A Conceptual Framework on Predictors of Cyberbullying Victimization

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Abstract

Cyberbullying is becoming a prevalent problem worldwide including in Sri Lanka with adolescents, in particular, being vulnerable to it. Researchers identify various personality traits and social factors as contributing to one's vulnerability to cyberbullying. Rather than being stand-alone factors, these personality and social factors are often interrelated and interdependent. Thus, the objective of this study is to examine how social structures such as family, peers and school influence personality traits that increase or decrease one's vulnerability to cyberbullying victimization, and design a conceptual framework on predictors of cyberbullying that depicts this relationship. This study is a qualitative study using the analytical research approach. The existing literature on factors contributing to cyberbullying, theories on cyberbullying and on human development are analysed for identifying the relationship between social structures and personality traits. The big five personality traits theory identifies the personality traits that increase one's vulnerability to cyberbullying while the bio-ecological framework on human development posits that human development is influenced by various social structures such as the family, peers and school. This study combines the two theories and demonstrates with reference to secondary sources and existing literature, how social structures such as the family influence development of personality traits that can increase or reduce one's vulnerability to cyberbullying. The study reveals that factors such as poor parental support, poor parental monitoring and supervision, emotional loneliness and lack of social cohesion in a family, poor peer support and lack of supportive and trusting relationships with one's teachers lead to the development and perpetuation of personality traits such as neuroticism and extraversion that increase vulnerability to cyberbullying while the existence of family cohesion, positive peer support etc can reduce vulnerability to cyberbullying by inculcating personality traits such as conscientiousness, and reducing neuroticism etc. Based on these findings, cyberbullying prevention and intervention programs should focus on promoting positive and supportive relationships between parents-children, teachers -students and peers to enable adolescents to acquire and develop personality traits that increase their resilience to cyberbullying.

Keywords: Cyberbullying, Cyber Harassment, Personality traits, Predictors, Social Factors

INTRODUCTION

As a result of the rapid rise in the use of electronic means of communication new forms of violence have come into being including cyberbullying which is emerging as a severe problem worldwide. Cyberbullying involves harassment, humiliation, or threat that occurs through the internet, emails, text messages, instant messaging, social media websites, online forums, and chat rooms, whereby harm is intentionally inflicted upon individuals by a single person or a group of persons (Watts et al., 2017; Wang & Chang, 2010). Cyberbullying can be seen to occur more often among teenagers than adults due to the high speed at which young people are adopting new technologies and their cognitive and emotional immaturity (Chengyan Zhu et al., 2021; Durak, 2018).

Occurrence of cyberbullying does not happen in isolation from the wider social environment in which humans operate; in fact, it stems from complex interactions between individuals and multiple social structures such as family, neighborhood, peers, school, community, etc (Jattarmat et al., 2021). Accordingly, various individual-level factors and social-level factors serve to promote and maintain vulnerability to cyberbullying. The individual-level factors include variables that are directly associated with the characteristics of specific persons such as age, gender, personality traits, etc. The social level factors involve variables that relate to the social background and social relationships of persons such as socioeconomic status of the household, parental support, school climate, peer support, etc.

Despite the abundance of research on individual and social level predictors of cyberbullying victimization, to date, there have been few studies that examined how personality traits, which predispose a person to become a target of cyberbullying, are affected by the social structures in their surrounding environment. In terms of the risk factors associated with cyberbullying victimization at the personal level, many studies evidence that adolescents with personality traits such as low self-esteem, high degree of

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self-expression or openness (sensation-seeking) are more likely to be cyberbullied (Pereira et al., 2016; Celik et al., 2012; Patchin &Hinduja, 2010). Studies of Feslt & Quandant, Celick and Safaria & Suyono reveal that college students with the ability to effectively balance emotions such as anxiety and hostility, and those who are conscientious, more organized with a great sense of responsibility and self-control are less likely to be cyberbullied (Safaria & Suyono, 2020; Feslt & Quandant, 2016; Celik et al., 2012). Further, it is proven that older female teenagers, especially those aged over 15 years, are at a greater risk of becoming victims of cyberbullying (Alvarez-Garcia D, 2018; Buelga, 2015). At the situational level, the role of parents, teachers and peers are seen as critical in cyberbullying experiences. Parental neglect, parental abuse, parental inconsistency in supervision of adolescents' online behavior and family dysfunction have been found to have a direct impact on cyberbullying victimization (Katz et al.,2019; Hong et al.,2018). Moreover, inharmonious teacher-student relationships and lack of peer support are major sources of tension that contribute to cyberbullying victimization (Wright & Li, 2013; Hinduja & Patchin, 2009). A majority of research studies on predictors of cyberbullying victimization has provided individual-level explanations (impact of characteristics of individuals on cyberbullying victimization), micro-sociological level explanations (impact of interactions between persons and groups on cyberbullying victimization) or macro-sociological explanations (impact of social systems and culture on cyberbullying victimization). Analyzing a phenomenon at one of these levels while ignoring the other levels of explanation yields an incomplete explanation of the phenomenon (Meire, 1985, p.65). Therefore, the present study seeks to fill this gap; it searches for possible linkages between social structures and personality traits that contribute to cyberbullying victimization to provide meaningful context and a more holistic perspective on this social phenomenon.

The influence of social structures such as family, school and peers in shaping personality traits that heighten or mitigate the risk of cyberbullying victimization is examined in this study. Furthermore, a framework is built conceptualizing the interplay between social structures and personality traits with regard to increasing or decreasing vulnerability to cyberbullying. This framework is expected to provide a deeper understanding of the underlying dynamics of cyberbullying, which is vital in bringing it to an end. Moreover, it is also expected to enable the formulation of targeted cyberbullying intervention and prevention measures, which treat those with different social behavioural norms differently.

CYBERBULLYING: DEFINITIONS, PREVALENCE AND IMPACTS

Information and Communication Technologies (ICTs) have a double-edged character; conveniences in terms of access to information and interpersonal communication go hand in hand with the risks of abusing these technologies for other less desirable purposes. One such negative usage of ICTs is cyberbullying, which emerges as a result of the transfer of traditional bullying to the virtual realm with the penetration of ICTs into human lives.

Belsey defines cyberbullying as a form of intentional, repetitive and hostile behaviour by a single person or a group of persons through the use of information and communication technologies (Belsey, 2019). Patchin and Hinduja observe that cyberbullying constitutes acts of online aggression that are carried out repeatedly by persons, who perceive themselves to be in positions of power and derive personal gratification from mistreating the victim, who finds it hard to defend him/herself (Patchin and Hinduja, 2019, p342). According to Ariack, cyberbullying can be understood as a scenario where an individual is tormented, threatened, harassed, humiliated, embarrassed or otherwise targeted by another individual via any digital device such as a computer or mobile phone, and most commonly occurs within social media environments, discussion forums and gaming environments, as well as through text messaging and email (Ariack et al.,2008, p.58). There is no single standardized definition of cyberbullying. However, when the above definitions are examined, cyberbullying can be generally characterized as a deliberate, repetitive and aggressive activity carried out through electronic means of communication in order to intimidate, humiliate and embarrass the targeted individual. There are numerous subtypes of cyberbullying such as flaming, outing, trickery, sexting, cyberstalking, catfishing, impersonation, denigration and exclusion (Khan et al., 2020).

Cyberbullying has become an alarmingly increasing issue across the globe. The Pew Internet and American Life Project on Cyberbullying, conducted in 2006 using a sample of 935 teens (age 12 -17) in the United States, revealed that one out of three teens have been bullied in the preceding year (Li, 2010). Selkie's study, which systematically reviewed cyberbullying among American middle and high school students (age 10-19) in 2015, revealed that the prevalence of cyberbullying victimization ranged from 65 percent to 72 percent (Selkie et al., 2015). A cross-sectional study conducted among 2338 youth in Australia between the ages of 12 and 18 revealed that 27.7 percent of respondents reported being cyberbullied at least once in 2015 (Klettke and Howard, n.d.). In Canada, one in three Canadian youth report having been bullied in the recent past, and 10 percent of individuals report being bullied on a daily basis (Steeve, 2014). Further, 47 percent of Canadian parents report having a child who has been bullied (Steeve, 2014).

Existing research reveals that cyberbullying can have extensive and debilitating psychological, physical and social impacts on victims (Okumu et al., 2020; Fisher et al., 2016). These include loneliness, anxiety, depression, low self-esteem, sleep deprivation, suicidal ideation, broad-line personality disorder, eating disorder, rape, suicide, disruptions in education and employment and marital discord (Nixon, 2014). Cyberbullying is regarded by many as being more pernicious than traditional bullying, as it enables the bullying of a large number of people relatively effortlessly and anonymously, irrespective of the time of the day and geographic location (Kowalski et al., 2014, p.1078). Unlike victims of traditional bullying, victims of cyberbullying have no escape and respite from the bullying even within their own homes (Khan et al., 2020).

High prevalence rates and serious negative impacts of cyberbullying on the physical and mental well-being of individuals warrant the implementation of effective countermeasures and preventive measures. To that end, gaining a comprehensive and methodical understanding of predictors of cyberbullying victimization is vital, as it can assist in tailoring cyberbullying prevention and intervention strategies in line with the needs, abilities and interests of the target groups.

METHODOLOGY

This study is a qualitative study, as it seeks to understand connections among variables, which drive people to behave in a certain way that increases the vulnerability to cyberbullying. The nature of the research is analytical and the research design is exploratory; instead of testing a hypothesis, this study focused on increasing the understanding on cyberbullying victimization by bringing together past qualitative research data, analysing and interpreting information, and examining if social structures do truly have an effect on personality traits of victims, thus, formulating a conceptual framework on predictors of cyberbullying victimization. To that end, this study utilized secondary date sources such as research papers and scholarly articles. Researchers explored literature on cyberbullying, cyberbullying victimization, factors motivating cyberbullying victimization, theories on cyberbullying victimization and theories on human development. The literature was extensively analysed using meta-synthesis; researchers brought together studies related to predictors of cyberbullying victimization, categorized the findings into personal factors and social structural factors, examined them and discovered linkages, and drew conclusions, which led to formation of the conceptual framework.

THE CYBERBULLYING VICTIMIZATION CONCEPTUAL FRAMEWORK

This framework (see Fig.1 below) is founded on the Big Five Personality Traits theory originally developed by Ernest Tupes and Raymond Christal (Tupes & Christal, 1961) and the Bio-ecological Framework of Human Development theory proposed by Bronfenbrenner (1997). The five broad human personality traits described by the Big Five Personality Traits theory are extraversion, agreeableness, conscientiousness, neuroticism (or emotional stability), and intellectualism (or openness to experiences). This theory is popularly utilized by researchers to better understand the relationship between personality traits and cyberbullying. This framework excludes the trait of agreeableness because it is proven that agreeableness does not play a major role as an explanatory factor of cyberbullying victimization (Alonso & Romero, 2017; Antoniadou & Kokkinos, 2018). The dimension of extraversion includes traits such as sociability, enthusiasm, assertiveness and self-confidence; conscientiousness includes traits like order, precision, and responsibility; neuroticism includes traits like feelings of anxiety, fear, worry, low self-esteem and depression; intellectualism includes creativity, curiosity, being imaginative and insightful (Escortell et al., 2020). Scholarly efforts at examining the impact of personality traits on cyberbullying victimization confirm that the probability of being a victim of cyberbullying increases as the levels of extraversion, neuroticism and openness to experience increase, while the conscientiousness personality trait is a protective factor against being bullied (Rodríguez-Enríquez et al., 2019, p.5; Escortell et al., 2020).

The Bio-ecological Framework emphasizes that the personal development of a human is influenced by his/her interactions with social structures in the microsystem, the mesosystem, the exosystem, the macrosystem and the chronosystem. The microsystem is the smallest and most immediate environment in which children live. It comprises the home, school or daycare and peer group (Goerzig & Machakova, 2015). The mesosystem encompasses interactions between different microsystems in which children find themselves in. It involves linkages between home and school, between peer group and family, and between family and community (Goerzig & Machakova, 2015). The exosystem contains social settings which do not directly contribute to the development of children but affect them indirectly such as the workplaces of parents, extended family members and the neighborhood the children live in (Goerzig & Machakova, 2015). The macro system in Bronfenbrenner's ecological model comprises the most distant collection of people and places to the children that still have significant influences on them. This ecological system is composed of the cultural patterns and values of children, specifically their dominant beliefs and ideas, as well as political and economic systems (Evans, 2020). The chronosystem demonstrates the influence of both change and constancy in the environments of children. The chronosystem includes a change in family structure, and the employment status of parents, as well as immense changes in society such as economic cycles and wars (Evans, 2020). This conceptual framework only considers structures in the microsystem, because microsystem is the most influential level of the ecological systems theory with regard to human development (Ashiabi & O' Neal, 2015).
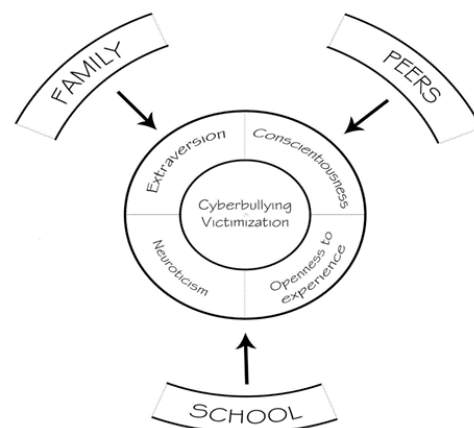
According to the above-stated theories, the authors posit that structures in the microsystem influence the development of personality traits in individuals that either mitigate or increase their vulnerability to cyberbullying. This framework (see Fig.1. above) unfolds how parents, school and peers in the microsystem influence personality traits of extraversion, conscientiousness, neuroticism and openness to experience, which form the basis of behaviours that affect the likelihood of being cyberbullied.

The relationship between social structures and individual characteristics illustrated by this framework can make a significant contribution to the design of cyberbullying prevention measures, in particular among children and adolescents, as they pass through various phases of personality development in which social structures play an essential and specific role. Moreover, this conceptual framework would be a vital source of knowledge for policymakers to customize preventive measures in line with risk and protective factors related to cyberbullying victimization and the role of social structure agents in shaping personality traits underlying cyberbullying.

CAUSAL RELATIONSHIP BETWEEN PERSONALITY TRAITS AND SOCIAL STRUCTURES

This section explores the nature of the influence of family, school and peers on each personality trait in the inner circle of the framework in terms of enhancing or inhibiting experiences of cyberbullying victimization.

Family

A growing body of literature investigating how dynamic family variables affect cyberbullying victimization suggests that family communication, family cohesion and parental control strongly influence personality traits (Oslon, 2000; Buelga et al., 2017), which form the basis of behaviours increasing or decreasing the likelihood of cyberbullying victimization.

Emotional loneliness is the subjective feeling of disconnection in a relationship (Jattamart & Kwangsawad, 2021). It is a trait captured by the neuroticism personality of the Big Five Personality Traits Model. Studies of Sahin and Russel reveal a strong positive correlation between emotional loneliness and cyberbullying victimization (Sahin, 2012; Russel, 2017, p.65). To reduce feelings of loneliness, youngsters actively use social networking sites, which provide more opportunities to be connected with others to feel cared and valued. The more time an individual spends on social networking sites, the more he/she is likely to experience cyberbullying, because users usually disclose large amounts of personal data through online chats, by sharing pictures and videos and updating statuses (Rodríguez-Enríquez et al., 2019; Won & Seo, 2017). Moreover, adolescents use gaming sites and entertainment sites more actively to help reduce their loneliness (Deters & Mehl, 2013). Results of the studies by Hao and Zheng indicated that lingering on leisure sites makes adolescents more vulnerable to mental, emotional and moral erosion through misinformation and disinformation on the internet and thus develop negative behaviours, which lead them to be bullied (Chang et al., 2015, p. 25; Hao, 2014) Accordingly, it is evident that higher degrees of cyber dependency to quell loneliness result in higher probabilities of adolescents being cyberbullied. A low level of family cohesion is a major contributing factor of emotional loneliness among youngsters (Arato et al., 2021, p.169). Frequent and intense family conflicts and absence or avoidance of communication result in weak emotional attachments among family members. Results of the study by Ybarra and Mitchell finely portray this causality between family cohesion and loneliness. They find that cyber victims had lower emotional bonds with their families and lower parental control compared to those not involved in such behaviours (Ybarra & Mitchell, 2004, p.322).

A great number of studies confirm that the highest predictor of being a cyber-victim is neuroticism and there is a positive relationship between being a cyber-victim and neuroticism (Celik et al., 2012, p.140). Neurotic individuals are more likely to experience negative emotions such as anxiety, anger, depression, and low self-esteem (Ruiz et al., 2018). Youngsters with neurotic traits indicate a high inability to rationally cope with these emotions, as adolescence is a period of growth; they do not possess well-developed cognitive, emotional and social skills (Kowalski et al., 2018). Therefore, they opt for, as a coping mechanism, depicting their emotional instabilities in online platforms. Cyberbullies could easily exploit these disclosures of discomfort and harass these individuals (Rodríguez-Enríquez et al., 2019, p.4), because online aggressors usually seek out victims who are disadvantaged and insecure (Rodríguez-Enríquez et al., 2019). Parental support is proven to be of considerable importance to the proper regulation of negative emotions experienced by neurotic individuals, and thus making them more resilient to cyberbullying (Marín-Cortés, 2019; Patchin & Hinduja, 2010). Parental support functions as a significant external emotion regulation strategy, to which adolescents can resort in order to monitor, evaluate and appropriately change their responses to emotionally distressing situations. Studies by Ruiz and Solecki confirmed this significant link between parental support and neuroticism (Ruiz et al., 2018; Solecki et al., 2014). The study conducted by Solecki involving individuals between ages 10-24 in the USA demonstrates that strong parental support decreases the possibility of youngsters with neuroticism personalities being victimized because proper parental guidance on formulating psychological and behavioural adjustments provides adolescents with a secure framework to respond to negative emotions effectively (Solecki et al., 2014). Based on the same reasoning as Solecki's study, Ruiz concludes that parental support coupled with open, unbiased and empathetic parent-child communication and warm and affectionate parent-child relationship operates as a protective factor against cyberbullying (Ruiz et al., 2018; Kostas et al., 2012). Moreover, there is a vast amount of evidence indicating the strong influence of parental support in mitigating associated harmful consequences of cyberbullying, which takes the form of anxiety, depression, anger, low self-esteem, alcohol use, substance abuse, smoking, suicidal ideation, sleeping deprivation, aggression etc (Kokkinos et al., 2013; Gunthert et al., 1999). A study by Schwartz found that victimized students receiving strong parental support indicate lower levels of anxiety and depression and greater self-esteem than victimized students with limited or no such support (Schwartz et al., 1998). Accordingly, it is evident that effective parental care and support can decrease the danger of becoming a recurring victim of cyberbullying by empowering the victim with better-coping capabilities.

According to a growing body of studies on the effects of personality on cyberbullying victimization, the probability of being a victim of cyberbullying increases as the levels of extraversion and openness to experience increase (Escortell et al., 2020). Individuals with extraversion and openness to experience personality traits are energized, talkative, enthusiastic, sociable and inquisitive. They are more prone to voice their opinions and ideas online, openly share their thoughts and emotions through social networks and take pleasure in participating in virtual social activities. Increased exposure to the internet and social media renders these extrovert individuals more vulnerable to suffering from cyberbullying episodes (Escortell et al., 2020); cyberbullying perpetrators have great opportunities to bully, as extrovert individuals are more prone to directly (e.g. - updating status, textual messages) or indirectly (e.g.- tagging, liking, sharing posts) expose their own information fully on the internet (Jattamart & Kwangsawad, 2021).

There is evidence that suggests that this situation becomes even more serious when parents do not or inadequately mentor on healthy usage of information and communication technologies and monitor online behaviours of their kids (Sampasa-Kanyinga & Hamilton, 2015). In a study conducted by Ybarra and Mitchell in 2004, they found that individuals with low parental mentoring and supervision on the social networking time, safe data sharing and usage of software are 54 per cent more likely to be cyberbullied when

compared to individuals with normal or high parental monitoring (Ybarra & Mitchell, 2004; Padir & Horzum, 2020). Parental supervision style and parental knowledge on the digital world can be identified as predominant determinants of the role of parental mentoring and monitoring in preventing extravert individuals from being victims of cyberbullying. Agreements on the usage of electronic devices and information and communication technologies reached through unbiased and open parent-child communications, as opposed to verbal coercion, physical coercion and privation practices, act as a protective factor against cyberbullying victimization (Lee, 2017). Knowledge and training on information and communication technologies, the internet and technical etiquette are necessary to effectively monitor the use of technology by youngsters. Studies indicate that the education level of parents has a large impact on the cyber victimization of adolescents. A study on cyberbullying among students between the ages of 15 to 18 in Sweden found that children with at least one parent who had a college education were less likely to be victims than children whose parents did not have a college education, because higher the educational level of parents, greater the awareness on the safe use of new technologies and adoption of this knowledge in supervising online behaviour of children (Läftman, 2013).

A high score on conscientiousness indicates a serious, formal, cautious, motivated, organized and resilient individual with a great sense of responsibility and self-control. The conscientiousness personality trait is a protective factor against being bullied; this may be because conscientious individuals are more cautious about the types of information they share online and patterns of using digital applications, which in turn provides limited opportunity for cyberbullying perpetrators to bully (Sampasa-Kanyinga & Hamilton, 2015). Moreover, conscientious individuals possess a high level of social–emotional intelligence and good emotion regulation skills. It contributes to better social competence and functioning, maintaining psychological well-being, to strategically processing and expressing emotions during disturbing situations (Morris et al., 2007). Parents do the groundwork with regard to inculcating the above qualities embedded in this trait. Studies by Rutherford and Eisenberg report that children who grow up in a dysfunctional family with low emotional communication are not given a model of how to accurately understand and respond to emotional situations (Rutherford et al., 2015; Eisenberg et al., 1998); these children are not encouraged to verbalize and display their feelings in an adaptive way; therefore, they lack the necessary cognitive and emotional maturity to better cope with their negative emotions and confidence to defend themselves against recurring situations of cyberbullying. A study by Zhong conducted including 947 Chinese college students highlights that, as opposed to inadequate and inconsistent parental supervision, students with moderate and consistent parental mentoring and monitoring on the use of the internet have high scores on personal skills, moral awareness and technical skills required for to use technology in a safe, responsible, and ethical way (Xu et al., 2020). It shows the critical role parents play in producing competent citizens capable of successfully facing the challenges in the information age.

Peers

Unlike in childhood, when most social support comes from parents and family, during adolescence, most social support comes from peers (Olenik-Shemesh & Heiman, 2017, p.29).

Existing research shows that the absence of peer acceptance and group belonging during adolescence is associated with a high sense of loneliness and psychological distress (Holt & Espelage, 2007). In order to reduce loneliness, adolescents tend to linger on social networks and leisure sites, which makes them more susceptible to cyberbullying victimization (Deters & Mehl, 2013).

Peer support is an effective external source of emotion regulation strategies for individuals during emotionally distressing situations. The findings of the study by Dunn and Brown suggest that peer support enables neurotic individuals to regulate the intensity and timing of emotional and behavioural responses appropriately (Dunn & Brown, 1991). Accordingly, receiving support from peers to confront stressful situations prevents individuals from being cyberbullied as it deters individuals from exposing their emotional state in digital space, which makes them easy targets of online aggressors.

Moreover, positive and quality peer association protects youngsters from suffering from poorer physical and psychological health conditions following cyberbullying victimization, and thereby closing opportunities for recurring victimization. Research on the effects of peer and teacher support in mitigating the negative impacts of cyberbullying reveals a significant difference in the case of peers. Although both types of support contribute to mitigating the negative effects that adolescents might experience when exposed to cyberbullying, in the presence of peer support, victims are less likely to resort to emotional and behavioural maladaptive coping strategies such as depression, substance abuse, etc (Hellfeldt et al., 2019; Flaspohler et al., 2009).

School

School is the social setting, next to the family, where individuals spend most of their lifetime and learn a large part of basic life skills that are required to manage their lives in a healthy and productive manner. Therefore, school connectedness and a positive school climate contribute to lessening cyberbullying experiences among children and adolescents (Kowalski et al., 2014).

A supportive and trusting relationship between students and teachers protects children and adolescents from cyberbullying victimization. Social support originating from teachers is a useful coping source, which can help students endure stressful situations, and can act as a buffer against the negative effects of cyberbullying. In particular, it encourages neurotic individuals to seek assistance and advice in regulating negative feelings and coping with recurring victimization (Ruiz et al., 2018). Findings of the longitudinal study on loneliness and its impact on well-being of girls in grades 1 to 8 in Norway by Lohre, Kvande, Hjemdal, and Lillefjel support this link between positive school climate and cyberbullying victimization (Kwande et al., 2014; Ruiz et al., 2018). Among the girls with a high level of loneliness, girls who sought advice from class advisors appeared more resilient and reported a low likelihood of being cyberbullied (Kwande et al., 2014). Further, Lohre and others found that passive teacher interventions such as taking no action or normalizing complaints of cyberbullying created frustration and discomfort among the girls, and in response to these feelings, girls engaged in online self and emotional disclosures, which rendered them y prey for cyberbullying (Kwande et al., 2014).

Not only neurotic students, a positive school climate also contributes to lessening cyberbullying victimization among

students with the personality traits of extraversion and openness who are fond of trying new things, and thus, more prone to be involved in internet events and interactions. Researchers posit that fluid cognitive ability, high social competence, mastery of using technology legally and ethically, and active practice of the internet and technical etiquettes effectively reduce the probability of being cyberbullied and allow extrovert individuals to enjoy the convenience and joy brought by digital technology (Romera, 2016). Zheng, Zhong and Huang reveal that school, as the prime formal learning platform, plays a critical role in inculcating and strengthening values, necessary qualities, key abilities, and behaviour habits for using technology safely, legally and ethically among children and adolescents (Zhong et al., 2020).[2] Thus, by inculcating in children and adolescents the competencies required to use technology safely, schools can play a major role in lessening cyberbullying victimization among youth.

IMPLICATIONS OF THE CONCEPTUAL FRAMEWORK FOR PRACTICE AND POLICY

This study revealed that a positive family climate characterized by open parent-child communication and parental warmth contributes to lessening neurotic traits among teenagers, and thus making them resilient to cyberbullying. Active parental mentoring and monitoring of usage of electronic devices and digital technology assist extroverts to avoid cyberbullying victimization. Moreover, this study indicated that family has a greater responsibility in inculcating qualities embedded in conscientiousness personality, which is a protective factor against cyberbullying victimization. The findings of this study highlight the protective function served by positive and quality peer association; it acts as a buffer against cyberbullying victimization and recurring victimization, in particular among neurotic individuals. Further, this study shed light on the responsibility of educators to create safe and connected school environments to reduce cyberbullying victimization among neurotic and extroverts.

The above-mentioned results of this study support the significance of joint efforts between parents, schools and communities to protect adolescents from cyberbullying. These stakeholders cannot work in isolation. Rather, they need coordinated approaches to share the responsibility as cyberbullying is not restricted to the classroom or school grounds. It will enhance the effectiveness of cyberbullying prevention measures. For example, given the responsibility of parents to ensure the correct use of cyberspace and electronic devices by their children, the involvement of parents to digital literacy enhancement programs conducted in the school context is useful, so that parents can monitor youngsters' compliance with safety measures.

It is evident from this framework that cyberbullying victimization can be best addressed through family, school and centric-peer-centric preventive efforts that are tailored to the needs of teenagers, which are largely determined by their personality traits. Prefabricated programs rarely yield effective results. For example, to meet the needs of more extroverted students, schools can increase the weight allocated for promoting healthy social leisure activities in their curriculum.

This study indicated that parental support positively influences the likelihood of cyberbullying victimization. To enhance the capacity of parents to adequately support youngsters, positive parenting training and digital safety training should be provided. This study revealed the immense use of social and emotional skills in reducing experiences of cyberbullying victimization. Therefore, prevention and early intervention programs should be introduced at the school level aimed at resilience building, moral and positive value promotion, age-appropriate emotional skills training and social skills development. Moreover, programs should be introduced to enhance the understanding of teachers on social and emotional intelligence and techniques of developing these capabilities in students. In this way, they can be alert to negative emotions experienced by young people and help them mediate negative emotions, thereby avoiding risky behaviours for cyberbullying. Further, educational and social practices should focus on promoting responsible and safe use of electronic devices and digital technology through school and peers, so that teenagers are able to make full use of cyberspace while learning to navigate through risks and potential cyber aggression.

CONCLUSION

The existing literature identifies various individual (personality) and social factors as increasing or decreasing one's vulnerability to cyberbullying. However, they fail to examine the relationship or interplay between these social and individual factors. In this context, the objective of this paper was to examine how factors related to social structures such as the family, peers and school influence the personality traits of individuals, which in turn determine their vulnerability to cyberbullying victimization. A conceptual framework was built to depict the interplay between social structures and personality traits based on the Big Five Personality Traits theory on cyberbullying and the Bio-ecological Framework of Human Development theory. The Big Five Personality Traits theory identifies certain personality traits such as extraversion, conscientiousness, neuroticism and intellectualism as determinants of one's vulnerability to cyberbullying while the Bio-ecological Framework explains the influence of social structures in the microsystem, mesosystem, exosystem, macrosystem and chronosystem on human development. This study combines elements of the two theories and demonstrates with reference to secondary sources and existing literature, how social structures such as the family influence development of personality traits and thereby can increase or reduce one's vulnerability to cyberbullying. The study reveals that factors such as poor parental support, poor parental monitoring and supervision, emotional loneliness and lack of social cohesion in a family, poor peer support and lack of supportive and trusting relationships with one's teachers lead to the development and perpetuation of personality traits such as neuroticism and extraversion that increase vulnerability to cyberbullying while existence of family cohesion, positive peer support etc can reduce vulnerability to cyberbullying by inculcating personality traits such as conscientiousness, and reducing neuroticism etc. Based on these findings, cyberbullying prevention and intervention programs should focus on fostering positive and supportive relationships between parents-children, teachers -students and peers to enable adolescents to acquire and develop personality traits that

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increase their resilience to cyberbullying. The review of the present study is limited to social structures in the microsystem, on account of the fact that the microsystem is the most influential level of the ecological systems theory for human growth and development. Further inquiry into the influence of social structures in the exosystem and macrosystem on the above-mentioned personality traits and empirical testing of the conceptual framework proposed herein can be identified as areas for future research.

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The authors declare that there is no conflict of interest.

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