



## **How Awareness Raising Program Affects the Bio-social Correlates of Adolescent's Consciousness on Sexual Harassment: A Multigroup Simultaneous Equation Model**

### **Abstract**

The aim of this study was to evaluate the effectiveness of school-based and community-based Sex education from the perspective of making adolescents conscious about Sexual harassment. This study also attempts to answer the question- Do the social elements such as families, peers, communities, and schools change their role if that program is strengthened? To provide the answer multi-group simultaneous equation model was fitted based on the conceptual framework of Bronfenbrenner bio-ecological model of adolescent functioning. Since the sexual harassment rate in Bangladesh is increasing at an alarming rate, even the enforcement of new strict laws of punishment could not reduce the incidence rate. Therefore, it is essential to raise consciousness about sexual harassment as well as the positive role of society to demolish sexual violence. The result showed that among the factors at the individual level, gender, age, school year, and students' educational ideals significantly impact teenagers' awareness of sexual harassment. In the social component, peers show contradictory influence on the consciousness of sexual harassment. Secondly, psychologically controlling society can increase their awareness. At that time, community chaos eliminated the adverse effects. Finally, there is a positive connection between teachers' concerns and teenagers' awareness of sexual harassment. This study illustrates that strengthening the sexual and reproductive health awareness-raising programs, especially school bases and community bases awareness programs, can significantly increase young people's awareness about the adverse effect of sexual harassment. Additionally, the strengthened awareness-raising program showed positive impacts on parents as they involve more positively in raising the consciousness about sexual harassment.

**Keywords:** Multi-group Simultaneous Equation Model, Sexual Harassment, Policy Evaluation, School-based Sex Education, Community-based Sex Education

**Introduction:** Despite a recent strict punishment rule passed by the local government, sexual violence against women in Bangladesh is increasing day by day. Approximately 35 percent of women become victims of sexual harassment; this number has increased (20 percent) significantly during the pandemic (Sifat, 2020). Only punishment cannot stop this trend. To improve this situation, we need to take proper prevention steps. By teaching boys how to value girls and making consciousness about a victim's pain, and making both girls and boys conscious about social safety, this situation can be improved. Any discussion in sexual talk among adolescents and adolescents, and adults is considered taboo in Bangladesh's social context. Therefore, most adolescents are unaware of the gravities issue of sexual harassment—this situation emphasizes the importance of sexuality education. School-based and community base sexual awareness-raising programs are two widely used sexual education systems in our country. However, there is a serious question on the program's effectiveness in making adolescents conscious of sexual harassment. This study aims to assess the effectiveness of such awareness raising program. Moreover, this study attempts to determine the answer to the question – How such awareness programs change the role various components of society like family, peer, community, and school to make adolescents conscious about awareness-raising. To find out the answer to this question, we employed a multigroup simultaneous equation model using the conceptual framework of Bronfenbrenner's bioecological model (Bronfenbrenner, 1986).

**Methods:** This quantitative study is based on a quasi-experimental study with two rounds of cross-sectional survey, baseline survey (n=1215) and end-line survey (n=1509). After baseline measurements had been taken on 2016 and endline, the program's intervention was carried out in the intervention group and regular school curriculum carried out on control group. The end-line measurement was taken on 2019. Randomization was carried out on the school level into intervention and control groups. All respondents personally interviewed using a structured questionnaire consists of socio-demographic, knowledge, and psychological part. The psychological part was adopted from the study of Amoateng and Kalule-Sabiti (2014), following the proposed guideline of Beaton et al. (2000). Adolescents Consciousness about sexual harassment (ACSH) is measured as a total number of items they identified as consequence of sexual harassment, personal insecurities, and personal safety.

### **Statistical Analysis**

Multigroup Simultaneous equation model was fitted using lavaan R package. ANOVA and t test used for model specification. Parameters of the simultaneous equation model was estimated using Weighted Least Square estimator method.

$$\begin{aligned}
 CSH &= (\alpha_{01}, \alpha_{11})Sex + \alpha_{32}YS + \alpha_{33}Age + \alpha_{34}SEA + \alpha_{35}SCAP + \alpha_{36}FS \\
 &\quad + \alpha_{37}PBC + \alpha_{38}PLS + \alpha_{39}PEPC + (\alpha_{010}, \alpha_{110})PEC \\
 &\quad + \alpha_{311}PER + \alpha_{312}CD + \alpha_{313}CPC + \alpha_{314}TC \\
 YS &= \beta_{31}FEdu + \beta_{32}MEdu + \beta_{33}FWS + (\beta_{04}, \beta_{14})PBC + \beta_{35}PLS \\
 SCAP &= \beta_{36}FEdu + \beta_{37}MEdu + \beta_{38}FWS + (\beta_{09}, \beta_{110})PBC + \beta_{311}PLS \\
 SEA &= \beta_{312}FEdu + \beta_{313}MEdu + \beta_{314}FWS + \beta_{315}PBC + (\beta_{316}, \beta_{317})PLS \\
 PBC &= \gamma_{31}PER + \gamma_{32}PEPC + \gamma_{33}CD + \gamma_{33}TC \\
 PLS &= (\gamma_{04}, \gamma_{14})PEC + \gamma_{35}PER + (\gamma_{06}, \gamma_{16})CD + \gamma_{37}CPC + (\gamma_{08}, \gamma_{18})TC
 \end{aligned}$$

Where,

CSH = Consciousness about Sexual Harassment, YS= Year of Schooling, FS = Family Size, FE = Fathers Education, MEdu = Mothers Education, FWS = Father's Working Status, SEA= Students Academic Aspiration, SCAP = Student's Current Academic Performance, PBC = Parental Behavioral Control, PLS = Parental Limit Setting, PEPC = Peer Psychological Control, PEC = Peer connection, PER = Peer regulation, CD = Community Disorganization, CPC = Community Psychological controls, and TC = Teacher's Concern.

**Results:** In this study the sample was constituted of majority of single (99.41%) adolescents and representative of approximately equal percentage of both sexes. The mean age of adolescents and their years of schooling was 14.67 and 8.08, respectively. Approximately half of the adolescent's parents (father and mother) completed secondary education level (51.19% for father and 57.27% for mother). The absolute majority level of adolescents (86.71%) reported that their father goes to work for earnings.

Number of degrees freedom (124) of the fitted of simultaneous equation model indicate that the model was over identified. The Model fit test statistic ( $\chi^2(df)= 1502.763 (182)$ , p-value=0.00) is significant. The fit indices GFI (0.85) and RMSEA (0.07) indicates the model is reasonably good fit (Browne & Cudeck, 1992).

The results of multi-group structural equation model showed that age, gender, year of schooling, Students academic performance had significant direct effect on consciousness about sexual

harassment for both intervention and control groups. The result showed that one year increase in age and time spending on school increase CSH by 0.216 and 0.972 unit respectively. Adolescent's current academic performance had a direct negative impact (0.674, p-value = 0.03) on ACSH. Parental limit setting was found significant factor in lessening the adolescent's knowledge regarding social safety. In the intervention group, the negative impact of parental limit setting on adolescent's knowledge was found 0.430 which is less than the value of the control group (0.470). Peer connection had highly significant negative impact (0.347 & p-value <0.001) in control group while in the intervention group peer connection shows insignificant negative influence (0.076 & p-value = 0.680) on adolescents' consciousness. Community psychological control had the same positive significant effect (0.392 & p-value < 0.001) on ASCH in both groups. Peer regulation had a positive significant effect (both direct and indirect) on adolescent's consciousness. The impact of peer regulation on the adolescent's knowledge increases in the intervention group compared to the control groups. Teacher's concerns had a highly significant effect on ACSH and due to the training, this effect increases by 0.011 in the intervention group. Community disorganization had a negative influence on adolescent's knowledge.

**Discussion:** This study revealed that female adolescents were more conscious of the topic in the control group, but the intervention displayed an astronomical result that male adolescents became more conscious than the female. This change indicates that the intervention was more effective in raising awareness in male adolescents than the female adolescents. Therefore, the intervention can become effective to reduce sexual harassment. Negative association between Adolescents' academic performance and consciousness demonstrates that, students are not focusing much on these topics. Fathers' education and working status didn't produce any significant impact on adolescent's consciousness of sexual harassment. On the other hand, mother's education imposed a significant beneficial impact on adolescent's consciousness for both groups. Parents setting limits on adolescents directly and indirectly reduces the consciousness. However, in the intervention group, the indirect reduction rate is lower than in the control group. In comparison, parental behavioral control had a positive effect on consciousness. Additionally, this positive effect was to a greater extent in the control group.

Among social components, Firstly, Peer showed a paradox influence- increase adolescent's consciousness by regulating, whereas reduce consciousness by mocking, insulting, and expressing disagreement. Secondly, psychologically controlling society increases their consciousness. At the same moment, community disorganization exerts a negative effect. Finally, there was a positive association between teacher concern and the adolescent's consciousness about sexual harassment.

This study demonstrates that sexual and reproductive health awareness-raising programs, especially the school base and community base awareness program, significantly improves adolescents' consciousness. Moreover, strengthened awareness-raising programs also positively influence the role of parents in raising the consciousness about sexual harassment. Another study in India by Shankar et al. (2020) as well found a similar positive impact of school-based health education programs.

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