

Measuring Cyber Aggression and Victimization: Turkish Adaptation of the ECIPQ Scale

Selçuk Kiran¹ , İlkin Ecem Emre² 

¹Department of Management Information Systems, Marmara University, Istanbul, Turkey

²Department of Management Information Systems, Marmara University, Istanbul, Turkey,
ecem.emre@marmara.edu.tr (Corresponding Author)

Abstract

Cyberbullying, a growing social influence issue intensified by digital interactions and connectivity, has adverse psychological, behavioral, and social outcomes. This study aims to adapt the European Cyberbullying Intervention Project Questionnaire (ECIPQ) into the Turkish language and examine features that affect university students from Turkey. The ECIPQ was originally developed to measure cyber aggression and cyber victimization. This scale was translated and adapted in a Turkish context. Therefore, a dataset was collected from 361 students across various universities in Turkey using convenience and snowball sampling methods. Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), and reliability tests were conducted in order to test and validate the factor structure of the adapted scale. Based on the tests, a three-factor structure was identified and found to demonstrate acceptable levels of fit and reliability within the used sample. Findings suggest that this version of the ECIPQ could be used in the Turkish language and also contributes to the literature by providing a three-factor structure for the ECIPQ for assessing cyberbullying behaviors and experiences among university students.

Keywords: ECIPQ, Cyberbullying, Cyber Aggression, Cyber Victimization

For Citation: Kiran, S., Emre, İ. E. (2025). Measuring Cyber Aggression and Victimization: Turkish Adaptation of the ECIPQ Scale. *Journal of Academic Value Studies*, 11(3), 259-269. <http://dx.doi.org/10.29228/javs.83077>

Received: 15.07.2025 Accepted: 17.10.2025

This article was checked by *intihal.net*

1. Introduction

Advancements in digital technologies have not only transformed communication but also led to new forms of negative consequences and harm, such as cyberbullying. This term has become a significant social concern. In today's digitally connected world, cyberbullying has emerged as a complex and pervasive form of interpersonal aggression. Although the society benefits from the advantages of the technology and the Internet, both can have negative effects like Internet addiction, social media addiction, cyberloafing, cyberbullying, etc. Cyberbullying emerged as a social issue manifested itself as a result of the double-edged nature of modern technology, which continuously balances between risks and opportunities (Walrave & Heirman, 2011). A wide range of electronic devices, like PCs, smartphones, or tablets, manifest themselves in various platforms like social media, gaming, and e-mail platforms (National Bullying Prevention Center, 2025). Unlike traditional bullying, it transcends physical boundaries, allowing perpetrators of cyberbullying to reach their victims at any time and place. Cyberbullying is basically defined as bullying with the use of digital technologies, which can occur on social media, messaging platforms, gaming platforms, and mobile phones (unicef.org, 2024). It is

also defined as “*sending, posting, or sharing negative, harmful, false, or mean content about someone else.*” (stopbullying.gov, 2021). It has emerged with the rapid enhancements in information and communication technologies (ICTs). Social media allows people to communicate and interact instantly through internet-based tools, providing opportunities for discussion and interaction without time and space limitations (İnce, 2017; Büyükdoğan, Gedik, Sezerer Albayrak, & Özdemir, 2017); however, these interactions could cause unwanted behaviors. Aggressive behaviors in cyberspace utilized by ICTs like mobile phones and social media platforms structured a new form of bullying (Graf et al., 2022), which is cyberbullying. These definitions show the multifaceted nature of cyberbullying, encompassing a wide range of harmful online behaviors. A study was conducted by the Pew Research Center in order to have a better understanding about the perspectives and experiences of teenagers on cyberbullying and harassment (Vogels, 2007). In this study cyberbullying of teens is measured using six distinct behaviors, which include offensive name-calling, spreading of false rumors about them, receiving explicit images they didn’t ask for, physical threats, constantly being asked where they are, what they’re doing, or who they’re with by someone other than a parent, and having explicit images of them shared without their consent. These kinds of negative behaviors affect the victims of cyberbullying not only psychologically but also socially.

Akdeniz & Doğan (2024) addressed the similarities and differences between traditional bullying and cyberbullying. According to them, both bullying types include deliberate and repetitive behaviors that stem from a power difference between the involved parties of this action, whereas anonymity in cyberbullying emerges as the distinguishing key factor between both types. Bullying involves repeated aggression rooted in power imbalance, and when conducted via electronic mediums to cause harm, it is defined as cyberbullying (Bhutoria et al., 2025). It is also mentioned that the cyberbullying frequently is reflecting offline or real-world bullying, especially with some young people, including bully-victims (E. Notar et al., 2013). In the same study, it is also addressed the significance of differentiating between minor and more serious instances of cyberbullying, where the most minor incidents can probably be dealt with before becoming more major instances of cyberbullying. According to Walrave & Heirman (2011), hostility of cyberbullies may stem from their own personal experiences of being victimized.

Regarding this, the subpopulations of cyberbullying can be divided mainly into two, which include cyber aggression and cyber victimization. These can be called being the victim or the perpetrator of this behavior. According to Garrett et al. (2016), the subpopulations of cyberbullying can be divided into four categories: cyberbully victims, cyberbullies, bystanders who help a victim, and bystanders who do not help a victim. Cyber-aggression can be defined as negative behaviors that may occur through electronic means. This behavior refers to hostile behaviors conducted through electronic means, such as social media or other online platforms. It is a concerning term, especially among young people, due to its potential to cause significant psychological consequences. Threatening, harassing, taunting, intimidating, and using electronic mediums (Shetgiri, 2013) are defined as cyberbullying. Various types of cyberbullying behaviors can result in significant emotional and psychological harm. These behaviors include flaming, harassment, outing, stalking, and exclusion or cyberstalking, all of which represent different tactics employed by cyber aggressors to target individuals online (Kowalski et al., 2014). Cyber-victimization is also another term that should be defined in terms of cyberbullying. There are many forms of peer victimization. While traditional peer victimization includes physical (hitting, kicking, etc.), relational (gossip, social exclusion), and verbal (name-calling) peer victimization, with the development of information and communication technologies, victimization has also diffused to online platforms (Holfeld & Mishna, 2019). The cyber form of peer victimization is called cyber victimization. According to Wright & Wachs (2020), cyber victimization is defined as exposure to offensive and aggressive behaviors through information and communication technologies like the internet, mobile phones, and game consoles. Dominguez-Alonso et al. (2023) defines cyber victimization as individuals who are exposed to attacks through electronic media.

2. Purpose of the Study

The purpose of this study is to adapt the European Cyberbullying Intervention Project Questionnaire (ECIPQ) (Brighi et al., 2012) into the Turkish language. This study contributes to the literature by validating the Turkish adaptation of the ECIPQ among university students using Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), and also reliability testing.

3. The European Cyberbullying Intervention Project Questionnaire (ECIPQ)

In order to measure cyberbullying behavior, a comprehensive study was conducted by Brighi et al. (2012), and the European Cyberbullying Intervention Project Questionnaire (ECIPQ) was developed. Originally this questionnaire consists of 22 items, 11 for cyber-aggression and 11 for cyber-victimization factors.

Various researchers have used this scale and tried to adapt it to different cultures. Del Rey et al. (2015) have conducted a study to measure the structural validation and cross-cultural robustness of this instrument, and its two dimensions were measured. The study was conducted in Greece, Germany, Italy, Spain, Poland, and the United Kingdom with 5679 secondary school students. EFA was conducted, and it found that extraction of two factors was appropriate. They have also conducted CFA for the validation and validated the two-factor structure of the scale. Additionally, Herrera-López et al. (2017) conducted another study in Colombia with 16 items in the Spanish language. 3,830 high school students, of which 1,931 were Colombian and 1,899 Spanish, aged 10 to 19. CFA was performed for the structural validation of the scale, and obtained results confirmed the robustness and suitability of the scale to measure cyberaggression and cyber-victimization. There are other adaptations of this questionnaire. The Chinese adaptation of ECIPQ was conducted by Zhu et al. (2022) by using 14 items amongst 452 adolescents between ages 14 and 20. For the study, 14 items were extracted from the original 22-item scale based on the professor's opinion, and also items with similar features were combined. EFA and CFA analyses were conducted for factor extraction and to validate the factors; as a result, a two-factor structure has been validated. Edy et al. (2023) has adapted the questionnaire in Indonesia with 16 items. The study was conducted amongst teenagers aged between 12 and 18 in the Indonesian language. The items in ECIPQ that have been adapted and supported the two-structural model of 8 items for both cyber-victimization and cyber-aggression by conducting CFA. Another adaptation was conducted in Turkey by Gözütok et al. (2024), in which 22 items were used in the Turkish language. The participants were 632 college students aged 11 to 23 years. CFA was conducted, and the results have supported the two-factor structure of this ECIPQ. Álvarez-Marín et al. (2022) conducted a study amongst 1777 Spanish students aged between 14 and 18 years and tested the validity of the scale with CFA. The two-factor model displayed appropriate measures. Williford & DePaolis (2019) have conducted CFA to examine the construct validity of the ECIPQ on a sample of 841 third- through fifth-grade students. Their results were found to be inconsistent based on the bullying and victimization models; however, their CFA results supported a three-factor model for victimization.

4. Material and Methods

4.1. Research Objectives

RO1: Does the two-factor model of cyber aggression and cyber victimization demonstrate good fit in a Turkish university student sample?

RO2: What is the structure of the Turkish adaptation of the ECIPQ among university students?

4.2. Scale

In this study the European Cyberbullying Intervention Project Questionnaire (ECIPQ) (Brighi et al., 2012) is used, and its adaptation in Turkish is developed. In the current study, the items in the ECIPQ scale have been adapted and modified, consisting of 11 items for each dimension. The original 22 Likert-type items with five options (never=1, once or twice=2, once or twice a month=3, about once a week=4, and more than once a week=5) were used to collect responses from participants.

A content review of the Turkish version revealed that each of the two dimensions included an item that was considered to reflect a relatively mild form of cyberbullying based on Turkish culture. This item was excluded from the final version from both factors by the authors based on Turkish culture. The "I spread rumors about someone on the internet" and "Someone spread rumors about me on the internet" items were removed.

Adapted Turkish and original versions of the European Cyberbullying Intervention Project Questionnaire items are given in the appendix.

4.3. Tools

The questionnaire for this research was distributed online by using Google Forms. The convenience and snowball sampling methods were used. In total, 361 participants consisting of university students participated in the study. Data cleaning and preparation were done using MS Excel 2019; further analyses were conducted using SPSS v23 and AMOS v24.

4.4. Data Preparation

The items adapted from the ECIPQ scale were translated into Turkish by an academic expert in English translation. The back-translation method was subsequently applied by three researchers specialized in information systems, resulting in

the initial version of the Turkish questionnaire. To ensure clarity, the survey was piloted with three university students from the target population. Any ambiguities identified by the participants were resolved collaboratively by the same three experts.

The survey was then conducted with 364 students, predominantly undergraduate or associate degree students from various universities across Turkey, selected through a convenience sampling and snowball method. After data screening, two participants were excluded due to graduation status, and one was removed due to inconsistency in the “parental relationship” response, resulting in a final sample of 361 participants.

Additionally, typing errors in university names were corrected, and examples such as “Istanbul, Istanbul, Istambul, Ist” were standardized as “Istanbul”. An extra variable was added to the dataset to indicate whether each university was public or private. Regarding the participants’ year of study, entries labeled as “Associate degree” or “1st year of associate degree” were coded as “1/2,” “Preparatory year” as “0,” and final-year or graduating students as “3/4.”

Firstly, the dataset was randomly divided into two subsamples. The first subsample ($n = 180$) was used to identify the number of underlying factors with EFA. In other words, EFA was conducted in order to check factors after the translation into the Turkish language. The second subsample was used ($n = 181$) to verify the goodness of fit of the factor structure that emerged from the EFA and to test the factor structure with CFA. Cronbach’s alpha is used to measure the reliability of the responses in the scale.

5. Results

5.1. Descriptive Results

As shown in the table below (Table 1), the number of male and female students who participated in the survey was nearly balanced (55% and 45%, respectively). A substantial majority of the students (81%) reported that their parents were living together. Regarding family structure, 59% of the students had either no siblings or only one. In terms of parental education, 72% of mothers and 66.8% of fathers had completed either a university degree or a lower level of education. Moreover, 66.5% of the participants were enrolled in public universities, and a striking 93.9% were studying in Istanbul. Finally, it was observed that approximately half of the students were in their first or second year, while a similar proportion were in their third or fourth year of study.

Table 1. Descriptive Results

Gender				Parents_Relationship			
	Frequency	Percent	Cumulative Percent		Frequency	Percent	Cumulative Percent
Woman	198	54.8	54.8	Parents together	293	81.2	81.2
Man	163	45.2	100.0	Parents not together	68	18.8	100.0
Total	361	100.0		Total	361	100.0	
Mother_Education				Father_Education			
	Frequency	Percent	Cumulative Percent		Frequency	Percent	Cumulative Percent
College and below	260	72.0	72.0	College and below	241	66.8	66.8
Undergraduate and higher	101	28.0	100.0	Undergraduate and higher	120	33.2	100.0
Total	361	100.0		Total	361	100.0	
City				University_Type			
	Frequency	Percent	Cumulative Percent		Frequency	Percent	Cumulative Percent
Istanbul	339	93.9	93.9	State	240	66.5	66.5
out of Istanbul	22	6.1	100.0	Private	121	33.5	100.0
Total	361	100.0		Total	361	100.0	
Nr_of_Siblings				Class			
	Frequency	Percent	Cumulative Percent		Frequency	Percent	Cumulative Percent
0	40	11.1	11.1	0	1	.3	.3

1	173	47.9	59.0	1 / 2	194	53.7	54.0
2	96	26.6	85.6	3 / 4	148	41.0	95.0
3	42	11.6	97.2	3	8	2.2	97.2
above 3	10	2.8	100.0	4	10	2.8	100.0
Total	361	100.0		Total	361	100.0	

5.2. EFA Results

EFA was employed initially to verify the translation and structure of the adapted instrument with the first subsample consisting of 180 responses. As a data-driven method, EFA is used to explore which items load onto which factors, providing insights into the underlying construct structure. Given that the scale consists of 20 items, the sample size meets the commonly accepted rule of having at least five participants per item, confirming its suitability for factor analysis (Aguinis & Harden, 2009; Bentler & Chou, 1987).

Since all observed inter-factor correlations were above 0.341, the oblique rotation method—specifically Direct Oblimin—was selected, as recommended in the literature for correlated factors (Hair et al., 2010; Tabachnick & Fidell, 2013). In addition, Bartlett's Test of Sphericity was significant, indicating the presence of meaningful correlations among the variables and justifying continuation with the factor analysis (Bartlett, 1950). The Kaiser-Meyer-Olkin (KMO) measure was 0.923, which not only exceeds the acceptable threshold of 0.60 but also suggests excellent sampling adequacy for factor analysis (Kaiser, 1974).

Factor loadings represent the degree of correlation between each observed variable and its corresponding latent factor. In cases where an item loads on more than one factor, cross-loadings are examined to determine factor assignment. A common rule is that the difference between the two loadings should be at least 0.10, favoring the factor with the higher loading. In other words, they indicate how well a variable is explained by a specific factor (Hair et al., 2010). Higher loadings (typically ≥ 0.30) are considered indicative of a meaningful relationship between the variable and the factor, while loadings of 0.50 or above are generally regarded as practically significant (Tabachnick & Fidell, 2007). The EFA results indicated that the items clustered under three distinct factors, as theoretically anticipated, when components with eigenvalues greater than one were considered.

5.3. CFA Results

CFA was conducted in order to assess the construct validity of the measurement model. The items summarized under three factors were subsequently subjected to a CFA using the second sample group, which consisted of 181 responses. Upon examining the factor loadings obtained from this analysis, it was observed that some items did not reach the threshold value of 0.30 within their respective factors. In the literature, factor loadings below 0.30 are generally considered statistically weak and insufficient for construct validity (Field, 2018; Hair et al., 2010; Tabachnick & Fidell, 2013). In line with this, items CV8 (0.187) and CV9 (0.192) were excluded from further analysis. Once these items were removed, all remaining loadings exceeded the 0.30 threshold, and the analysis proceeded accordingly.

To improve model fit, modification indices were examined. Following the recommendations of Hair et al. (2010) and Byrne (2010), covariances were added between error terms whose modification indices exceeded 10. These modifications were applied particularly between items that shared conceptual similarities and belonged to the same factor. With this respect, covariances were introduced between the following error terms: e1 <--> e2, e14 <--> e15, e5 <--> e6, e2 <--> e8, e2 <--> e7, e1 <--> e7, e1 <--> e3, and e4 <--> e5.

Following these adjustments, improvements were observed in the model's goodness-of-fit indices (GFI), thereby justifying the continuation with CFA. The chi-square to degrees of freedom ratio (χ^2/df) was calculated as 2.486, indicating a good model fit. According to Kline (2023), values below 3 suggest a good model fit. GFI, which reflects the structural validity of the model, was calculated as 0.837. While values approaching 0.90 are typically considered acceptable (Hair et al., 2010), some studies interpret values above 0.80 as indicative of moderate fit (Hu & Bentler, 1999). Thus, the obtained GFI value can be interpreted as reflecting a moderate level of fit.

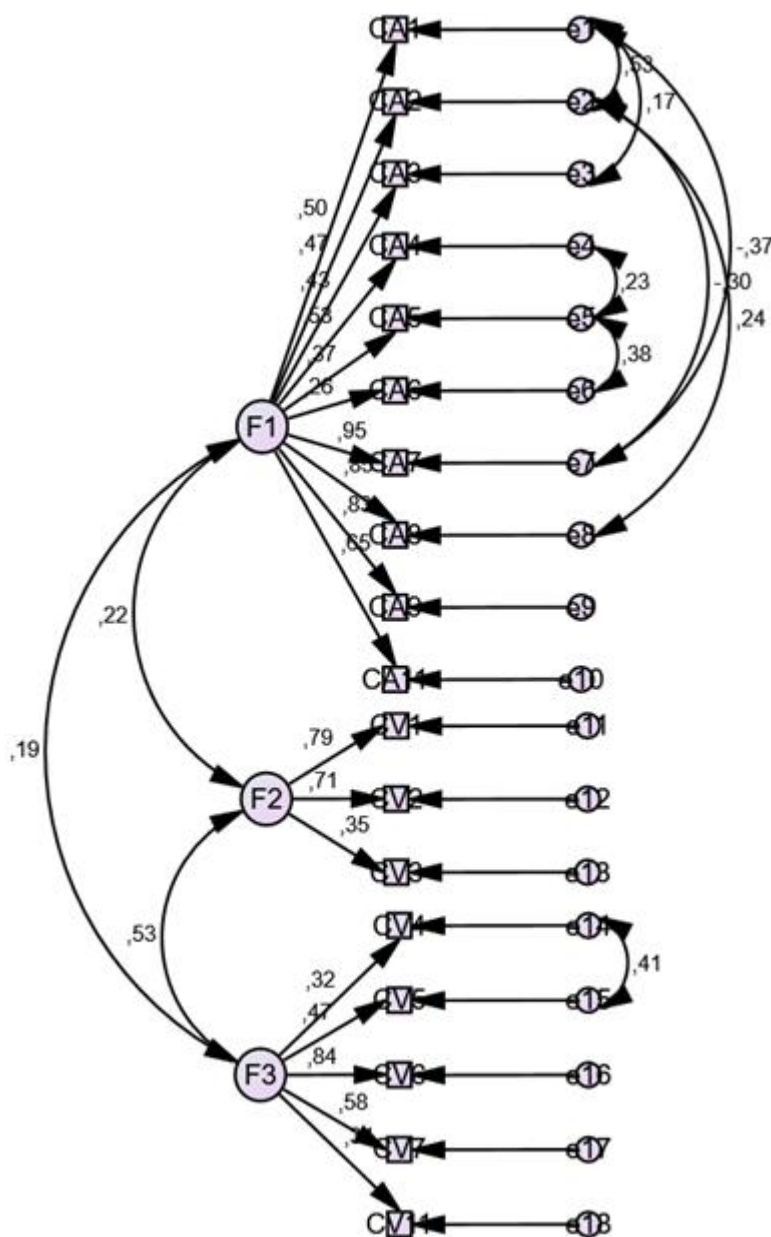
The Comparative Fit Index (CFI) and Incremental Fit Index (IFI), which evaluate the model's fit relative to a baseline model, were found to be 0.823 and 0.827, respectively. While values above 0.90 indicate a good fit, those below the 0.90 threshold generally recommended in the literature for acceptable fit mean the model is considered to have a poor fit to the data (Hu & Bentler, 1999). Although the CFI and IFI values are not optimal, their improvement following modifications suggests a positively progressing model fit.

The root mean square error of approximation (RMSEA) value of 0.10 falls within the widely accepted marginal upper limit of 0.10 (Browne and Cudeck, 1993) and is considered acceptable when supported by other fit indices (MacCallum et al., 1996). In this context, the obtained RMSEA value can be interpreted as reflecting a poor but tolerable model fit.

The Standardized Root Mean Squared Residual (SRMR) value, calculated at 0.0879, further supports this assessment. Hu & Bentler (1999) have defined SRMR values below 0.08 as indicating good fit, while values between 0.08 and 0.10 are considered marginally acceptable. Similarly, Hair et al. (2010) have emphasized that SRMR values up to 0.09 can be tolerated in social sciences. Accordingly, although the SRMR value does not reflect a perfect fit, it suggests that the model is structurally adequate and interpretable.

In conclusion, meaningful improvements in fit indices were observed following the applied modifications. While some values remained below optimal thresholds, the overall goodness-of-fit measures indicate that the model demonstrates an acceptable, moderate level of fit. On the other hand, standardized factor loadings of 0.30 or greater are generally considered minimally acceptable, while higher loadings indicate stronger relationships between observed and latent variables (Kline, 2023). The CFA path diagram is presented below (Figure 1).

Figure 1. CFA Path Diagram



5.4. Re-testing with EFA

At this stage, the analysis was repeated on the initial sample after removing the two items, and the results of the EFA were re-evaluated. The KMO value was found to be 0.912, and Bartlett's Test of Sphericity was statistically significant, indicating that the sample was adequate for factor analysis. Based on the criterion of eigenvalues greater than one, the total variance explained was 68.77%, which exceeds the generally accepted threshold of 60% in social sciences and supports the construct validity of the scale (Hair et al., 2010). As presented in the table below (Table 2), all factor loadings—except one—were above 0.50, with only a single item showing a moderate loading.

The first factor consisted of representing cyber aggression items. The second and the third factors consisted of items related to cybervictimization. These factors were named as “Cyber Victimization: Verbal” and “Cyber Victimization: Identity” based on the features of the items.

Table 2. Factor Loadings

Factor	Factor Names	Item	Mean	Std. Deviation	Factor Load
F1	Cyber Aggression	CA1	1.122	.4237	.825
F1		CA2	1.097	.4000	.807
F1		CA3	1.091	.3495	.855
F1		CA4	1.055	.2929	.937
F1		CA5	1.061	.3277	.851
F1		CA6	1.191	.5318	.574
F1		CA7	1.036	.2815	.790
F1		CA8	1.033	.2769	.750
F1		CA9	1.033	.2667	.901
F1		CA11	1.061	.3361	.783
F2	Cyber Victimization: Verbal	CV1	1.623	.7393	.761
F2		CV2	1.388	.6492	.710
F2		CV3	1.407	.6217	.841
F3	Cyber Victimization: Identity	CV4	1.302	.5166	.791
F3		CV5	1.213	.4960	.815
F3		CV6	1.296	.5708	.811
F3		CV7	1.219	.6003	.534
F3		CV11	1.288	.5870	.399

Cronbach's alpha is a reliability coefficient that evaluates the internal consistency of a scale by measuring the degree of correlation among its items (Hair et al., 2010). Values above 0.70 are generally considered acceptable, while those exceeding 0.80 are interpreted as indicating a high level of reliability. In the reliability analysis conducted for the identified factors, satisfactory results were obtained for all three dimensions. The corresponding Cronbach's Alpha coefficients for each factor are presented below (Table 3).

Table 3. Cronbach's Alpha Reliability Test Results

Factor	Number of items	Cronbach's Alpha
F1	10	0.940
F2	3	0.758
F3	5	0.838

6. Discussion & Conclusion

The present study aimed to adapt ECIPQ, which is an internationally used and recognized measurement of cyberbullying, into Turkish and validate its structure among university students in Turkey. Through a comprehensive process involving EFA and CFA, a three-factor structure was identified and found to demonstrate acceptable levels of fit and reliability within the used sample. The findings of the studies from the literature confirmed the two-factor structure of the original scale. However, our findings suggest a three-factor structure for the scale adaptation in Turkey. This may be due to the fact that the sample in the study was limited to 5 times the number of items. The fact that the study was conducted with university students may have also affected the results, whereas the studies conducted in the literature were conducted with younger participants such as adolescents and children.

The EFA revealed a clear factor structure by clustering items into cyber aggression and victimization in the literature. The two-factor structure of the ECIPQ in different languages was tested and validated by various researchers (Álvarez-

Marín et al., 2022; Del Rey et al., 2015; Edy et al., 2023; Herrera-López et al., 2017; Zhu et al., 2022), which typically confirmed a two-factor model distinguishing only between cyber aggression and victimization. The Turkish adaptation of the scale is conducted by Gözütok et al. (2024), and the same structure is validated. Distinct from these findings, our findings align with Williford & DePaolis (2019). Their results were inconsistent between the bullying and victimization models, whereas they observed a three-factor structure but only for victimization. However, their results supported a three-factor model for victimization consisting of overt (e.g., hitting, kicking, and physical threats), relational (e.g., rumor spreading and exclusion), and cyberbullying. The CFA results have validated the structural integrity of the Turkish version of the EPIPQ and its applicability to the university student population. In the studies examined in this research, the samples consist of participants from different education and age categories outside of university. In addition, it is observed that the participants conducted or were exposed to cyber aggression, and cyber victimization levels are low. This could also be one of the reasons affecting the results.

It also addressed the significance of differentiating between minor, serious, and more serious or major instances of cyberbullying, where the most minor incidents can probably be dealt with before becoming more major instances of cyberbullying (E. Notar et al., 2013). Accordingly, three factors were named as “Cyber Aggression,” “Cyber Victimization: Verbal,” and “Cyber Victimization: Identity.”

These findings contribute to the growing literature on cyberbullying by validating a culturally appropriate instrument for assessing cyber aggression and victimization among young adults in Turkey. They also support the idea that cyberbullying experiences may manifest differently across cultural contexts and age groups. These results indicate the need for localized assessment tools and tailored intervention strategies.

Nevertheless, this study is not without limitations. The use of non-probability sampling methods may restrict the generalizability of the findings to the broader university student population. Similar studies could be repeated in different samples other than universities in order to generalize them better to a broader population. Moreover, the self-report nature of the instrument could have caused bias, potentially affecting the response accuracy. Future studies could aim to conduct studies across various subgroups such as gender, academic discipline, or level of digital engagement. Different psychological scales could be added to the context. Furthermore, since five responses per item are considered acceptable, more responses could be collected by researchers in order to obtain more generalizable results.

In conclusion, the Turkish adaptation of the ECIPQ appears to be a valid and reliable tool for assessing cyberbullying behaviors and experiences among university students. The emergence of a three-factor structure highlights the complex nature of cyberbullying in digitally connected societies and calls for further research into its evolving forms and impacts.

Ethical Declaration

It is declared that scientific and ethical principles were adhered to during the execution and writing of this study and that all sources used have been appropriately cited. Ethics committee approval was received for this study from the Marmara University Social Sciences Research Ethics Committee, numbered 2025-81 and dated 14.10.2025.

Declaration Regarding the Use of Artificial Intelligence

The authors commit to adhering to ethical principles, transparency, and responsibility in the use of artificial intelligence tools, ensuring their academic responsibility.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

Authors' Contributions

Design of the Research: S. Kiran (+), İ. E. Emre (+)

Data Collection: S. Kıran (+), İ. E. Emre (-)

Data Analysis: S. Kıran (+), İ. E. Emre (-)

Article Writing: S. Kıran (+), İ. E. Emre (+)

Article Submission and/or Revision: S. Kıran (+), İ. E. Emre (+)

Note: The + and - symbols indicate whether authors contributed or did not contribute, respectively.

References

- Aguinis, H., & Harden, E. E. (2009). Sample size rules of thumb: Evaluating three common practices. In *Statistical and methodological myths and urban legends: Doctrine, verity and fable in the organizational and social sciences*. (pp. 267–360). Routledge/Taylor & Francis Group.
- Akdeniz, B., & Doğan, A. (2024). Cyberbullying: Definition, Prevalence, Effects, Risk and Protective Factors. *Psikiyatride Güncel Yaklaşımlar-Current Approaches in Psychiatry*, 16(3), 425–438. <https://doi.org/10.18863/pgy.1325195>
- Álvarez-Marín, I., Pérez-Albéniz, A., Lucas-Molina, B., Martínez-Valderrey, V., & Fonseca-Pedrero, E. (2022). Assessing Cyberbullying in Adolescence: New Evidence for the Spanish Version of the European Cyberbullying Intervention Project Questionnaire (ECIP-Q). <https://doi.org/10.3390/ijerph192114196>
- Bartlett, M. S. (1950). Tests of significance in factor analysis. *British Journal of Psychology*, 3, 77–85.
- Bentler, P. M., & Chou, C.-P. (1987). Practical Issues in Structural Modeling. *Sociological Methods & Research*, 16(1), 78–117. <https://doi.org/10.1177/0049124187016001004>
- Bhutoria, A., Aljabri, N., Choudhary, U., & Alrubian, A. (2025). Behind the Screen: Unraveling the Relationship Between Cyberbullying and Student Achievement Across the Globe Using TIMMS 2019 Data. *International Journal of Bullying Prevention*, 1–23. <https://doi.org/10.1007/s42380-025-00291-8>
- Brighi, A., Ortega, R., Pyzalski, J., Scheithauer, H., Smith, P. K., Tsormpatzoudis, H., & Tsorbatzoudis, H. (2012). European Cyberbullying Intervention Project Questionnaire (ECIPQ). *APA PsycTests*, 4(3), 133–141.
- Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models*. CA Sage. <https://www.scrip.org/reference/referencespapers?referenceid=213477>
- Büyükdoğan, B., & Gedik, H., & Sezerer Albayrak, E., & Özdemir, N. (2017). Social Media Usage of Students at State and Foundation University: A Comparison in Terms of Uses And Gratification Theory. *Journal of Academic Value Studies (JAVStudies)*, 3(12), 293-302. <https://doi.org/10.23929/javs.341>
- Byrne, B. M. (2010). *Structural equation modeling with AMOS: Basic concepts, applications, and programming* (2nd ed.). Routledge/Taylor & Francis Group.
- Del Rey, R., Casas, J. A., Ortega-Ruiz, R., Schultze-Krumbholz, A., Scheithauer, H., Smith, P., Thompson, F., Barkoukis, V., Tsorbatzoudis, H., Brighi, A., Guarini, A., Pyzalski, J., & Plichta, P. (2015). Structural validation and cross-cultural robustness of the European Cyberbullying Intervention Project Questionnaire. *Computers in Human Behavior*, 50, 141–147. <https://doi.org/10.1016/j.chb.2015.03.065>
- Dominguez-Alonso, J., Portela-Pino, I., & Alvarez-Garcia, D. (2023). Incidence and Demographic Correlates of Self-Reported Cyber-Victimization Among Adolescent Respondents. *Journal of Technology and Science Education*, 13(3), 823–836. <https://doi.org/10.3926/JOTSE.2000>
- E. Notar, C., Padgett, S., & Roden, J. (2013). Cyberbullying: A Review of the Literature. *Universal Journal of Educational Research*, 1(1), 1–9. <https://doi.org/10.13189/ujer.2013.010101>
- Edy, D. F., Harsono, Y. T., Rahmah, A. N., Nurmawati, F., & Lay, A. E. (2023). European Cyberbullying Intervention Project Questionnaire (ECIPQ) instrument adaptation for adolescents. *Psychology Research on Education and Social Sciences*, 4(3), 133–141.
- Field, A. P. (2018). *Discovering Statistics Using IBM SPSS Statistics* (5th ed.). Sage.
- Garett, R., Lord, L. R., & Young, S. D. (2016). Associations between social media and cyberbullying: a review of the literature. *MHealth*, 2, 46–46. <https://doi.org/10.21037/mhealth.2016.12.01>

- Gözütok, A. S., Akçıl, S., & Ulus, İ. Ç. (2024). Turkish Adaptation and Validation of the European Cyberbullying Intervention Project Questionnaire (ECIPQ). *Journal of Learning and Teaching in Digital Age*, 9(1), 80–87. <https://doi.org/10.53850/joltida.1300228>
- Graf, D., Yanagida, T., Runions, K., & Spiel, C. (2022). Why did you do that? Differential types of aggression in offline and in cyberbullying. *Computers in Human Behavior*, 128, 107107. <https://doi.org/10.1016/j.chb.2021.107107>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis* (7th ed.). Pearson Prentice Hall.
- Herrera-López, M., Casas, J. A., Romera, E. M., Ortega-Ruiz, R., & Del Rey, R. (2017). Validation of the European Cyberbullying Intervention Project Questionnaire for Colombian Adolescents. *Cyberpsychology, Behavior, and Social Networking*, 20(2), 117–125. <https://doi.org/10.1089/cyber.2016.0414>
- Holfeld, B., & Mishna, F. (2019). Internalizing Symptoms and Externalizing Problems: Risk Factors for or Consequences of Cyber Victimization? *Journal of Youth and Adolescence*, 48(3), 567–580. <https://doi.org/10.1007/s10964-018-0974-7>
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>
- İnce, F. (2017). A Research On Using Social Media And The Tendency Of Conspicuous Consumption. *Journal of Academic Value Studies (JAVStudies)*, 3(15), 107–113. <https://doi.org/10.23929/jav.556>
- Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika*, 39(1), 31–36. <https://doi.org/10.1007/BF02291575>
- Kline, R. B. (2023). *Principles and Practice of Structural Equation Modeling* (5th ed.). Guildford Press.
- Kowalski, R. M., Giumetti, G. W., Schroeder, A. N., & Lattanner, M. R. (2014). Bullying in the digital age: A critical review and meta-analysis of cyberbullying research among youth. *Psychological Bulletin*, 140(4), 1073–1137. <https://doi.org/10.1037/a0035618>
- National Bullying Prevention Center. (2025). *Cyberbullying - National Bullying Prevention Center*. Pacer.Org. <https://www.pacer.org/bullying/info/cyberbullying/>
- Shetgiri, R. (2013). Bullying and victimization among children. In *Advances in Pediatrics* (Vol. 60, Issue 1, pp. 33–51). <https://doi.org/10.1016/j.yapd.2013.04.004>
- stopbullying.gov. (2021). *What Is Cyberbullying*. Stopbullying.Gov. <https://www.stopbullying.gov/cyberbullying/what-is-it>
- Tabachnick, B. G., & Fidell, L. S. (2007). *Using Multivariate Statistics* (5th ed.). Allyn and Bacon.
- Tabachnick, B. G., & Fidell, L. S. (2013). *Using Multivariate Statistics* (6th ed.). Pearson Education.
- unicef.org. (2024). *Cyberbullying: What is it and how to stop it*. UNICEF. <https://www.unicef.org/end-violence/how-to-stop-cyberbullying>
- Vogels, E. A. (2007). *Teens and Cyberbullying 2022*. Pew Research Center. <https://www.pewresearch.org/internet/2022/12/15/teens-and-cyberbullying-2022/>
- Walrave, M., & Heirman, W. (2011). Cyberbullying: Predicting victimisation and perpetration. *Children and Society*, 25(1), 59–72. <https://doi.org/10.1111/j.1099-0860.2009.00260.x>
- Williford, A., & DePaolis, K. J. (2019). Validation of a Cyber Bullying and Victimization Measure Among Elementary School-Aged Children. *Child and Adolescent Social Work Journal*, 36(5), 557–570. <https://doi.org/10.1007/s10560-018-0583-z>
- Wright, M. F., & Wachs, S. (2020). Adolescents' Cyber Victimization: The Influence of Technologies, Gender, and Gender Stereotype Traits. *International Journal of Environmental Research and Public Health*, 17(4). <https://doi.org/10.3390/IJERPH17041293>
- Zhu, Y., Wu, S., Marsiglia, F. F., Wu, Q., & Chen, Q. (2022). Adaptation and validation of the European cyberbullying intervention project questionnaire with and for Chinese adolescents. *Health and Social Care in the Community*, 30(4), 1363–1372. <https://doi.org/10.1111/hsc.13466>

Appendix

Adapted Turkish and Original Versions of the European Cyberbullying Intervention Project Questionnaire Items

Original_Item_Nr	Factors	Turkish_Items	Original_Items
CybA1	Cyber Aggression	Birisine SMS veya çevrimiçi mesajlar yoluyla rahatsız edici şeyler (edepsiz, ahlaksız, müstehcen) söyledim veya isimler taktım	I said nasty things to someone or called them names using texts or online messages
CybA2		Birisi hakkında diğer insanlara SMS veya çevrimiçi mesajlar yoluyla rahatsız edici şeyler (edepsiz, ahlaksız, müstehcen) söyledim	I said nasty things about someone to other people either online or through text messages
CybA3		Birini SMS veya çevrimiçi mesajlar yoluyla tehdit ettim	I threatened someone through texts or online messages
CybA4		Birinin hesabını ele geçirerek kişisel bilgilerini çaldım (örn. e-posta veya sosyal ağ hesapları)	I hacked into someone's account and stole personal information (e.g. through email or social networking accounts)
CybA5		Birinin hesabını ele geçirerek o kişiyim gibi davrandım (örn. anlık mesajlaşma veya sosyal ağ hesapları üzerinden)	I hacked into someone's account and pretended to be them (e.g. through instant messaging or social networking accounts)
CybA6		Başka biri gibi davranarak sahte bir hesap oluşturdum (örn. Facebook veya MSN'de)	I created a fake account, pretending to be someone else (e.g. on Facebook or MSN)
CybA7		Çevrimiçi ortamda birinin kişisel bilgilerini yayınladım	I posted personal information about someone online
CybA8		İnternette birinin utanç verici / rahatsız edici videolarını veya resimlerini yayınladım	I posted embarrassing videos or pictures of someone online
CybA9		İnternette başka bir kişinin yayınlanmış resim veya videolarını değiştirdim	I altered pictures or videos of another person that had been posted online
CybA11		İnternette birisi hakkında dedikodu yaydım	I spread rumours about someone on the internet
CybV1	Cyber Victimization: Verbal	Birisi SMS veya çevrimiçi mesajlar yoluyla bana rahatsız edici şeyler (edepsiz, ahlaksız, müstehcen) söyledi veya isimler taktı	Someone said nasty things to me or called me names using texts or online messages
CybV2		Birisi SMS veya çevrimiçi mesajlar yoluyla başkalarına benim hakkımda rahatsız edici şeyler (edepsiz, ahlaksız, müstehcen) söyledi	Someone said nasty things about me to others either online or through text messages
CybV3		Birisi SMS veya çevrimiçi mesajlar yoluyla beni tehdit etti	Someone threatened me through texts or online messages
CybV4	Cyber Victimization: Identity	Birisi hesabımı ele geçirerek kişisel bilgilerimi çaldı (örn. e-posta veya sosyal ağ hesapları)	Someone hacked into my account and stole personal information (e.g. through email or social networking accounts)
CybV5		Birisi hesabımı ele geçirerek benim gibi davrandı (örn. anlık mesajlaşma veya sosyal ağ hesapları üzerinden)	Someone hacked into my account and pretended to be me (e.g. through instant messaging or social networking accounts)
CybV6		Birisi benim gibi davranarak sahte bir hesap oluşturdu (örn. Facebook veya MSN'de)	Someone created a fake account, pretending to be me (e.g. on Facebook or MSN)
CybV7		Birisi çevrimiçi ortamda kişisel bilgilerimi (iznim olmadan) yayınladı	Someone posted personal information about me online
CybV11		Birisi internette benim hakkımda dedikodu yaydı	Someone spread rumours about me on the internet