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# Cyberbullying Among University Students in Türkiye*

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## Abstract

The studies revealed that cyberbullying is a prevalent phenomenon and highlighted the dramatic increase in cyberbullying during the pandemic. Therefore, this study aims to examine the relationship between quality of life, collectivism, and psychological needs with cyberbullying perpetration and victimization during the COVID-19 pandemic. Participants' ages ranged from 18 to 25 (M = 20.74). This study consisted of 520 university students (female = 435; male = 85) studying at any university in Türkiye. Personal Information Form, Cyberbullying Inventory, the Quality of Life Scale, Individualism and Collectivism Scale, and Psychological Needs Inventory were used in data collection. Correlation and multiple hierarchical regression analyses were conducted to identify the associations of the study variables. The findings illustrated that cyberbullying perpetration was statistically significant and positively related to psychological, social, and professional factors related to the quality of life; and negatively correlated with loyalty to authority and tradition, and love and belonging. The study's findings revealed that psychological, social, and professional factors related to the quality of life, loyalty to authority and tradition (i.e., a dimension of collectivism), and love and belonging, which are psychological needs, were predictors of cyberbullying perpetration. In addition, the psychological, social, and professional factors related to the quality of life, group dependency, and love and belonging from psychological needs were predictors of cyberbullying victimization. The findings on cyberbullying prevalence also illustrated that 34.6% of the participants were involved in cyberbullying perpetration, and 51.3% were exposed to cyberbullying victimization at least once in the last six months.

**Keywords:** Cyberbullying, collectivism, psychological needs, quality of life, COVID-19

# Türkiye'de Üniversite Öğrencileri Arasında Siber Zorbalık

## Öz

Araştırmalar, siber zorbalığın yaygın bir olgu olduğunu ortaya koymuş ve COVID-19 salgını sırasında siber zorbalıktaki artışı vurgulamıştır. Bu nedenle, bu çalışmada COVID-19 salgını sırasında yaşam kalitesi, kolektivizm ve psikolojik ihtiyaçların siber zorbalık uygulama ve mağduriyet ile ilişkisinin incelenmesi amaçlanmaktadır. Bu çalışma, Türkiye'deki herhangi bir üniversitede öğrenim gören 520 üniversite öğrencisinden (kadın = 435; erkek = 85) oluşmaktadır. Katılımcıların yaşları 18 ile 25 arasında değişmektedir (M = 20.74). Veri toplamada Kişisel Bilgi Formu, Siber Zorbalık Envanteri, Yaşam Kalitesi Ölçeği, Bireycilik ve Kolektivizm Ölçeği ve Psikolojik İhtiyaçlar Envanteri kullanılmıştır. Siber zorbalığa maruz kalma ve mağduriyetin yaşam kalitesi, kolektivizm ve psikolojik ihtiyaçlar ile ilişkisini belirlemek için Pearson korelasyon analizi yapılmıştır. Bulgular, siber zorbalığın yaşam kalitesiyle ilgili psikolojik, sosyal ve mesleki faktörlerle istatistiksel olarak anlamlı ve pozitif yönde; otorite ve geleneğe bağlılık ve sevgi ve aidiyet ile negatif yönde ilişkili olduğunu göstermiştir. Çalışmanın bulguları, yaşam kalitesi, otoriteye ve geleneğe bağlılık (diğer bir deyişle, toplulukçuluk boyutu) ve psikolojik ihtiyaçlardan sevgi ve aidiyet ile ilgili psikolojik, sosyal ve mesleki faktörlerin siber zorbalığın yordayıcıları olduğunu ortaya koymuştur. Ayrıca, yaşam kalitesine ilişkin psikolojik, sosyal ve mesleki faktörler, grup bağımlılığı ve psikolojik ihtiyaçlardan sevgi ve aidiyet siber zorbalık mağduriyetinin yordayıcılarıdır. Siber zorbalığın yaygınlığına ilişkin bulgular da katılımcıların %34,6'sının siber zorbalığa karıştığını ve %51,3'ünün son altı ay içinde en az bir kez siber zorbalık mağduriyetine maruz kaldığını göstermiştir.

**Anahtar Kelimeler:** Siber zorbalık, kolektivizm, psikolojik ihtiyaçlar, yaşam kalitesi, COVID-19

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## INTRODUCTION

The effects of the COVID-19 pandemic on the quality of life of individuals have been experienced in various fields, including psychological, social, and professional life (Cam et al., 2022; Dong et al., 2021; Prati & Mancini, 2021; Rania et al., 2023; Robinson et al., 2022). The restrictive environment brought by the pandemic and online education has necessarily increased interest in the virtual world and caused individuals to spend most of their time in the virtual environment (Khan et al., 2024; Smith & Jones, 2022). Widespread digital use has been reflected in many areas, such as shopping and business, and online crime has also increased (Aziani et al., 2023), including cyberbullying (Misra et al., 2024; Varela et al., 2022). A study found that 24.6% of university students are cyberbullying victims (Atta et al., 2021). Studies also supported that cyberbullying has increased during the pandemic period (e.g., Misra et al., 2024), suggesting that the restrictions brought by the pandemic and the increased internet use may pave the way for cyberbullying.

Although the concept of cyberbullying describes a broad set of behaviors, Bauman (2013) defined it as "the intentional and repeated harm to another person through electronic communication methods" (p. 11). In addition, individuals' experiences of cyberbullying perpetration (CP) or cyberbullying victimization (CV) vary according to many factors. In most studies, it was reported that there is a relationship between university students' exposure to CP and demographic variables such as gender, age, and daily internet use frequency (Kircaburun et al., 2018; Livingstone & Smith, 2014; Musharraf et al., 2019; O'Reilly et al., 2018). However, previous studies illustrated inconsistent results on the relationship between CP/CV and gender. While most studies revealed that women are exposed to more CP (e.g., Kowalski et al., 2019), some studies stated that men experience more cyberbullying (Forssell, 2016; Phizacklea & Sargisson, 2018). The lack of a clear view of the study results suggests that different individual and cultural factors affect cyberbullying and gender variables. It was stated in the relevant literature that the cultural values of the society might be effective in the higher rate of cyberbullying by male students (Burke-Winkelman et al., 2015; Santre, 2021). According to the literature, culture can normalize specific behaviors with its natural structure (Chan, 2023). For example, in collectivist cultures, group goals are more important than personal goals, group belonging and harmony are emphasized, individuals define their selves according to their ingroup, and individuals' self-perceptions are affected by the context (Markus & Kitayama, 2014). Researchers stated that social control mechanisms such as shame and religious beliefs are prioritized more than the individual's internal control mechanisms in the collectivist culture; in other words, external control mechanisms are more important than internal control mechanisms, and people accept the group norms they feel belong to without question and show conformity behavior (Minkov & Kaasa, 2022; Smith & Louis, 2009). Therefore, it is possible that group affiliation in collectivist societies may affect cyberbullying behavior, which is also compatible with the ecological system perspective (Liu, 2023). However, it is not known whether individuals' collectivism tendencies predict cyberbullying behaviors during the pandemic period.

Another individual dimension of cyberbullying emphasized in the literature is individual and psychological needs. Glasser's (1998) choice theory assumes that individuals are born with five innate needs. These are the needs for survival, power, love and belonging, freedom, and fun. Failure to meet these needs creates discomfort in individuals. The organism, whose homeostatic balance is disturbed, creates internal tension and prompts the individual to act in order to meet these needs. The studies conducted before the pandemic found that individuals' needs for power, belonging, and fun were related to cyberbullying (Sabancı & Çekiç, 2019). Another study determined that psychological needs satisfaction explained CP by 13.4% and CV by 10.7% (Mahan, 2017). In addition, Sabancı and Çekiç (2019) found a negative relationship between success and CP and a positive relationship between the need for autonomy and CV. According to the results of various studies, aggression and CP/CV were found to be positively related (e.g., Güzeller & Gençosman, 2013). Based on the findings of these studies, the psychological needs of individuals are an essential variable in CP and CV in the studies conducted before the pandemic. However, with the impact on social relationships and the increase in online communication, it is unknown whether individuals' needs for love and belonging are related to cyberbullying behaviors during the pandemic.

Considering the importance of individual factors and culture in the formation of cyberbullying, it is thought that evaluating the quality of life, collectivism tendency, and psychological needs in relation to cyberbullying will provide a guide for future studies to better understand CP and CV experienced during the pandemic. In other words, determining the current situation on cyberbullying will guide the mental health studies that can be done with university students during and after the pandemic. Moreover, in studies published before and during the pandemic, it was stated that new studies with university samples are needed (Shaikh et al., 2020). However, considering that the pandemic and the temporal conditions of the pandemic correspond to the chronosystem

dimension of the ecological system within the framework of ecological system theory, a study to be carried out in this period is essential in terms of giving ideas to other researchers in future studies on CP/CV and ecological system theory, and in terms of evaluating the temporal dimension.

Based on all these reasons, the main purpose of this study is to examine the relationship between the quality of life, collectivism, and psychological needs with CP and CV. The following main research questions were addressed in the present study:

1. Do quality of life, collectivism, and psychological needs significantly predict cyberbullying perpetration and cyberbullying victimization?

2. What is cyberbullying perpetration and victimization prevalence among university students?

## METHOD

This study was conducted in a relational model. The convenience sampling method was used as the sampling method.

### Participants

The present study included participants who met the following criteria: (1) enrollment as a university student, (2) capacity to connect to the internet, and (2) access to a technological device. The current study consists of 520 university students in Türkiye, and the mean age of the participants was 20.74 (*Range* = 18-25). The sample included 83.7% female (n = 435) and 16.3% male (n = 85) participants, drawn from all geographical regions of Türkiye. The majority of participants were female (83.7%), most identified as middle class (79.8%), and over half of the sample (58.3%) were first and second-year students.

### Process

After obtaining the necessary permissions from the ethics committee, informed consent and scales were added to "Google Forms". The study's data were collected online due to the constraints and limitations imposed by the COVID-19 pandemic. In order to reach the candidate participants, the research link was announced on social media platforms (e.g., Instagram). Additionally, the research team collaborated with academicians and mental health professionals (e.g., counselors) in several cities of Türkiye for participant recruitment. Before the candidate participants filled out the scales, information about the study and their rights, including the option to volunteer and withdraw from the research, was presented to them at the relevant link. In other words, the participants accessed the research data collection tools after being informed about the online "Informed Consent Form" and declared their consent to participate in the study. It took approximately 8-10 minutes for the participants to respond to the scales.

### Measures

The data collection tools used in the present study, including the Demographic Information Form, Cyberbullying Inventory for University Students, Quality of Life Scale, Individualism and Collectivism Scale for Young Persons, and Psychological Needs Inventory, are presented below.

***Demographic Information Form.*** The form was prepared to identify information about individual and environmental characteristics of individuals, such as gender, age, class level, and perceived income level.

***Cyberbullying Inventory for University Students.*** The scale was developed by Tanrıkulu and Erdur-Baker (2019). The scale has two sub-scales, each consisting of the same 11 items. The first part of the scale assesses CP, and the second part assesses CV. The scale is answered on a 4-point Likert scale (3 = *More than three times*, 2 = *Two to three times*, 1 = *Once*, 0 = *Never*). Higher scores indicate an increased frequency of both CP and CV. Confirmatory factor analyses (CFA) revealed adequate fit to the data, the internal consistency coefficients showed good internal consistencies, and evidence for convergent validity was obtained (GFI = .96, CFI = .91, SRMR = .04, RMSEA = .06). The reliability coefficient was calculated as .82 for CP and .75 for CV (Tanrıkulu & Erdur-Baker, 2020). The reliability coefficient (Cronbach's alpha) was calculated as .71 for CP and .77 for CV in the current study. Some scale items are as follows: *"Sharing on the Internet with someone else's identity without permission"* and *"Making someone watch a private video conversation without the other party's knowledge"*.

***Quality of Life Scale.*** The scale was developed by Erçetin et al. (2020) to assess the impact of the COVID-19 pandemic on the quality of life. When all validity and reliability results were evaluated, the COVID-19 EQLS were a suitable measurement tool that can be used psychometrically (Erçetin et al., 2020). The scale consists of four sub-scales (i.e., professional, familial, psychological, and social) and contains 29 items. Participants respond using a four-point Likert scale, ranging from 1 (I'm affected to a very low degree) to 4 (I'm affected to a very high

degree). The range of scores is between 29 and 116, and a high score from the scale indicates that the quality of life of respondents was adversely affected due to the pandemic (Erçetin et al., 2020). The internal consistency estimates for each subscale are α = .93 for psychological effect, α = .79 for social effect, α = .86 for professional effect, and α = .94 for familial effect. Also, Cronbach's alpha was found as .89 for the all scale. The reliability coefficients for this study were as follows: .92 for psychological, .78 for social, .84 for professional, and .93 for familial. Cronbach's alpha coefficient for the scale was calculated to be .89 in the current study.

***Individualism and Collectivism Scale in Young Persons (ICSYP).*** The scale was developed by Kahveci and Sever (2016) and consisted of 29 items. As a result of exploratory factor analysis, it was determined that the scale consists of eight subscales. Five subscales are related to individualism, while three are related to collectivism. Group dependency, sharing, and loyalty to authority and tradition constitute the sub-scales of collectivism. In contrast, the other five subscales (Consumerism, individual benefits and competitiveness, uniqueness, liberality, openness, criticism) constitute the sub-subscales of individualism. Participants respond using a five-point Likert format, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), and the range of scores on the scale is between 29 and 145. The total variance of the scale, collected across eight subscales, is 56.98%. The Cronbach Alpha (α) coefficient of internal consistency ranges from .58 to .78 in the subscales (Kahveci & Sever, 2016). This Coefficient was found to be .77 for the scale as a whole. Since the relationship between the collectivism levels of the participants and cyberbullying/victimization was examined in this study, only the sub-dimensions of "loyalty to authority and tradition" and "group dependency" were used in the study. The internal consistency coefficients were .60 for group dependency, .60 for commitment to authority and tradition, and .77 for the overall scale.

***Psychological Needs Inventory (PNI).*** The PNI was developed by Eşici (2014) with university students. AFA sonucunda ölçeğin toplam varyansın %48.21'ini açıkladığı, 25 maddeden oluşan dört alt boyutlu bir yapıya sahip olduğu görülmüştür. The scale comprises four sub-scales (i.e., love and belonging, freedom, power, and fun), each with 25 items. It has been confirmed that the conformity indices and statistical results obtained from the CFA meet the basic criteria (RMSEA = .05, RMR = .04, CFI = .91, GFI = .90). Participants respond using a five-point Likert format, ranging from 1 (Never) to 5 (Always), and the range of scores from the scale is between 29 and 125. The internal consistency coefficients were: .87 for love and belonging, .69 for freedom, .66 for power, and .76 for fun (Eşici, 2014). In this study, Cronbach's alpha reliability coefficient values were found to be .91 for the love and belonging subscale, .74 for the freedom subscale, .81 for the power subscale, and .84 for the fun subscale. Examples of items from the scale are as follows: "*My family makes me feel loved at every opportunity*" and "*Even if I get the opinions of my friends, I make the final decision*".

**Data Analysis**

Skewness and kurtosis were used to examine the data distribution, with values between -2 and +2 suggesting normality (Byrne, 2013). Skewness ranged from -0.77 to +1.88, and kurtosis from -0.59 to +1.04 in the current study. These findings indicated that the data met normal distribution criteria, except for CP and CV. However, the scores for CP and CV do not necessarily indicate a problem with the scale's scores but rather reflect the underlying nature of the measured constructs. For example, the relevant literature illustrated that adolescents regard involvement in cyberbullying-related behaviors or exposed to such behaviors as socially undesirable (Betts, 2016; Musharraf et al., 2019). Therefore, a correlation analysis, a parametric test, was conducted to examine the associations between the study variables. Multiple hierarchical regression analyses were conducted to investigate the relationships between quality of life, collectivism, and psychological needs and CP and CV. SPSS v26 was used to conduct all analyses, including descriptive statistics, correlation, and regression analysis.

## FINDINGS

The prevalence and frequency of CP and CV are presented in Table 1. 267 participants reported that they had been cyber-victims in the last six months; of these, 55 reported "one time", 102 reported "two or three times", and 110 as "more than three times". On the other hand, 180 participants reported that they were involved in CP in the last six months. Seventy-three reported it "one time", 64 reported "two or three times", and 43 as "more than three times".

**Table 1.** Prevalence of Perpetration and Victimization

| Prevalence | CP | | CV | |
|---|---|---|---|---|
| | *n* | % | *n* | % |
| Never | 340 | 65.4 | 253 | 48.7 |
| One time | 73 | 14.0 | 55 | 10.6 |
| Two or three times | 64 | 12.3 | 102 | 19.6 |
| More than three times | 43 | 8.3 | 110 | 21.1 |

*Note.* CP = Cyberbullying perpetration, CV = Cyberbullying victimization.

Skewness and kurtosis values were examined to determine whether the data are normally distributed. Skewness and kurtosis values within the range of -3 to +3 are considered acceptable for normal distribution (Hair et al., 2010). In this study, it was observed that the skewness and kurtosis values of all variables were between -3 and +3. Additionally, histogram graphs were examined for data normality. No outliers were detected in these graphs. Therefore, it can be stated that the data follow a normal distribution. Since the data exhibit a normal distribution, parametric tests were used in the analysis.

The multicollinearity problem was examined in the data set before regression analysis. A correlation analysis was performed between the quantitative dependent and independent variables in this context. Since the relationships between the variables included in the model were not high, it can be stated that there was no multicollinearity or singularity problem. In order to control for multicollinearity in the dataset, variance inflation factors (VIF) and tolerance values (TV) were examined in addition to the correlation coefficients between variables. Hair et al. (2010) state that there are no multicollinearity and singularity issues in the dataset when tolerance values are greater than 0.10 and VIF values are less than 10. Since the obtained tolerance values are greater than 0.10 and the VIF values are less than 10, it can be said that the data set is suitable for hierarchical multiple regression analysis and that there is no multicollinearity problem.

The associations of CP and CV with the quality of life, collectivism, and psychological needs were identified by performing Pearson's correlation analysis, and the results are shown in Table 2. The findings illustrated that CP was statistically significant and positively related with psychological ($r = .13$, $p < .01$), social ($r = .13$, $p < .01$), and professional ($r = .10$, $p < .05$) factors related to the quality of life; and negatively correlated with loyalty to authority and tradition ($r = -.10$, $p < .05$) and love and belonging ($r = -.11$, $p < .05$). In addition, it was found that CV was statistically significant and positively associated with psychological ($r = .19$, $p < .01$), social ($r = .17$, $p < .01$), professional ($r = .19$, $p < .01$) factors related to the quality of life, and group dependency ($r = .08$, $p < .05$); and negatively associated with love and belonging ($r = -.17$, $p < .01$). However, there were no significant correlations between CP and CV and familial effect, freedom, power, fun, and age; CP and group dependency; and CV and loyalty to authority and tradition ($p > .05$; see Table 2).

Regression analyses were also performed to identify the relationships between quality of life, collectivism, and psychological needs and CP and CV. Before proceeding with the regression analyses, subcategories of quality of life, collectivism, and psychological needs that were not correlated with CP and CV were excluded from the models (see Table 2). Then, hierarchical regression analysis was performed to predict CP from subscales of the quality of life (Step 1), the addition of loyalty to authority and tradition (Step 2), and the addition of love and belonging (Step 3). Additionally, hierarchical regression was conducted to examine CV from subscales of the quality of life (Step 1), the addition of group dependency (Step 2), and the addition of love and belonging (Step 3).

**Table 2.** The Results of Correlation Analysis

| Variables | Mean | Standard deviation | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Cyberbullying perpetration | 0.83 | 1.44 | - | | | | | | | | | | | |
| 2. Cyberbullying victimization | 2.04 | 2.96 | .50** | - | | | | | | | | | | |
| 3. Psychological [a] | 30.60 | 9.12 | .13** | .19** | - | | | | | | | | | |
| 4. Social [a] | 10.47 | 3.21 | .13** | .17** | .56** | - | | | | | | | | |
| 5. Professional[a] | 11.07 | 3.69 | .10* | .19** | .57** | .46** | - | | | | | | | |
| 6. Familial[a] | 20.39 | 7.03 | .03 | .02 | -.10* | -.04 | -.06 | - | | | | | | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7. Loyalty to authority and tradition[b] | 10.13 | 2.90 | -.10* | -.05 | -.03 | .04 | -.04 | -.23** | - | | | | |
| 8. Group dependency[b] | 8.28 | 2.36 | .06 | .08* | .09* | .13** | .09* | -.08 | .28** | - | | | |
| 9. Love and belonging[c] | 27.07 | 6.10 | -.11* | -.17** | -.07 | -.12** | -.10* | -.60** | .15** | -.02 | - | | |
| 10. Freedom[c] | 19.07 | 3.26 | .01 | -.04 | -.08 | -.09* | -.06 | -.02 | -.14** | -.09* | .16** | - | |
| 11. Power[c] | 17.59 | 3.61 | -.06 | -.01 | -.10* | -.18** | -.09* | -.27** | .04 | -.09* | .42** | .42** | - |
| 12. Fun[c] | 32.45 | 4.88 | -.05 | -.02 | -.08 | -.05 | -.04 | -.24** | .01 | -.03 | .34** | .38** | .60** |

*Note.* N = 520. *$p$ <. 01, **$p$ < .01, ***$p$ <. 001. [a]Subscales of the Quality of Life Scale. [b]Subscales of the ICSYP. [c]Subscales of the PNI.

The hierarchical multiple regression analysis showed that psychological, social, and professional factors related to the quality of life significantly explained variance in CP at step 1 ($F_{(3, 516)} = 3.79$, $p < .05$, $\Delta R^2 = .016$). The addition of loyalty to authority and tradition at step 2 produced a further significant increase ($F_{(4, 515)} = 4.12$, $p < .01$, $\Delta R^2 = .023$). Finally, including love and belonging at step 3 resulted in a statistically significant improvement in predicting CP ($F_{(5, 514)} = 3.98$, $p < .01$, $\Delta R^2 = .028$; see Table 3).

**Table 3.** The Results of Regression Analysis for Cyberbullying Perpetration

| Variables | *B* | 95% CI for *B* | | *SE (B)* | *β* | $R^2$ | $\Delta R^2$ |
|---|---|---|---|---|---|---|---|
| | | LL | UL | | | | |
| Step 1 | | | | | | .022 | .016* |
| Constant | .01 | -.49 | .51 | .25 | | | |
| Psychological[a] | .01 | -.01 | .03 | .01 | .08 | | |
| Social[a] | .03 | -.02 | .08 | .02 | .07 | | |
| Professional[a] | .01 | -.03 | .05 | .02 | .03 | | |
| Step 2 | | | | | | .031 | .023** |
| Constant | .51 | -.15 | 1.17 | .34 | | | |
| Psychological[a] | .01 | -.01 | .03 | .01 | .07 | | |
| Social[a] | .04 | -.01 | .08 | .02 | .08 | | |
| Professional[a] | .02 | -.03 | .05 | .02 | .02 | | |
| Loyalty to authority and tradition[b] | -.02 | -.09 | -.01 | .02 | -.10* | | |
| Step 3 | | | | | | .037 | .028** |
| Constant | 1.02 | .16 | 1.88 | .44 | | | |
| Psychological[a] | .01 | -.01 | .03 | .01 | .08 | | |
| Social[a] | .03 | -.02 | .08 | .02 | .09 | | |
| Professional[a] | .01 | -.04 | .05 | .02 | .02 | | |
| Loyalty to authority and tradition[b] | -.04 | -.09 | .00 | .02 | -.09* | | |
| Love and belonging[c] | -.02 | -.04 | .00 | .01 | -.08 | | |

*Note.* N = 520. *$p$ < .05, **$p$ <. 01, ***$p$ < .001. $\Delta R^2$ = Adjusted $R^2$, $R^2$ = Coefficient of determination, $\beta$ = Standardized Coefficient, *SE (B)*= Standard error of the Coefficient, *CI* = Confidence interval, *B* = Unstandardized regression coefficient. [a]Subscale of the Quality of Life, [b]Subscale of the ICSYP, [c]Subscale of the PNI.

The hierarchical multiple regression analysis also revealed that psychological, social, and professional factors related to the quality of life significantly explained variance in CV at step 1 ($F_{(3, 516)} = 8.97$, $p < .001$, $\Delta R^2 = .044$). The addition of group dependency at step 2 led to a statistically significant increase ($F_{(4, 515)} = 7.18$, $p < .001$, $\Delta R^2 = .045$). Finally, including love and belonging at step 3 resulted in a statistically significant improvement in predicting CV ($F_{(5, 514)} = 8.20$, $p < .001$, $\Delta R^2 = .065$; see Table 4).

**Table 4.** The Results of Regression Analysis for Cyberbullying Victimization

| Variable | *B* | 95% CI for *B* | | *SE (B)* | *β* | $R^2$ | $\Delta R^2$ |
|---|---|---|---|---|---|---|---|
| | | LL | UL | | | | |
| Step 1 | | | | | | .050 | .044*** |
| Constant | -.48 | -1.48 | .52 | .51 | | | |
| Psychological[a] | .03 | -.01 | .07 | .02 | .10 | | |
| Social[a] | .06 | -.04 | .16 | .05 | .07 | | |
| Professional[a] | .08 | -.01 | .17 | .04 | .10* | | |
| Step 2 | | | | | | .053 | .045*** |
| Constant | -.10 | -2.26 | .26 | .64 | | | |
| Psychological[a] | .03 | -.01 | .07 | .02 | .10 | | |
| Social[a] | .05 | -.04 | .15 | .05 | .06 | | |
| Professional[a] | .08 | -.01 | .17 | .04 | .10 | | |
| Group dependency[b] | .07 | -.03 | .18 | .05 | .06 | | |
| Step 3 | | | | | | .074 | .065*** |
| Constant | 1.14 | -.61 | 2.89 | .89 | | | |
| Psychological[a] | .03 | -.01 | .07 | .02 | .10 | | |
| Social[a] | .04 | -.06 | .14 | .05 | .04 | | |
| Professional[a] | .07 | -.01 | .16 | .04 | .09 | | |
| Group dependency[b] | .07 | -.03 | .18 | .05 | .06 | | |
| Love and belonging[c] | -.07 | -.11 | -.03 | .02 | -.15* | | |

*Note.* N = 520. *$p$ < .05, **$p$ <. 01, ***$p$ < .001. [a]Subscale of the Quality of Life, [b]Subscale of the ICSYP, [c]Subscale of the PNI.

## DISCUSSION AND CONCLUSION

The present study aimed to reveal the relationship between the quality of life, collectivism, and psychological needs with CP and CV during the pandemic. The study's findings illustrated that the psychological, social, and professional dimensions of the quality of life, loyalty to authority and tradition (i.e., dimension of collectivism), and love and belonging from psychological needs were predictors of CP. In addition, the psychological, social, and professional dimensions of the quality of life, group dependency (i.e., dimension of collectivism), and love and belonging from psychological needs were predictors of CV. The study findings on cyberbullying prevalence also illustrated that 34.6% of the participants were involved in CP, and 51.3% were exposed to CV at least one time in the last six months.

Considering the studies conducted during the COVID-19 pandemic, it can be said that the rates of CP and CV are higher than in the studies before the pandemic. In the studies comparing the rates before and during the pandemic, it is seen that the rates of CP and CV are high and similar to this study (e.g., Misra et al., 2024). On the other hand, there are high proportional differences between studies on the prevalence of cyberbullying in pre-pandemic studies. For instance, some studies conducted before the pandemic also revealed that the rates of CP and CV were between 3% and 18% (Ang et al., 2014; Foody et al., 2017; Jadambaa et al., 2019; Lobe et al., 2011). Factors such as individual/cultural differences in the samples, variations in the data collection process, and the quality of the measurement tools used can all affect the prevalence of cyberbullying (e.g., Smith, 2012). Along with these factors, the high rate of CP/CV in this study may be attributed to data collection during the pandemic period and the increased internet use resulting from pandemic measures, such as curfews and quarantine processes. Considering that CP and CV are factors associated with the duration of internet use (Musharraf et al., 2019), individuals may have compensated for their diminishing face-to-face social relations with online communication. Moreover, the relationship between the quality of life with CP and CV, which is another important finding of the present study, also supports this view on the psychological, social, and professional role of the pandemic conditions. Individuals may have seen the internet as a way of coping with the stress caused by the pandemic's psychological, social, and professional effects. Indeed, people experiencing stress due to the COVID-19 pandemic

have an increased tendency to be involved in CP as their experiences of stressful life events increase (Khan et al., 2024). Psychological, occupational, and social factors such as negative news caused by the pandemic, physical illness, economic negatives, lack of social activity, loneliness, occupational losses, and job/environment changes can lead individuals to use the internet more (Dong et al., 2021), leading to both more bullying behavior and more may have caused them more suffering. However, causal studies with mixed findings on the role of quality of life in CP and CV are needed to reach a definitive opinion.

The study findings also revealed that loyalty to authority and tradition (i.e., dimension of collectivism) was negatively associated with CP, while group dependency, another dimension of collectivism, was positively associated with CV. In other words, different dimensions of collectivism predict CP and CV differently. Considering the items on the scale used in this study, it is evident that individuals who demonstrate a commitment to traditions and authority are more obedient. Studies on this subject have shown that cyberbullying and learned cultural attitudes are related, and that aggression is lower in collectivist and self-directed societies (Rodríguez-Hidalgo et al., 2018; Wei et al., 2022). On the other hand, individuals who show dependency on the group may be at high risk of being targets for cyberbullies and exhibit more dependent personality traits. As can be understood from the scale items in this study, individuals who exhibit group loyalty are those who feel bad when they do not feel like they belong to a group and abide by these decisions, even if they do not adopt the group's decisions. Considering that these characteristics also indicate low self-esteem and that people who show loyalty to the group are more victims of cyberbullying, it is likely that bullies will target these people because of their dependency or feelings of inadequacy. On the other hand, considering that gender equality in Türkiye is not at the desired level and cyber victims are predominantly women (Turan et al., 2011), it is thought that women with dependent personality traits may be in the risk group. However, to evaluate whether the gender variable is a confounding factor affecting the results, there is a need for new studies in which the mentioned factors are addressed and the sample is equally distributed.

Another finding of this study was that love and belonging, one of the basic psychological needs, predict both CP and CV. Previous studies stated that basic psychological needs might be the antecedents of individuals' cyberbullying behaviors (e.g., Sabancı & Çekiç, 2019). However, depending on the theoretical approach adopted by the researchers and the measurement tools they use, the basic needs addressed in the research differ. For example, one study found that psychological needs satisfaction accounted for 13.4% of CP and 10.7% of CV (Mahan, 2017). According to the study results, relatedness predicts CP and CV. Considering that the present study's data were collected during the pandemic period, the feeling of loneliness and the need for love created by the pandemic may have led to more internet use by both victims and cyberbullies and indirectly increased the experience of CP and CV. However, since it is not known for what purpose people use the internet (e.g., finding a lover or meeting a lover online), new studies can be conducted using qualitative or mixed methods to determine how the need for love and belonging predicts cyberbullying.

**Conclusion**

The present study contributes to the literature on CP and CV by examining the relationship between the quality of life, collectivism, and psychological needs. This study found that CP and CV were related to the impact on the quality of life and psychological needs (love and belonging). In addition, group dependency in terms of collectivism was associated with CV, while loyalty to authority and tradition was related to CP. Furthermore, the findings highlight the prevalence of CP and CV among university students.

**Implications**

Various findings predicting CP and CV were obtained in this study. In light of this information, preventive and interventional psychoeducation programs can be developed for university students at risk in terms of CP and CV. For example, these services can be offered primarily to university students with a high daily internet usage time during the pandemic period, whose quality of life is affected by the COVID-19 pandemic, or who have a basic psychological need for love and belonging. For this purpose, university students whose quality of life is affected psychologically, socially, and professionally can be determined by a screening study to be carried out in the university universe, and psychological counseling and guidance studies can be carried out for these students. On the other hand, this study found that the need for love and belonging negatively affects CP and CV. In order to reduce the rates of CP and CV and to be a protective factor, activities can be carried out to strengthen social support to meet the psychological needs of young individuals, such as belongingness needs, especially in the psychological counseling and guidance centers in universities. In addition, mental health professionals working at universities can carry out studies that will provide zero tolerance for cyberbullying and increase students' awareness of cyberbullying to prevent CP and CV. In this context, individual/group studies, psychological

counseling/psychoeducation programs, and studies to increase peer support can be carried out. In order for university students to focus on the correct and efficient use of the time they spend on the internet, training on effective internet use, possible harms of the cyber environment, and prevention of these harms, and effective coping methods can be provided.

**Limitations**

Although the present study has many contributions to the relevant literature, it has several limitations. First, the data in the study were collected online due to the pandemic. In this way, although university students residing in every geographical region of Türkiye were reached, individuals without internet access could not be reached. Second, since the research method is not experimental and longitudinal, a cause-and-effect relationship cannot be established between CP/CV and other variables examined, and the research has a cross-sectional character regarding the pandemic period. With new studies to be carried out in the future, longitudinal, mixed-pattern, or causal studies can be conducted between university students' CP and CV experiences and the variables addressed. Third, the measures used in the current study were self-reporting. The relevant literature highlighted that adolescents consider involvement in cyberbullying behaviors or exposed to cyberbullying a socially undesirable behavior (Betts, 2016; Doane et al., 2013; Musharraf et al., 2019). Therefore, the participants included in this study might have been less inclined to provide honest self-reports. Fourth, most participants who participated in the study were female (83.7%). Therefore, this should be considered one of the critical considerations for study limitations. Finally, although the study findings provide information on CP and CV experienced in a society with a collectivist cultural structure, the information obtained can be generalized to university students who exhibit similar individual and cultural characteristics to the participants.

**Statements of Publication Ethics**

Ethics Committee approval of the study was obtained.

**Conflict of Interest**

This study does not have any conflicts of interest.

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