INTERACTION EFFECT OF CYBER BULLYING SENSITIZATION PROGRAM (CBSP) AND ICT COMPETENCY ON STUDENTS' CYBER BULLYING BEHAVIOUR

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Abstract

The present study was to ascertain the interactive effect of cyber bullying sensitization program (CBSP) and ICT competency on cyber bullying behaviour among middle school students. For this purpose, an intervention program was developed by the researcher for the participants. The participants of the study included 94 and 92 students in theexperimental and control groups respectively. The cyber bullying behaviour of the participants was significantly affected by the cyber bullying sensitization program (CBSP) whereas ICT Competency skill of the participants had no effect on theircyber bullying behaviour.The implications for prevention and intervention programs were discussed.

Key words: Cyber Bullying, ICT Competency, Sensitization Program, Quasi-experimental design
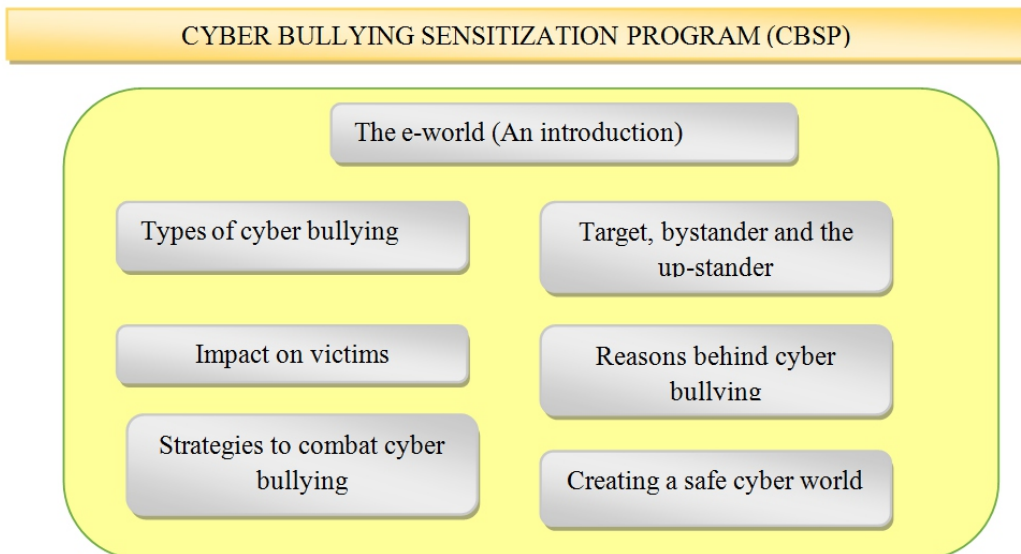
Introduction:

The wand of technological advancement has made life simpler and fast paced for millions of us. However it has also made every person with smart phone a potential victim as well as perpetuator of cyber bullying. Cyber bullying, can be defined as using the Internet, cell phones, video game systems, or other technology to send or post text or images intended to hurt or embarrass another person (Jackson & Cohen, 2012). Just like traditional bullying, it is repetitive and targets the victims in cruelest of manner.Vandebosch and Van Cleemput (2008) argued that a greater knowledge of ICT's may contribute to a power imbalance; they found that pupils with more advanced Internet skills were more likely to have experience with deviant Internet and mobile phone activities. This could even pave way towards cyber related crimes and negative activities. Ybarra and Mitchell (2004) found that cyberbullies do rate themselves as Internet experts to a higher degree compared to those who do not cyberbully others.However, it

does not take too much expertise for one to take a picture of someone else in order to use it in an abusive manner, be it uploading it onto Internet for others to see or showing around amongst friends. Through this paper, the author would like to understand the effect of the cyber bullying sensitization program and ICT skills of the participants on their cyber bullying behaviour.

The Cyber Bullying Sensitization Program (CBSP)

Interventions and educational programmes are crucialin plummeting the impact and incidence of cyber bullying (Burton &Mutongwizo, 2009; Mitchell, 2010; Smith et al., 2008). Studies suggest that awareness about cyber bullying can be increased with educational and awareness based programs (Liau et al., 2008; Soliman&Mathna, 2009; Sulistyawati et al., 2011). Keeping this objective in mind, the cyber bullying sensitization program (CBSP) was conceived.

CBSP covers basic information on online bullying and related issues, types, threats, security and strategies. It was developed by the researcher after having focused group discussions with adolescents on topic of online bullying and followed by an exhaustive exploitation of the literature from primary as well as secondary sources. Content validity of the CBSP was performed by fourteen experts from the field of education, ICT and law were contacted.*Lawshe*formula given in C.H. Lawshe in 1975 was used to calculate the content validity of the program, which was found to be 0.85. The main themes sketched for the program were as follows:

CYBER BULLYING SENSITIZATION PROGRAM (CBSP)

- The e-world (An introduction)
- Types of cyber bullying
- Target, bystander and the up-stander
- Impact on victims
- Reasons behind cyber bullying
- Strategies to combat cyber bullying
- Creating a safe cyber world

The researcher settled with the above themes as they were believed to cover all the areas and strategies required to empower the adolescent participants. This study investigates the interaction effects of the cyber bullying Sensitization program and the ICT Competency of the participants on reducing their cyber bullying behaviors. The research hypothesis was as following:

Ho1. There is no significant relation due to interaction effect of the treatment (CBSP) and the ICT competency on the Cyber Bullying Behaviour (CBS) of the participants.

Method

A quasi experimental design which is crucial in exposing casual relationships between variables was preferred for the study. The design used can be symbolised as follows:

$$E --Y1 --X --Y2$$
$$C --Y1--Non-X--Y2$$

Where:

E = Experimental group

C = Control group (comparison group)

Y1 = Dependent variable before introduction of X (cyber bullying behaviour)

Y2 = Dependent variable after introduction of X (cyber bullying behaviour)

X = Independent variable (Cyber Bullying Sensitization Program)

Participant

The sample for the study were secondary school students in the age group 13-15 years of age, studying in grade IX in various schools in Delhi affiliated to CBSE (English Medium). Lottery system was used for selecting the Experimental and Control group from those schools which granted permission. 186 students studying in the middle school were selected. The total sample comprised 94 participants in the experimental group and 92 in the control group. There were 54 boys and 38 girls in the control group. While in the experimental group, girls and boys were equal in number in this group.

Measure

The Cyber Bullying Scale (CBS) used in the study has been developed by Aricak et al. in 2012. This scale measures cyber bullying behaviours among adolescents. The scale is a four-point Likert scale that consists of 24 items. The rise in the points indicates an increase in the level

of cyber bullying. The Cronbach's alpha coefficient for the entire scale was found to be 0.95 and the test - retest reliability coefficient was 0.70. Permission to use this scale was sought through email.

Another tool used in this study was the *ICT Competency Scale* developed by Dr. Mudasiru O. Yusuf and Modupe R. Balogun. This tool consists of 35 items. The tool is divided into four sections, namely i) Basic Computer Operations and Issues, ii) Use of Application Software, iii) Use of Internet Resources, and iv) Use of Peripheral ICT Equipment. The reliability index coefficients for the four sections were 0.86, 0.81, 0.80, and 0.76, respectively.

Procedure

After the consent from the authorities was gained, the CBSP was conducted with the experimental group owing to the quasi- experimental design while the control group received no treatment but only pre and post test. With the experimental group, the researcher conducted the activities based program for ten days. These theme based activities were aimed at exploiting the higher order thinking skills of the participants. Role plays, case studies, showcasing of related videos, creative writing were some of the activities planned. Even though no treatment was provided to the control group, a gap of ten days was still maintained between the pre and post tests. The ICT competency test was clubbed with the pre-test and was collected from both the groups before the onset of the program with the experimental group.

Data Analysis

The size of the groups and their normal distribution were considered while selecting the appropriate statistical techniques for data analysis Two-Way factorial ANCOVA was used to study the interaction effect. This test increases the precision of comparison by removing the effects of the treatment variables i.e. ICT Competency on the Cyber Bullying Behaviour. The Wolf's Formula derived by Fredric Wolf in 1986 was applied to measure the extent of effectiveness of the intervention program (CBSP) on the cyber bullying behaviour of the participants. Statistical analysis was conducted using VassarStats, a Statistical Computation Web Site (http://vassarstats.net/odds2x2.html).

Results

The following table shows the relevant statistics of CBS by treatment and ICT competency after partialling out the effect of the pre-test CBS.

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Table 1. Mean of CBS by treatment and ICT Competency

Group	ICT Competency			
	Low	Moderate	High	Total
	N	N	N	N
CG	24	47	21	92
EG	24	49	21	94
Mean Scores				
CG	33.75	33.12	32.90	33.23
EG	26.04	25.79	26.14	25.93
TOTAL	29.89	29.38	29.52	29.54

It was found that the F-ratio for intervention program (F= 311.69) is significant at < 0.0001, while it was not significant (F=0.58) for ICT Competency. The interaction effect of intervention program (CBSP) and ICT Competency(F=0.21) was not significant at 0.05 level. Hence, the null hypothesis is accepted with reference to the interaction effect for CBS. The mean CBS of theexperimental group is significantly lower than that of the control groupwhich does not differ on the basis of ICT Competency scores of students and also not on the basis of theinteraction between intervention program and ICT Competency of students. The following figure shows thedifferences in the mean scores of CBS of the students on the basis of treatment(CBSP) and ICT Competency of students.
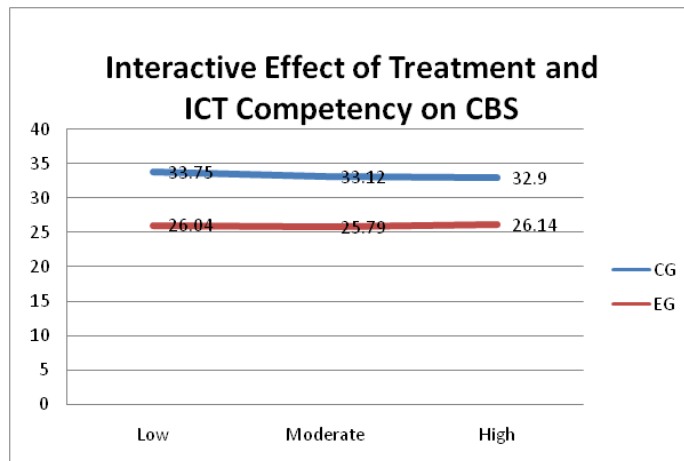
FIGURE.1 Interactive Effect of Treatment and ICT Competency on CBS

The magnitude of the effect of the treatment for CBS applying the Wolf's formula was found to be 2.6, indicating a large effect. It can therefore be concluded that the treatment, that is, the cyber bullying Sensitization program (CBSP), had a large effect on reducing the cyber bullying behaviour of the participants in the experimental group.

Discussion

There is a worldwide consensus about the benefits that ICT skills bring into all the areas concerned with communication and technology, if used wisely. Out of the total participants of the study (n=186), 96.8% (n=180) confirmed that they have laptop/desktops with Internet which makes it clear about their accessibility and ability to use such devices. The statistical results confirm that ICT Competency and the treatment or the CBSP has no interactive effect on Cyber Bullying Behaviour (CBS) in the experimental group. Therefore, it can be concluded that the program helped all the students irrespective of their ICT scores in altering their cyber behaviour for the good. We can also propose that knowledge and skills per say do not guarantee a cyber bullying free space. It depends upon the right decisions and judicious use an individual makes. Studies conducted byKokkinos et al. (2016) and Sokal (2012) support this line of thought and havemaintainedthat cyber bullying and cyber victimization has no relation and Internet usage or skills.

Limitation of the study

A program like this demands time and technological support, which every school may not be able to provide.The program, CBSP was conceived and developed by the researcher and therefore, its innate limitations must be considered. Lastly, the results cannot be generalized as the study followed an experimental design.

Suggestions for further research

Reviews suggested a disparity between what learners say they will do and what they actually do when faced with cyber bullying. A follow up of the program can be taken up to assess the lasting effects of the program. A comparative study of the prevalence rates of cyberbullying episodes witnessed or reported in an institution before and after the conduction of CBSP could also be initiated.Interactive effect of other moderator variables like gender, emotional maturity, well-being of the participants on the program effectiveness can also be studied. This would lend a holistic understanding of the effects and impacts of cyber bullying program upon the participants.

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