantitative data and to identify and examine the determinant factors of sexual abuse which were not gained with survey.

Sample Size and Sampling Techniques

High school female students, counselors and directors in the town were the target population of this study from where the actual samples were selected**.** Only female students were participated, because existing literature on the prevalence of sexual abuse indicates that, though boys are also possible victims, girls are the primary targets of sexual abuse. High school students were selected since it is believed that lower grade children would not be able to comprehend the essence of sexual abuse and might fail to provide reliable data.

Hence, the actual samples for the quantitative survey were determined with the following sample size determination formula:

$n = Z^2 P (1-P) / W^2$

where n= is the expected sample size, Z- is the confidence level in this case 95%, p- is taken as 50% and w- accepted error 5% and based on the formula

$n = (1.96)^2 (.5 x .5) / (.05)^2 = 384.16$ (since (N =2435), i.e N<10,000)

n= no/ 1+ no/N =334.4≈335

1+ no

N

Therefore, 335 female students were taken as the actual respondents of this study.

In this study both probability and non- probability techniques of sampling were employed to select the actual samples for the two methods. From probability sampling stratified proportional random sampling with lottery was used to select 335 female students from four selected high schools. *From non- probability sampling technique purposive sampling was used to select one school counselor; two unit leader and two school directors.* Detailed profile of the respondents presented in the table below.

Table1: Socio- Demographic Background of Respondents

Variable		Respondents level of Education		Total
		Grade 9	Grade 10	
Age of respondents	13-15	99	7	106
		93.4%	6.6%	100.0%
	16-17	120	109	229
		52.4%	47.6%	100.0%
		219	116	335
Total		100.0%	100.0%	100.0%

Out of the total 219 grade nine students 174 (79%) and 45 (20.5%) respectively were from Gondar town and outside of it and out of 116 grade 10 students 94 (81%) and 22(19%) were from Gondar town and outside of it respectively. Therefore, most of them are living in

Gondar town 268 (80%) and from grade nine 219(65%). The remaining 67 (20%) and 116(35%) are living outside Gondar and are grade 10 students respectively.

Concerning to the age of grade 9 and 10 female student respondents and 106 (31.6%) students have age between 13-15 and 229 (68.4%) have age between 16 & 17. In terms of level of education 99 (45.2 %) and 120 (54.8%) of grade 9 students respectively have age ranges between 13-15 and 16-17 and grade 10 students 7(6%) and 109 (94%) have age between 13-15 and 16-17 respectively.

Data Collection Instruments

To collect the qualitative data key informant interview with counselor, unit leaders and school directors were used and for the quantitative data collection survey questionnaires, which were prepared both in local (Amharic) and English language were used. Hence, the Amharic version was administered to the respondents since it can be difficult for them to easily understand the English. Some parts of the questionnaires i.e. third and fourth have been used by [11] in Addis Ababa in studying the dominant factors of child sexual abuse.

More importantly, the questionnaire was administered to pilot study of 35 grade nine and ten students to ensure the reliability and validity of the instrument. Then based on the data collected Cronbach's alpha reliability test of the instrument was measured and is relatively reliable having (r=0.80). In addition, the content validity of the instrument was assessed by the advisor, psychologist, sociologists, social workers, and the language validity was also checked by local language expert.

Data Analysis Techniques

Data collected through quantitative and qualitative methods were processed and analyzed concurrently. To analyze the quantitative data, different statistical techniques were computed using SPSS version 16. Specifically binary logistic regression technique was used to analyze those computed data. Binary logistic regression was used to identify and examining the multiple determinant factors of child sexual abuse in the school. To analyze the data generated from key informant interview thematic data analysis technique was used.

Ethical Consideration

In general to get ethical acceptance, all concerned bodies at all levels were informed about the aims and objectives as well as expected advantages of the study. Oral and written consent were also requested from the respondents and others who treat children before the instruments administered. The researcher was communicating confidentiality of the information and the privilege of privacy to them. Specifically, first orientation was given to assistant data collectors on how to handle and administer the questionnaires and the interviews. Then, data collectors were discussed with female respondents and directly distributing questionnaires to them.

RESULTS

This section of the research revealed the basic results of the collected data specifically the analysis of both the quantitative and qualitative data concerning the determinant factors of child sexual abuse of female students in high schools.

DETERMINANT FACTORS OF CHILD SEXUAL ABUSE

As it is mentioned in the method of the research, the major determinant factors of child sexual abuse are examined through the binary logistic regression model that is done based on the logit odd of being abused or not. So, the basic SPSS result of the model and its respective explanation (model evaluation, interpretation of the result, identification of significant factors based on its respective P-value, coefficients and odd ratio).

The evaluation of the logistic regression model with Omnibus Tests of Model Coefficients, Hosmer and Lemeshow Test and the classification tables shows that the model is fitted to examine the determinant factors of the child sexual abuse in the school environment. Hence, more specifically, the fitted model explained

the nature of the predictor variables and its evaluation in the following way.

The table below shows the inclusion of seventeen explanatory variables to the constant model reduced the -2 log likelihood by 273.977 (464.382-190.405) with 17 degree of freedom. The -2 log likelihood is a measure of how well the model explains variations in the outcome of interest, in this case respondents' status of sexual abuse. The -2 log likelihood (sometimes called, deviance) has a chi squared distribution. The p value for the result of adding the seventeen explanatory variables to the model is given in the below Table 4 and that is 0.0001 which is less than the conventional significance level of 0.05. Hence, the addition of explanatory variables to the model is statistically significant.

Table 2: Omnibus Tests of Model Coefficients

		Chi-square	Df	Sig.
Step 1	Step	273.977	17	.000
2	Block	273.977	17	.000
3	Model	273.977	17	.000

Table 3: Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	9.710	8	.286

Hosmer and Lemeshow test in table 3 above shows the fit of the model resulted from the incorporation of the predictor variables which is used as the measure of inferential goodness-of- the regression model that gives a Chi-squared value of 9.710 at 8 degree of freedom. The test is a version of a goodness-of-fit chi-square test with a null hypothesis that the data fit the model adequately. Hence, in this case, since the p-value of the test- which is the null hypothesis that each parameters equals zero is 0.286 which is greater than 0.05, the model is fitted.

The above Table 3 shows the predictor variables entered to the model, its coefficients(B), Standard errors, significant test (sig), individual test of relationship between the outcome and independent variable (Wald statistics), expected odds(exp(B)) and the 95 % confidence interval of the each odd ratio. Those results independently or in combination are very important in identifying and explaining significant predictor variables.

As the table shows loneliness (1), loose relation with others (reln-_others (1)), absence / shortage of sexual education at the family

(abs_sexedu (1)), less attention given to female students at the school (Lessatten (1)), peer influence (peerinf(1)) and improper arrangement of the library (arrng_liberary(1)) are not significant factors for female sexual abuse in those selected high schools because the significance test(p- value) for each variable is greater than the standard test i.e. 0.05 (refer table 19). While the remaining predictor variables are significant factors because the significant test for each is less than 0.05 the detail explanation of those significant factors were discussed below:

As table 4 displays the Exp (B) of each variables which is equal to e^B and is the odd ratio of significant predictor variables in the model which are parental marital status of respondents(mar_statu), living status of respondents (liv_statu), absence/ shortage of gender/sexual education in the school(abs_edu), being emotionally disturbed(emo_dis), absence/shortage of professional counseling service in the school(coun_ser), strong relation with the abuser(reln_abuser), unconditionally being with the abuser alone(be_with), gender (ben- female), absence/shortage of measures taken against the abusers(abs_measure) and gender club in the school (gen_club) and the presence of student maladaptive behavior in the school (stu_beh). The odds ratio for respondents' parental marital status was equal to $e^{-2.235}$ = 0.107 which indicates that the model predicts the odds of respondents' status of sexual abuse was 0.107. In other words, for each additional unit increase in the respondents' parental marital status of married, the odds of students' status of being sexually abused are decreased by 0.107.

In addition the probability of the Wald statistics for the independent variable survey respondents (living status in this case) who said that they were living with their biological parents (χ^2(1, N = 335) = 10.394, p =.001) was less than the level of significance of.05. The null hypothesis that the B coefficient for survey respondents who said that they were living with their biological parents was equal to zero was rejected. The value of Exp (B) for the variable survey respondents who said that they were living with their biological parents was.138 which implies a decrease in the odds of 86.2% (.138 - 1.000 = -.862). This means that Survey respondents (female students) who said that they were living with their biological parents were 86.2% less likely to be sexually abused as compared to those who said that they were living with others (non- biological parents).

Table 4: Predictor Variables of Students' Status of Sexual abuse

	Variables	B	S.E.	Wald	Df	Sig.	Exp(B)	95.0%C.I.for EXP(B)	
								Lower	Upper
Step 1a	mar_statu(1)	-2.235	.635	12.40	1	.000	.107	.031	.371
	liv_statu(1)	-1.981	.614	10.39	1	.001	.138	.041	.460
	Lonliness(1)	-.126	.428	.087	1	.768	.881	.381	2.039
	abs_edu(1)	1.422	.421	11.41	1	.001	4.147	1.817	9.466
	emo_dis(1)	1.567	.474	10.93	1	.001	4.793	1.893	12.133
	reln_abuser(1)	1.147	.411	7.809	1	.005	3.149	1.409	7.041
	rln_others(1)	.461	.458	1.014	1	.314	1.586	.646	3.894
	ben_female(1)	5.228	1.095	22.78	1	.000	186.51	21.789	1596.48
	be_with(1)	1.097	.404	7.369	1	.007	2.995	1.357	6.614
	abs_sexedu(1)	.077	.399	.037	1	.847	1.080	.494	2.361
	Lessatten(1)	.361	.388	.866	1	.352	1.435	.671	3.069
	abs_measure(1)	.752	.228	10.878	1	.001	2.121	1.357	3.317
	stu_beh(1)	2.308	.430	28.822	1	.000	10.059	4.331	23.365
	gen_club(1)	.557	.230	5.862	1	.015	1.746	1.112	2.742
	coun_ser(1)	1.628	.400	16.546	1	.000	5.092	2.324	11.156
	peerinf(1)	-.682	.408	2.794	1	.095	.505	.227	1.125
	arrng_liberary(1)	.069	.428	.026	1	.873	1.071	.463	2.480
	Constant	**-2.324**	**.889**	**6.833**	**1**	**.009**	**.098**		

In the same way the probability of the Wald statistics for the independent variable survey respondents (absence/shortage of sexual or gender education at school) who said that their sexual abuse was due to the absence/shortage of sexual or gender

education at school (χ^2 (1, N = 335) = 11.411, p =.001) was less than the level of significance of.05. The null hypothesis that the B coefficient for survey respondents who said that the absence/shortage of sexual or gender education at school influenced

their sexual abuse was equal to zero was rejected. The value of Exp (B) for the variable survey respondents who said that their sexual abuse was due to the absence/shortage of sexual or gender education at school was 4.174 which implies an increase in the odds of 300 % (4.147 - 1.000 = 3.147). This means that Survey respondents (female students) who said that the absence/shortage of sexual or gender education at school was one of the factor which contribute for their sexual abuse were 300% more likely to be sexually abused as compared to those who said that the absence/shortage of sexual or gender education at school was not one of the factor which contribute for their sexual abuse.

Therefore, the interpretation of the other predictor variables is done in the same way as a result it is not important to interpret all significant predictor variables.

Hence, we proceed to the overall explanation of the table and from it we can infer the direction and nature of relationship between the individual dependent and significant independent variables (individual, socio-demographic factors and situational factors) mentioned above based on the value of the parameters of each variables (B). The parameters of respondents' living status and their parents' marital status and the constant have negative parameters (-2.235, -1.981, -2.324) respectively which shows the negative relationship between the respondents status of sexual abuse and those predictor variables and its respective odd ratios (exp (B)) becomes less than one. For example, the predicted odd ratio of the respondents' living status B=-1.981 is equals to e^B ($e^{-1.981} = 0.138$) which means that the odd ratio of students who said that they were living with their biological parents are 0.138 times less likely to be sexually abused than those female students who lived with non biological parents. Similarly, the odd ratio of female students who said that their parents were married is 0.107 times less likely to be sexually abused than those students who said that their parents were divorced (others).

Similarly, concerning the determinant factors of child sexual abuse, the qualitative data collected from counselors, school directors and unit leaders can be explained that that situational (school environment) and personal factors were responsible for child sexual abuse in the selected school environment.

DISCUSSION

Determinant Factors for School Based Child Sexual Abuses

The major factors that are responsible for female students' sexual abuse were examined based on binary logistic regression (logit model) which is used to explain and predict the relation between categorical predicted variable (status of sexual abuse) and the predictor variables. And hence, concerning the determinant factors of female students' sexual abuse at high school, the model revealed socio-demographic, individual and situational factors as the major variables that exposed students to sexual abuse. More specifically, parental marital status of respondents, living status of respondents, absence/shortage of gender/sexual education in the school, being emotionally disturbed, absence/shortage of professional counseling service in the school, strong relation with the abuser, unconditionally being with the abuser alone, gender, absence/shortage of measures taken against the abusers and gender club in the school and the presence of student maladaptive behavior in the school are the significant factors which exposed female students to sexual abuse in the school.

The qualitative finding from the key informants also revealed that gender, forming high intimacy with perpetrators, personal exposure (globalization), loose relation between family and schools, shortage/absence of professional counseling given, the shortage/absence of sexual or gender education in the school and being with the abusers at different events become some of the factors that directly or indirectly contributed for the sexual abuse of female students in the selected high schools school.

Similarly, even though it is difficult to find specific school based studies on the determinant factors of child sexual abuse, there are different related studies done on factors which are more or less related with this study. For example, a study on the determinant factors of child sexual abuse in Addis Ababa explained that lack of awareness (lack of information about the effect of child sexual abuse, unavailability of sex education, barriers to women's equality and alcohol), lack of resistance (being forced by the offender, living without parent, being threaten by the offender, being persuaded by the offender, being emotionally deprived, the feeling of social powerlessness and one's own gender), lack of external protection, sexual arousal to a child and environmental situation become responsible factors for child sexual abuse in the city of Addis Ababa [11].

Moreover, according to the study done on the situation of girl child sexual abuse in Addis Ababa high schools and other places explained that although all girls regardless of their background can be at risk of being sexually abused, certain group of girls who are vulnerable to sexual abuse were girls from poor families, broken families, street children, domestic workers, girls lacking confidence and assertiveness and girls below the age of 18 were the most vulnerable groups to sexual abuse both in the school and outside school [8].

In line with our research findings, different theories can explain the potential and actual determinant factors of the prevalence of child sexual abuse within and outside the school environment. Those theories include the psychological and sociological explanations and for this research dominantly the sociological theories which are related to the major findings of this study are discussed below:

Cultural theories (structural and school ethics) of sexual abuse explained that different factors in the school directly or indirectly influence the presence of student sexual abuse in the school environment. Similarly, the result of this research revealed that the presence of female students sexual abuse was explained with school based situational factors which includes; the presence of student maladaptive behavior in the school, absence /shortage of measures taken against the abusers, absence /shortage of sexual or gender education and shortage of professional counseling services given and loose organization of gender and other clubs in the school were the significant factors that explained the presence of school based students' sexual abuse.

Hence, in line with this finding the above cultural theories are helpful in giving helpful responses to the problem in the schools because of the importance they afford school norms in influencing the behaviors of school members.

CONCLUSION

The problem of child sexual abuse among high school female students is prevalent and from those sexually abused female students the majorities have age ranges 16-17 and were from grade nine of selected high schools.

The finding of the research revealed that the model was evaluated with its validation of predicted probabilities, goodness-fit test statistics (hosmer and lemeshow test), omnibus test of model coefficients and statistical test of individual predictor variables. Based on the evaluation the model is fitted in explaining the relationship between the predicted (status of sexual abuse) and the predictor variables.

Finally, the statistical tests of individual predictor variables also validates the fit of the model in such a way that out of seventeen variables included in the model eleven variables becomes significantly explain the occurrence of the predicted variable i.e. being sexually abused (refer table 4). From those eleven significant predictor variables parental marital status of respondents and respondents' living status are negatively correlated with female students status of being sexually abused in the school whereas the remaining nine predictor variables have positive correlation (positive odds and odd ratio greater than one) with status of being sexually abused.

Therefore, the qualitative and quantitative data highly elaborated that the problem of female students sexual abuse is in one way or another explained with students socio-demographic characteristics, individual and situational factors.

Recommendation and Sociological Implications of the Study

According to Sociology master's curriculum conducting research, designing and evaluating projects and policy on different societal issues at various contexts is one of the basic focus areas of sociological inquiry**.** As per this logic, research on the determinant factors of child sexual abuse in the school environment has so many implications for the theoretical and practical sociological knowledge application and generation. This can be explained as this research mainly deals with the issue of children which is one of the current areas of research that needs serious attention at the local, national and global levels and hence studying this issue by applying sociological theories and knowledge has its own implications. This means the research tried to customize sociological (cultural) theories in explaining school based institutional dynamics by applying the social institutions and theories.

This research also identified future research, project and policy investigation areas i.e. as per the major findings of this research; the issue of child sexual abuse in the school environment requires serious attention and intervention responses from different concerned bodies. Those responses range from designing projects and policies to revision of the existing policies concerning measures taken against abusers, child rights and organizing institutional mechanisms that are used to reduce the prevalence and factors of such abuse in the school situation. Hence, the research becomes important for the practical application of existing and generating new sociological knowledge to explain the issue of child sexual abuse.

For this reason, to reduce the problem the researcher suggests the following individual, institutional and organizational recommendations:

Parents, child caretakers and others who have direct and indirect concern about child protection and welfare, should bear in mind that children are not immune from sexual victimization unlike the popular myth (i.e. they are safe from such abuse until they begin to develop secondary sexual characteristics) so that critical supervision is indispensable at every stage of their development.

Schools and other concerned institutions should be able to create or strengthen available structural units (strengthening gender clubs, training and education on the issue) that could have a significant input in securing the rights of the child. Educating the school and outside community about the prevalent potential causes, and consequences of the problem is important. Specifically, schools and the family have to be conscious of and collaboratively act to counter the problem of child sexual abuse.

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