Journal of School Administration

Vol 12 No 2, Summer 2024

ISSN: 2538 - 4724

University of Kurdistan

Determinants of Cyber Victimization among high School Students

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ARTICLE INFO
Article history:

Received: 03/02/2024

Accepted: 09/05/2024

Available online: Summer 2024

Keyword: Cyberbullying, Maladaptive Schemas, Parenting, Personality, schools.

Abstract

The purpose of this study was to predict cyber victimization based on personality traits, primary maladaptive schemas, and parenting styles among high school students. In this cross-sectional study, a total of 240 male and female students of the high school in the academic year of 2021-2022 were selected using available sampling method. To collect data, the Cyber-bullying/Victimization Experiences Questionnaire (CBVEQ, 2016), The Big Five Questionnaire for Children (BFQ-C, 2017), The Schema Inventory for Children (SIC, 2010) and the Parenting Style Index-2 (PSI-II, 1997) were used online. The data were analyzed with SPSS software using statistical techniques such as Pearson's correlation test and multivariate regression analysis. The findings indicated that two factors of personality traits (emotional instability; β= 0.328 and extroversion; β= -0.253), early maladaptive schemas (β= 0.237) and parenting styles (demandingness; β= 0.318 and autonomy granting; β= -0.193) can predict cyber victimization in students. In addition, the findings related to the interaction effect of the predictor variables showed that the interaction between personality traits, early maladaptive schemas and parenting styles (R^2= 0.551; P<0.01) is a stronger predictor for cyber victimization in students than each of these variables alone. The findings of this study revealed that emotional instability, maladaptive schemas, and demandingness parenting styles play a very significant role in predicting cyber victimization among high school students. The findings of the present study have some psycho-educational implications that have been discussed.

Sarhangi, N., & Rostami, M. (2024) Determinants of Cyber Victimization among high School Students Journal of School Administration,12(2) ,48-60.

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Introduction

School, as a social institution occupying a significant part of adolescents' time, is considered an effective factor in adolescents' socialization process (Garibaldi & Josias, 2015; Amani et al., 2022). Many studies have addressed problems related to violence and aggression in students. Bullying is one of the most important problems in educational centers and it has received serious attention (Sobkin & Fedotova, 2021). Bullying is defined as aggressive and intentional behavior by a group or an individual committed repeatedly against a victim who cannot easily defend themselves (Sittichai & Smith, 2018). The power imbalance is a feature that distinguishes bullying from other types of aggression (Volk et al., 2021). There are different categories and definitions of bullying. In addition to verbal and physical forms of bullying, cyberbullying or internet bullying is another aggressive behavior. Indeed, some adolescents use the advantages of media tools and cyberspace intentionally to harm, annoy, or hurt other adolescents (Corcoran et al., 2015). Cyberbullying is defined as the use of electronic communication technology to intentionally threaten, harm, embarrass, or socially exclude the other (Hinduja & Patchin, 2010; Güllü et al., 2023).

Bullying is currently very common in schools; Studies have shown 10 to 30% of students are exposed to bullying, and this figure increases during high school and is not specific to a particular culture (Elliott et al., 2019). Global statistics report victimization rates between 5.3 and 31.5 percent (Gradinger et al., 2009). For example, a study conducted in Greece indicated a prevalence of 14.6% of cyberbullying victims (Floros et al., 2013). In Iran, despite the limited number of studies in this field, statistics show that more than half of students have experienced traditional bullying or cyberbullying at least once (Beyrami et al., 2015) The results of a study on Iranian students aged 10 to 14 showed a bullying rate of 37% (Asmari Bardehzard et al., 2017).

Cyberbullying has potentially severe consequences such as school dropout or symptoms such as depression and suicide (Raskauskas & Stoltz, 2007; Shafiee-Kandjani et al., 2021). These consequences for the victims have negative effects on the development of adolescents (Fariña et al., 2014). Some of these negative effects include the strengthening of antisocial behaviors, less empathy (Brewer & Kerslake, 2015), weak self-control (Vazsonyi et al., 2012), and other behaviors such as aggression and theft (Hemphill et al., 2015). Various factors can play a role in being a victim of cyberbullying in students (Kim et al., 2020) including personality traits, early maladaptive schemas, and parenting styles.

Personality refers to an individual's pattern of thinking, feeling, and behaving. This pattern determines to a great extent how a person reacts to stressors in life (Allport, 1961). According to Costa and McCrae (2008), personality consists of five big factors: neuroticism, extroversion, agreeableness, conscientiousness, and openness to experience. From an adaptive perspective, personality traits may provide a context for people to engage in aggressive behaviors to pursue their adaptive goals (Volk et al., 2021). Research on personality traits and bullying has shown that cyber-victims spent more time on social networking sites than non-victims and had more emotional instability and less extroversion and conscientiousness (Rodríguez-Enríquez et al., 2019). Another study showed that a lower level of conscientiousness and agreeableness and a higher level of neuroticism and extroversion are related to victimization behavior (Mitsopoulou & Giovazolias, 2015).

Early maladaptive schemas (EMS), which are formed in early childhood and remain until the end of life, are defined as broad, dysfunctional, and pervasive patterns that involve memories, emotions, cognition, and bodily sensations about oneself and relationships with others (Orue et al., 2014). These schemas usually operate outside of consciousness and psychologically expose people to anxiety, incompatible relationships, substance abuse, and other psychological disorders and problems (Thimm, 2010). According to the findings of a study on Brazilian samples showed that adolescents with the experience of bulling victimization have significantly higher scores in the majority of EMS than other adolescents (Mallmann et al., 2017). Based on the findings of various studies (Yang and Salmivalli, 2015; Calvete et al., 2018), negative experiences in early life, such as victimization, are one of the factors that cause EMS. When schemas are developing, they tend to stabilize and perpetuate. Accordingly, these schemas make people face situations where they are victimized again.

Parenting styles refer to a set of parental behaviors and attitudes towards children, which lead to the creation of an emotional atmosphere in the family and directly affect children's behavior (Baumrind, 1991). These behaviors are adopted to regulate children's growth and behavior so that they can have an acceptable social life, adapt to their environment, and pursue their goals (Pinquart & Gerke, 2019). Almost all children and adolescents face challenges during their development and in the process of adapting to these changes. The stress and conflicts caused by these challenges can lead to behavioral-emotional and learning problems in them (Pinquart & Gerke, 2019).

A study on students showed a significant relationship between parenting styles and being a victim of bullying in adolescents, and psychological aggression and parents' physical punishment increased maturity and the risk of being a victim of bullying (Asgharpor & Zarbakhsh Bahri, 2018).

In summary, the electronic venue that has evolved provides opportunities for adolescents to interact positively or negatively. Consequently, educators and professionals such as school psychologists must have a comprehensive understanding of their students' cyberbullying experiences if they are to initiate effective policies and practices to address and prevent cyberbullying in schools (Sakellariou et al., 2012).

Therefore, given the evidence that shows the link between the increasing use of technology and bullying, it is very important to continue research on this important problem. A review of the literature showed most of the studies have investigated and confirmed the influence of personality variables, early maladaptive schemas, and parenting styles in predicting students' behavioral problems and disorders. Despite some knowledge about the factors associated with Cyber Victimization, few empirical studies have been conducted on the factors that influence the likelihood of this phenomenon. Although some studies have focused on traditional bullying (e.g., Asgharpor & Zarbakhsh Bahri, 2018; Mallmann et al., 2017; Mitsopoulou & Giovazolias, 2015), no study has directly addressed role of variables in the present study in predicting cyber victimization experiences. This being so, the present study aimed to investigate the predictive power of personality traits, early maladaptive schemas, and parenting styles alone as well as the interaction effect of these variables in predicting cyber victimization experiences of high school students.

Methods

Research design

The present study was conducted using a cross-sectional descriptive correlational design.

Participants and Sampling Method

The research population consisted of all male and female high school students who were studying in Sanandaj, Kurdistan, in the academic year 2021-2022. The sample size was estimated as196 persons using the following formula (Verma & Verma, 2020). However, considering the possibility of participants' dropout and their failure to complete the questionnaires, a total of 250 students were selected as the participants in the study, and after excluding the incomplete questionnaires, the data from 240 questionnaires were used for data analysis. The participants were selected using convenience sampling .The inclusion criteria for this study included the following: being a female or male high school student (Secondary High School), willingness and informed consent to participate in the study (completion of the online informed consent form). The exclusion criteria included incomplete completion of questionnaires or informed consent form. Of the 240 students who participated in this, 42.5% were tenth-grade, 35.4% were eleventh-grade and 22.1% were thirteenth-grade students. The age of the students varied between 14 and 18 years, and the majority of them were 16 years old (34.2%). 82.9% were female, and 17.1% were male. About 64.6% of the students were studying empirical science. This percentage was 21.7% and 13.8% for humanities and mathematics fields, respectively.

$$N = \frac{pqNt^2}{Nd^2 + pqt^2} = \frac{0/5 \times 0/5 \times 402 \times (1/96)^2}{402 \times (0/05)^2 + 0/5 \times 0/5 \times (1/96)^2} = 196.6 \approx 196$$

The following instruments were used in this study for data collection:

Questionnaires

Cyberbullying/Victimization Experiences

Questionnaire (CBVEQ): This questionnaire was developed by Antoniadou et al. (2016) to investigate cyberbullying and victimization experiences among adolescents. The CBVEQ contains 24 items that are scored on a 5-point Likert scale (*1 = never, 2 = once or twice, 3 = sometimes, 4= often, and 5 = every day*). These items measure cyberbullying and victimization behaviors directly and indirectly. Items 1, 6, 8, 10, and 12 measure cyberbullying and victimization experiences directly, and items 2, 3, 5, 7, and 9 measure cyberbullying and victimization experiences indirectly. The overall range of scores will vary between 24 to 120. Antoniadou et al. (2016) confirmed that the questionnaire has good validity and reliability (Cronbach's alpha was 0.89 for the cyberbullying factor and 0.80 for the cyber victimization factor). In Iran, the psychometric properties of the CBVEQ have been investigated and verified using confirmatory factor analysis, and the findings showed Cronbach's alpha coefficients for each factor of cyberbullying, and cyber victimization, and the total score were 0.75, 0.78, and 0.79, respectively (Basharpoor & Zardi, 2019). In this study, only items related to cyber victimization were used. The Cronbach's alpha value for items related to cyber victimization were 0.70.

The Big Five Questionnaire for Children (BFQ-C):

The questionnaire was developed and validated by Markos and Kokkinos (2017) based on the Big Five Questionnaire for Children and Adolescents. This questionnaire has 65 items and 5 factors (intellect/openness, agreeableness, conscientiousness,

emotional instability, and energy/extroversion). The items are scored on a 5-point Likert scale. There are 13 items per factor. The overall range of scores will vary between 65 to 325. The developer reported a very good fit (CFI=77.4, RMSEA=407.4, TLI=72.4) for the original version of the BFQ-C. In Iran, Atadokht et al. (2018) assessed the reliability of the questionnaire using internal consistency and checked its validity through convergent validity. The exploratory and confirmatory factor analysis showed that the questionnaire has acceptable reliability and validity indices.

Cronbach's alpha values for conscientiousness, intellect, agreeableness, emotional instability, and extroversion were equal to 0.75, 0.87, 0.72, 0.88, and 0.83, respectively. in the present study, Cronbach's alpha values for conscientiousness, intellect, agreeableness, emotional instability, and extroversion were 0.69, 0.71, 0.70, 0.75 and 0.74, respectively.

The Schema Inventory for Children (SIC):

This inventory was developed by Rijkeboer and de Boo (2010) based on Young's schema model and has 40 items scored on a four-point Likert scale from 1 (completely incorrect) to 4 (completely correct). This tool measures 11 early maladaptive schemas in children and adolescents (loneliness, vulnerability, mistrust/abuse, defectiveness, failure, submission, unrelenting standards, self-sacrifice, enmeshment, entitlement, and insufficient self-control). The overall range of scores will vary between 40 to 160. The confirmatory factor analysis confirmed the goodness of fit of the original version of the interjectory. The reliability of the instrument was assessed using the test-retest method and the Pearson correlations varied from 0.53 to 0.79 with an average of 0.67.

The psychometric properties of SIC were assessed in Iran, and the findings regarding the assessment of the consistency of the whole instrument and its eleven factors indicated the high reliability of the instrument. Cronbach's alpha for the whole instrument was 0.81 and its split-half reliability was 0.72 (Agha Yousefi & Amirpour, 2012). In the present study, Cronbach's alpha of the whole scale was 0.78.

Parenting Style Index-2 (PSI-II): This tool was developed by Darling and Toyokawa (1997) and contains 15 items with three subscales of autonomy granting, demandingness, and responsiveness. The items in the PSI-II are scored on a 5-point Likert scale ranging from strongly disagree to strongly agree. The overall range of scores will vary between 15 to 75. Darling and Toyokawa (1997) reported Cronbach's alpha for demandingness, responsiveness, and autonomy granting as 72%, 74%, and 75%, respectively. In Iran, Sadr et al. (2018) estimated the Cronbach's alpha of the whole index equal to 0.65, and for three subscales (demandingness, responsiveness, and autonomy granting) within a range of 0.53 to 0.75. The test-retest correlation coefficient was 0.77, indicating the acceptable reliability of the instrument. In the present study, Cronbach's alpha of the whole scale was 0.70 and for autonomy granting, demandingness, and responsiveness were 0.65, 0.69 and 0.76, respectively.

Procedure

First, the necessary permits were obtained from the Education Department of Sanandaj, Kurdistan Province. In the next step, some information about the objectives of the study and the research procedure were provided to the school principals and the participants. Before starting to collect information, all study procedures and questionnaires were approved by the school's principals. Since this study was conducted during the COVID-19 pandemic and school closures (in the school year 2021-2022), the questionnaires were uploaded to an online link-building website and the link was posted in the students' education application (SHAD; A government platform in Iran that was used in schools during the COVID-19 pandemic) and WhatsApp messenger.

Some instructions about the objective of the study, voluntary participation, the confidentiality of the participants' demographic information, and guidelines on how to complete the questionnaires were provided with the link to the questionnaire as part of the requirements for compliance with ethical protocols. A phone number was also provided to answer students' questions.

Data analysis

The questionnaires completed online were collected and data were analyzed with SPSS version 20 software (SPSS Inc., Chicago, IL, USA) using statistical techniques such as Pearson's correlation test and multivariate regression analysis.

Results

Table 1 summarizes the descriptive findings and correlation coefficients between the research variables.

Table 1 Descriptive and Correlational Findings

Variables	1	2	3	4	5	6	7	8	9	10
CBVEQ	1									
SIC	0.297*									
E	-0.375*	-0.435**	1							
O	-0.157*	-0.020	0.573**	1						
A	-0.207*	-0.443**	0.488**	0.508**	1					
C	-0.218*	-0.310**	0.567**	0.621**	0.458**	1				
EI	0.422**	0.542**	-0.307**	-0.241**	-0.217**	-0.325**	1			
Demandingness	0.416*	0.011	-0.067	-0.089	-0.018	-0.175*	0.124*	1		
Responsiveness	0.039	0.130*	-0.049	-0.023	-0.109*	-0.019	0.94	0.109	1	
Autonomy granting	-0.421*	-0.411**	0.140**	0.057	0.129*	0.071	-0.111	-0.257**	0.063**	1
M	29/52	103.52	31.62	33.92	32.68	30.79	53.77	19.53	13.96	10.17
SD	4.55	18.92	5.47	5.01	4.03	5.15	4.60	1.72	2.08	3.48

Note. CBVEQ= Cyberbullying/Victimization Experiences Questionnaire. SIC= the Schema Inventory for Children. E= Extroversion. O= Openness. A= Agreeableness. C= conscientiousness. EI= Emotional Instability. M = Mean. SD = Standard Deviation. **= P<0.01. *= P<0.05.

As can be seen in Table 1, the highest mean score for PSI-II was related to demandingness, and the highest mean score for BFQ-C was related to emotional instability. The data in this table also indicate that CBVEQ have a negative relationship with autonomy granting (r=-0.421), but a positive relationship with demandingness (r=0.416). The findings also indicate that CBVEQ are negatively correlated with E (r=-0.375), O (r=-0.157), A (r=-0.207), and C (r=-0.218), but a positive relationship with EI (r=0.422). Moreover, CBVEQ have a positive correlation with SIC (r=0.297).

Table 2
Variance Tolerance Index and Variance Inflation Factor

Multicollinearity Indicators			
Predictor Variables	Tolerance	VIF	DW
SIC	0.856	1.091	2.005
E	0.585	1.711	1.956
O	0.514	1.947	
A	0.668	1.498	
C	0.545	1.834	
EI	0.835	1.198	
Demandingness	0.918	1.089	2.065
Responsiveness	0.979	1.021	
Autonomy granting	0.926	1.080	

Note. SIC= the Schema Inventory for Children. E= Extroversion. O= Openness. A= Agreeableness. C= conscientiousness. EI= Emotional Instability. VIF= Variance Inflation Factor. DW= the Durbin Watson Statistic.

One of the assumptions for running regression analysis is that there is no linear effect between predictor variables. Variance tolerance and variance inflation indices are used to check these assumptions. The Durbin-Watson test is used to check this assumption. If the Durbin-Watson value is between 1.5 and 2.5, this assumption is met. Since the statistic of the regression model used in the present study varies from 1.15 to 2.5 (see Table 2), it can be concluded that the errors are independent of each other and the regression model can be used to test the research hypotheses.

To check the direction of the relationships and also to ensure the significance of the beta coefficients of the variables predicting cyber victimization, standardized regression coefficients were used (Table 3). Before running hierarchical regression analysis, synchronous regression was used to investigate the role of BFQ-C, PSI-II, and SIC in predicting cyber victimization. The results showed that only t-values for extraversion (t=-3.810) and emotional instability (t=5.247) are significant (p>0.01), and thus they can significantly predict cyber victimization. An analysis of PSI-II also indicated that only the t-values for demandingness (t=5.659) and autonomy granting (t=-5.906) are significant (p<0.01), confirming the role of these two parenting styles in predicting cyber victimization. The results for SIC indicated that the resulting t-value (t=5.160) is statistically significant (p<0.01) and can significantly predict cyber victimization. As shown in Table 3, only the variables that could predict cyber victimization in the synchronous regression model were entered into the multivariate regression equation using a hierarchical method. As can be seen, the beta coefficient in model 4 for the interaction between emotional instability and demandingness (t=-2.458; P<0.015), the interaction between emotional instability, demandingness, and SIC (t=-2.166; P<0.031) are statistically significant (p<0.01) and can significantly predict cyber victimization.

Table 3
The Results of Multivariate Regression Analysis Using the Hierarchical Method

	Models	B	SE B	β	T	P-value
1	E	-0.253	0.061	-0.253	-4.129	0.000
	EI	0.328	0.061	0.328	5.345	0.000
2	E	-0.206	0.060	-0.206	-3.420	0.001
	EI	0.318	0.059	0.318	5.366	0.000
	SIC	0.237	0.056	0.237	4.213	0.000
3	E	-0.099	0.056	-0.099	-1.781	0.076
	EI	0.314	0.053	0.314	5.897	0.000
	SIC	0.170	0.052	0.170	3.268	0.001
	Demandingness	0.318	0.051	0.318	6.195	0.000
	Autonomy granting	-0.193	0.055	-0.193	-3.525	0.001
4	E	-0.102	0.053	-0.102	-1.899	0.059
	EI	0.237	0.055	0.237	4.318	0.000
	SIC	0.137	0.051	0.137	2.715	0.007
	Demandingness	0.265	0.053	0.265	45.027	0.000
	Autonomy granting	-0.122	0.053	-0.122	-2.301	0.022
	EI × Demandingness	-0.164	0.067	-0.155	-2.458	0.015
	EI × Autonomy granting	0.059	0.057	0.070	1.035	0.302
	EI × SIC	-0.081	0.055	-0.085	-1.465	0.144
	Demandingness × SIC	0.023	0.054	0.030	0.426	0.670
	Autonomy granting × SIC	0.100	0.058	0.117	1.718	0.087
	EI × Demandingness × SIC	-0.130	0.060	-0.141	-2.166	0.031
	EI × Autonomy granting × SIC	-0.074	0.053	-0.124	-1.386	0.167
	E × Demandingness × SIC	-0.037	0.040	-0.108	-0.916	0.361
	E × Autonomy granting × SIC	0.006	0.065	0.013	0.098	0.922

Note. SIC= the Schema Inventory for Children. E= Extroversion. EI= Emotional Instability.

Table 4
Results of Multivariate Regression Analysis Using the Hierarchical Method to Predict cyber victimization Based on the Interaction of BFQ-C, SIC, and PSI-II

Models		Sum of Squares	df	Mean of Squares	F	P-value	R	R^2
1	Regression	55.673	2	27.836	35.986	0.000	0.483	0.233
	Residuals	183.327	237	0.774				
	Total	239.000	239					
2	Regression	68.495	3	22.832	31.602	0.000	0.535	0.287
	Residuals	170.505	236	0.722				
	Total	239.000	239					
3	Regression	104.464	5	20.893	36.339	0.000	0.661	0.437
	Residuals	134.536	234	0.575				
	Total	239.000	239					
4	Regression	131.652	14	9.404	19.710	0.000	0.742	0.551
	Residuals	107.348	225	0.477				
	Total	239.000	239					

The data in Table 4 indicate that, in the first model, emotional instability and extroversion as personality traits when entered into the prediction model alone explain 0.23% of the variances in cyber victimization (R=0.233). In the second model, when SIC are entered from the model, the coefficient of determination increased from 0.233 to 0.287. In the third model, with the inclusion of demandingness and autonomy granting as two parenting styles, the coefficient of determination increased from 0.287 to 0.437. In the fourth model, the coefficient of determination increased from 0.437 to 0.551, which is significant at the $p<0.01$ level, with the inclusion of the interaction effect of the variables of the previous models.

Discussion

The present study aimed to predict cyber victimization based on personality traits, early maladaptive schemas, and parenting styles among high school students. The results of the regression analysis showed that among the personality traits, extroversion and emotional instability can significantly predict cyber victimization negatively and positively, respectively, as evident in previous studies (Bayat et al., 2021: Rodríguez-Enríquez et al., 2019; Mitsopoulou & Giovazolias, 2015). Accordingly, it can be argued that extroversion includes traits such as talkativeness, boldness, and positive activity. Pleasantness is another interpersonal tendency of extroverted people. Pleasant people tend to have empathy and support for people, and these factors make them less likely to engage in bullying behaviors to express their desires. In contrast, students with emotional instability cannot control their emotions well. Thus, they are more likely to show more victimization behavior compared to other students. Indeed, children who show extensive angry emotions are more likely to be bullied by their peers, and in turn, chronic victimization leads the child to express angry emotions (Mitsopoulou & Giovazolias, 2015).

The results also showed that demandingness and autonomy granting as parenting styles can significantly predict cyber victimization in students negatively and positively, respectively. These findings were in line with the observations made in previous studies (Dorreh et al., 2019; Katz et al., 2019). This is to argue that the family is the first and most important social foundation that plays a role in the socialization and education of children. There is strong evidence that parenting styles lead to family consolidation against bullying and victimization experiences. Parents who use an authoritarian (demanding) style have cold, harsh, and indifferent behaviors. Such parents have a lot of control over their child's behavior. These parents have very dominant behaviors and always seek to increase their power and dominance in the family. Thus, the children of these parents often tend to be anxious, isolated, violent, and sad, and they are looking for an opportunity to vent their anger and hatred towards their oppressor parents or to re-experience the previous role of being a victim.

For this reason, we can expect aggressive and bullying behavior from these children, especially boys, during adolescence and adulthood (Martínez et al., 2019). In contrast, parents with an authoritative parenting style (autonomy granting) try to interact with their children by establishing a warm and constructive relationship. Parents following this style expect reasonable behavior from their children (Georgiou et al., 2017).

The results of the regression analysis indicated that the early maladaptive schemas can significantly predict cyber victimization as reported by Borges et al. (2020) and Mallmann et al. (2017). Following this finding, it can be argued that people with maladaptive schemas show behaviors such as high dependency, domineering, or controlling behaviors, and as a result, they experience more victimization behaviors (Mallmann et al., 2017).

These schemas play an important role in predicting such behaviors. Compared to their peers, people with early maladaptive schemas will consider themselves incompetent and will undoubtedly fail to achieve a reasonable level of progress (in education, career, etc.). Such people often have lower self-esteem compared to others (Borges et al., 2020). According to schema therapy theory, it can be predicted that victimization in school and family can lead to the creation of in compatible schemas in victims, and these schemas increase the probability of victimization in the future. Indeed, Schemas always create biases in the person's interpretation of events, and these biases, with false assumptions, cause people to react unrealistically in situations that are in line with previous schemas (Yang and Salmivalli, 2015).

The findings from this study also showed that the interaction between personality traits, early maladaptive schemas, and parenting styles is a stronger predictor for cyber victimization in students than any of the variables alone. The results indicated that with the inclusion of the interaction effect of all variables in the fourth model, the coefficient of determination increases to 0.551 while none of the variables alone were able to account for this variance. The data showed that emotional instability, early maladaptive schemas, and demandingness (authoritarian) parenting styles play a very significant role in predicting cyber victimization. To the best of our knowledge, no study has yet addressed the effect of interaction between variables in predicting bullying/victimization experiences.

However, these results can be considered consistent with similar studies that have focused on the role of personality traits, especially emotional instability, early maladaptive schemas, and the demanding parenting style in predicting bullying/victimization experiences and other behavioral problems (Dorreh et al., 2019; Katz et al., 2019; Bayat et al., 2021; Mallmann et al., 2017). Accordingly, it can be argued that the main feature of emotional instability (neuroticism), as one of the powerful factors in predicting behavioral problems in adolescents, is having unpleasant and negative experiences and emotions. This personality trait expresses a person's general tendency to experience negative feelings and emotions such as depression, shyness, vulnerability, aggressiveness, emotional instability and sensitivity, and irritability (Bayat et al., 2021). High neuroticism is associated with poor adaptation, emotional coping style, and high stress, which can make a person vulnerable to physical and psychological problems. As a result, these adolescents generally express their emotions irrationally, are more irritable, and have low frustration tolerance (Costa & McCrae, 2008).

Therefore, high levels of neuroticism can cause behavioral problems in adolescents. Another possible factor is the relationship between early maladaptive schemas and the personality traits of children and adolescents. Young and Brown (1994) believed that temperament and incompatible personality traits cause children and adolescents to be more exposed to negative educational challenges with their parents, and this causes the formation of maladaptive schemas, indicating that the child's basic needs for security, stability, etc. are not met. Following the findings of the present study, a study reported a strong relationship between personality traits and early maladaptive schemas that can play a role in predicting behavioral problems and high-risk behaviors in adolescents (Valikhani et al., 2017).

Demanding styles and the type of parent-child interaction are also important factors that can contribute to making a child the victim of bullying. Children whose parents behave strictly do not have enough self-confidence and self-esteem. Thus, these children are unable to defend their rights if necessary, and they are more likely to become victims of bullying (Katz et al., 2019). A study by Asgharpor and Zarbakhsh Bahri (2018) on students showed a significant relationship between parenting styles and bullying victims in adolescents.

They also showed that parental psychological aggression and physical punishment are risk factors for bullying victimization. Parents who adopt an authoritarian style have cold, harsh, and indifferent behaviors and have a lot of control over their child's behavior. These parents have very dominant behaviors and always seek to increase their power and dominance in the family (Rajendran et al., 2016).

Conclusion

Overall, the findings of this study revealed that personality traits, early maladaptive schemas, and

parenting styles can predict cyber victimization in students, and the interaction effect of these variables is a significant predictor of cyber victimization.

More specifically, emotional instability, maladaptive schemas, and demandingness parenting styles play a very significant role in predicting cyber victimization among high school students. The findings of the present study have some psycho-educational implications. Cyberbullying victims must understand that they should not be blamed for their victimization experiences. Moreover, improving students' social relationships (for example, with teachers or classmates) can make vulnerable students feel supported and valued and thus contribute to preventing other behavioral problems. Some students who experience more severe cyberbullying or victimization may benefit from intensive psychotherapeutic interventions.

Limitations

One of the most important limitations of the present study was that the data were collected online due to the COVID-19 outbreak. Thus, it was not possible to conduct face-to-face interviews with the students. Besides, the students were not selected randomly. These problems could affect the findings of the study. Also, this study was conducted based on cross-sectional data that might restrict causal inferences. Other variables, such as delinquency, substance abuse, and previous suicide attempts, may also account for cyberbullying and victimization experiences, which need to be investigated in future studies. Similar studies can address these variables with a focus on gender and compare people engaged in cyberbullying and cyber victims.

Ethical Considerations

This article is an excerpt from the master's thesis of the first author and all its steps have been reviewed and approved by the Vice-Chancellor of Research and Technology in Kurdistan University. All ethical principles are considered in this article.

The participants were informed of the purpose of the research and its implementation stages. They were also assured about the confidentiality of their information and were free to leave the study whenever they wished, and if desired, the research results would be available to them. A written consent has been obtained from the subjects. principles of the Helsinki Convention were also observed. Participation in this research was with informed consent for all participants. Principles of the Helsinki Convention was also observed.

Funding

This research project received no funds or financial support from any university or scientific institution.

Author Contributions

All authors equally contributed to preparing this article.

Conflict of Interest

The authors declare no conflict of interest.

Acknowledgments

The authors would like to express their gratitude to the students, school principals, and all those who contributed to conducting this study.

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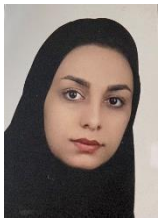

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