

TO INVESTIGATE THE DEGREE OF AWARENESS AND SUPPORT PROVIDED BY INSTITUTIONS IN CHENNAI TO ADOLESCENTS IN PREVENTING CYBERBULLYING.

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Abstract:

Cyberbullying has become an increasingly prevalent issue among adolescents in Chennai, India, leading to negative impacts on their mental health, academic performance, and social lives. To address this issue, there is a growing need for awareness programs that educate adolescents on how to prevent and report cyberbullying. Research studies have shown that cyberbullying is prevalent among Indian adolescents and is associated with outcomes that include anxiety, depression, and poor academic achievement. Interventions that involve parental support, teacher training, and peer-led initiatives have proven effective in reducing cyberbullying incidents among adolescents in Chennai. A survey of 199 respondents revealed that 21.1% reported experiencing cyberbullying at some point, while 17.6% admitted to engaging in online bullying. Only 5% of respondents believed that their institution provided sufficient awareness and support to combat cyberbullying.

KEYWORDS: Cyberbullying, Internet, fear, awareness, prevention, traditional bullying, electronic communication, smartphones.

I. Introduction

Cyberbullying can have a significant impact on the mental health and well-being of adolescents. It is essential for parents, educators, and mental health professionals to be aware of the potential risks of cyberbullying and to provide support and resources to those who have been affected. Cyberbullying can lead to feelings of sadness, hopelessness, and anxiety. Adolescents who are bullied online may experience a decrease in self-esteem and confidence, which can lead to ongoing emotional difficulties, increase the risk of suicidal ideation and self-harm. Adolescents who are cyberbullied may feel overwhelmed and helpless and may consider harming themselves as a way to cope with their feelings¹.

Cyberbullying can interfere with a student's ability to focus on schoolwork and academic performance. It may also lead to absenteeism and a lack of interest in attending school. Adolescents who often witness bullying find themselves socially isolated and have difficulty

forming and maintaining friendships. They are most likely to withdraw from social situations².

Cyberbullying is a relatively new phenomenon, and as such, there has been ongoing discussion and debate about its definition. While there is some variation in how different researchers and organizations define cyberbullying, there is general agreement that it involves the use of electronic communication technologies to intentionally harm, intimidate, or harass others.

Some definitions of cyberbullying emphasize the repetitive or persistent nature of the behavior, while others focus on the power imbalance between the perpetrator and the victim. Many definitions also specify that the behavior must be intentional, meaning that the perpetrator is actively seeking to cause harm.

According to Glew et al., (2000), bullying refers to the deliberate and repetitive use of intimidation, harassment, or physical harm by one or more children to intimidate, harass, or harm another child and is considered a form of aggression³. Olweus, (1994) states that there is an imbalance of power between the perpetrator and the victim⁴. Glew et al., (2000) also state that victims tend to view themselves as less powerful than bullies and believe they are incapable of responding with retaliation⁵.

B. Importance of addressing cyberbullying among adolescents

The issue of cyberbullying has been on the rise among adolescents globally, and India is not an exception. Numerous studies have been conducted to examine the occurrence, characteristics, and consequences of cyberbullying among Indian adolescents.

A study by Mishra et al. (2017) found that approximately 45% of Indian adolescents reported experiencing cyberbullying, with name-calling and rumour-spreading being the most common types of cyberbullying⁶. Another study by Bhat and Rani (2018) reported similar findings, with almost 40% of Indian adolescents reporting having been victims of cyberbullying⁷. Mishra and Sahoo (2019) revealed that 38.9% of Indian adolescents have experienced cyberbullying, with verbal abuse being the most common form. The study also found that females were more likely to be victims of cyberbullying than males⁸.

Further, a study by Roy and Kumar (2019) investigated the psychological impact of cyberbullying on Indian adolescents and found that victims of cyberbullying were more likely to experience anxiety, depression, and low self-esteem⁹. Similarly, a study by Singh et al. (2019) reported a significant association between cyberbullying victimization and suicidal ideation among Indian adolescents¹⁰. And another study by Jain and Agarwal (2020) highlighted the negative impact of cyberbullying on the mental health of Indian adolescents. The study found that victims of cyberbullying experienced increased levels of anxiety, depression, and stress¹¹. The role of parents and educators in addressing cyberbullying among Indian adolescents has been emphasized in the literature. A study by Rastogi et al. (2021) revealed that parental involvement and monitoring of their children's online activities can significantly reduce the incidence of cyberbullying¹².

Studies on cyberbullying among adolescents in Chennai are limited; however, available literature suggests that cyberbullying is a concern in this area, as it is in other parts of India. A study by Sathiyaseelan et al. (2017) found that, among a sample of 400 adolescents in Chennai, 28% reported experiencing cyberbullying. The study also identified that girls were more likely to be victims of cyberbullying than boys and that social media platforms were the most common avenue for cyberbullying to occur¹³. Another study by Manoharan and Nagarajan (2018) investigated the association between cyberbullying victimization and academic achievement among 1000 adolescents in Chennai. And it is found that 35% of participants reported being cyberbullied, and that cyberbullying victimisation was negatively associated with academic achievement¹⁴.

The psychological consequences of cyberbullying among adolescents in Chennai have also been investigated. A study by Akilan and Palanisamy (2020) found that cyberbullying victimization was associated with depression, anxiety, and low self-esteem among a sample of 200 adolescents in Chennai¹⁵. Various interventions have been proposed in response to the prevalence of cyberbullying among adolescents in Chennai. A study by Shalini and Beena (2019) evaluated the effectiveness of a peer-led cyberbullying prevention program in Chennai. The program was found to be effective in improving knowledge and attitudes toward cyberbullying among participants¹⁶.

In response to the growing concern about cyberbullying in Chennai, various awareness and intervention programs have been implemented. For example, a study by Rajapandian et al. (2021) found that an intervention program focused on building resilience and coping strategies was effective in reducing the incidence of cyberbullying among adolescents in Chennai¹⁷. The limited literature on cyberbullying among adolescents in Chennai suggests that it is a concern in this area, and highlights the need for further research and effective interventions to address this problem.

Awareness and prevention programs for cyberbullying are essential for promoting a safe and supportive school and college environment for adolescents in Chennai. A review of the literature suggests that various programs and interventions have been implemented in schools and colleges to raise awareness about cyberbullying and promote prevention strategies among adolescents in Chennai. A study by Kumar and Nagendran (2019) found that a cyberbullying awareness program in schools increased students' knowledge and understanding of the issue. The program included interactive workshops and discussions on the impact of cyberbullying and strategies for prevention¹⁸.

The research paper titled "Impact of College-Based Intervention Program on Cyberbullying and Its Correlates Among College Students in Chennai" was published in the Indian Journal of Mental Health. The study used a pre-post design with a sample of 200 college students and evaluated the effectiveness of the intervention program in reducing the incidence of cyberbullying and its correlates, including self-esteem, social support, and coping strategies. The study found that the intervention program was effective in reducing the incidence of cyberbullying and improving students' self-esteem, social support, and coping strategies.¹⁹. Research has also identified the importance of involving parents and teachers in cyberbullying

prevention efforts. A study by Paul and Kamal (2019) found that parental involvement and support were essential for reducing cyberbullying among adolescents in Chennai. The study also highlighted the need for teacher training and support to address cyberbullying in the classroom²⁰.

There is a definite need to create awareness among adolescents in Chennai. A study by Ramamurthy et al. (2020) suggests that out of 500 adolescents aged between 14- 17, the majority of the respondents (78.2%) were aware of cyberbullying, but only 52.8% knew how to report it. The findings suggest the need for targeted awareness programs to educate adolescents about the dangers of cyberbullying and how to prevent and report it²¹.

The literature review suggests that cyberbullying awareness and prevention programs in schools and colleges can be effective in reducing the incidence of cyberbullying among adolescents in Chennai. These programs should include interactive workshops, peer support groups, and counselling sessions to educate adolescents on the impact of cyberbullying and promote prevention strategies. Additionally, involving parents and teachers in these efforts is crucial for creating a safe and supportive environment for adolescents.

Hence, it is important to address cyberbullying in schools and colleges to create a safe and supportive environment for all students. Schools and colleges can have a significant impact on the well-being of their students by taking proactive steps to prevent cyberbullying and support victims.

II. The current landscape of cyberbullying awareness

Cyberbullying is a growing concern in today's digital age, and there has been significant research conducted in recent years to better understand the issue and develop effective strategies to prevent and address it. Ongoing research and collaboration are needed to develop and implement effective strategies for addressing cyberbullying. One recent study published in 2021 examined the relationship between cyberbullying victimization and depression in adolescents, finding a significant correlation between the two. Another study published in 2020 looked at the effectiveness of a school-based intervention program to prevent cyberbullying and found that it was successful in reducing the incidence of cyberbullying behaviors among students. In retrospect, the current landscape of cyberbullying awareness research highlights the need for continued efforts to better understand the problem and develop effective interventions to address it.

A. Statistics on the prevalence of cyberbullying in adolescence

Cyberbullying is a significant issue among adolescents globally, with prevalence rates varying across studies and countries. A meta-analysis of 80 studies from around the world found that the average prevalence rate of cyberbullying victimization among adolescents was 23.3%, while the average prevalence rate of perpetration was 14.1%. (Source: Modecki et al., 2014). In a study conducted in the United States, 15% of high school students reported being cyberbullied in 2019. (Source: National Center for Education Statistics). In India, a study found that 37.5% of adolescents reported experiencing cyberbullying. (Source: Sengupta et al., 2018)

NCRB (National Crime Records Bureau) reported that in 2020, there were 50,035 cases of cybercrime in India. Among these cases, 1614 cases of cyberstalking, 762 cases of cyber blackmailing, 84 cases of defamation, 247 cases of fake profiles, and 838 cases of fake news were investigated. The data also shows that cybercrime in India increased by 63.48% from 2018 to 2019, with the number of cases rising from 27,248 to 44,548. In 2020, there was a further increase of 12.32%, with the number of cases rising from 44,548 to 50,035.

B. Awareness campaigns and resources provided by institutions

A study conducted by Sengupta et al. (2018) examined the response of Indian institutions to cyberbullying and found that several organizations have taken initiatives to raise awareness and prevent cyberbullying among adolescents²². The study identified a few resources and campaigns, including:

The Cyber Safety Awareness Program, organized by the Cyber Peace Foundation, provides training on online safety to students, teachers, and parents across schools in India.

The Safer Internet Day campaign is an annual global initiative to promote online safety, privacy, and responsible use of digital technology. In India, the campaign is led by the Internet and Mobile Association of India (IAMAI) and supported by various organizations, including schools and universities.

The Indian government's **Cyber Swachhta Kendra (CSK)** initiative, provides information on malware, viruses, and other cybersecurity threats, along with tools and resources to protect against them.

The **Cyber Crime Awareness Society (CCAS)**, is a non-profit organization that conducts awareness programs on cybercrime and online safety for students, teachers, and parents.

Overall, these initiatives suggest that there is a growing recognition of the need to address cyberbullying and promote online safety among adolescents in India.

A study by Singh & Khatoon (2021) examined various awareness campaigns and resources provided by institutions in India, including the government, schools, and NGOs. The authors note that these campaigns have focused on raising awareness among students, parents, and teachers, as well as providing support to victims. The study notes that the Indian government has established a National Cyber Crime Reporting Portal and has launched a "Cyber Crime Volunteers Program" to raise awareness about cybercrime and empower citizens to report incidents²³.

However, the paper also highlights several challenges to addressing cyberbullying in India.

These challenges include a lack of resources and infrastructure, inadequate laws and policies, and cultural barriers that can inhibit reporting and disclosure. The authors recommend that more efforts be made to provide resources and support to victims and to increase awareness among the public and institutions.

C. Limitations and gaps of current initiatives

Despite the growing interest in cyberbullying research, it is evident that the current state of research is in its early stages and more extensive efforts are needed to tackle such a prevalent issue on a global scale. Although certain studies have successfully identified risk factors and effective prevention and intervention strategies, there remain gaps in the existing literature.

Kaur & Saini (2021) found that despite some efforts to promote awareness about cyberbullying, many people in India still lack sufficient knowledge about what cyberbullying is and how to address it²⁴. It is also noted that schools and organizations in India often lack the resources to effectively address cyberbullying, including trained personnel, technology, and funding²⁵.

Over the years, it has been widely believed that the country has undergone a cultural transformation, and its ideologies and cultural boundaries have evolved. The general notion has been that we are now more comfortable discussing taboo topics. But cultural norms and beliefs in India still can make it difficult for victims of cyberbullying to speak out or seek help, particularly in cases where the perpetrator is a family member or close acquaintance²⁶. Weaker legal frameworks from current laws and policies in India are inadequate to address cyberbullying, and there is a lack of effective mechanisms for reporting and investigating incidents. There is a lack of specific laws and policies that address cyberbullying, leaving victims with limited legal recourse²⁷.

The authors suggest that to address these limitations and gaps, there is a need for a coordinated effort involving various stakeholders, including the government, schools, NGOs, and the wider community. They emphasize the importance of promoting awareness, providing resources and training, and strengthening the legal framework to effectively prevent and address cyberbullying in India.

III. Factors contributing to the effectiveness of cyberbullying prevention programs

Recent research has identified various factors that can aid in combating cyberbullying. Sánchez-Queija et al., 2021, suggests the following through his paper that lays a detailed analysis of factors that contribute to the effectiveness of cyberbullying prevention programs²⁸. Accordingly, some of the factors that contribute to the effectiveness of cyberbullying prevention programs include parental involvement, teacher training, a whole-school approach, and the use of interactive and multimodal materials. This view is also supported by Kowalski et al., 2018; Mishna et al., 2012 who strongly suggest the involvement of parents and corresponding stakeholders.

The researchers' study of the literature yielded the following key points.

Multimodal approach: A multimodal approach is necessary to effectively address the issue of cyberbullying. This approach combines different types of interventions and strategies to create a more effective and holistic response to cyberbullying.

Theory-based interventions: Programs that are based on a sound theoretical framework, such as social cognitive theory or the social-ecological model, are more likely to be effective in changing behavior and attitudes related to cyberbullying.

Empowering approach: Programs that aim to empower participants by enhancing their skills and self-efficacy to deal with cyberbullying are more effective than those that simply raise awareness about the problem.

The researchers propose that utilizing these factors can serve as a framework for designing and executing successful cyberbullying prevention programs. By customizing programs to fit the specific requirements of the target audience, incorporating multiple methods, incorporating a strong theoretical foundation, empowering participants, and engaging with significant stakeholders, interventions can be more successful in preventing cyberbullying and fostering constructive online conduct.

A. Tailored and targeted messages

Programs that are tailored to the specific needs and characteristics of the target population are more effective in preventing cyberbullying. For example, interventions that are designed for younger children may differ from those designed for older adolescents. Likewise, programs that use a variety of approaches, such as educational workshops, peer mentoring, and parental involvement, are more effective than those that rely on a single approach.

B. Involvement of various stakeholders

Adeyanju & Adegoke, (2018) suggest that programs that involve parents, teachers, and other key stakeholders in the prevention efforts are more likely to be effective in creating a supportive environment for addressing cyberbullying²⁹. Cyberbullying is a complex issue that cannot be addressed by a single stakeholder or entity. Effective prevention efforts require the collaboration and coordination of multiple stakeholders, which include parents, school administrators, law enforcement agencies, and online service providers. These efforts must be collaborative to address the problem.

C. Ongoing evaluation and adaptation

Regular evaluation and adaptation of cyberbullying prevention programs are crucial to ensuring their effectiveness in addressing the issue. Kowalski et al. (2014) concluded that although there

is a growing number of programs aimed at preventing cyberbullying, there is a lack of evidence-based programs with proven effectiveness³⁰. And hence, the researchers recommended that future research should focus on developing and testing effective prevention programs that can be implemented in schools and communities. It was also noted that the risk factors for involvement in cyberbullying vary depending on the role of the individual (victim, bully, or bully-victim), but overall, social support is a protective factor. Mishna et al. (2012) suggest that prevention programs should focus on promoting positive relationships and providing social support to help reduce the likelihood of involvement in cyberbullying³¹. They also emphasize the importance of evaluating and adapting prevention programs to ensure their effectiveness.

Data Analysis

The Tree Model analysis of cyberbullying as a form of repeated bullying that occurs online is a significant contribution to the understanding of this phenomenon. The model highlights the interconnectedness of various factors that contribute to cyberbullying, including individual characteristics, social and cultural norms, and technological affordances. At the individual level, factors such as low self-esteem, poor coping skills, and a history of victimization can make someone more vulnerable to cyberbullying. Social and cultural norms that promote aggression or stigmatize certain groups can also contribute to the prevalence of cyberbullying. Moreover, technological affordances such as anonymity and distance can facilitate cyberbullying by reducing the perceived consequences for perpetrators. The Tree Model analysis underscores the need for multi-level interventions that address these various factors in order to prevent and mitigate cyberbullying. Overall, this model provides a comprehensive framework for understanding cyberbullying as a complex social problem with multiple determinants. Its insights can inform policy and practice aimed at preventing this harmful behavior in online spaces.

The given information shows the distribution of categorical variables in the dataset. The variables and their corresponding categories are:

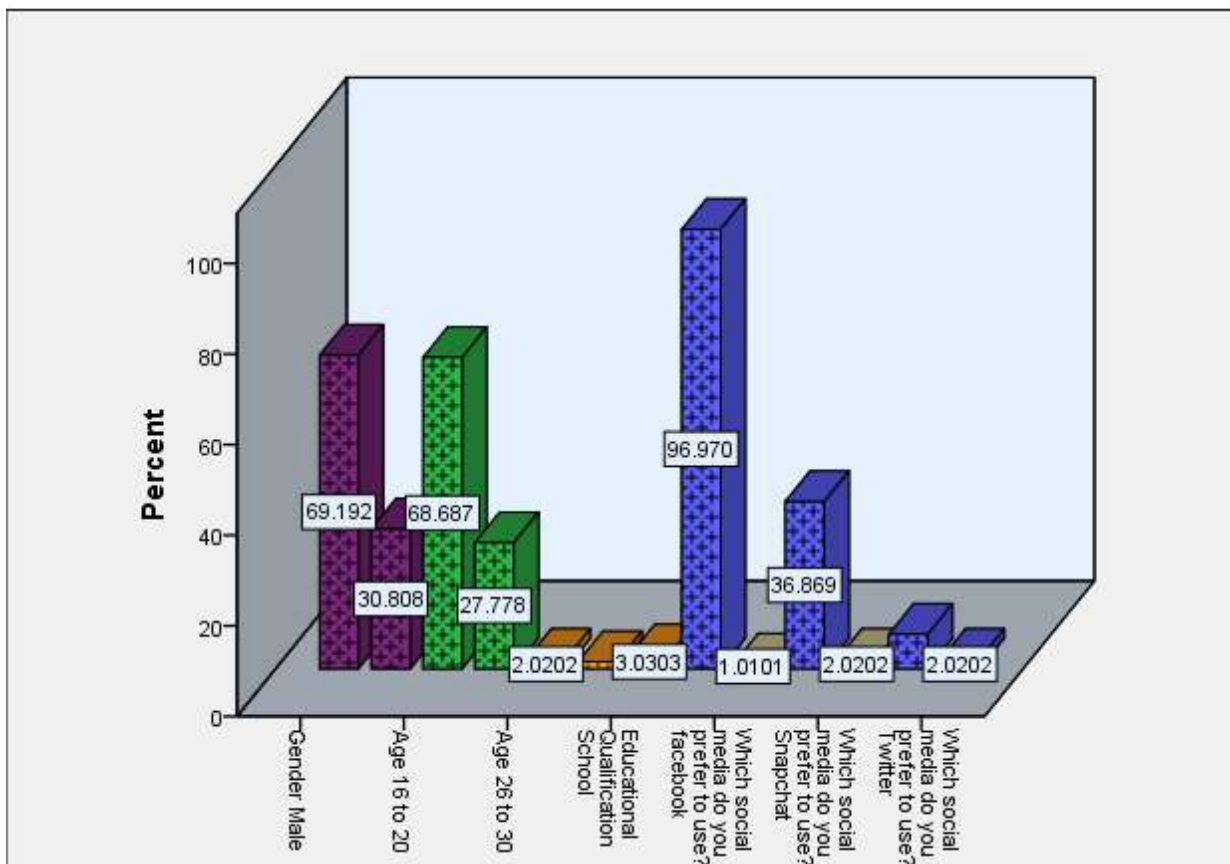
1. Gender: Male (69.2%), Female (30.8%)
2. Age: 16 to 20 (68.7%), 21 to 25 (27.8%), 26 to 30 (2.0%), above 30 (1.5%)
3. Educational Qualification: School (3.0%), College (97.0%)
4. Preferred Social Media Platform: Facebook (1.0%), WhatsApp (36.9%), Instagram (50.5%), Snapchat (2.0%), YouTube (7.6%), Twitter (2.0%)

The statistics reveal that there is a significant gender disparity in the population, with males comprising 69.2% and females only 30.8%. Furthermore, the age distribution is also unevenly distributed, with those aged 16 to 20 making up the majority at 68.7%, followed by those aged 21 to 25 at 27.8%, and those aged between 26 to 30 at only 2%. The remaining percentage belongs to individuals above the age of thirty. These figures highlight the need for targeted policies and programs aimed at addressing gender inequality and catering to the needs of different age groups.

Table 1: Categorical Variable Information

| Categorical Variable Information | | | | |
|---|---|-----------|----------|----------------|
| | | | N | Percent |
| Factor | Gender | Male | 137 | 69.2% |
| | | Female | 61 | 30.8% |
| | | Total | 198 | 100.0% |
| | Age | 16 to 20 | 136 | 68.7% |
| | | 21 to 25 | 55 | 27.8% |
| | | 26 to 30 | 4 | 2.0% |
| | | above 30 | 3 | 1.5% |
| | | Total | 198 | 100.0% |
| | Educational Qualification | School | 6 | 3.0% |
| | | College | 192 | 97.0% |
| | | Total | 198 | 100.0% |
| | Which social media do you prefer to use? | Facebook | 2 | 1.0% |
| | | WhatsApp | 73 | 36.9% |
| | | Instagram | 100 | 50.5% |
| | | Snapchat | 4 | 2.0% |
| | | YouTube | 15 | 7.6% |
| | | Twitter | 4 | 2.0% |
| | | Total | 198 | 100.0% |

Figure 1: Categorical Variable Information



Attaining a solid education is essential for leading a prosperous life. It serves as a crucial component in unlocking an individual's potential and realizing their aspirations. The contemporary world places significant emphasis on educational credentials when it comes to career opportunities and income potential. Recent data reveals that a mere 3.0% of people have obtained their highest level of education as a high school diploma, whereas a vast majority of 97.0% have pursued college or higher education.

The advent of social media has transformed the way we communicate and interact with others, and Instagram has emerged as the most widely used platform with a massive user base of 50.5%. Following closely behind is Whatsapp, with 36.9% of users, while YouTube captures 7.6% of the market share. Twitter and Snapchat, on the other hand, hold only 2% of the user base each. Interestingly, Facebook, which was once a dominant player in the social media arena, now commands just 1% of users' preference. This shift in user behavior underscores the need for continuous adaptation and innovation to remain relevant in the ever-changing digital landscape.

Tree Model:1

The Growth Method specifications for this study are detailed in the Model Synopsis and utilize CHAID analysis. The study's Dependent Variable is the favored social media platform used by

the participants. Independent variables include social media use and cyberbullying, as well as experiences with cyberbullying, perceptions of prevention efforts, institutional support and resources, and the impact of cyberbullying on academic performance.

The study found that cyberbullying and social media usage were independent variables in relation to the participants' preferred social media platforms. The CHAID analysis resulted in three nodes, with two terminal nodes and one depth. The specific details of the nodes and terminal nodes are not provided in the given information, but it suggests that the CHAID algorithm was used to generate a decision tree that best explains the relationship between the independent and dependent variables in the study.

Figure 2: Preferred Social Media

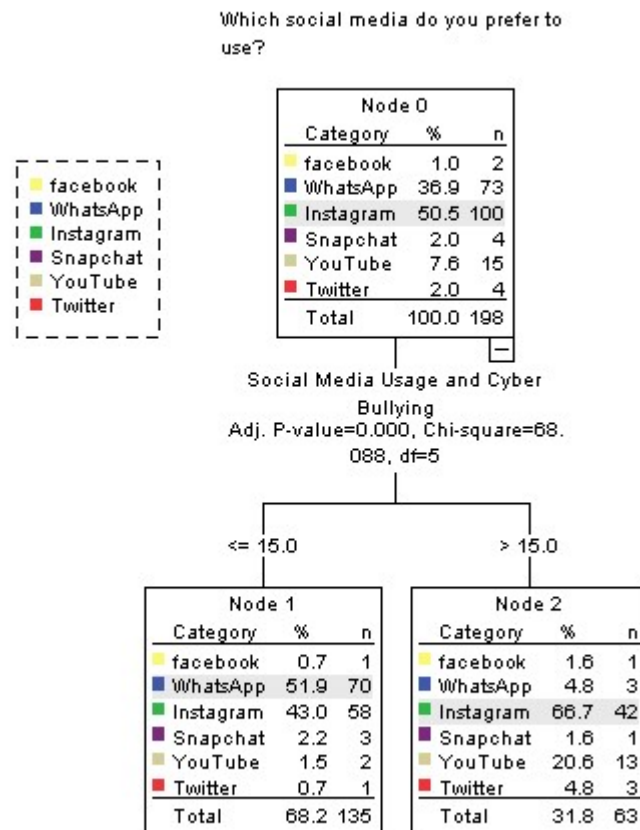


Table 2: What social media do you prefer to use?

| Tree Table-1 | | | | |
|--|-------------------|------------------|--|--|
| | | Node | | |
| | | 0 | 1 | 2 |
| Facebook | N | 2 | 1 | 1 |
| | Percent | 1.0% | 0.7% | 1.6% |
| WhatsApp | N | 73 | 70 | 3 |
| | Percent | 36.9% | 51.9% | 4.8% |
| Instagram | N | 100 | 58 | 42 |
| | Percent | 50.5% | 43.0% | 66.7% |
| Snapchat | N | 4 | 3 | 1 |
| | Percent | 2.0% | 2.2% | 1.6% |
| YouTube | N | 15 | 2 | 13 |
| | Percent | 7.6% | 1.5% | 20.6% |
| Twitter | N | 4 | 1 | 3 |
| | Percent | 2.0% | 0.7% | 4.8% |
| Total | N | 198 | 135 | 63 |
| | Percent | 100.0% | 68.2% | 31.8% |
| Predicted Category | | Instagram | WhatsApp | Instagram |
| Parent Node | | | 0 | 0 |
| Primary Independent Variable | Variab le | | Social Media Usage and Cyber Bullying | Social Media Usage and Cyber Bullying |
| | Sig. ^a | | 0.001** | 0.001** |
| | Chi-Square | | 68.088 | 68.088 |
| | df | | 5 | 5 |
| | Split Values | | <= 15.0 | > 15.0 |
| Growing Method: CHAID | | | | |
| Dependent Variable: Which social media do you prefer to use? | | | | |
| a. Bonferroni adjusted | | | | |

The Tree Table indicates the percentages of social media platform usage among the participants in Node1 and Node2. Node1 has an overall usage of 68.2%, while Node2 has a usage of 31.8%. The percentages of Facebook usage are 0.7% for Node1 and 1.6% for Node2. WhatsApp usage is 51.9% for Node1 and 4.8% for Node2. Instagram usage is 43.0% for Node1 and 66.7% for Node2. Snapchat usage is 2.2% for Node1 and 1.6% for Node2. Twitter usage is 0.7% for

Node1 and 4.8% for Node2, while YouTube usage is 1.5% for Node1 and 20.6% for Node2.

The CHAID analysis determined that the primary independent factor in social media usage and cyberbullying is Instagram. The Chi-Square value is significant with a p-value of 0.001 and 5 degrees of freedom. The split value is 15.0, with a cut-off point greater than 15.0. Therefore, it can be concluded that Instagram plays a significant role in social media usage and cyberbullying among the participants in this study. It may be a significant factor in online bullying, as it is one of the main independent factors identified in the Chi-Square analysis.

Tree Model:2

The Growth Method CHAID analysis utilized a model summary with the following specifications: the dependent variable was the prevalence of cyberbullying on social media platforms, while independent variables included social media use, cyberbullying, experiences with cyberbullying, perceptions of prevention efforts, institutional support and resources, and the effect of cyberbullying on academic performance.

The Maximum Tree Depth for this analysis was 3, and there was no validation. The study found that cyberbullying and social media usage were independent variables. The CHAID algorithm generated three nodes in the decision tree, and there were two terminal nodes at a depth of 1. The specific details of the nodes and terminal nodes are not provided in the given information, but it suggests that the decision tree was used to identify the social media platform with the highest prevalence of cyberbullying based on the independent variables considered in the study.

Figure 3: Social media with highest rate of cyber bullying.

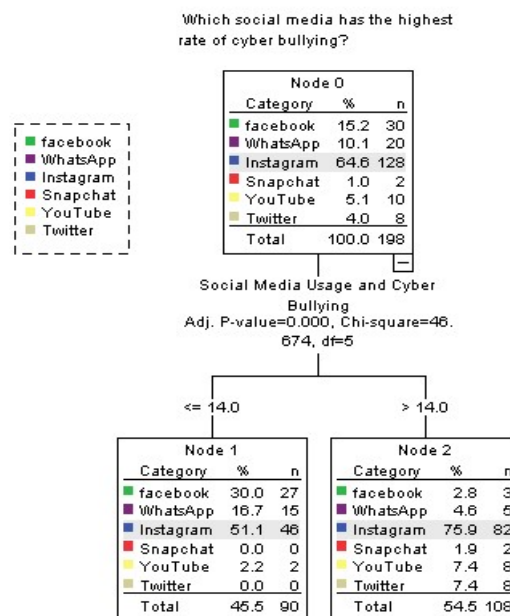


Table 3: Social media with highest rate of cyber bullying.

| Tree Table-2 | | | | |
|--|-------------------|------------------|--|--|
| | | Node | | |
| | | 0 | 1 | 2 |
| facebook | N | 30 | 27 | 3 |
| | Percent | 15.2% | 30.0% | 2.8% |
| WhatsApp | N | 20 | 15 | 5 |
| | Percent | 10.1% | 16.7% | 4.6% |
| Instagram | N | 128 | 46 | 82 |
| | Percent | 64.6% | 51.1% | 75.9% |
| Snapchat | N | 2 | 0 | 2 |
| | Percent | 1.0% | 0.0% | 1.9% |
| YouTube | N | 10 | 2 | 8 |
| | Percent | 5.1% | 2.2% | 7.4% |
| Twitter | N | 8 | 0 | 8 |
| | Percent | 4.0% | 0.0% | 7.4% |
| Total | N | 198 | 90 | 108 |
| | Percent | 100.0% | 45.5% | 54.5% |
| Predicted Category | | Instagram | Instagram | Instagram |
| Parent Node | | | 0 | 0 |
| Primary Independent Variable | Variable | | Social Media Usage and Cyber Bullying | Social Media Usage and Cyber Bullying |
| | Sig. ^a | | 0.001** | 0.001** |
| | Chi-Square | | 46.674 | 46.674 |
| | df | | 5 | 5 |
| | Split Values | | <= 14.0 | > 14.0 |
| Growing Method: CHAID | | | | |
| Dependent Variable: Which social media has the highest rate of cyber bullying? | | | | |
| a. Bonferroni adjusted | | | | |

In Tree Table-2, the percentage of Facebook users is represented by Node1 at 30.0% and Node2 at 2.8%. Node1 has 16.7% of its users who also use Instagram, while Node2 has 4.6% of its users who use Instagram. Node1 has a Snapchat usage percentage of 0.0% while Node2 has

1.9%. The usage percentage of YouTube for Node1 is 2.2% while for Node2 it is 7.4%. Node1 does not have any users who use Twitter, while Node2 has a total percentage of 7.4% of users who use Twitter.

Node1's overall usage is 45%, while Node2's usage is 54%. The determined category in this analysis is Instagram, and the parent of Instagram is also Instagram. Node1's primary independent variable is Cyberbullying and Social Media Use, which is set to 0, while Node2's primary independent variable is Cyberbullying and Social Media Usage.

The analysis shows a high Chi-Square value of 46.674 and a significant Sig.a value of 0.001 **, with 5 degrees of freedom. The split values for the analysis are set at $14.0 > 14.0$. This suggests that the independent variables, cyberbullying, and social media usage, are important factors in understanding the prevalence of cyberbullying on Instagram.

Tree Model:3

Based on the CHAID analysis with "what kind of help would you need if you were a victim of cyberbullying" as the dependent variable, the independent factors that contribute to the outcome include social media use, cyberbullying, experience with cyberbullying, perception of prevention efforts, institutional support and resources, and the effect of cyberbullying on academic performance. The maximum tree depth is 3, and there is no validation. The analysis found that institutional support and resources are an independent factor, and there are 3 nodes in the tree, including two terminal nodes and one depth.

Figure 4: Types of support required of cyber bullying victims

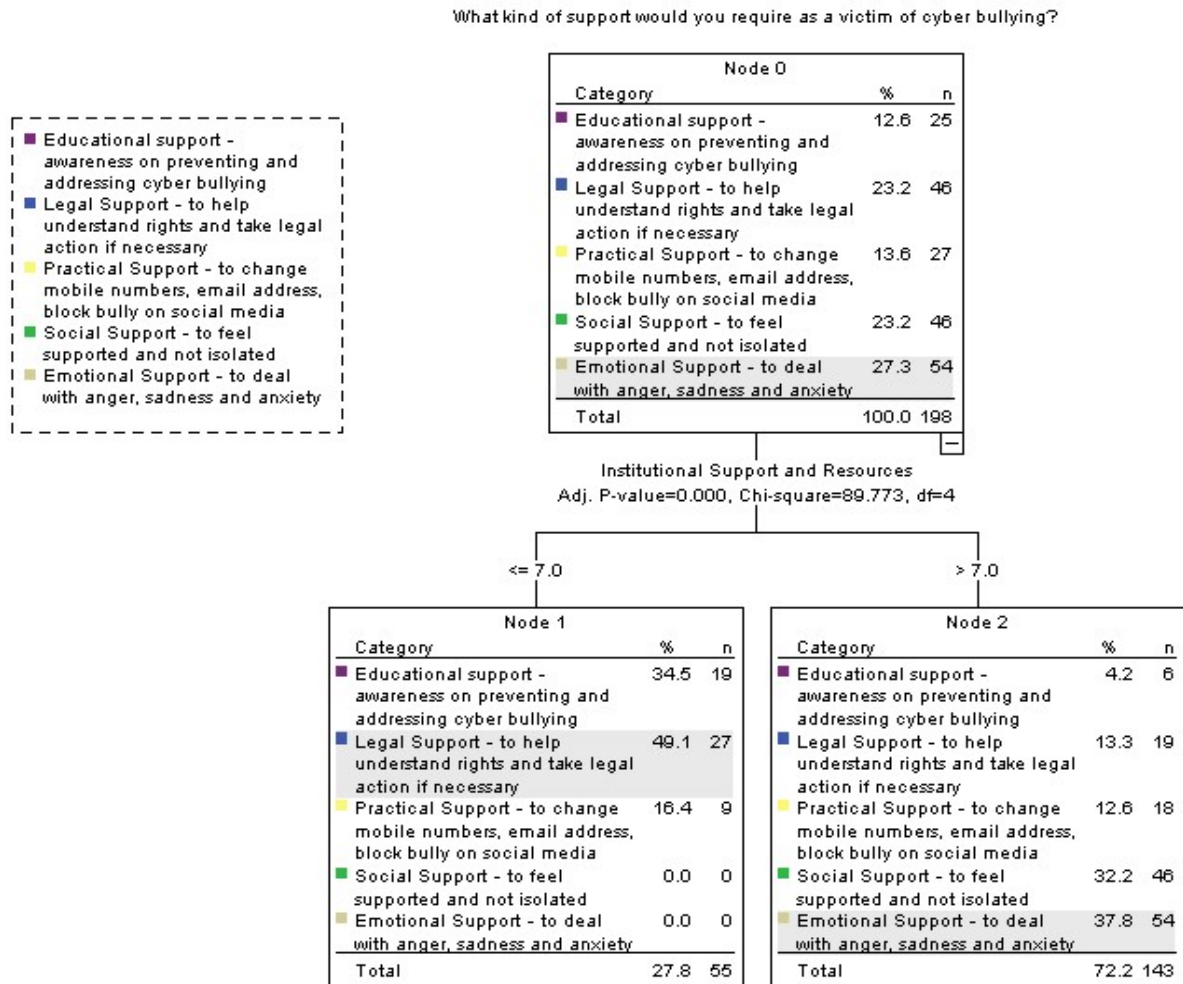


Table 4: Types of support required of cyber bullying victims

| Tree Table-3 | | | | |
|---|---------|--------|--------|--------|
| | | Node | | |
| | | 0 | 1 | 2 |
| Educational support – awareness on preventing and addressing cyber bullying | N | 25 | 19 | 6 |
| | Percent | 12.60% | 34.50% | 4.20% |
| Legal Support – to help understand rights and take legal action if necessary | N | 46 | 27 | 19 |
| | Percent | 23.20% | 49.10% | 13.30% |
| Practical Support – to change mobile | N | 27 | 9 | 18 |
| | Percent | 13.60% | 16.40% | 12.60% |

| | | | | | |
|---|-------------------|---|--|---|--|
| numbers, email address, block bully on social media | | | | | |
| Social Support – to feel supported and not isolated | N | 46 | 0 | 46 | |
| | Percent | 23.20% | 0.00% | 32.20% | |
| Emotional Support – to deal with anger, sadness and anxiety | N | 54 | 0 | 54 | |
| | Percent | 27.30% | 0.00% | 37.80% | |
| Total | N | 198 | 55 | 143 | |
| | Percent | 100.00% | 27.80% | 72.20% | |
| Predicted Category | | Emotional Support – to deal with anger, sadness and anxiety | Legal Support – to help understand rights and take legal action if necessary | Emotional Support – to deal with anger, sadness and anxiety | |
| Parent Node | | | 0 | 0 | |
| Primary Independent Variable | Variable | | Institutional Support and Resources | Institutional Support and Resources | |
| | Sig. ^a | | 0.001** | 0.001** | |
| | Chi-Square | | 89.773 | 89.773 | |
| | df | | 4 | 4 | |
| | Split Values | | <= 7.0 | > 7.0 | |
| Growing Method: CHAID | | | | | |
| Dependent Variable: What kind of support would you require as a victim of cyber bullying? | | | | | |
| a. Bonferroni adjusted | | | | | |

Based on the information provided in Tree Table-3, it appears that if someone were a victim of cyberbullying, the most commonly desired form of help would be legal support to understand their rights and take legal action if necessary (49.1% in Node1). In Node2, emotional support to deal with anger, sadness, and anxiety is the most desired form of help (37.8%). Other forms of help that were considered include practical support (16.4% in Node1 and 12.6% in Node2), educational support on preventing and addressing cyberbullying (34.5% in Node1 and 4.2% in Node2), and social support to feel supported and not isolated (0% in Node1 and 32.2% in Node2).

The primary independent variable for both Node1 and Node2 is institutional support and resources, indicating that the availability of support and resources from institutions such as schools or workplaces is an important factor in determining the type of help that victims of cyberbullying desire. The Chi-Square value of 89.773 with a significance level of 0.001**

suggests a strong relationship between the type of help desired and institutional support and resources.

Split Values are ≤ 7.0 > 7.0 in the tree table indicates that the independent variable values were split into two groups at a split value of 7.0. The first group includes values less than or equal to 7.0, and the second group includes values greater than 7.0. Based on the results of the CHAID analysis, the determined category for the question, Node1: Legal Support - to assist with understanding rights and, if necessary, legal action and Node2: Emotional Support - to manage emotions like rage, sadness, and anxiety. The primary independent variables for these nodes are institutional support and resources from Node1 and Node2, respectively. Determined Category Node1 Legal Support: to assist with understanding rights and, if necessary, legal action To manage emotions like rage, sadness, and anxiety, use Node 2. Parent Independent Node Primary Variables are Resources and Institutional Support from Node1 and Node2, respectively.

DISCUSSION:

Just like any other disease, cyberbullying can be effectively and systematically addressed in order to promote the well-being of the next generation, who will increasingly live their lives in a digital world. The existing literature on cyberbullying suggests that interventions and programs designed to address this issue should be evidence-based and rigorously tested before being implemented.

A.Strategies for improving existing awareness initiatives

Focusing on educational institutions could be a key strategy in disseminating information and providing resources to adolescents to combat cyberbullying. Therefore, future initiatives and research should prioritize this approach. Innovative educational programs and mental health support services in schools, coupled with advanced educational programs, can create an effective platform for adolescents to combat cyberbullying. These programmes should include evidence-based interventions, such as cognitive-behavioral therapy, to address the psychological effects of cyberbullying³².

2. Providing greater legal & technical protection to minors online

Enhancing legal and technical safeguards for minors online is crucial to combat cyberbullying. This entails strengthening cyberbullying laws and regulations and developing advanced technologies to identify and prevent instances of cyberbullying³². These measures can help to create a safer online environment for minors and prevent instances of cyberbullying. Borrajo, Gámez-Guadix, and Calvete (2018) argue that legal measures and technical safeguards must be enhanced to protect minors' online³³.

3. Fostering a supportive culture through parental guidance, peer support groups etc.

Promoting responsible online behavior among adolescents and fostering a supportive culture that emphasizes empathy and kindness is essential, and this can be facilitated by encouraging parents and other adults to play an active role. Additionally, creating peer support groups can

provide teenagers with a secure space to share their experiences and receive support.³⁴

V. Conclusion

The issue of cyberbullying is an ever-increasing problem that requires urgent action and greater collaboration between institutions and policymakers. It is crucial that all stakeholders, including schools, governments, parents, and technology companies, work together to address this issue and promote responsible online behavior among adolescents. It is not enough to simply create awareness about cyberbullying, but we must also regularly monitor the impact of our interventions through effective monitoring tools and audits to ensure that we are achieving positive outcomes for young people. By working together and taking a proactive approach to combating cyberbullying, we can create a healthier online ecosystem for the next generation.

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| Categorical Variable Information | | | | |
|----------------------------------|--|------------|-----|---------|
| | | | N | Percent |
| Factor | Gender | Male | 137 | 69.2% |
| | | Female | 61 | 30.8% |
| | | Total | 198 | 100.0% |
| | Age | 16 to 20 | 136 | 68.7% |
| | | 21 to 25 | 55 | 27.8% |
| | | 26 to 30 | 4 | 2.0% |
| | | above 30 | 3 | 1.5% |
| | | Total | 198 | 100.0% |
| | Educational Qualification | School | 6 | 3.0% |
| | | College | 192 | 97.0% |
| | | Total | 198 | 100.0% |
| | Which social media do you prefer to use? | Facebook | 2 | 1.0% |
| | | WhatsApp | 73 | 36.9% |
| | | Instagram | 100 | 50.5% |
| | | Snapchat | 4 | 2.0% |
| | | YouTube | 15 | 7.6% |
| | | Twitter | 4 | 2.0% |
| | | Total | 198 | 100.0% |
| | Which social media has the highest rate of cyber bullying? | facebook | 30 | 15.2% |
| | | WhatsApp | 20 | 10.1% |
| | | Instagram | 128 | 64.6% |
| | | Snapchat | 2 | 1.0% |
| | | YouTube | 10 | 5.1% |
| | | Twitter | 8 | 4.0% |
| | | Total | 198 | 100.0% |
| | How 2 have you been bullied or harassed through the internet or text message? | Very Often | 2 | 1.0% |
| | | Often | 9 | 4.5% |
| | | Sometimes | 31 | 15.7% |
| | | Rarely | 48 | 24.2% |
| | | Never | 108 | 54.5% |
| | | Total | 198 | 100.0% |
| | Have you ever bullied or harassed someone through the internet or text message? | Very Often | 1 | 0.5% |
| | | Often | 6 | 3.0% |
| | | Sometimes | 28 | 14.1% |
| | | Rarely | 26 | 13.1% |
| | | Never | 137 | 69.2% |
| | | Total | 198 | 100.0% |
| | How much has | Extremely | 2 | 1.0% |

| | | | | |
|--|--|------------------------|-----|--------|
| | cyberbullying affected your daily life? | A lot | 11 | 5.6% |
| | | Somewhat | 28 | 14.1% |
| | | A little | 48 | 24.2% |
| | | Not at all | 109 | 55.1% |
| | | Total | 198 | 100.0% |
| | How comfortable do you feel reporting cyberbullying to an adult? | I would not report it | 13 | 6.6% |
| | | Not comfortable at all | 23 | 11.6% |
| | | Not very comfortable | 32 | 16.2% |
| | | Somewhat comfortable | 54 | 27.3% |
| | | Very comfortable | 76 | 38.4% |
| | | Total | 198 | 100.0% |
| | Who would you be comfortable to share about your experiences with cyberbullying? | Friend | 143 | 72.2% |
| | | Counsellor | 14 | 7.1% |
| | | Teacher | 9 | 4.5% |
| | | parent | 32 | 16.2% |
| | | Total | 198 | 100.0% |
| | How much do you believe that talking to someone about your experiences with cyberbullying can help you? | Extremely | 17 | 8.6% |
| | | A lot | 41 | 20.7% |
| | | Somewhat | 53 | 26.8% |
| | | A little | 52 | 26.3% |
| | | Not at all | 35 | 17.7% |
| | | Total | 198 | 100.0% |
| | How much do you believe social media companies are doing to prevent cyber bullying? | Extremely | 5 | 2.5% |
| | | A lot | 16 | 8.1% |
| | | Somewhat | 61 | 30.8% |
| | | A little | 59 | 29.8% |
| | | Not at all | 57 | 28.8% |
| | | Total | 198 | 100.0% |
| | How much do you believe 1s and 2s are doing to encourage disclosure and support for victims of cyber bullying? | Extremely | 10 | 5.1% |
| | | A lot | 19 | 9.6% |
| | | Somewhat | 63 | 31.8% |
| | | A little | 59 | 29.8% |
| | | Not at all | 47 | 23.7% |
| | | Total | 198 | 100.0% |
| | How effective do you believe the cyberbullying prevention education and awareness campaigns provided by your 1 or 2s are? | Extremely effective | 7 | 3.5% |
| | | very effective | 19 | 9.6% |
| | | Somewhat | 58 | 29.3% |
| | | A little effective | 64 | 32.3% |
| | | Not at all effective | 50 | 25.3% |
| | | Total | 198 | 100.0% |

| | | | | |
|--|--|---|-----|--------|
| | To what extent has cyberbullying affected your academic performance? | Extremely | 4 | 2.0% |
| | | A lot | 11 | 5.6% |
| | | Somewhat | 25 | 12.6% |
| | | A little | 42 | 21.2% |
| | | Not at all | 116 | 58.6% |
| | | Total | 198 | 100.0% |
| | How has cyberbullying impacted your motivation to attend 1 or complete 1 work? | Extremely | 10 | 5.1% |
| | | A lot | 16 | 8.1% |
| | | Somewhat | 25 | 12.6% |
| | | A little | 44 | 22.2% |
| | | Not at all | 103 | 52.0% |
| | | Total | 198 | 100.0% |
| | To what extent has cyberbullying interfered with your ability to concentrate or focus on 1work? | Extremely | 11 | 5.6% |
| | | A lot | 11 | 5.6% |
| | | Somewhat | 34 | 17.2% |
| | | A little | 47 | 23.7% |
| | | Not at all | 95 | 48.0% |
| | | Total | 198 | 100.0% |
| | Cyber bullying affect your overall academic confidence and self-esteem? | Extremely | 7 | 3.5% |
| | | A lot | 11 | 5.6% |
| | | Somewhat | 30 | 15.2% |
| | | A little | 42 | 21.2% |
| | | Not at all | 108 | 54.5% |
| | | Total | 198 | 100.0% |
| | Does your institution provide support and resources to cyber bully victims? | May be | 54 | 27.3% |
| | | Sometimes | 28 | 14.1% |
| | | no | 61 | 30.8% |
| | | yes | 55 | 27.8% |
| | | Total | 198 | 100.0% |
| | If 4, how 4 are you with the support and resources provided by your institution for victims of cyberbullying? | Very dissatisfied | 9 | 4.5% |
| | | Dissatisfied | 13 | 6.6% |
| | | Neutral | 104 | 52.5% |
| | | Satisfied | 45 | 22.7% |
| | | Emotional Support – to deal with anger, sadness and anxiety | 27 | 13.6% |
| | | Total | 198 | 100.0% |

| | | | | |
|--|---|--|-----|--------|
| | What kind of support would you require as a victim of cyberbullying? | Educational support – awareness on preventing and addressing cyber bullying | 25 | 12.6% |
| | | Legal Support – to help understand rights and take legal action if necessary | 46 | 23.2% |
| | | Practical Support – to change mobile numbers, email address, block bully on social media | 27 | 13.6% |
| | | Social Support – to feel supported and not isolated | 46 | 23.2% |
| | | Emotional Support – to deal with anger, sadness and anxiety | 54 | 27.3% |
| | | Total | 198 | 100.0% |