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Variations in adolescent cybercrime awareness concerning geographical location and parental relationships

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Abstract---This paper investigates the adolescents' importance of parental relationships in preventing them from cybercrime victimization. In addition, the role of locality in the level of internet addiction is studied. A sample comprised of 360 students of age group 15-17 years, pursuing their studies in 13 CBSE schools of New Delhi was selected randomly. These selected students were in classes XI and XII. The internet addiction and the satisfaction level of parental relationships were analyzed to understand the adolescents' online behaviors. The mean, SD, and standard error measures of several factors were analyzed. Findings reveal that there exists a significant difference in internet addiction between urban and rural adolescents. The findings also confirmed that 84.75 % of cyber-victimized adolescents have a dissatisfied parental relationship.

Keywords---internet addiction, cybercrime, parental relationship, adolescents, locality.

Introduction

Cyberbullying involves intentional psychological violence and is often anonymous. Recent studies have reported that children between 10 and 19 years of age are frequently involved in cyberbullying (Dehue et al. 2008). Internet playing a salient part in adolescents' lives causes harmful effects on youths. Many shreds of

evidence reported show that youths get affected physically and emotionally. Researchers have studied the role of age and gender in concern to cyberbullying (Grunin& Cohen 2021). With access to digital technologies, the vulnerability and victimization towards cybercrime have increased (Hsieh et al., 2019). Victims are tracked through emails, blogs, chatrooms, social networking sites, etc. Usually, preparators are boys, and girls are mostly victimized. The victimization causes negative psychological consequences like suicidal ideation, depression, stress, and so on(Hall et al. 2021). Receiving support can create positive effectiveness by increasing secured feelings. Parents often are the major supporters (Wright, 2018). In the US, about 95% of adolescents access smartphones and spend a great deal of time over the internet getting themselves involved in negative online activities (Wong& Fung, 2020). This has a wide difference when compared to Indian adolescents. However, the trend is being changed with the pandemic situation(Ekpenyong 2020). Adolescents out of anxiety and lack of awareness get involved in more online activities and are victimized (Udris, 2017). The current study considers the investigation of adolescents' online activity. Although it is difficult to observe and measure the level of cyberbullying, it can be analyzed on the factors that reduce the adolescents' involvement in cyberbullying. The study focuses on investigating the two major factors such as i) adolescents' geographical location and ii) adolescents' parental relationship. The analysis is carried out to understand how these two factors can positively create cybercrime awareness among adolescents. The following is how the rest of the article's section is organized: Section 2 discusses various related studies on cybercrime. Sections 3 and 4 discuss the importance of the current study as well as the various research questions addressed in the paper. Section 5 goes over the research methodology, while Section 6 goes over the results and discussion. Finally, sections 7 and 8 discuss the study's limitations and conclusion.

Related Research

Adolescents' excessive use of the internet and gambling cause serious concerns on mental health issues. Many researchers have suggested that peer support is important for their psychological well-being. Khasmohammadi et al. (2020) examined the relation between internet/gambling addiction and adolescents' psychological well-being. Adolescents' transition stage has increased vulnerability and is prone to stressful life events. Their addictive behavior leads to severe consequences. These create detrimental effects on physical health and damage their social relationship. Therefore, the study examined two types of addictive behaviors i) compulsive internet use and 2) gambling problems. The study was conducted for a sample of 347 Iranian adolescents aged between 14 to 18 yrs. The results revealed that there exists a negative relationship between psychological well-being and internet addiction. Whereas with perceived peer support the relationship was positive. The study revealed that support from peer groups prevented adolescents from online addiction. However, the author's point on the non-existence of research in terms of unmeasured factors such as parental relationships, personality, and socio-economic status has inspired the conduct of the current study.

Jeon et al. (2021) investigated adolescents' perceptions of parenting, game use, and self-control in the context of either positive or harsh parenting. The

aggressive nature is the most pervasive issue in unstable life. Parental attitudes influence adolescent aggression during their development. Children suffer because of their parents' stress. Aggression is the root cause of abnormal behavior, such as antisocial behavior and crime. The study was carried out to better understand the relationship between parenting behavior and children's aggressive attitudes. The sample consists of 778 students for analyzing their online gaming behavior. The study, however, emphasized that parenting style has a significant influence on adolescent behavior. This study was inspired by the authors' comments about the need for more research on parenting behavior.

Chen et al. (2021) investigated the prevalence of cyber deviance among adolescents in terms of gender, age, parental monitoring, substance use, offline behavior, and so on. Students in grades 7–12 from Taiwan were considered for the study. Male students were found to be engaging in internet pornography and illegal website visits, according to the findings. Females, on the other hand, were flaming on the internet. Furthermore, there was no significant relationship between cyber deviance and parental monitoring. The authors emphasized the importance of developing policy strategies to reduce adolescent risk of cyber deviance. Lee and Holt (2020) developed a multinomial regression model to better understand computer hacking behavior. The proliferation of computers and the internet has created opportunities for cybercriminal behavior. The results show that a lack of self-control is a significant predictor of hacking. Alkhallouf (2021) investigated parental cyberbullying. Although the number of reported cases is limited, it is extremely difficult for children to report them. Arguments exist in the formulation of policies and laws in this regard. Baek et al. (2018) investigated whether parental apathy increased adolescent digital piracy. Illegal downloads of media files and copyrighted software are examples of digital piracy. 1091 samples ranging in age from 11 to 15 years old were considered. However, the study only looked at attitudes toward digital piracy and did not look at the long-term effects. Furthermore, studying adolescent deviant behavior on the internet remains difficult. To solve this knowledge gap, the current research focuses on cybersecurity challenges from the perspective of locality and parental relationships. The following research questions are addressed in detail in the paper.

Research Questions

- Are there any regional differences in adolescent cybercrime awareness?
- Is there a relationship between parental supervision and cyber-victimization?

Significance of Study

The perceived activities of the children are represented by parental control and monitoring. Parental relationships and family bonding teach every child the life lessons they will need in the future. Lack of parental control causes them to have a negative attitude, particularly when engaging in online activities. The child becomes a victim of cyberspace because of an unsatisfied relationship. Adolescents can experience anxiety and fear due to a lack of knowledge about cyber security due to parental monitoring and location. As a result, the study

focuses on the importance of parental control and location as a factor in adolescent online risk behavior.

Research Hypothesis

- There is no significant difference between rural and urban adolescent internet addiction.
- There is no significant difference between parental control and cyber-victimization.

Research Methodology

Participants and Procedure

The study enlisted the participation of 360 adolescents (50% male and 50% female, ages 15 to 17). The participants were chosen using a randomized selection procedure from CBSE schools in New Delhi's XI and XII classes. During the month of February 2019, data was collected by delivering self-report questionnaires to schools. The investigator sent out a call for participation to all known teachers and school administrators in CBSE schools to conduct the fieldwork. So that the pupils are aware of the importance of completing the questionnaire. The objective of the study and the information that participation is optional were explained to the participants. The institutional administrators gave their ethical approval. A descriptive-quantitative research design was used in this study. The primary goal of the current study was to measure adolescents' technical perceptions of cybersecurity issues. Furthermore, descriptive research has the goal of determining the status of a particular phenomenon.

Measures

The following survey items were used to determine the dependent variable: (a) What is the perceived level of internet addiction. (a) How often do you use the internet? The measurement scale for both items was 1 (low) to 3 (high). Cybercrime victimization was assessed in concern to satisfied and non-satisfied parental relationships. Table 1 contains more information about our analysis variables and results. A teenager must follow cybersecurity guidelines to be open and receptive to criticisms while avoiding passive-aggressive behavior (Malik, 2018).

Survey Instrument

Gender, age, location, parental relationship, and level of skill in information technology usage were all questioned in the first section of the survey. The participants' technological attitudes and behaviors connected to online and internet usage were the focus of the second section of the questionnaire. Further, the statements took into account internet usage and parental relationship. To ensure the items' validity and reliability, the researcher selected items that had been evaluated in earlier information security research whenever possible and a cybercrime awareness scale (CCAS-RS) constructed by Dr. S. Rajasekar and changed the items as needed for the current study area. The cyber victimization

items were graded on a three-point scale ranging from one (Low) to three (High). Following the completion of data collection and processing, reliability testing was carried out to check that the constructions had appropriate internal consistency. The scales were confirmed to be credible because all Cronbach alphas were 0.999. SPSS 22.0 was used to conduct all data analyses.

Table 1 Demographic Characteristics (N=360)

Variable	Demographic Characteristics	Percentage
Gender	Male	50%(180)
	Female	50%(180)
Medium	English	100%(360)
Locality	Rural	50%(180)
	Urban	50%(180)

Results and Discussion

Table 2 summarises the findings of the investigation. The mean, SD, and standard error mean scores of the variables locality and parental relationship are shown in Table 2.

Table 2 Results of the Current Study

Variables	Locality	Mean	SD	Std. Error Mean
Locality	Urban	2.63	0.692	0.0516
	Rural	1.29	0.621	0.0463
Parental Relationship	Satisfied	1.38	0.719	0.0536
	Non-satisfied	2.66	0.679	0.0506

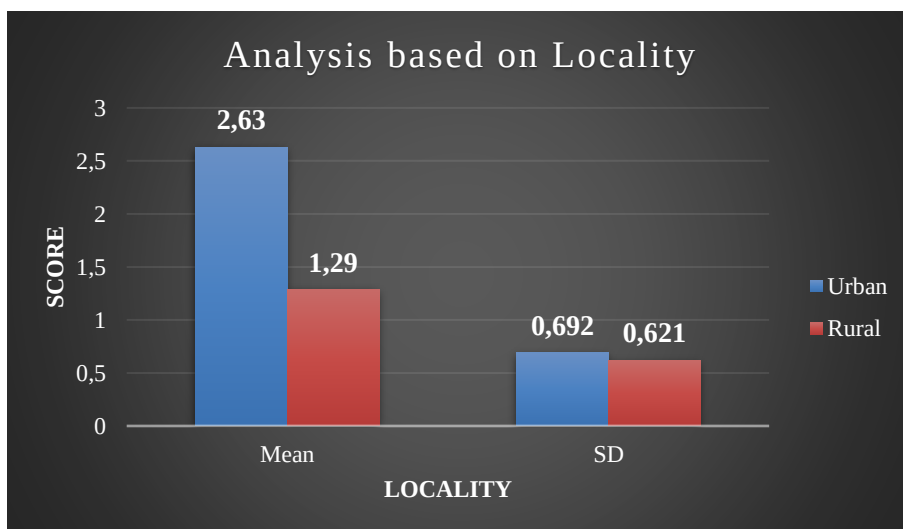


Figure 1. Analysis based on Locality

Figure 1 depicts the locality-based analysis. The urban locality's mean score is 2.63, while the rural locality's mean score is 1.29. Likewise, the SD scores for

urban and rural areas are 0.692 and 0.621, respectively. The urban mean score is higher than the rural mean score. In terms of internet addiction, there is a significant difference in mean scores between urban and rural adolescents. As a result, the hypothesis signifying “There is no significant difference between rural and urban adolescent internet addiction” is rejected. Adolescents in urban areas are more likely to be exposed to the internet. They use technology to interact socially.

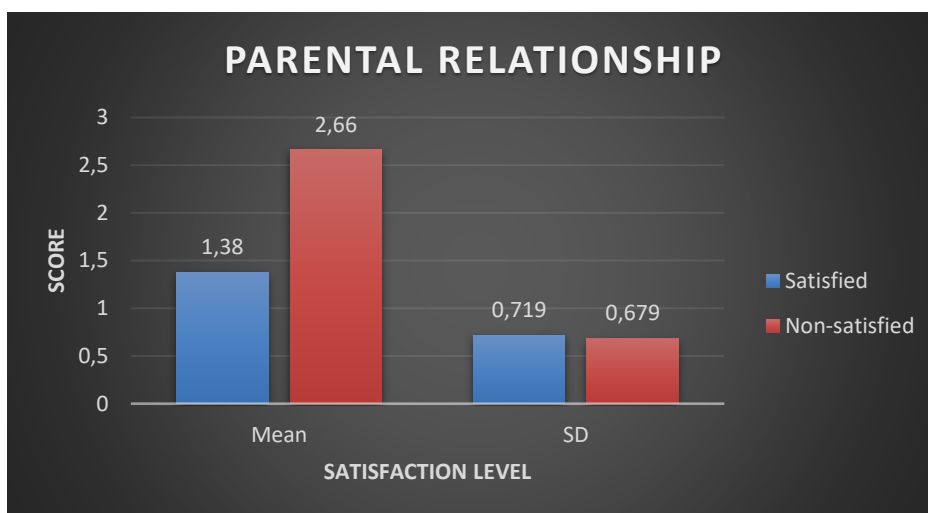


Figure 2. Analysis based on Parental Relationship

Figure 2 depicts the parental relationship-based analysis. The satisfied mean score is 1.38, while the non-satisfied mean score is 2.66. Likewise, the SD scores for satisfied and non-satisfied are 0.719 and 0.679, respectively. The satisfied mean score is lower than the non-satisfied mean score. In terms of satisfaction level, there is a significant difference in mean scores. As a result, the hypothesis signifying “There is no significant difference between parental control and cyber-victimization” is rejected.

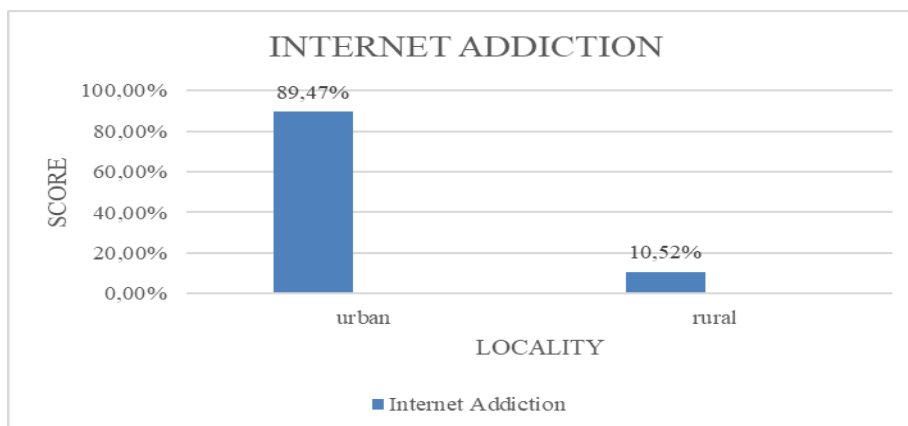


Figure 3. Analysis of Internet Addiction

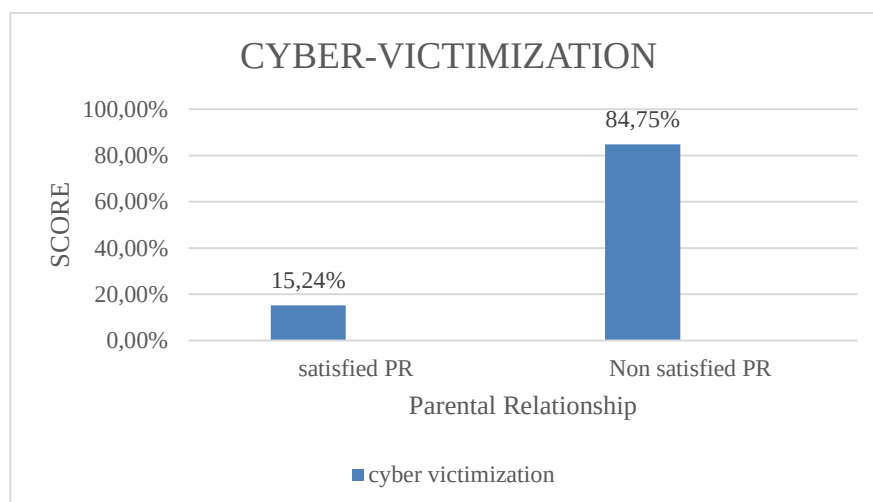


Figure 4. Analysis Cyber-Victimization

The study was carried out concerning internet addiction and cyber victimization. They are depicted in Figures 3 and 4. Figure 3 shows that 89.47 % in urban areas are addicted to internet use. 10.52 % of residents are solely addicted to internet use. This indicates that urban students use the internet more frequently than rural students do. This is also the reason for rural students' vulnerability to cyber threats due to their lack of cyber security knowledge. Similarly, only 15.24 % of cyber victimization is seen in satisfying parental relationships. Unsatisfied parental relationships account for 84.75 % of cyber victimization.

Limitations

The proposed research study is being carried out in the Indian context. The study only takes into account a sample of 360 students from secondary and senior secondary classes at CBSE affiliated schools in New Delhi.

Conclusion

Thus, the study on cyber victimization among XI and XII students is being conducted. It has been discovered that there is a significant difference in the level of internet addiction. Adolescents in urban areas are addicted to the internet, 89.47 %. As a result, location has a significant impact on cybercrime awareness. The mean scores of urban are higher than those of rural areas. The findings also confirmed that 84.75 % of cyber-victimized adolescents have a dissatisfied parental relationship. Based on the findings above, it is possible to conclude that location and parental relationships have an impact on the level of cybercrime victimization.

Conflicts of Interest

There are no conflicts of interest declared by the authors.

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