Experience of Sexual Harassment among Female Students in Bangabandhu Sheikh Mujibur Rahman Science and Technology University (BSMRSTU)

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Abstract:- Bangladesh is a South Asian country speaking of which this country is not also free from such inhuman events named sexual harassment. Research on sexual harassment is still now very limited. This paper includes the number of 300 female students of Bangabandhu Sheikh Mujibur Rahman Science & Technology University, Gopalganj. The primary data for this study were collected with a predetermined questionnaire from February to April 2023. In this study, we find that about 74% of the respondents had experienced sexual harassment at least once in their lifetime. Most of the harasser about 34.8% were belonged to the age group (21-30) years and unknown to the victims. Road and public transport is the most likely place for being harassed. About 41% of the respondents changed their lifestyle after experiencing sexual harassment such as not walking from a particular place, changing clothes, institutes, sim cards, etc. From this study, we find an association between some factors such as family status, residence area, age of victim, dress or appearance of victim, public transport, education level of the harasser and experience of being sexually harassed. By fitting the binary logistic regression model, we find that residence area, dress or appearance of the victim and public transport are significant influential factors for experiencing sexual harassment.

Keywords:- Sexual Harassment, Family Status, Residence Area, Age, Dress, Public Transport, Statistical Analysis.

I. INTRODUCTION

Sexual harassment is a multifaceted social problem that women in all societies encounter to varying degrees. In every three women worldwide, one has been a victim of physical or sexual violence perpetrated by another (UN Women, 2019). Sexual harassment intends to harm an individual's dignity and create an intimidating, uncomfortable, demeaning, insulting, or offensive situation (UN Women, 2019). Sexual harassment makes traumatic life memories and sociological impacts on the victims. It makes the victims feel helpless and powerless, which affects their self-esteem (Kalra & Bhugra, 2013).

Sexual harassment has become considerable attention in Bangladesh as a social and legal problem over the last two decades. Sexual harassment has reached epidemic levels in the world's higher education systems (Bondestam & Lundqvist, 2020). Students and women are frequently victims of gender-based sexual violence in higher education (Bondestam & Lundqvist, 2020). Cantor et al. (2016) reported that 47.7 % of students experienced sexual harassment from matriculation through post-graduation; yet, most of the incidences of sexual harassment and rape went unreported (UN Women, 2019). Bondestam & Lundqvist (2020) stated that more than half of victims of sexual harassment in higher education did not disclose the incident to legal authorities; Johnson et al. (2016) also found 71% of women do not report sexual assault. However, in Bangladesh, no scholarly studies have been undertaken on sexual harassment in higher education or why students do not report incidents of SH, even though it has become a major concern in higher education. Between 2011 and 2019, 2830 girls in Bangladesh were subjected to various forms of sexual harassment (Odhikar, 2019). According to ASK (2020), 258 girls were victims of SH in Bangladesh in 2019. Additionally, 1413 females experienced rape attempts in 2019, and 224 were raped.

II. RESEARCH OBJECTIVES

➢ *The objectives of this study are:*
- To investigate the factors that are whether responsible or not for sexual harassment.
- To analyze the percentage distribution of sexual harassment among women in BSMRSTU.
- To find out the association among the several factors with sexual harassment.
- To fit an appropriate model for sexual harassment among women due to several factors.

III. DATA COLLECTION AND METHODOLOGY

This was a cross sectional study where data was collected by questionnaire method. Primary data is information gathered directly from respondents. The study included females aged 19-28 years who are students of BSMRSTU. Questionnaires were used to gather information from female students of BSMRSTU who experienced sexual harassment once or more than one at any time in her life time. We selected such a sample because it was accessible and also it is the group that provided the information about the study.

A stratified sampling technique was used to select the sampling elements. By using stratified sampling, we ensure that our survey includes participants from each academic year in population to their representation in the population. This allows us to draw more accurate conclusions about the sexual harassment of students at different academic levels on campus. First, divide the entire population of BSMRSTU students into five distinct groups or strata based on their academic year (Graduation level 1, Graduation level 2, Graduation level 3, Graduation level 4, and Postgraduate). Each stratum represents a subset of the population with similar characteristics. Secondly, determine the sample size from each stratum proportionally. Then draw the specified number of students from each stratum by using a simple random sampling technique. After drawing the required number of participants from each stratum combine the individual samples to create our final stratified sample. The period of data collection was from 15th March to 10th May 2023.

Data used in this study contain information on 300 respondents who experienced sexual harassment once or more than one at any time in her lives. Different software has been used to complete this study. The entire analysis of the study is done statistical package named SPSS (Statistical Package for Social Science) for Windows (version 25.0) SPSS Microsoft Word (2019) is used to prepare all the outputs that are presented in this study

IV. RESULT AND DISCUSSION

➢ *Univariate Analysis*

The socio-economic and demographic characteristics such as age, educational status, residence area, family status, monthly family income etc. are closely interlinked with sexual harassment (SH) and are more accurate and reliable indicators to understand the exact scenario of situation.

Table 1. Background information of the respondents who ever faced sexual harassment

Variable	Sub category	N	%
Age (In years)	≤ 20	46	15.3
	20-22	59	19.7
	22-24	89	29.7
	≥ 24	106	35.3
Educational Status	Graduation level 1	55	18.3
	Graduation level 2	56	18.7
	Graduation level 3	58	19.3
	Graduation level 4	62	20.7
	Postgraduate	69	23.0
Residence Area	Rural	117	39.0
	Sub-urban	94	31.3
	Urban	89	29.7
Family Status	Lower class	13	4.3
	Lower middle class	64	21.4
	Middle class	177	59.0
	Solvent	46	15.3
Monthly Family Income	≤ 20000	40	13.3
	20000-40000	157	52.4
	≥ 40000	103	34.3
Experience of Sexual Harassment (SH)	No	79	26.3
	Yes	221	73.7
Age of Experiencing SH for the first time	<10 years	54	24.4
	10-20 years	144	65.2
	20-30 years	23	10.4

It is seen from the Table 1 that about 15.3 percent of respondent's age was less than 20 years. About 19.7 percent of the respondents belonged to the age group (20-22) years. About 35.3 percent of respondent's age was more than 24 years. It is noted that more or less same percentage of participants from each academic year was included in the study. Most of the female students came from rural (about 39.0 %) and sub-urban (about 31.3%) area. Majority of the respondents (about 59.0%) belonged middle class family. It was found that majority about 52.4 percent of the respondent's family monthly income group is between Tk. (20000-40000). It is noted that about 73.7% of female students of BSMRSTU had experienced sexual harassment at least once in their lifetime. About 24.4% of the respondents had faced sexual harassment at less than 10 years of their age for the first time. About 65.2% of them had faced it at the age range 11 to 20 years and the rest 10.4% of them had experienced this at the age between 21 years and more.

Table 2: Scenario of sexual harassment among female students in BSMRSTU:

Variables	Percentage
Physical Sexual Harassment.	
Yes	22.2%
No	77.8%
Verbal Sexual Harassment.	
Yes	67.4%
No	32.6%
Visual Sexual Harassment.	
Yes	89.1%
No	10.9%
Percentage of the frequency of being harassed among the respondents.	
Only Once	19.5%
2-5 times	50.7%
6-10 times	14.0%
More than 10 times	14.9%
Daily	0.9%
The most likely place for females to be sexually harassed.	
Educational Institute	21.3%
Public Transport	70.1%
Road	80.5%
Market/ Shopping Complex	54.8%
Home	14.5%
Workplace	6.3%
Administrative Building	4.1%
Relationship between the harasser and the victim.	
Unknown	96.4%
Teacher	13.1%
Relative	21.7%
Friends/Classmate	19.5%
Colleague	5.4%
Service provider	21.3%
Percentage of the age of harassers(in years).	
10-20	19.0%
21-30	34.8%
31-40	24.9%
41-50	14.0%
>50	7.2%

From the study it is found that about 22.2% of the respondents were victim of physical sexual harassment. About 67% of them had experienced verbal harassment and 89.1% of them were the victim of visual sexual harassment. About 19.5% of them experienced sexual harassment only once in a lifetime, about 50.7% had faced it 2-5 times and it was very alarming that about 14.9%. had harassed more than ten times. From the result we can see that about 70.1% of sexual harassment happened on public transport, about 80.5% of sexual harassment happened on the road, 54.8% happened in market/shopping complex, 21.3% happened in an educational institutes and so on. Majority of the respondents about 96.4% had been harassed by an unknown person. About 34.8% of the harasser were belonged to the age group (21-30) years and about 7.2% harasser were aged above 50 years.

Table 3: Effect and impact of experiencing sexual harassment among female students

Variable	Sub category	N	%
Instant reaction of the respondents after being sexually harassed.	Nothing, kept quiet	88	39.8
	Identified the harasser and told them that was wrong	13	5.9
	Reported it to the authority	14	6.3
	Tried to protect herself	28	12.7
	Asked for help to people around her	73	33.0
	Have taken legal assistance	5	2.3
Wheather respondent's changed their lifestyle after being harassed.	Yes	90	40.7
	No	102	46.2
	Maybe	29	13.1
Type of changes that made by the victims in their lifestyle after being experiencing SH	Not Mentioned	44	37.0
	Not Walking from a Particular Road	32	26.9
	Changing Clothes	24	20.2
	Changing Institute	4	3.4
	Changing Sim Card	5	4.2
	Others	10	8.4

It is noted from the study that about 39.8% respondents did not react when they faced sexual harassment. Only 2.3% had taken legal action and about 33.0% of them tried to protect themselves. It is seen from table 3 that about 40.7% of the respondents changed their normal lifestyle after being sexually harassed.

About 26.9% of the respondent avoided a particular road because of the fear of being harassed. 20.2% of them changed their clothes choices and 3.4% had changed institute. 4.2% had stopped using the sim card that they used to use. 8.4% changed their lifestyle in other ways such as keeping a family member most of the time along them, consciously moving from a particular place, etc. 37% did not mention the changes.

➤ *Bivariate Analysis*

We represent contingency analysis, which is designed to test any association between different phenomena. In contingency studies, if 'O' denoted observed frequency and 'E' denoted expected frequency of a contingency table, then the expected frequency under any hypothesis is;

Null and alternative hypothesis:

$H_o =$ There is no association between two classified variables

$H_1 =$ There is a significant association between two classified variables

$$E_{ij} = \frac{(R_i)(C_j)}{N}$$

Where,

$E_{ij} =$ Expected frequency of the *ith* row and *j th* column.

$R_i =$ No. of observation of the *i th* row the respective contingency table.

$C_j =$ No. of data of the *j th* row the respective contingency table.

From each contingency table examine the association between variables/individuals and the different segment of the individual are made by computing Chi-square and using the test statistics is,

$$X^2 = \sum_{i=1}^{c} \sum_{j=1}^{c} \left(\frac{\left(o_{ij} - E_{ij} \right)^2}{E_{ij}} \right)$$

Where $\chi 2$ follows (r-1) (c-1) degrees of freedom. And $O_{ij} =$ the observed number of observations in (*i th*, j *th*) cell.

The decision rule is if $\chi^2_{cal} > \chi^2_{tab}$ reject the null hypothesis. Where χ^2_{cal} is from the chi- squared distribution with (r-1) (c-1) degree of freedom.

Cross-tabulation and contingency analysis of different variables used in this study are given below with a related comparison table and interpretation.

Table 4: Test of Association between experience of sexual harassment and some selected variables.

Experience of Sexual Harassment	Variable			Chi-square	p value	Result
	Family Status			9.303	0.054	**Significant**
	Lower Class	Middle Class	Solvent			
Yes	75.32%	70.06%	84.78%			
No	24.67%	29.94%	15.22%			
	Residence Area			14.561	0.001	**Significant**
	Rural	Sub-urban	Urban			
Yes	64.10%	72.34%	87.64%			
No	35.89%	27.66%	12.36%			
	Monthly Family Income			2.858	0.091	Not Significant
	Below 30K		Above 30K			
Yes	70.56%		79.61%			
No	29.44%		20.39%			
	Sexual Harassment varies by Age			10.094	0.039	**Significant**
	Agree	Neutral	Disagree			
Yes	72%	72.97%	77.78%			
No	28%	27.03%	22.22%			
	Dress or Appearance can be a reason for being harassed			11.882	0.018	**Significant**
	Agree	Neutral	Disagree			
Yes	71.67%	76.32%	76.83%			
No	28.33%	23.68%	23.17%			
	Most of the harassers are uneducated or moderately educated			6.074	0.194	Not Significant
	Agree	Neutral	Disagree			
Yes	74.53%	70.46%	73.68%			
No	25.47%	29.55%	26.32%			
	The govt. has taken enough precaution to prevent harassment			3.694	0.449	Not Significant
	Agree	Neutral	Disagree			
Yes	66.13%	78.41%	74%			
No	33.87%	21.59%	26%			
	Public transport is the most likely place for being harassed			24.884	0.000	**Significant**
	Agree	Neutral	Disagree			
Yes	76.81%	42.86%	77.78%			
No	23.19%	57.14%	22.22%			

It is noted from the contingency table that for residence area, we see that the Pearson Chi-square statistic with 2 degrees of freedom is observed to be 14.561 which has the *p*-value 0.001 is less than significance level $\alpha = 0.01$. So we may reject the null hypothesis and the alternative hypothesis indicates that there exists a significant association between experiencing sexual harassment and residence area. By examining the result of contingency table we get the variables **Family Status, Residence Area, Age, Dress or Appearance** and **Public transport** has a significant association of experiencing sexual harassment.

➢ *Multivariate Analysis*

- *Logistic Regression Analysis*

In a regression problem, we use binary logistic regression when the response variable is dichotomous in nature. We often observe that one or more explanatory variables could be categorical or continuous. These types of problems are generally handled by coding dichotomous variable 0 and 1 dummy variable regression.

Let us then consider logistic function is

$$Y_j = \frac{\exp\left(\beta_o + \sum_{i=1}^{n} \beta_i X_{ij}\right)}{1 + \exp\left(\beta_o + \sum_{i=1}^{n} \beta_i X_{ij}\right)}$$

Where, $i = 1, 2, 3, \ldots\ldots\ldots, n.$

$j = 1, 2, 3, \ldots\ldots\ldots, n.$

Let,

Y_{ij} = Experience of Sexual Harassment (No=0, Yes=1)

X_{ij} = Different factors.

β_j's are regression coefficients.

Now we like to test the following hypothesis-

H_o = Covariates do not have a significant effect on Sexual Harassment.

H_1 = Covariates have a significant effect on Sexual Harassment.

Table 5 Dependent Variable Encoding:

Experience of Sexual Harassment	Original Value	Internal Value
	Yes	1
	No	0

Table 6 Independent Variable Encoding:

Variable	Original Value	Internal Value
Family Status	Lower Class	0
	Upper Class	1
Residence Area	Rural	0
	Urban	1
SH varies by Age	Agree	1
	Disagree	0
Dress or Appearance can be a reason for being harassed	Agree	1
	Disagree	0
Most of the harassers are uneducated or moderately educated	Agree	1
	Disagree	0
Public Transport is the most likely place for being harassed	Agree	0
	Disagree	1
Female students feel safer in an educational institute	Agree	0
	Disagree	1

The results obtained from the logistic regression model are given in the following table

Table 7: Effects of selected covariates on the experience of sexual harassment (Binary Logistic regression analysis).

Variables	B	S.E.	df	Sig.	Exp(B)	95% C.I. for Exp(B)	
						Lower	Upper
Family Status	-0.163	0.213	1	0.444	0.849	0.559	1.290
Residence Area	0.729	0.220	1	0.001	2.073	1.348	3.188
SH varies by age	0.040	0.168	1	0.810	1.041	0.749	1.447
Dress or appearance of the victim	0.210	0.153	1	0.027	1.233	0.914	1.663
Educational level of the harasser	-0.118	0.102	1	0.251	0.889	0.728	1.086
Public transport	-0.444	0.185	1	0.016	0.641	0.446	0.921
Educational institutes	-0.214	0.161	1	0.184	0.807	0.589	1.107
Constant	1.206	0.882	1	0.172	0.172		

From the table 7, it is found that residence area has a significant effect (p-value is less than 0.05) on experiencing sexual harassment. The odds of females coming from urban areas who experienced sexFual harassment is 2.073 times higher than those who came from rural areas experienced sexual harassment with a 95% CI of 1.348 to 3.188.

Further, it is observed that the dress or appearance of the victim has a significant impact on experiencing sexual harassment. With a 95% CI of 0.914 to 1.663, dress or appearance is 1.233 times more likely to be responsible for experiencing sexual harassment. In addition, it also reveals that public transports are the most likely place for being harassed as it has a significant effect on experiencing sexual harassment. On the other hand, family status, age of the victim, and educational level of the harasser has no significant effect (p-value greater than or equal to 0.05) on experiencing sexual harassment. In other words, we say that sexual harassment is independent of family status, age of the victim & family relationship. Although these are significant in bivariate analysis.

V. DISCUSSION AND CONCLUSION

The purpose of the study was to investigate the experience of sexual harassment among female students in BSMRSTU on the basis of different important related factors. 300 female students were interviewed from different departments of BSMRSTU. Nowadays sexual harassment has become a very common problem in our society.

Our aim was to find out the factors affecting sexual harassment in BSMRSTU. At first, we prepared a questionnaire on the basis of our study. We include some harassment-based conditions such as times of being harassed, the relationship between the harasser and the victim, the age of the victim, the educational level of the harasser, etc.

We can conclude that about 74% of the female students of BSMRSTU had experienced sexual harassment at least once in their lifetime. 22.2% of them had experienced physical sexual harassment and 67.4% had faced verbal sexual harassment. Most of the respondents had experienced visual sexual harassment and the percentage is 89.1%. Most of the harasser were unknown to victims and

public transport and road is the place where most of the respondents had experienced this. 40.7% of them had changed their daily lifestyle such as not walking from a particular road, changing clothes or Institute or sim cards and many other daily chores. About 40% of the victims did not even take any action after facing sexual harassment, they kept quiet. We described the association different variables related to the study with experience of sexual harassment. We can conclude that residence area of respondents , family status of respondents, age of victim,public transports are associated with the experience of sexual harassment. From binary logistic regression analysis, we see that residence area, dress or appearance of the victim and public transport have significant relationship with experience of sexual harassment. Although other variables are significant in bivariate analysis. Therefore we can conclude that these predictors can be the reason of experiencing sexual harassment among female students.

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