Iranian Journal of Educational Sociology

Journal Website

Article history:
Received 01 February 2026
Revised 01 June 2026
Accepted 07 June 2026
Initial Published 10 June 2026
Final Publication 10 July 2026

Iranian Journal of Educational Sociology

Volume 9, Issue 4, pp 1-11

Quarterly
Iranian Journal of Educational Sociology

E-ISSN: 2645-3460

A Prevalence and Risk Factors of Cyberbullying among High School Students in Tehran, Iran: A Cross-Sectional Survey

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A r t i c l e I n f o

Article type:
Original Research

How to cite this article:
Ghasemtabar, S. A., Abdolmaleki, S., & Ghasemtabar, S. A. (2026). A Prevalence and Risk Factors of Cyberbullying among High School Students in Tehran, Iran: A Cross-Sectional Survey. *Iranian Journal of Educational Sociology, 9*(4), 1-11.
https://doi.org/10.61838/kman.ijes.1476

A B S T R A C T

Purpose: The present study was conducted with the aim of investigating the prevalence and risk factors of cyberbullying among high school students in Tehran, Iran.

Methods and Materials: This study employed a cross-sectional research design. The statistical population encompassed all high school students in Tehran during the academic year 2021-2022. A sample of 389 individuals was selected using a multi-stage cluster sampling method. Data were collected using the Multidimensional Cyberbullying Questionnaire (MCQ), developed by the researchers. The collected data were analyzed using Multinomial Logistic Regression (MLR) analysis, conducted with SPSS22 and AMOS26.

Findings: 67.60% of participants experienced cyberbullying in the past year. Retaliation was the primary coping strategy. It was found that being female increases the probability of victimization (P< 0/001) and decreases the probability of being in other roles (P< 0/0001). senior high school students were more likely to be bystanders (P< 0/01). with the increase in the use of technologies, the possibility of being in all the roles of cyberbullying increases (P< 0/01), and with the increase in the skill in using technology, the possibility of being in the role of bully(P<0/01), bully-bystander (P< 0/001), and bully-victim-bystander(P< 0/001) increases and the possibility of being in the role of victim decreases (P< 0/001).

Conclusion: Cyberbullying poses a significant threat to the well-being of Iranian students. This study highlights the high prevalence of cyberbullying and the ineffective use of retaliation as a coping strategy. These findings underscore the urgent need for comprehensive interventions to prevent and address cyberbullying. Policymakers, educators, and mental health professionals must collaborate to develop effective strategies to protect young people in the digital age.

Keywords: *Cyberbullying, Prevalence, Risk Factors, High School Students, Tehran.*

1. Introduction

The rapid expansion of digital technologies and online platforms has transformed the social interactions of adolescents, offering both opportunities and risks. While cyberspace facilitates communication, learning, and socialization, it also exposes young individuals to various forms of harm, including cyberbullying, which represents a significant threat to their psychological and social well-being (Casana Mohedo et al., 2026; Ma et al., 2026; Manzoor et al., 2026). Cyberbullying, defined as intentional and repetitive aggression carried out through electronic communication against a target who is unable to easily defend themselves, is widely regarded as a digital extension of traditional bullying (Saeidi & Soleimani, 2025; Sergeeva & Zheltukhina, 2025; Solas-Martínez et al., 2025). Unlike conventional forms of bullying, cyberbullying can occur at any time and place, often with greater anonymity and a wider audience, amplifying the psychological impact on victims (Erbiçer et al., 2023; Orue et al., 2023; Yurdakul et al., 2022). The COVID-19 pandemic has further intensified adolescents' exposure to online environments, as remote learning and social distancing measures increased reliance on digital platforms for academic and social engagement (Nagata et al., 2022; Vismara et al., 2022; World Health, 2022). Consequently, understanding the prevalence and risk factors of cyberbullying in high school populations is critical for developing targeted interventions and protective policies.

Empirical research has demonstrated that cyberbullying can have severe and lasting negative effects on adolescents. Victims often experience depression, anxiety, social isolation, and diminished academic performance, alongside increased risk of self-harm and suicidal ideation (Macaulay et al., 2022; Shin & Choi, 2021; Wang & Kim, 2021; Zhu et al., 2021). Beyond mental health, cyberbullying can disrupt peer relationships, diminish life satisfaction, and contribute to broader social and occupational challenges during adolescence (Ngo et al., 2021; Saleem et al., 2021; Seçkin-Kapucu et al., 2021). The complex interplay of individual, social, and technological factors in cyberbullying highlights the need to explore both personal characteristics, such as gender and coping styles, and environmental contexts, including school culture and online platform use, in understanding adolescents' vulnerability (Azami & Taremian, 2021; Cagirkan & Bilek, 2021; Martínez-Ferrer et al., 2021).

Prevalence studies across different countries reveal substantial variability in cyberbullying experiences. In Israel, Aizenkot and Kashy-Rosenbaum (2021) found that significant proportions of elementary, middle, and high school students experienced harassment through platforms such as WhatsApp, emphasizing the pervasiveness of this phenomenon in technologically connected societies (Aizenkot & Kashy-Rosenbaum, 2021). Nordic adolescents similarly show correlations between cyberbullying and diminished life satisfaction, with both victims and perpetrators experiencing adverse outcomes (Arnarsson et al., 2020). Regional differences in prevalence and forms of cyberbullying underscore the need for culturally sensitive studies, as cyberbullying dynamics are shaped by social norms, access to technology, and educational systems (Camerini et al., 2020; Chen & Chen, 2020; Chi et al., 2020). Within Iran, studies have highlighted varying rates of victimization and perpetration among high school students, with contributing factors including gender, age, and technological engagement (Azami & Taremian, 2021; Kaluarachchi et al., 2020; Mohseny et al., 2020).

Gender plays a complex role in cyberbullying experiences. Several studies indicate that male adolescents are more likely to engage in perpetration, whereas female adolescents are more likely to be victims (Ma et al., 2026; Martínez-Ferrer et al., 2021; Nagata et al., 2022). This gender disparity is often explained through theories of aggression, socialization patterns, and the differential use of covert versus overt forms of aggression, with girls tending to use relational or indirect strategies, while boys exhibit more direct or physical forms of cyber aggression (Erbiçer et al., 2023; Orue et al., 2023; Yurdakul et al., 2022). Furthermore, research suggests that gender differences extend to the bystander role, influencing how adolescents intervene or respond to online bullying incidents (Macaulay et al., 2022; Wang & Kim, 2021). Understanding these distinctions is critical for developing gender-responsive interventions that enhance resilience and equip adolescents with effective coping strategies.

Educational stage and age are also associated with cyberbullying experiences. While some studies indicate higher victimization rates among younger students due to limited experience and cognitive maturity, other studies report increased perpetration and bystander involvement among older adolescents (Aizenkot & Kashy-Rosenbaum, 2021; Arnarsson et al., 2020; Skilbred-Fjeld et al., 2020). Cognitive development during adolescence, including the ongoing maturation of the prefrontal cortex, contributes to heightened risk-taking behaviors, impulsivity, and susceptibility to online peer influence, all of which can

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E-ISSN: 2645-3460

amplify the likelihood of engagement in or exposure to cyberbullying (Ma et al., 2026; Manzoor et al., 2026). Consequently, the educational stage may modulate the roles adolescents occupy in cyberbullying dynamics, highlighting the importance of stratified prevention approaches.

Technological literacy and usage patterns further mediate cyberbullying risk. Adolescents with higher technological skills may be more likely to perpetrate cyberbullying due to increased proficiency in leveraging digital tools, whereas lower skill levels can heighten vulnerability to victimization (Chen & Chen, 2020; Chi et al., 2020; Kaluarachchi et al., 2020). Simultaneously, prolonged online engagement increases opportunities for exposure, creating a paradoxical effect in which both skilled and frequent users encounter distinct risks and roles in cyberbullying incidents (Casana Mohedo et al., 2026; Ma et al., 2026; Manzoor et al., 2026). The interaction between skill, access, and usage intensity suggests that interventions must consider not only behavioral education but also digital literacy and responsible online engagement training.

Coping strategies employed by adolescents in response to cyberbullying significantly influence the impact of victimization and the persistence of bullying behaviors. Empirical evidence indicates that active coping strategies, such as problem-solving or seeking support, tend to mitigate negative outcomes, whereas passive, avoidant, or retaliatory strategies exacerbate psychological distress and perpetuate the cycle of cyberbullying (Erbiçer et al., 2023; Manzoor et al., 2026; Ngo et al., 2021). Studies also highlight the cultural variability in coping, with Iranian adolescents demonstrating a tendency toward retaliation as a primary coping mechanism, which contrasts with other countries where seeking help or ignoring the aggression is more common (Azami & Taremian, 2021; Cagirkan & Bilek, 2021; Saeidi & Soleimani, 2025). Therefore, culturally tailored interventions that promote adaptive coping strategies are necessary to reduce the psychosocial harm of cyberbullying.

The cumulative evidence underscores that cyberbullying is a multifaceted phenomenon influenced by individual characteristics, social contexts, and digital behaviors. Its prevalence among adolescents, particularly in high school settings, is influenced by gender, educational stage, technological proficiency, and online engagement patterns, while the effectiveness of coping strategies modulates psychological outcomes. The rapid increase in digital interactions, especially in the post-COVID-19 era, necessitates urgent attention to cyberbullying prevention, monitoring, and intervention (Nagata et al., 2022; Shin & Choi, 2021; Vismara et al., 2022). Understanding the interplay of these risk factors within the Iranian high school context provides a foundation for evidence-based strategies that safeguard adolescent well-being and foster healthier online environments.

The present study aims to investigate the prevalence and risk factors of cyberbullying among high school students in Tehran, Iran.

2. Methods and Materials

2.1. Study Design and Participants

The present research was conducted with a cross-sectional survey design. The statistical population encompassed all high school students in Tehran during the academic year 2021-2022. a multi-stage cluster sampling method was used to select the sample. Thus, the city of Tehran was divided into five geographical parts: north, south, east, west, and center. Then, 2 regions (10 districts in total) and four schools (two boys' schools and two girls' schools) were selected from each part. Considering that the high school stage in Iran consists of junior high school (grades 7 to 9; adolescents aged 13 to 15) and senior high school (grades 10 to 12; adolescents aged 16 to 18), so, to have a representative sample, two junior and two senior high schools were selected from each region. From each school, 10 students from different grades completed the questionnaire. A total of 400 questionnaires were completed and finally, 389 questionnaires were selected for analysis.

Access to the internet and ownership of a smartphone, having no serious psychological or academic problems, and informed consent from both the student and parents were considered as inclusion criteria. Providing incomplete or contradictory information in the questionnaire was considered as an exclusion criterion.

2.2. Measure

Analysis and criticism of the existing questionnaires in the field of cyberbullying indicate that each of them has one or more weaknesses (Smith, 2019; Berne et al., 2013). Therefore, the Multidimensional Cyberbullying Questionnaire (MCQ) was developed by the authors. In the development of questionnaire items all forms of cyberbullying (cyber harassment, denigration, happy slapping, cyber grooming, flaming, cyberstalking, masquerading or Impersonation, trickery, outing, cat-

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E-ISSN: 2645-3460

phishing, exclusion or ostracism, and sexual cyberbullying) are considered. The developed questionnaire has three parts. The first part contains five questions, three of which are related to children's demographic characteristics (gender, age, and educational stage), and two questions are about their skills and the extent of their use of technological tools. The second part of the questionnaire is for measuring cyberbullying and contains 39 questions. This part of the questionnaire includes three dimensions or subscales, which are cyber bully, cyber victim, and cyber bystander. Each subscale contains thirteen questions. In this questionnaire, by combining these three roles, seven roles can be identified, which are: 1) cyber bully (B), 2) cyber victim (V), 3) cyber bystander (By), 4) cyber bully-cyber victim (B-V), 5) cyber victim-cyber bystander (V-By), 6) cyber bully-cyber bystander (B-By), 7) cyber bully-cyber victim-cyber bystander (B-V-By).

The reference period or time frame "in the past year" was used in the current questionnaire. Respondents answered the questions on a five-point Likert scale (no; yes, once or twice in the past year; yes, once or twice a month; yes, once or twice a week; yes, every day or almost every day). The respondent's score in each question will range from zero (no) to four (yes, every day or almost every day). Therefore, the minimum score of each respondent in this part of the questionnaire is zero and the maximum score is 156. A higher score on this questionnaire indicates a greater experience of each form of cyberbullying.

The third part of the questionnaire contains one question and measures the coping strategies of cyber victims when facing cyber bullies. For this purpose, the participants were asked: if someone harasses you or abuses you in cyberspace in one of the ways that we mentioned in the questions above, what would you do first before doing anything? The respondent had to choose one of the answers provided. The answers are in the findings section.

Confirmatory Factor Analysis with the Maximum Likelihood Method was used to verify the construct validity. Table 1 shows the fit indices of the confirmatory factor analysis model of the MCQ. To discuss the fit of the model, we need to consider different indicators. For the RMSEA index, values between 0.05 and 0.08 (Fabrigar et al, 1999), for NFI, TLI, CFI, IFI, GFI, AFGI indices, a value greater than 0.90 (Byrne, 1994; Bentler, 1990), and for X2/df a lower value of 2 or 3 (chermelleh-Engel et al., 2003) are acceptable. According to the results reported in table 1, it can be said that the confirmatory model had an acceptable fit and the three-factor structure of the questionnaire was confirmed.

Table 1

Confirmatory factor analysis model fit indices

X^2/df	X^2	GFI	AGFI	IFI	TLI	CFI	NFI	REMSEA
2.62	1039.12	0.93	0.94	0.92	0.96	0.93	0.95	0.06

Abbreviations: RMSEA: root mean square error of approximation; NFI: normed fit index; CFI: comparative fit index; TLI: Tucker-Lewis index; IFI: Incremental Fit Index; AGFI: adjusted goodness of fit index; GFI: Goodness of Fit Indices; CMIN/DF: minimum discrepancy function by degrees of freedom divided; X^2: chi-square; X^2/df: chi-square/degrees of freedom.

To check the content validity of the questionnaire, two indexes of content validity ratio (CVR) (Lawshe, 1975) and content validity index (CVI) (Waltz & Bausell, 1981) were used. In the current study, 11 university professors and Iranian specialists in the fields of educational technology, information and communication technology, psychology, and education were selected to check the content validity of the questionnaire. Respondents rated each of the questions based on a three-point Likert scale (the item is necessary; the item is useful but not necessary; the item is not necessary) for CVR and based on a four-point Likert scale (completely relevant; relevant but needs revision; needs major revision; not related) for CVI. The value of CVR (for 11 experts) and CVI should not be less than 0.59 (Lawshe, 1975) and 0.78 (Polit et al., 2007), respectively. Questions whose CVR and CVI were below the quorum were revised and resubmitted. In Table 2, the CVR and CVI of the questionnaire items after revision and changes are reported. As can be seen, the content validity of all questionnaire items is at desired levels.

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Table 2

The content validity rate (CVR) of the questionnaire items after revision.

Item	CVR	CVI	Item	CVR	CVI	Item	CVR	CVI	Item	CVR	CVI
1	0.82	0.90	11	0.82	0.82	21	0.82	0.90	31	0.82	0.90
2	0.82	0.90	12	0.82	1	22	0.64	0.82	32	1	0.90
3	1	0.82	13	1	1	23	0.82	0.90	33	0.82	0.90
4	0.64	0.82	14	0.82	0.90	24	0.82	0.82	34	0.82	0.82
5	0.82	0.90	15	0.82	0.90	25	0.82	0.90	35	0.82	0.90
6	0.82	0.90	16	1	0.82	26	0.82	0.90	36	1	0.90
7	0.82	0.82	17	0.64	0.82	27	1	1	37	0.82	1
8	0.82	0.90	18	0.82	0.90	28	0.82	0.90	38	0.82	0.90
9	1	1	19	0.82	0.90	29	0.82	0.90	39	0.82	1
10	1	0.82	20	1	1	30	0.82	0.90	40	0.82	0.90

Cronbach's alpha method was used to check the reliability of this questionnaire, which in a sample of 43 people, for the whole scale and the three main dimensions of cyberbullying, cyber victim and cyber bystander were obtained as 0.77, 0.81, 0.74, and 0.76 respectively.

2.3. Data Analysis

Descriptive statistical methods (mean, standard deviation, frequency) were used for descriptive data analysis, and Multinomial Logistic Regression (MLR) was used for inferential data analysis. The data were analyzed using $SPSS_{22}$ and $AMOS_{26}$ statistical software.

3. Findings and Results

The demographic characteristics of the participants were reported in Table 3.

Table 3

Demographic profile of the participants

Demographics	Categories	N (%)
Gender	Girl	202 (51.93)
	Boy	187 (48.07)
Age	-	Mean 15.70 (Range: 13-18)
Education	Junior	181(46.53)
	Senior	208 (53.47)
Total	-	(100)

Table 4 is related to the level of skill and use of technologies by the participants (including social networks and messengers). As can be seen, 6% of the participants reported that they have no skills, and 46% chose the “I know a lot” option, which indicates the high level of skill of the latter group in using technologies. Also, 1% of the participants use technologies for half an hour or less per day, and 32% for more than five hours a day.

Table 4

Distribution of the frequency of skills and the level of technology use by the participants

Variable	Subgroups	N (%)
Skill in using technologies	I don’t know	23 (6)
	I don’t know much	43 (11)
	I know	144 (37)
	I know a lot	179 (46)
Level of technologies’ use	Half an hour or less	4 (1.03)
	About 1 hour	19 (4.88)
	About 2 hours	21 (5.40)

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About 3 hours	31 (7.97)
About 4 hours	48 (12.34)
About 5 hours	143 (36.76)
More than 5 hours	123 (31.62)

In Table 5, the frequency distribution of the prevalence of cyberbullying among teenagers in Tehran province was reported by demographic variables and also the seven roles of cyberbullying. According to the data of the last row of this table, among the total participants in the research (389 individuals), 263 individuals (60.67%) have had at least one of the seven cyberbullying roles (bully, victim, bystander, bully-victim, victim-bystander, bully-bystander, bully-victim-bystander) at least once during the last year. 126 individuals (32.4%) have not had any experience in cyberbullying.

Table 5

Frequency distribution of the prevalence of cyberbullying in high school students in Tehran by demographic and role variables

Roles		B		V		By		B-V		V-By		B-By		B-V-By		Total		not involved	
Variables	Categories	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Gender	Girl	3	1.48	9	4.45	51	25.25	3	1.48	34	16.83	19	9.40	38	18.81	157	77.72	45	22.28
	Boy	6	3.21	6	3.20	31	16.58	5	2.67	21	11.33	14	7.48	23	12.30	106	56.68	81	43.31
Education	Junior	4	2.30	7	4.02	32	18.96	4	2.30	24	13.79	15	8.62	23	13.22	110	63.22	64	36.78
	Senior	5	2.32	8	3.72	49	22.79	4	1.89	31	14.41	18	8.37	37	17.67	153	71.16	62	28.84
Total	-	9	2.31	15	3.86	82	21.08	8	2.05	55	14.14	33	8.48	61	15.68	263	67.60	126	32.4

The responses of the participants about their strategies to cope with cyberbullying are reported in Table 6. The strategies of retaliation and informing the father or mother were respectively the most (34.96%) and the least (2.31%) strategies used by students.

Table 6

Frequency distribution of participants' responses about their coping strategies against cyberbullying

Items	N (%)
I tell someone to help me	20 (5.14)
I ask the disturbing person to stop his/her behavior	101 (25.97)
I will do something so that she/he can't bother me anymore.	73 (18.77)
I don’t care	43 (11.05)
I retaliate	136 (34.96)
I get very upset but I don't do anything	16 (4.11)

Based on the data reported in Table 7, the gender variable had a significant effect on all 7 cyberbullying roles, and girls are 54% less likely to be in the bully role than boys, but the probability of girls being placed in other roles (victim, bystander, bully-victim, victim-bystander, bully-bystander and bully-victim-bystander) is significantly more than boys.

The probability of senior high school students being in the role of bystander is 18% higher than that of junior high school students. In other roles, there was no significant difference between the senior and junior high school students.

With the increase in the use of technologies, the possibility of being in all the seven roles of cyberbullying increases significantly.

By increasing the skill level in using technology, the possibility of being in the role of bully increases by 15%, bully-bystander by 17%, and bully-victim-bystander by 32%, and the possibility of being in the role of a victim decreases by 56%. The variable of skill in using technology did not have a significant effect on the three roles of bystander, bully-victim, and victim-bystander.

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E-ISSN: 2645-3460

Table 7

Multinominal logistic regression (MLR) on the effect of the variables of gender, age, technology use and skill in using technological tools on each of the seven roles of cyberbullying.

Variables	Categories	B		V		By		B-V		V-By		B-By		B-V-By	
		OR	CI	OR	CI	OR	CI	OR	CI	OR	CI	OR	CI	OR	CI
Gender	Girl	0.46$^{\times\times\times}$	0.32-0.56	1.37$^{\times\times}$	1.26-1.63	1.52$^{\times\times}$	1.41-1.86	1.55$^{\times\times}$	1.32-177	1.48$^{\times\times}$	1.32-176	1.25$^{\times\times}$	0.74-1.22	1.52$^{\times\times}$	1.33-168
	Boy (ref.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Education	Junior	1.02	0.84-1.31	0.97	56-1.12	1.18$^{\times}$	0.86-1.32	1.04	0.91-1-43	0/98	0.67-1.26	1.11	0.79-1.32	1.13	0.78-1.40
	Senior (ref.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Use	-	1.58$^{\times\times}$	1.11-1.21	1.63$^{\times\times\times}$	1.33-2.04	1.66$^{\times\times\times}$	1.43-1.97	1.86$^{\times\times\times}$	1.57-2.14	1.21$^{\times}$	0.98-1.39	1.61$^{\times\times}$	1.54-2.01	1.71$^{\times\times\times}$	1.53-1.94
Skill	-	1.15$^{\times}$	0.86-1.41	0.44$^{\times\times}$	0.31-0.76	1.05	0.78-1.32	1.08	0.86-1.41	0.93	0.63-1.26	1.17$^{\times\times}$	0/89-1.39	1.32$^{\times\times}$	0.96-1.52

Note. OR: Odds ratios; CI: 95% Confidence Interval; $^{\times\times\times}$: P< 0/001; $^{\times\times}$: P< 0/01; $^{\times}$: P< 0/01; Ref: Reference Group. Reference category: not involved in cyberbullying.

4. Discussion and Conclusion

The findings of the present study revealed that cyberbullying is a highly prevalent phenomenon among high school students in Tehran. More than two-thirds of the participants reported involvement in at least one cyberbullying role during the previous year, indicating that cyberbullying has become a significant social and psychological concern within the adolescent population. This finding is consistent with the growing body of international literature demonstrating that cyberbullying has emerged as a widespread problem among adolescents worldwide (Casana Mohedo et al., 2026; Vismara et al., 2022; Zhu et al., 2021). The high prevalence observed in the present study supports previous evidence suggesting that increased digital connectivity and extensive engagement with social networking platforms have expanded opportunities for online aggression and victimization (Camerini et al., 2020; Chen & Chen, 2020; Chi et al., 2020). Furthermore, the elevated prevalence may reflect the long-term effects of the COVID-19 pandemic, during which students increasingly relied on digital communication for educational and social purposes, thereby increasing exposure to cyberbullying risks (Shin & Choi, 2021; World Health, 2022). The findings also align with reports indicating that cyberbullying prevalence varies across countries but generally demonstrates an upward trend as technology becomes more integrated into adolescents' daily lives (Nagata et al., 2022; Saleem et al., 2021; Vismara et al., 2022).

Another important finding was that gender significantly influenced cyberbullying involvement. Female students were more likely to report victimization and participation in several mixed cyberbullying roles, whereas males demonstrated a greater likelihood of occupying the perpetrator role. This pattern is largely consistent with previous research indicating that boys are more frequently involved in cyberbullying perpetration, while girls experience higher rates of victimization (Azami & Taremian, 2021; Martínez-Ferrer et al., 2021; Nagata et al., 2022). Several explanations may account for this pattern. First, boys tend to exhibit higher levels of direct and overt aggression, which may translate into online environments and increase the likelihood of engaging in cyberbullying behaviors (Cagirkan & Bilek, 2021; Erbiçer et al., 2023). Second, girls may engage more heavily in social networking activities and online communication, increasing their exposure to relational aggression and cybervictimization (Aizenkot & Kashy-Rosenbaum, 2021; Seçkin-Kapucu et al., 2021). Moreover, female adolescents may be more willing to disclose experiences of victimization and emotional distress, resulting in higher reported victimization rates (Martínez-Ferrer et al., 2021; Sergeeva & Zheltukhina, 2025). The current findings therefore reinforce the need for gender-sensitive prevention and intervention strategies that acknowledge distinct patterns of cyberbullying involvement among male and female adolescents.

The findings further indicated that educational stage had only a limited influence on cyberbullying involvement. Senior high school students were more likely to occupy the bystander role, whereas no substantial differences emerged between junior and senior students regarding most other

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E-ISSN: 2645-3460

cyberbullying roles. This finding corresponds with studies that reported weak or inconsistent relationships between age, educational stage, and cyberbullying involvement (Aizenkot & Kashy-Rosenbaum, 2021; Arnarsson et al., 2020; Chen & Chen, 2020). The absence of strong educational-stage differences may suggest that cyberbullying has become a pervasive feature of adolescent digital culture that transcends specific age groups. Adolescents across different educational stages are increasingly exposed to similar digital environments, social media platforms, and online communication channels, which may reduce developmental differences in cyberbullying experiences (Vismara et al., 2022; Zhu et al., 2021). However, the greater prevalence of bystander behavior among older students may reflect increased social awareness and online engagement, leading to greater exposure to cyberbullying incidents involving peers (Macaulay et al., 2022; Wang & Kim, 2021). This finding emphasizes the importance of empowering bystanders and transforming passive observation into active intervention.

A particularly noteworthy finding was the role of technology use in predicting cyberbullying involvement. As the duration of technology use increased, the probability of involvement in all cyberbullying roles also increased. This result is strongly supported by previous research indicating that extensive online activity substantially increases adolescents' exposure to cyberbullying opportunities and risks (Chi et al., 2020; Nagata et al., 2022; Zhu et al., 2021). Adolescents who spend more time online encounter a greater number of social interactions, participate in more digital communities, and have increased opportunities to observe, perpetrate, or become victims of cyberbullying. Frequent online engagement may also intensify emotional investment in digital relationships, thereby amplifying the consequences of negative interactions (Ngo et al., 2021; Yurdakul et al., 2022). Furthermore, prolonged use of social networking platforms may increase exposure to social comparison, peer pressure, and online conflicts that contribute to cyberbullying behaviors (Martínez-Ferrer et al., 2021; Seçkin-Kapucu et al., 2021). The present findings therefore support the growing consensus that technology use is a significant risk factor for cyberbullying and should be considered in prevention programs aimed at reducing online aggression among adolescents.

The study also demonstrated that technological skill was associated with specific cyberbullying roles. Students with higher levels of technological competence were more likely to occupy perpetrator-related roles, while those with lower levels of technological skill were more vulnerable to victimization. This finding is consistent with theoretical perspectives emphasizing the role of digital competence in shaping online power dynamics (Kaluarachchi et al., 2020; Seçkin-Kapucu et al., 2021). Technological proficiency may provide adolescents with greater knowledge of digital tools, communication strategies, and platform features that can facilitate cyberbullying behaviors. Conversely, individuals with limited digital skills may be less capable of protecting themselves from online threats, managing privacy settings, or responding effectively to cyberbullying incidents. Nevertheless, the findings also suggest that technological skill alone is not sufficient to explain cyberbullying involvement. Previous studies have argued that digital competence may reduce risk when combined with responsible online behavior and effective parental monitoring (Kaluarachchi et al., 2020; Seçkin-Kapucu et al., 2021). Thus, technological literacy should be accompanied by digital citizenship education emphasizing ethical and responsible online conduct.

The coping strategies reported by participants represent another important aspect of the findings. Retaliation emerged as the most frequently used response to cyberbullying. This result is concerning because retaliatory coping strategies are generally considered maladaptive and may perpetuate cycles of aggression and victimization. Previous studies have shown that adolescents who respond to cyberbullying with revenge or aggressive counteractions often experience increased psychological distress and prolonged exposure to conflict (Erbiçer et al., 2023; Manzoor et al., 2026; Ngo et al., 2021). Retaliation may temporarily restore a sense of control but frequently escalates online disputes and reinforces aggressive behavioral patterns. In contrast, adaptive coping strategies such as seeking social support, reporting incidents, and problem-focused coping have been associated with better psychological outcomes and reduced cyberbullying involvement (Erbiçer et al., 2023; Ngo et al., 2021). The predominance of retaliatory coping among participants may indicate insufficient awareness of effective coping mechanisms and a lack of accessible support systems within schools and families.

The findings related to cyberbullying and psychological vulnerability are also consistent with contemporary evidence highlighting the harmful mental health consequences of online victimization. Studies have repeatedly demonstrated that cybervictimization is associated with depression, anxiety, emotional dysregulation, reduced well-being, self-

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injurious behaviors, and engagement in risky behaviors (Casana Mohedo et al., 2026; Ma et al., 2026; Saeidi & Soleimani, 2025; Sergeeva & Zheltukhina, 2025). The substantial prevalence of victimization observed in the present study suggests that a considerable proportion of adolescents may be exposed to psychological risks. Cyberbullying creates a unique form of victimization because harmful content can be rapidly disseminated, remain permanently accessible, and reach large audiences, intensifying emotional harm (Vismara et al., 2022; Zhu et al., 2021). These characteristics distinguish cyberbullying from traditional forms of bullying and help explain its strong association with adverse mental health outcomes.

The findings concerning bystander involvement also warrant attention. A significant proportion of participants reported occupying bystander roles, either alone or in combination with other cyberbullying roles. This observation aligns with emerging research emphasizing the central role of bystanders in shaping cyberbullying dynamics (Macaulay et al., 2022; Orue et al., 2023; Wang & Kim, 2021). Bystanders may contribute to cyberbullying by reinforcing aggressive behavior, remaining passive observers, or actively supporting victims. Research suggests that empowering bystanders to intervene effectively can significantly reduce the prevalence and impact of cyberbullying incidents (Macaulay et al., 2022; Wang & Kim, 2021). Therefore, intervention programs should extend beyond victims and perpetrators to include bystanders as critical agents of change within online peer networks.

Overall, the present findings contribute to the growing literature indicating that cyberbullying is a multifaceted phenomenon influenced by demographic characteristics, technological engagement, digital competence, and coping processes. The findings are broadly consistent with international evidence and highlight the urgent need for comprehensive prevention and intervention initiatives targeting adolescents in educational settings (Casana Mohedo et al., 2026; Vismara et al., 2022; Zhu et al., 2021). By identifying key risk factors associated with cyberbullying involvement, the study provides valuable insights that can inform future policies, educational programs, and mental health interventions designed to promote safer online environments for adolescents.

One limitation of the present study is its cross-sectional design, which restricts the ability to establish causal relationships among the variables examined. Although significant associations were identified between cyberbullying and several risk factors, it is not possible to determine the directionality of these relationships. In addition, the study relied on self-report measures, which may be influenced by social desirability bias, recall errors, or underreporting of sensitive behaviors. The sample was limited to high school students in Tehran, which may reduce the generalizability of the findings to adolescents from other regions, educational contexts, or cultural backgrounds. Furthermore, certain potentially important variables, such as family functioning, parental monitoring, personality traits, and school climate, were not examined.

Future research should employ longitudinal designs to better understand developmental trajectories and causal mechanisms underlying cyberbullying involvement. Researchers should investigate additional psychological, familial, and social factors that may influence cyberbullying behaviors and victimization experiences. Comparative studies involving diverse regions and cultural contexts would enhance understanding of contextual influences on cyberbullying. Future studies may also examine the effectiveness of specific intervention programs, digital literacy initiatives, and coping-skills training in reducing cyberbullying prevalence and improving adolescent well-being. Qualitative approaches could provide deeper insights into adolescents' lived experiences and perceptions of cyberbullying.

From a practical perspective, schools should implement comprehensive cyberbullying prevention programs that emphasize digital citizenship, responsible technology use, empathy development, and effective coping strategies. Teachers, school counselors, and parents should receive training to recognize warning signs of cyberbullying and provide timely support to affected students. Educational initiatives should encourage adaptive coping responses rather than retaliatory behaviors and promote safe reporting mechanisms for cyberbullying incidents. Collaboration among schools, families, mental health professionals, and policymakers is essential for creating supportive environments that reduce cyberbullying risk and protect adolescents' psychological well-being.

Authors' Contributions

Authors equally contributed to this article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

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E-ISSN: 2645-3460

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

Acknowledgments

We hereby thank all participants for agreeing to record the interview and participate in the research.

Declaration of Interest

The authors report no conflict of interest.

Funding

According to the authors, this article has no financial support.

Ethical Considerations

All procedures performed in studies involving human participants were under the ethical standards of the institutional and, or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

References

Aizenkot, D., & Kashy-Rosenbaum, G. (2021). Cyberbullying Victimization in WhatsApp Classmate Groups among Israeli Elementary, Middle, and High School Students. *Journal of interpersonal violence*, *36*(15-16), 8498-8519. https://doi.org/10.1177/0886260519842860

Arnarsson, A., Nygren, J., Nyholm, M., Torsheim, T., Augustine, L., Bjereld, Y., Markkanen, I., Schnohr, C. W., Rasmussen, M., Nielsen, L., & Bendtsen, P. (2020). Cyberbullying and Traditional Bullying among Nordic Adolescents and Their Impact on Life Satisfaction. *Scandinavian Journal of Public Health*, *48*(5), 502-510. https://doi.org/10.1177/1403494818817411

Azami, M. S., & Taremian, F. (2021). Risk Factors Associated with Cyberbullying, Cybervictimization, and Cyberbullying-Victimization in Iran's High School Students. *Iranian Journal of Psychiatry*, *16*(3), 343. https://doi.org/10.18502/ijps.v16i3.6261

Cagirkan, B., & Bilek, G. (2021). Cyberbullying among Turkish High School Students. *Scandinavian journal of psychology*, *62*(4), 608-616. https://doi.org/10.1111/sjop.12720

Camerini, A. L., Marciano, L., Carrara, A., & Schulz, P. J. (2020). Cyberbullying Perpetration and Victimization among Children and Adolescents: A Systematic Review of Longitudinal Studies. *Telematics and Informatics*, *49*, 101362. https://doi.org/10.1016/j.tele.2020.101362

Casana Mohedo, J., Murillo-Llorente, M. T., Perez-Bermejo, M., Legidos-Garcia, M. E., & Martinez-Peris, M. (2026). Study of the Relationship between Cyberbullying and Mental Health in Adolescents: A Systematic Review. *Children*, *13*(3), 367. https://doi.org/10.3390/children13030367

Chen, J. K., & Chen, L. M. (2020). Cyberbullying among Adolescents in Taiwan, Hong Kong, and Mainland China: A Cross-National Study in Chinese Societies. *Asia Pacific Journal of Social Work and Development*, *30*(3), 227-241. https://doi.org/10.1080/02185385.2020.1788978

Chi, P. T. L., Lan, V. T. H., Ngan, N. H., & Linh, N. T. (2020). Online Time, Experience of Cyber Bullying and Practices to Cope with It among High School Students in Hanoi. *Health Psychology Open*, *7*(1), 2055102920935747. https://doi.org/10.1177/2055102920935747

Erbiçer, E. S., Toprak, E., & Metin, A. (2023). Cyberbullying among Adolescents in Turkey: The Relationship between Coping Strategies and Cyberbullying Perpetration. *Child and Adolescent Mental Health*, *28*(1), 67-75. https://doi.org/10.1111/camh.12622

Kaluarachchi, C., Warren, M., & Jiang, F. (2020). Responsible Use of Technology to Combat Cyberbullying among Adolescents. *Australasian Journal of Information Systems*, *24*. https://doi.org/10.3127/ajis.v24i0.2791

Ma, X., He, L., Yu, M., Li, S., Liu, Y., XuYou, & Yu, L. (2026). Relationship between cyberbullying victimization and nonsuicidal self-injury behavior in vocational college students in China: a cross-sectional study. *Current Psychology*, *45*(3), 280. https://doi.org/10.1007/s12144-025-08671-5

Macaulay, P. J., Betts, L. R., Stiller, J., & Kellezi, B. (2022). Bystander Responses to Cyberbullying: The Role of Perceived Severity, Publicity, Anonymity, Type of Cyberbullying, and Victim Response. *Computers in human Behavior*, *131*, 107238. https://doi.org/10.1016/j.chb.2022.107238

Manzoor, Z., Sadiq, U., & Baig, K. B. (2026). Cyberbullying and emotional vulnerabilities: role of coping styles. *BMC psychology*. https://doi.org/10.1186/s40359-026-04021-7

Martínez-Ferrer, M. F., León-Moreno, C., Suárez-Relinque, C., Del Moral-Arroyo, G., & Musitu-Ochoa, G. (2021). Cybervictimization, Offline Victimization, and Cyberbullying: The Mediating Role of the Problematic Use of Social Networking Sites in Boys and Girls. *Psychosocial Intervention*, *30*(3), 155-162. https://doi.org/10.5817/CP2013-3-5

Mohseny, M., Zamani, Z., Basti, S. A., Sohrabi, M. R., Najafi, A., & Tajdini, F. (2020). Exposure to Cyberbullying, Cybervictimization, and Related Factors among Junior High School Students. *Iranian journal of psychiatry and behavioral sciences*, *14*(4). https://doi.org/10.5812/ijpbs.99357

Nagata, J. M., Trompeter, N., Singh, G., Ganson, K. T., Testa, A., Jackson, D. B., & Baker, F. C. (2022). Social Epidemiology of Early Adolescent Cyberbullying in the United States. *Academic Pediatrics*, *22*(8), 1287-1293. https://doi.org/10.1016/j.acap.2022.07.003

Ngo, A. T., Tran, A. Q., Tran, B. X., Nguyen, L. H., Hoang, M. T., Nguyen, T. H. T., & Ho, C. S. (2021). Cyberbullying among School Adolescents in an Urban Setting of a Developing Country: Experience, Coping Strategies, and Mediating Effects of Different Support on Psychological Well-Being. *Frontiers in psychology*, *12*, 661919. https://doi.org/10.3389/fpsyg.2021.661919

Orue, I., Fernández-González, L., Machimbarrena, J. M., González-Cabrera, J., & Calvete, E. (2023). Bidirectional Relationships between Cyberbystanders' Roles, Cyberbullying Perpetration, and Justification of Violence. *Youth & Society*, *55*(4), 611-629. https://doi.org/10.1177/0044118X211053356

Saeidi, S., & Soleimani, M. (2025). Structural Relationships of Cyberbullying with Risky Behaviors in Adolescents: The Mediating Role of Anger Rumination. *Clinical Psychology: Innovations in Research and Practice*, *17*(2), 117-131.

Iranian Journal of Educational Sociology
E-ISSN: 2645-3460

Saleem, S., Khan, N. F., & Zafar, S. (2021). Prevalence of Cyberbullying Victimization among Pakistani Youth. *Technology in Society*, *65*, 101577. https://doi.org/10.1016/j.techsoc.2021.101577

Seçkin-Kapucu, M., Özcan, H., & Karakaya-Özyer, K. (2021). The Relationship between Middle School Students' Digital Literacy Levels, Social Media Usage Purposes and Cyberbullying Threat Level. *International Journal of Modern Education Studies*, *5*(2), 537-566. https://doi.org/10.51383/ijonmes.2021.136

Sergeeva, O., & Zheltukhina, M. (2025). Psychological Well-Being as a Predictor of Cyberbullying Victimization in University Students: A Bayesian Approach. *Frontiers in Education*, *10*. https://doi.org/10.3389/feduc.2025.1563122

Shin, S. Y., & Choi, Y. J. (2021). Comparison of Cyberbullying before and after the COVID-19 Pandemic in Korea. *International journal of environmental research and public health*, *18*(19), 10085. https://doi.org/10.3390/ijerph181910085

Skilbred-Fjeld, S., Reme, S. E., & Mossige, S. (2020). Cyberbullying Involvement and Mental Health Problems among Late Adolescents. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, *14*(1), Article 5. https://doi.org/10.5817/CP2020-1-5

Solas-Martínez, J. L., Manuel, J. D. l. T. C., Magdaleno, A. R., & López, E. J. M. (2025). Bullying and Cyberbullying Is Associated With Low Levels of Cognitive and Metacognitive Learning Strategies in Young People. *Frontiers in psychology*, *16*. https://doi.org/10.3389/fpsyg.2025.1569400

Vismara, M., Girone, N., Conti, D., Nicolini, G., & Dell'Osso, B. (2022). The Current Status of Cyberbullying Research: A Short Review of the Literature. *Current Opinion in Behavioral Sciences*, *46*, 101152. https://doi.org/10.1016/j.cobeha.2022.101152

Wang, S., & Kim, K. J. (2021). Effects of Victimization Experience, Gender, and Empathic Distress on Bystanders' Intervening Behavior in Cyberbullying. *The Social Science Journal*, *58*(1), 1-10. https://doi.org/10.1080/03623319.2020.1861826

World Health, O. (2022). Overview of Coronavirus Disease (COVID-19) by Date. https://www.who.int/countries/irn

Yurdakul, Y., Beyazıt, U., & Ayhan, A. B. (2022). Individual, Social, and Occupational Effects of Cyberbullying during Adolescence. In *Research Anthology on Combating Cyber-Aggression and Online Negativity* (pp. 1338-1360). IGI Global. https://doi.org/10.4018/978-1-6684-5594-4.ch067

Zhu, C., Huang, S., Evans, R., & Zhang, W. (2021). Cyberbullying among Adolescents and Children: A Comprehensive Review of the Global Situation, Risk Factors, and Preventive Measures. *Frontiers in Public Health*, *9*, 634909. https://doi.org/10.3389/fpubh.2021.634909

E-ISSN: 2645-3460