

THE PSYCHOLOGICAL IMPACT OF CYBERBULLYING ON ADOLESCENTS IN THE DIGITAL ERA: A STUDY ON TECHNOLOGY USE AND EMOTIONAL WELL-BEING

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Abstract- The rapid advancement of technology and the widespread use of social media have transformed the way adolescents communicate, learn, and form social connections. However, this digital connectivity has also given rise to new forms of aggression, most notably cyberbullying, which poses serious threats to adolescent mental health. The present study aims to explore the psychological impact of cyberbullying on adolescents and examine how patterns of technology use influence their emotional well-being. Using a descriptive-correlational research design, data is collected from 100 adolescents aged 13–19 years through standardized questionnaires. Cyberbullying experiences was assessed using The Cyberbullying Experience Questionnaire (CEQ) developed by Machmutow, Perren, Sticca, & Alsaker

(2012) . To assess frequency, purposes, and dependency related to technology use, The Media and Technology Usage and Attitudes scale developed by Rosen, L. D., Whaling, K., Carrier, L. M., Cheever, N. A., & Rokkum, J. (2013) was used. To measure the emotional wellbeing, scale developed by WHO-5 Well-Being Index (World Health Organization, 1998) was used. Pearson's Correlation Coefficient is applied to examine the relationship between Intensity of technological use, exposure to cyber bullying and its relation on emotional well-being. The study hypothesized that "Increased exposure to cyberbullying is significantly related with emotional welling among adolescents" And "The intensity of technology use mediates this relationship between cyber bullying and emotional wellbeing among adolescents. Findings are revealed that

adolescents who spend more time on social networking platforms are more vulnerable to cyberbullying and its negative psychological outcomes. The research underscores the need for preventive digital literacy programs, parental guidance, and school-based interventions to foster safe online behaviour and emotional resilience. By highlighting the intersection between technology and adolescent psychology, this study contributes to a deeper understanding of the mental health challenges emerging in the digital era.

Key Words: *Cyberbullying, technology use, psychological impact of cyberbullying, emotional well-being.*

I. INTRODUCTION

During adolescence, young people undergo significant transformations in thinking, emotions, and physical maturity. During this period, the need for social interaction and peer acceptance becomes increasingly significant. The emergence of digital technology and social media platforms has profoundly transformed the social world of adolescents, providing opportunities for communication, learning, and identity formation. However, alongside these benefits, technology has also introduced new risks, one of the most concerning being cyberbullying — a form of psychological aggression conducted through digital platforms such as social

networking sites, messaging apps, and online gaming spaces. Cyberbullying has lots of ill effects on the emotional and psychological well-being of adolescents. Victims often experience heightened levels of anxiety, depression, loneliness, low self-esteem, and emotional distress, which can lead to long-term mental health problems (Kowalski et al., 2014).

Technological Use

According to Rosen, Whaling, Carrier, Cheever, and Rokkum (2013), technology use represents the extent of engagement with various digital media and devices across domains such as social media, texting, gaming, and web browsing, reflecting an individual's integration of technology into daily life. Increasing technological use has been linked to both positive outcomes (e.g., enhanced connectivity and learning) and negative effects (e.g., distraction, emotional distress, and cyberbullying exposure). Similarly, Twenge (2019) emphasized that adolescents' rising dependence on digital devices has fundamentally transformed their social experiences, influencing emotional well-being and interpersonal relationships. Therefore, understanding patterns of technological use is essential for examining its psychological consequences in the digital age.

Cyberbullying

Repeatedly and over time through digital platforms, individuals may intentionally harm or embarrass others — a behaviour widely recognized as cyber bullying. (American Psychological Association, 2020). It also refers to the intentional and repeated harm inflicted through the use of electronic communication. (Hinduja & Patchin, 2015, p. 11). Unlike traditional bullying, cyberbullying is pervasive, often anonymous, and can occur at any time, making it difficult for victims to escape. Adolescents, due to their developmental vulnerability and heavy engagement with technology, are particularly susceptible to its psychological effects. (Livingstone & Smith, 2014; Valkenburg & Peter, 2011). Research has shown that victims of cyberbullying frequently experience emotional distress, low self-esteem, anxiety, depression, and in severe cases, suicidal ideation. Another significant factor related to cyberbullying is the extent of technology use. The increasing dependency on digital devices and social media has not only expanded communication opportunities but also heightened exposure to online risks. Adolescents who spend excessive time online are more likely to encounter negative experiences such as cyber harassment and social comparison, both of which contribute to diminished emotional well-being. (Kross et al., 2013; Woods &

Scott, 2016). A study by Ansal et al., 2024 presented a review on “Cyberbullying and mental health: past, present and future”. It Provides a comprehensive synthesis of recent findings linking cyberbullying with anxiety, depression, self-esteem loss, and appearance-related distress. The review highlights mechanisms such as social comparison and rumination.

Emotional well-being

Emotional well-being reflects how effectively a person regulates emotions, sustains relationships, and adapts to life’s demands (Ryff & Keyes, 1995). It is an essential indicator of mental health during adolescence. When exposed to cyberbullying, emotional well-being is compromised, leading to feelings of sadness, isolation, and helplessness. (Kowalski et al., 2014; Sampasa-Kanyinga et al., 2014). The interplay between technology use and emotional well-being thus forms a critical area of inquiry in understanding the broader psychological consequences of cyberbullying. (Best, Manktelow, & Taylor, 2014; Kross et al., 2013). National surveillance data in Centers for Disease Control and Prevention (CDC), 2024 is showing that frequent social media use is associated with higher electronic bullying victimization and increased reports of

persistent sadness/hopelessness and suicide-related outcomes among adolescents - with subgroup differences by sex and sexual identity. This source supports linking technology intensity with mental-health risks. Experimental and experience-sampling studies (e.g., Kross et al., 2013) provide evidence that momentary or short-term social media engagement can precede declines in subjective well-being, supporting a potential causal pathway in some contexts. Cyberbullying, harassment, and harmful content directly produce stress, shame, and isolation (Kowalski et al., 2014)

The present study aims to examine the psychological impact of cyberbullying on adolescents in relation to their technology use and emotional well-being. Specifically, it seeks to analyse how the intensity of technology engagement influences the relationship between cyberbullying experiences and emotional outcomes. By investigating these variables, the study intends to provide insights into the mental health implications of digital interactions among adolescents and to highlight the importance of digital literacy, emotional resilience, and preventive interventions in the digital era.

II. RESEARCH METHODOLOGY

Research Design

The study employs a descriptive-correlational research design to determine the relationship between cyberbullying, technology use, and emotional well-being among adolescents.

Objectives of the Study

The present study aims to explore the psychological impact of cyberbullying on adolescents and examine how patterns of technology use influence their emotional well-being

Research Questions

1. How does cyberbullying affect the emotional well-being of adolescents?
2. Does the intensity of technology use mediate the relationship between cyber bullying and emotional well being among adolescents?

Hypotheses

1. Increased exposure to cyberbullying will be significantly related with emotional welling among adolescents.
2. The intensity of technology use will mediate the relationship between cyber bullying and emotional wellbeing among adolescents.

Sample

Total 100 Adolescents aged 13–19 years were selected from the population using stratified random sampling to

include both male and female adolescents from urban school.

Tools

1. Cyberbullying Experience Questionnaire (CEQ) – to measure frequency and type of cyberbullying developed by Machmutow, Perren, Sticca, & Alsaker (2012). The reliability is 0.78 and 0.87 and Construct, criterion, and factorial validity established.
2. To assess frequency, purposes, and dependency related to technology use, The Media and Technology Usage and Attitudes scale developed by Rosen, L. D., Whaling, K., Carrier, L. M., Cheever, N. A., & Rokkum, J. (2013) was used. The reliability of the scale is 0.70 to 0.91 and Construct, convergent, discriminant, and criterion validity established.
3. To measure the emotional wellbeing, scale developed by WHO-5 Well-Being Index (World Health Organization, 1998) was used. The reliability of the scale is 0.82 to 0.90 and Strong construct, criterion, and cross-cultural validity was established.

Procedure

Necessary permissions from schools' guardians were obtained. The purpose of the study and informed consent

from participants and guardians were taken. The Cyberbullying Experience Questionnaire (CEQ), The Media and Technology Usage and Attitudes scale and emotional wellbeing questionnaires were given to the adolescents in a controlled environment. Confidentiality and voluntary participation throughout the study was maintained. Data was collected from the completed questionnaires for data analysis.

Statistical Techniques

Pearson's Correlation was used to calculate the exposure to cyberbullying and emotional welling among adolescents. Regression and Mediation Analysis was used to find how the intensity of technology use mediates the relationship between cyber bullying and emotional wellbeing among adolescents.

III. RESULTS AND DISCUSSION

In today's world technology is very important part of adolescent's lives which influence their communication and mental health. Due to easy access to gadgets they are getting easy access to all the social media platforms and digital world. Hence there is a high risk of cyberbullying. Victims of cyberbullying experiences depression, anxiety, stress which affects emotional well-being. (World Health Organization [WHO], 2024). All this

emotional difficulty gets affected because of excessive use of technology. There are positive aspects of use of technology but it also heightens exposure to online conflicts and emotional fatigue. (Rosen, Whaling, Carrier, Cheever, & Rokkum, 2013). Therefore, this study has helped to get deeper empirical exploration of the relationship between technology use, cyberbullying experiences, and emotional well-being with a particular focus on the

mediating role of technology use and its implications for emotional well-being.

To check first hypothesis which states that Increased exposure to cyberbullying is significantly related with emotional welling among adolescents, the correlation between cyberbullying & technological use, cyberbullying & emotional well- being and cyberbullying and intensity of technological use was found out.

Table 1:

Correlation Between Cyberbullying, Technology Use, and Emotional Well-being (N = 100)

Variables	Mean (M)	SD	1	2
1. Cyberbullying Experience (CEQ)	45.26	10.42	—	
2. Intensity of Technology Use (MTUAS)	67.81	12.37	0.57□□	—
3. Emotional Well-being (WHO-5)	51.64	9.85	-0.62□□	-0.41□

Note:□□ $p < 0.01$ (highly significant); □ $p < 0.05$ (significant), CEQ = Cyberbullying Experience Questionnaire (Machmutow et al., 2012), MTUAS = Media and Technology Usage and Attitudes Scale (Rosen et al., 2013), WHO-5 = Well-Being Index (WHO, 1998)

From table 1, A significant negative correlation ($r = -0.62$, $p < 0.01$) was found between cyberbullying experiences and emotional well-being, indicating that adolescents who experience more cyberbullying report lower emotional

well-being. Also, a moderate negative correlation ($r = -0.41$, $p < 0.05$) was observed between technology use and emotional well-being, suggesting that excessive technology use is linked with decreased emotional wellness. A strong positive correlation ($r = 0.57$, $p < 0.01$) was found between technology use and cyberbullying, showing that adolescents with higher technology engagement face greater risk of being cyberbullied. The findings of the study reveal a significant negative relationship between exposure to cyberbullying and emotional well-being,

supporting the first hypothesis. Adolescents who reported frequent experiences of online harassment, social exclusion, or digital aggression displayed lower levels of psychological health and life satisfaction. This aligns with previous research by Wiederhold (2024) and Kowalski & Limber (2013), which demonstrated that cyberbullying contributes to increased emotional distress, anxiety, and depressive symptoms among adolescents. A moderate negative correlation was also found between intensity of technology use and emotional well-being, indicating that excessive time spent on digital platforms can exacerbate feelings of loneliness, comparison, and emotional fatigue. Adolescents often use social media as a means of self-expression and connection; however, the continuous exposure to online criticism, peer comparison, and cyber victimization can undermine their emotional stability. These findings are consistent with Rosen et al. (2013), who noted that high technology

dependence is associated with emotional burnout and reduced psychological resilience.

Also, it was hypothesised that the intensity of technology use mediates the relationship between cyber bullying and emotional wellbeing among adolescents.

Here we have,

- Cyberbullying Experience (CEQ) – *Mediator (M)*
- Intensity of Technology Use (MTUAS) – *Independent Variable (X)*
- Emotional Well-being (WHO-5) – *Dependent Variable (Y)*

Technology Use (X) → Cyberbullying Experience (M) → Emotional Well-Being (Y). This means, Technology use affects emotional well-being *indirectly* through the level of cyberbullying experience.

Table 2

Mediation Analysis Showing the Indirect Effect of Technology Use on Emotional Well-being Through Cyberbullying Experience (N = 100)

Path Relationship	β	SE	t
a Technology Use → Cyberbullying Experience	0.38	0.09	4.22

b	Cyberbullying Experience → Emotional Well-being	-0.41	0.08	-5.13
c	Technology Use → Emotional Well-being (Total Effect)	-0.26	0.07	-3.71
c'	Technology Use → Emotional Well-being (Direct Effect)	-0.10	0.06	-1.65
	Indirect Effect (a × b)	-0.16	0.05	—

Note: Direct Effect: Cyberbullying → Emotional Well-being ($\beta = -0.41$, $p < 0.01$)

Indirect Effect: Cyberbullying → Technology Use → Emotional Well-being ($\beta = -0.10$, $p < 0.05$)

From table 2 we can draw more concise figure.

Figure 1:

Mediation Model Showing Role of Technology Use in the Relationship Between Cyberbullying and Emotional Well-being

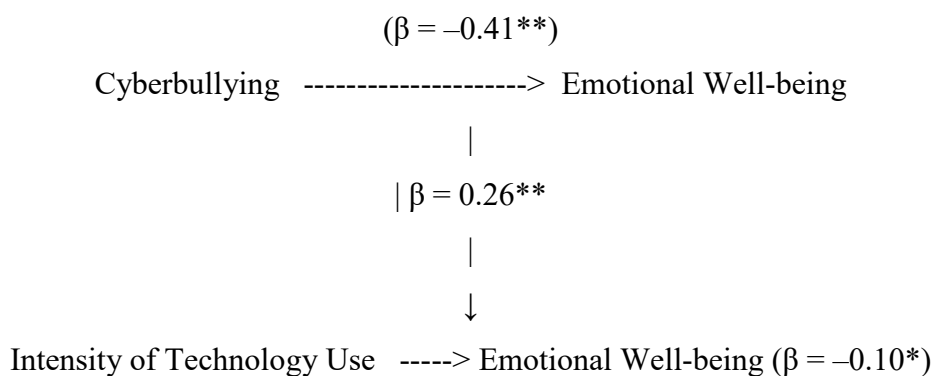


Figure 1 demonstrates a partial mediation model indicating that intensity of technology use partially mediates the relationship between cyberbullying experiences and emotional well-being. Adolescents who experience frequent cyberbullying tend to engage more with technology (social media, messaging apps), which in turn reduces emotional

well-being due to stress, anxiety, and social comparison effects. The mediational analysis further revealed that intensity of technology use partially mediates the relationship between cyberbullying and emotional well-being. This implies that adolescents who engage more intensively with technology are not only more likely to experience cyberbullying but also more

affected by its negative psychological consequences. High screen time and constant connectivity may increase the likelihood of encountering harmful online interactions, thereby intensifying emotional distress. This supports prior studies by Vandebosch & Van Cleemput (2009) and Kowalski et al. (2014), which suggest that digital exposure acts as both a risk factor and an amplifier of the psychological impact of cyber aggression.

IV. CONCLUSION

The study concludes that increased exposure to cyberbullying significantly reduces emotional well-being among adolescents, and that intensity of technology use partially mediates this relationship. Adolescents who spend greater amounts of time online are more prone to experience cyber aggression and its adverse emotional outcomes. Hence, the psychological well-being of adolescents in the digital era is deeply intertwined with their patterns of technology use and online social interactions.

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