Psychological Achievements

(Psychol Achiev), 2025
32(*Special Issue*), 133-146
Received: 15 May 2026
Accepted: 14 Oct 2026
Doi: 10.22055/psy.2026.51795.3589

ISSN (E): 2588-6649
https://psychac.scu.ac.ir/

Open Access
Publish Free

Research Article

Attachment Styles, Perfectionism, and Cyberloafing among University Students: The Mediating Role of Loneliness

Ghasem Abdolpour[1], Hassan Mahmoudian[2], Fatemeh Alizadeh Afroozi[3], Sahar Joorsara[4]

1. Assistant Professor, Department of Psychology, University of Mazandaran, Babolsar, Iran.
2. Assistant Professor, Department of Psychology, University of Mazandaran, Babolsar, Iran.
3. Bachelor's Degree, Department of Psychology, University of Mazandaran, Babolsar, Iran.
4. Bachelor's Degree, Department of Psychology, University of Mazandaran, Babolsar, Iran.

Article Info

Corresponding Author:
Ghasem Abdolpour

Email:
g.abdolpour@umz.ac.ir

Keywords:
cyberloafing, perfectionism, loneliness, attachment style, Structural Equation Model

Citation:
Ghasem Abdolpour, Gh., Mahmoudian, H., Alizadeh Afroozi, F., & Joorsara, S. (2026). Attachment Styles, Perfectionism, and Cyberloafing among University Students: The Mediating Role of Loneliness, *Psychological Achievements, 32*(Special Issue), 133-146.

Abstract

Aim: Cyberloafing is defined as the use of the internet for non-work-related purposes along working hours. The current study examined the mediating role of loneliness in the relationship between insecure attachment, perfectionism, and cyberloafing.

Methods: Participants consisted of 561 individuals +18 years old who had access to the internet (males = 46.8%, mean age = 27.60 ± 7.86 years and females = 53.1%, mean age = 25.37 ± 9.16 years). They voluntarily completed a questionnaire package which included the Russell's Loneliness Questionnaire (UCLA), Hill Perfectionism Inventory (HPI), cyberloafing scale of Akbulut et al, (2016), and the experiences in close relationships revise scale (ECR-R). Data were analyzed by implementing Pearson correlation and testing a mediation via the Structural Equation Model approach.

Results: The findings revealed that the structural model of attachment style, perfectionism and cyberloafing with the mediating role of loneliness had a good fit (GFI = 0.94; NFI = 0.94; CFI = 0.96; RMSEA= 0.057). Further, all paths in the proposed model were statistically significant, explaining 39% of the variance in cyberloafing.

Conclusion: These findings suggest that loneliness could demonstrate a full mediating role in the correlation between perfectionism and cyberloafing. Also, according to the findings, loneliness could demonstrate a partially mediating role in the correlation between perfectionism and cyberloafing.

© 2025 The Author(s). Published by Shahid Chamran University of Ahvaz. This is an open-access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

1. Introduction

Insecure attachment refers to maladaptive patterns of relating to others developed from inconsistent, unavailable, or insensitive caregiving experiences in early life, as described by Attachment Theory (Bowlby, 1969). Insecurely attached individuals either have anxious (fear of abandonment) or avoidant (emotional distancing) attachment strategies (& Ditommaso, 2020; Nottage et al., 2022). Those with anxious attachment tend to hyperactivate the attachment system, seek constant reassurance, and remain highly vigilant to signs of rejection or abandonment, while insecurely avoidant persons distance themselves from others to avoid perceived vulnerability (Borawski et al., 2022). Insecure attachment has repeatedly been linked to perceived social isolation and loneliness, which refers to the painful feeling of being alone or socially disconnected. These experiences may take place because insecurely attached individuals often have difficulties developing secure, trusting, and emotionally supportive relationships with others (Nottage et al., 2022; 2024). Insecurely attached individuals have been shown to have less perceived social support (Benoit & Ditommaso, 2020), contributing to increased experiences of loneliness.

Perfectionism is a multidimensional construct which includes self-oriented perfectionism (setting excessively high standards for oneself), socially-prescribed perfectionism (the perception that others impose unrealistic expectations on the individual), and other-oriented perfectionism (imposing unrealistic standards on others) (Chen et al., 2024; Sahin & Duy, 2023). Although self-oriented perfectionism may be motivational for success in academics and other goals in life, maladaptive perfectionism, especially socially-prescribed perfectionism, is significantly associated with emotional distress such as experiences of loneliness, irritability, and academic burnout (Eley et al., 2020; Yang et al., 2021). According to the Perfectionism Social Disconnection Model, perfectionistic concerns may restrict healthy social engagement since fear of judgment and rejection can inhibit emotional closeness and promote emotional disconnection (Chen et al., 2024). For example, socially-prescribed perfectionism predicts experiences of chronic loneliness upheld by convictions about other people accepting one conditionally (Sahin & Duy, 2023). This is in line with research suggesting that maladaptive perfectionism may mediate the relationship between negative childhood emotional experiences, such as insecure attachment, and later emotional distress (Lafontaine et al., 2020).

Insecure attachment, whether anxious or avoidant, is linked to loneliness and cyberloafing. The anxious attached may be deeply distressed in their fear of abandonment and have increasing experiences of loneliness from being constantly vigilant about their relationships as well as social environment (Benoit & Ditommaso, 2020; Nottage et al., 2022). The avoidant-attached will avoid emotional expressions to forestall rejection, which can lead to feelings of existential loneliness and a sense of not being understood by others (Borawski et al., 2021; Helm et al., 2022). Individuals with insecure attachment patterns often experience difficulties in regulating their emotions; such poor emotion control makes these students search for emotional comfort in inefficient activities such as engaging in cyberloafing. For instance, Yang et al. (2021) have noted that workplace loneliness mediated by insecure attachment can be predictive of increased instances of workplace cyberloafing. This is because these workers resorted to internet surfing as a way of escaping from their experiences of emotional exhaustion. Also, Chen et al. (2021) have confirmed that the students who had insecure attachment to engage more in cyberloafing behaviors, especially under academic stressors.

These dynamics may be especially relevant in cultural contexts such as Iran, where academic success and social evaluation may be closely tied to family expectations and

collective values. Students in competitive academic settings may be deterred from confiding in their peers out of fear of family embarrassment and choose to engage in cyberloafing as their way of handling these issues (Sung & Sung, 2022; Hao et al., 2024). They may do this because, for example, avoidantly attached Iranian students may retreat into online spaces as a way of avoiding direct interpersonal engagement and lowering emotional vulnerability (Hibrian et al., 2022).

Maladaptive perfectionism, particularly socially prescribed perfectionism, has also been linked to loneliness and problematic internet use among students. In socially prescribed perfectionists, external demands seem never-ending, creating fear of evaluation and emotional disconnection (Chen et al., 2024; Sahin & Duy, 2023). In accordance with Perfectionism Social Disconnection Model, those who set high self-standards have impaired heuristic search for social connections and turn to online activities to fulfill these needs (Chen et al., 2024). Among medical students, Eley et al. (2020) reported perfectionism as a mediator of mental distress. They observed strong links between socially prescribed perfectionism as well as experiences of loneliness and escapist internet use.

Some empirical research highlights the role of maladaptive perfectionism in guiding behavior related to cyberloafing as these self-denigrating thought processes provide momentary respite from increased self-blame. For instance, Yang et al. (2021) noted that fear of failure and burnout were associated with Internet addiction among Chinese college students. Likewise, in collectivist academic cultures where academic achievement may be closely connected to family prestige, perfectionistic students may engage in cyberloafing as a form of procrastination or avoidance, in spite of its negative academic consequences (Sung & Sung, 2022; Dobos et al., 2024).

Loneliness may act as a critical mediator between relational issues (such as insecure attachment) and perfectionistic demands as well as their associated maladaptive strategies such as cyberloafing. Insecurely attached students often experience a gap between their desired and actual social connections, which may contribute to existential isolation and compensatory Internet use (Helm et al., 2020; Fang et al., 2020). For example, it has been found that loneliness completely mediated the association between insecure attachment and issues linked to mental health challenges by intensifying emotional distress (Nottage et al., 2022). In a related study by Chen et al. (2024), it was observed to have mediated between scholars who experienced socially prescribed perfectionism and distress since scholars avoided social interactions to steer clear of perceived judgments.

According to this theory, those who experience psychological distress may use the Internet excessively to compensate for unfulfilled social or emotional needs (Kardefelt-Winther, 2014). For instance, Fang et al. (2020) found that the presence of loneliness moderated the association between victimization in cyberspace and escapist internet usage, while Yu et al. (2023) recently found that loneliness mediated the association between neuroticism and symptoms of depression. In Iranian college students, limited resources to deal with mental issues and associated stigma considering emotional vulnerability may exacerbate this vicious cycle to make cyberloafing a culturally acceptable but detrimental alternative (Hao et al., 2024; Chen et al., 2021).

Even though there exists increasing literature regarding the psychologically antecedent correlates of cyberloafing, it still represents a critical research gap to fully grasp how loneliness mediates between insecure attachment, perfectionism, and maladaptive internet use. Although past research emphasizes insecure attachment and perfectionism as antecedent predictors of internet-mediated loneliness and cyberloafing in Westernized and East Asian samples (Nottage et al., 2022; Yang et al., 2022; Chen et al., 2021), there is

remarkably scant research in Middle Eastern samples pertaining to Iranian college-aged cyberloafing. Specifically, Iran represents a collectivist society inculcating values such as family honor and academic success; these values may promote perfectionistic concerns in ways that differ from many Western contexts (Sung & Sung, 2022; Hao et al., 2024). Despite these cultural considerations, no research has yet examined the mediating role of culture in the relationship between internet-mediated attachment-related loneliness and cyberloafing.

Further, past research work on cyberloafing has mainly been performed either in a workplace or adult sample context (Yang et al., 2022), disregarding stresses specifically associated with academic contexts and college-going students. Indeed, academic burnout and fear of failure have been found to be common phenomena associated with perfectionistic pursuits (Eley et al., 2020; Dobos et al., 2024), which can potentially exacerbate experiences of loneliness and lead to increased instances of cyberloafing because of such experiences. However, such correlations have yet to be fully explored and understood. Further, other research (Fang et al., 2024; Sahin & Duy, 2023) notwithstanding investigating attachment and perfectionistic pursuits as discrete predictors of distress experiences, it would be interesting to investigate associated mediational effects of loneliness to determine their role in increasing instances of cyberloafing.

In combining the Perfectionism Social Disconnection Model (Perfectionism Social Disconnection Model; Chen et al., 2024) and compensatory internet use theory (Kardefelt-Winther, 2014), this study puts forward theoretical developments of internet use behavior of the type associated with 'cyberloafing.' The results of this study will provide insight into culturally sensitive methods to counteract these effects of loneliness in high-pressured academic settings.

2. Objectives

Given the mediating role of student loneliness, attachment patterns and perfectionistic tendencies can predict cyberloafing among Iranian university students.

1- Cyberloafing among Iranian university students can be predicted based on attachment patterns and perfectionistic tendencies

3- Cyberloafing among Iranian university students can be predicted based upon loneliness.

4- Loneliness among Iranian university students can be predicted based on attachment patterns.

5- Loneliness among Iranian university students can be predicted based upon perfectionistic tendencies.

6- Student loneliness mediates the relationship between attachment patterns and cyberloafing.

3. Methods

3.1. Sample and Procedure

The present study design was descriptive correlational with its statistical population comprising all individuals older than 18 years who regularly use social media. Through the availability sampling method, 589 individuals participated in the present study, which dropped to 561 after eliminating outliers. Thus, the final data analysis contained 561 participants. The study sample consisted of 298 females (53.11%) and 263 males (46.88%). The mean age and standard deviation of the men's age were 27.60 and 7.86, respectively, whereas the mean age and standard deviation of the women's age were 25.37 and 9.16, respectively. Considering education, 308 (54.9%) held a bachelor's degree, 168 (29.9%) a master's degree, and 63 (11.22%) a Ph.D, with 22 (3.92%) being undefined. Further,

regarding marital status, 420 (74.86%) were married, 121 (21.56%) were single, and 20 (3.56%) were divorced. The study was undertaken on the Iranian population from June 2024 to December 2024. The participants responded to the online questionnaires and submitted their answers to the researcher. Inclusion criteria were: age over 18 years, access to the internet, willingness to participate in the study (approval of written informed consent). The participants were recruited in the study via invitations through social media and received the necessary information regarding the research.

3.2. Research Tools

3.2.1. Perfectionism Scale:

The Perfectionism Scale was developed by Hill et al. (2004). This scale consists of 59 items, including 8 subscales. It is validated based on a 4-point Likert scale ranging from "Strongly Disagree" (1) to "Strongly Agree" (4). The reliability coefficient attained using Cronbach's alpha ranged from 0.83 to 0.91 (Hill et al., 2004). The Hill Perfectionism Inventory demonstrated good convergent validity, with the Self-Evaluative scales (Rumination, Concern Over Mistakes, Need for Approval) showing strong correlations with the BSI global severity index, FNE, and OCI (all r > .50), while the Conscientious Perfectionism scales were moderately associated with relevant MPS subscales such as SOP, PS, and OR (r ≈ .40–.60) (Hill et al., 2004). The Cronbach's α ranged from 0.79 to 0.92 in the present study. The Persian version of the Perfectionism Scale was validated by Jamshidi et al. (2009). The results indicated that the scale demonstrated acceptable reliability (Cronbach's alpha coefficient = 0.90 for the total scale) and construct validity was supported through factor analysis.

3.2.2. Russell's Loneliness Questionnaire (UCLA):

The revised version of Russell's Loneliness Questionnaire was developed by Russell et al. (1980). This scale includes 20 four-point items, with 10 negatively worded and 10 positively worded items, measuring emotional and social loneliness. The responses are scored as "Never" (1), "Rarely" (2), "Sometimes" (3), and "Always" (4). Questions 1, 5, 6, 9, 10, 15, 16, 19, and 20 are reverse scored. The total score ranges between 20 and 80. In a study by Mirdrikvand (1999), the scale's reliability coefficient was reported as 0.81 using Cronbach's alpha. The overall Cronbach's α score in the present study was found 0.84. "The revised UCLA Loneliness Scale showed strong concurrent validity, correlating significantly with depression ($r = 0.62$, $p < .001$), anxiety ($r = 0.32$, $p < .001$), and self-reported loneliness ($r = 0.71$, $p < .001$), while maintaining discriminant validity from related constructs."

3.2.3. The Cyberloafing Scale:

The Cyberloafing Scale was developed by Akbulut et al. (2016) and consists of 30 items designed to ascertain cyber activities across student populations. This scale includes 5 subscales, with the items validated based on a 7-point Likert scale ranging from "Never" (1) to "Always" (7), with intermediate responses such as "Rarely" (2), "Occasionally" (3), "Sometimes" (4), "Frequently" (5), and "Usually" (6). The reliability coefficient for the subscales, measured using Cronbach's alpha, ranged from 0.69 to 0.95. The cyberloafing scale demonstrated good convergent validity, showing significant positive correlations with rumination ($r = 0.42–0.62$, $p < 0.05–0.001$) and social media addiction subscales ($r = 0.24–0.57$, $p < 0.001$) (Abdolpour, 2026). The Cronbach's α ranged from 0.81 to 0.91 in the present study. The Farsi version of the Cyberloafing Scale showed good reliability (Cronbach's $\alpha = 0.92$) and acceptable construct validity (Abdolpour, 2026).

3.2.4. Attachment style scale (R-ECR):

To appraise adult attachment, the revised version of the Experiences in Close Relationships Questionnaire (R-ECR) was employed. This scale, developed by Waller, Fraley, and Brennan (2000), measures three attachment styles—secure, anxious, and avoidant—using 36 items on a 7-point Likert scale. The findings of Shokrkon and colleagues (2006) revealed that the reliability coefficients for the anxious scale, measured through Cronbach's alpha and split-half methods, ranged between 0.80 and 0.86, and for the avoidant scale, ranged from 0.80 to 0.89. In this study, only the anxious and avoidant attachment subscales were utilized. The questionnaire demonstrated acceptable convergent validity; the anxious attachment subscale showed correlations ranging from 073 to 0.86 with the anxiety dimension of the Hazan and Shaver attachment measure, whereas the avoidant attachment subscale showed correlations ranging from 0.69 to 0.78 with the avoidance dimension.

3.3. Ethical Considerations

All ethical guidelines for psychological research were closely adhered through the course of the study. Parents or legal guardians gave their informed consent once participants were fully informed about the study's objectives. All information was kept private, and no personal information was revealed when the results were presented in aggregate form.

4. Results

Out of a total of 561 participants, 298 individuals, accounting for 53.1% of the sample, were female, and 263 individuals, approximately 46.8% of the sample, were male. The age range of the participants was between 18 and 41 years. The descriptive results are reported in Table 1.

Table 1. Descriptive Statistics of the Research Variables

Observed Variable in model	Mean (ST-deviation)	Kurtosis	Skewness
Avoidance	54.88 (15.09)	-0.227	0.084
Anxiety	52.31 (17.05)	-0.163	0.111
Organization	19.44 (3.85)	0.149	0.005
Excellence	14.39 (2.89)	0.066	0.047
Plan-fullness	16.90 (3.60)	-0.048	0.128
Standard	15.27 (3.39)	-0.016	-0.082
Mistakes	19.37 (3.89)	0.372	0.103
Approval	19.44 (3.85)	0.149	0.005
Rumination	15.61 (3.15)	0.009	-0.074
Pressure	17.55 (3.29)	0.238	-0.077
Sharing	31.98 (12.43)	-0.326	0.411
Shopping	20.97 (8.04)	-0.969	0.036
Updating	14.82 (8.21)	-0.502	0.686
Content	14.95 (4.20)	-0.574	0.376
Gambling	11.40 (6.13)	-0.445	0.652
Item1	23.21 (7.83)	-0.403	0.538
Item2	10.23 (2.96)	-0.598	0.322
Item3	10.90 (3.31)	-0.625	0.385

Structural model

The statistical assumptions underlying structural equation modeling were fulfilled. Kurtosis (−0.625 to 0.372) and skewness (-0.082 to 0.652) values fell within commonly accepted thresholds, and the Relative Multivariate Kurtosis Index (1.281) revealed multivariate

normality. Further, inter-variable correlations (0.120 to 0.413) were well below the 0.850 cutoff, suggesting that multicollinearity did not pose a problem for model estimation.

The initial analysis of the structural model was performed based on Attachment style and perfectionism, mediating variable (loneliness), and cyberloafing. In this model, it was assumed that Insecure Attachment styles and perfectionism would affect cyberloafing through loneliness in addition to having a direct effect. The analysis results are presented in Figure 1 and Table 2. Only the pathway of perfectionism to cyberloafing is not significant, while the rest of the pathways demonstrated significant coefficients. Based on Figure 2, perfectionism, as an exogenous variable, had a significant effect on loneliness (β = 0.11, T-value = 2.44), cyberloafing (β = 0.04, T-value = 0.172). Further, insecure attachment, as an exogenous variable, had a significant impact on loneliness (β = 0.51, T-value = 9.82), cyberloafing (β = 0.26, T-value = 4.80). Meanwhile, loneliness (β = 0.40, T-value = 7.62) as a mediator variable revealed a significant effect on the cyberloafing. Ultimately, the results of fit indices indicated that the conceptual model of the present study is an acceptable fit with the data (χ 2 = 319.460, χ 2 /df = 2.55, CFI = 0.96, GFI = 0.94, NFI = 0.94, TLI = 0.95, RMSEA = 0.053). The results demonstrated that the present model could explain 39% of cyberloafing.

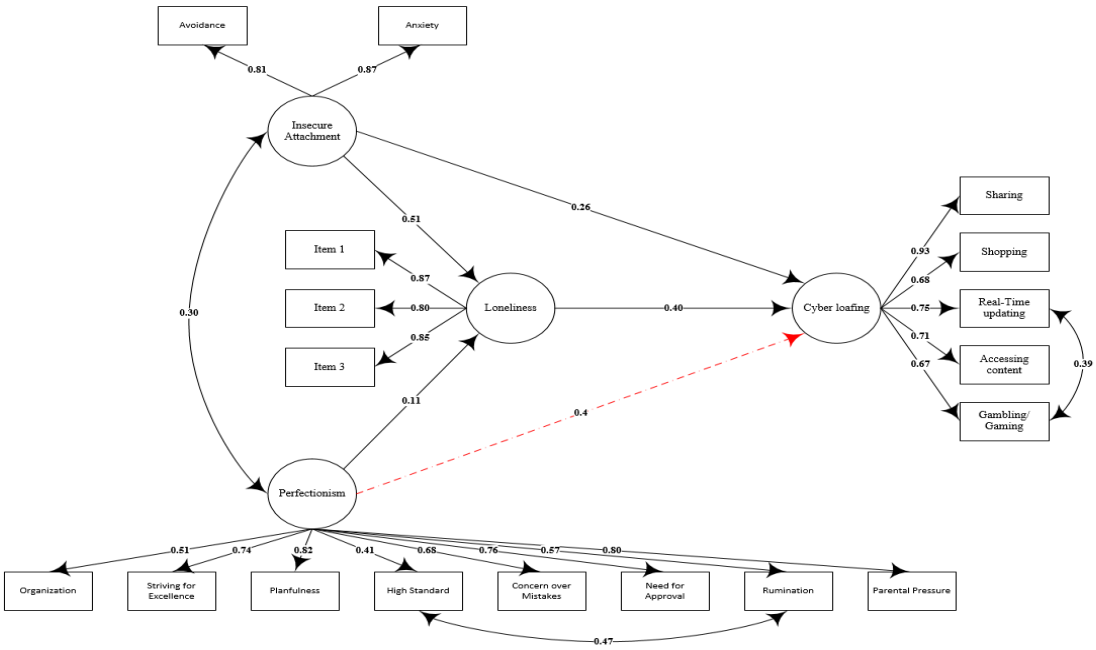


Figure1. Structural equation modeling of cyberloafing with standard coefficients

Table 2. Direct effects between latent variables.

Independent variables	Dependent variables	B	T	SE	P
Insecure Attachment	Loneliness	0.51	9.823	0.024	<0.001
Insecure Attachment	Cyberloafing	0.26	4.807	0.043	<0.001
Perfectionism	Loneliness	0.11	2.447	0.107	0.014
Perfectionism	Cyberloafing	0.04	0.172	0.983	0.325
Loneliness	Cyberloafing	0.40	7.625	0.089	<0.001

Bootstrapping

The present study employed the Bootstrap test (iteration number = 200) to ascertain the indirect effects. Bootstrap provides a powerful method of appraising indirect effects (Preacher & Hayes,

2008). Evaluation of the significance of these relationships can be examined in two ways. The first method refers to significance levels, whereas the second inspects confidence intervals. The test results in Table 3 reveal that the Insecure Attachment mediated by Loneliness significantly affected cyberloafing (beta = 0.203, SE = 0.033, 95% CI = 0.129 to 0.273, $p < 0.01$). Further, Perfectionism mediated by Loneliness had a significant influence on cyberloafing (beta = 0.044, SE = 0.021, 95% CI = 0.006 to 0.092, $p < 0.05$).

Table 3. Bootstrapping test indirect effect and 95% CI for the mediation model.

Independent variable	Mediator variable	Dependent variable	Standard coefficient	Standard error	95% CI		Sig
					Lower	Upper	
Insecure Attachment	Loneliness	Cyberloafing	0.203	0.033	0.129	0.273	0.012
Perfectionism	Loneliness	Cyberloafing	0.044	0.021	0.006	0.092	0.039

5. Discussion

This research tried to determine if loneliness can act as a mediator between insecure attachment, perfectionism, and cyberloafing. The findings of this research suggest that insecure attachment and perfectionism have different effects on cyberloafing. Considering insecure attachment, it was found that it impacts cyberloafing both directly and indirectly. In other words, it can be concluded from these findings that there is a partial mediation between insecure attachment and cyberloafing. This means both the direct effect and indirect effect were found to be significant.

The results from this study agree with another research conducted by et al. (2024), Liu et al. (2026), and Remondi et al. (2020). The study by Eichenberg et al. (2024) indicated that ambivalent attachment to others results in increased social media addiction and mental health issues.

Those who have an insecure attachment style will have both a negative self-perception and a positive perception of others. The latter leads to overdependence on others for their validation in their closest relationships; hence, their style in these relationships becomes very engaged but demanding (Bartholomew et al., 1991). Individuals may turn to their smartphones as a form of emotional coping or avoidance, using them to alleviate negative emotional states such as loneliness and anxiety and to compensate for difficulties in real-life social interactions (Elhai et al., 2020).

Findings from this study also supported a positive linkage to loneliness for insecure attachment style, which aligns with past research (Borawski et al., 2021; Shorter et al., 2022; Salimi & Joukar., 2012; Barati, 2025). People who tend to have an anxious-insecure attachment style always find themselves very lonely owing to their intense fear of being in relationships and their inability to sustain such ties. In their case, their high need for intimacy complicated by their fear of abandonment culminates in clinging to other people to sustain their needed connections in life. If this behavior surpasses others' tolerance, it may cause emotional strain and stress in close relationships; such behavior leads to isolation and makes these people very lonely despite their needed connections (Golchha et al., 2024). Those with avoidant attachment styles tend to make other people very lonely since they do not allow development of intimate connections (Malder et al., 2024). The way these individuals express emotional distance from significant others often results in superficial relationships, while preventing the formation of deeper, meaningful connections in life. In their case, in spite of their apparent

involvement in social life to be seen as not very lonely, their emotional distance from other members induces isolation in life and makes such members very lonely. Other members would always be very distant from them since all their efforts to have such members be physically close lead to emotional distance (Tardast & et al., 2024). In such processes, loneness would always culminate in situations that ruin such needed connections (Nottage et al., 2021; Tardast & et al., 2024).

In regard to perfectionism, it was noted that this variable is only related to cyberloafing via loneliness and did not have any direct effect. This provides evidence of a full mediation effect where perfectionism links to cyberloafing solely via its impact on loneliness. The full mediation pattern observed in the relationship between perfectionism and cyberloafing via loneliness emphasizes the pivotal role of mediation by loneliness. Many research articles have confirmed intense correlations between loneliness, perfectionism, and cyberloafing. The challenging nature of perfectionism and its negative dimensions (Leonard et al., 2008) lead to experiences of inadequacy and isolation (Liu et al., 2025; Xu & Wenyu, 2024). Those who chase unrealistic goals may encounter very strong self-blame and fear of being judged by others; these elements result in their withdrawal from society and experiences of loneliness (Liu et al., 2025). Social isolation directly gives rises to increased experiences of loneliness. Many research articles have confirmed that loneliness is a strong predictor of cyberloafing (Young et al., 2022; Olak et al., 2021; Pangani et al, 2024).

Lonely workers may look for ways to comfort themselves and provide a feeling of togetherness even if it is just superficially accomplished via online activities (Young et al., 2022). The cadence from self-imposed stress and self-blame associated with perfectionism here leads to loneliness, followed by cyberloafing as escapism. The intensity of loneliness here represents an essential element to decide to what degree workers participate in indulging in cyberloafing. Negative perfectionism here refers to self-blame and fear of failure in addition to a fixation to avoid errors (Leonard et al., 2008), creating circumstances conducive to worker loneliness. The stress workers place on themselves besides fear of being judged owing to negative perfectionism creates situations conducive to social avoidance and lack of belongingness; hence, workers can act as escapists through engaging in cyberloafing (Liu et al., 2025).

In general, it can be concluded from this study results that insecure attachment and perfectionism represent two basic antecedents to the occurrence of cyberloafing. Insecure attachment and perfectionism may be noted as vulnerability antecedents to personality and relational characteristics, respectively. They have been linked to cyberloafing. The data from this current analysis have indicated, nevertheless, that these characteristics mentioned above do not have direct effects but rather have mediated consequences. The main mediation observed to have these consequences to cyberloafing is perceived loneliness.

The results of this research have major clinical implications. The concept of cyberloafing is newly emerging in the area of cell phone addiction. Since cyberloafing is not yet identified as a distinct diagnostic disorder, it can be assumed quite safely that there may be missed cases of this condition. The results of this research have confirmed that it is not entirely correct to state that either cause or effect directly leads to cyberloafing but instead there are some underlying elements and emotional and inter-relational mediators which form and sustain it. Thus, awareness about major variables and forces contributing to this newly evolving condition not only helps in its understanding but also helps to develop strategies to prevent it and thus mitigate the distress associated with it and related costs.

6. Limitations and Recommendations

The limitations of this study need to be kept in mind while generalizing. First of all, since this study was cross-sectional and dealt with correlation research, it is not possible to verify causal connections between perfectionism, insecure attachment style, feeling of loneliness, and cyberloafing. To uncover more precise data about these issues, it would be better to undertake research related to these issues in longitudinal research or controlled experiments. Further, since this research mainly involved very educated staff members, whose sample helped form a rather homogenous group, it makes it difficult to generalize conclusions about other samples. In order to obtain a full understanding of these issues, it would be advisable to conduct research involving diverse samples. In addition, self-administered questionnaires may have caused bias in favor of social desirability biases; it may lead to finding some spurious connections between research variables. Nevertheless, it should be stated that this research study contributes meaningfully to uncover new knowledge about what kind of issues deal with cyberloafing.

7. Conclusion

This study highlighted the associations between insecure attachment, perfectionistic tendencies, loneliness, and cyberloafing. This suggests that loneliness may serve as an important mechanism through which attachment-related difficulties and maladaptive perfectionism contribute to cyberloafing among university students. These findings imply that interventions aimed at lowering loneliness, enhancing interpersonal security, and addressing perfectionistic concerns could be beneficial. Future research and programs may focus on attachment-based strategies, perfectionism management, social connectedness, as well as adaptive coping skills to reduce cyberloafing in academic settings.

8. Author Contributions

Author 1 contributed to the conceptualization, methodology design. Author 2 contributed to statistical analysis, and initial drafting of manuscript. Author 3 data collection, interpretation of results, and critical revision of the manuscript. Author 4 data collection and statistical analysis. Both authors reviewed and approved the final version of the manuscript.

9. Acknowledgment

We would like to thank all students who participated in the research.

10. Conflicts of Interest

There are no conflicts of interest.

References

Abdolpour, G. Validation of the Farsi version of the cyberloafing scale in Iranian university students. *BMC Psychol* (2026). https://doi.org/10.1186/s40359-026-04735-8**.**

Akbulut, Y., Dursun, Ö. Ö., Dönmez, O., & Şahin, Y. L. (2016). In search of a measure to investigate cyberloafing in educational settings. *Computers in Human Behavior*, 55, 616–625. https://doi.org/10.1016/j.chb.2015.11.002

Akbulut, Y., Dursun, Ö. Ö., Dönmez, O., & Şahin, Y. L. (2016). In search of a measure to investigate cyberloafing in educational settings. *Computers in Human Behavior*, 55, 616-625. http://dx.doi.org/10.1016/j.chb.2017.02.043

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin, 103*(3), 411. https://doi.org/10.1037/0033-2909.103.3.411

Arunrasameesopa, S., Wongpakaran, N., & Wongpakaran, T. (2021). "Influence of Attachment Anxiety on the Relationship between Loneliness and Depression among Long-Term Care Residents". None. https://doi.org/10.3390/healthcare9121675

Bararti, H. (2025). Investigating the Relationship between Attachment Styles, Resilience, and Perceived Organizational Support with Occupational Depression Mediated by Loneliness in Satellite Employees of Persian Gulf Star Oil Company. (e20322). Psychological Achievements, (Persian), e20322. https://doi.org/10.22055/psy.2025.49706.3438

Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: a test of a four-category model. *Journal of Personality and Social Psychology, 61*(2), 226. https://doi.org/10.1037/0022-3514.61.2.226

Benoit, A., & Ditommaso, E. (2020). Attachment, loneliness, and online perceived social support. *Personality and Individual Differences,* 167, 110230. https://doi.org/10.1016/j.paid.2020.110230

Books, B. A. S. I. C., & Bowlby, J. (1973). Attachment and loss. Separation: Anxiety and anger.

Borawski, D., Sojda, M., Rychlewska, K., & Wajs, T. (2022). Attached but lonely: Emotional intelligence as a mediator and moderator between attachment styles and loneliness. *International Journal of Environmental Research and Public Health, 19*(22), 14831. https://doi.org/10.3390/ijerph192214831

Borawski, D., Wajs, T., Sojka, K., & Misztal, U. (2021). Interrelations between attachment styles, emotional contagion and loneliness. *Journal of Family Issues, 42*(9), 2064-2082. https://doi.org/10.1177/0192513X20966013

Bowlby, J. (1969). Attachment and loss (No. 79). random house.

Chen, S., Saklofske, D., Flett, G., & Hewitt, P. (2024). Assessing and evaluating the perfectionism social disconnection model: Social support, loneliness, and distress among undergraduate law and medical students. *Journal of Psychoeducational Assessment,* 42, 743–767. https://doi.org/10.1177/07342829241244951

Chen, Y., Chen, H., Andrasik, F., & Gu, C. H. (2021). Perceived stress and cyberloafing among college students: The mediating roles of fatigue and negative coping styles. *Sustainability, 13*(8), 4468. https://doi.org/10.3390/SU13084468

Dobos, B., Mellor, D., & Pikó, B. (2024). Exploring fear of happiness among university students: The role of perfectionism, academic burnout, loneliness, and hopelessness. *Scandinavian Journal of Psychology.* https://doi.org/10.1111/sjop.13001

Eichenberg, C., Schneider, R., & Rumpl, H. (2024). Social media addiction: associations with attachment style, mental distress, and personality. *BMC psychiatry, 24*(1), 278. https://doi.org/10.1186/s12888-024-05709-z.

Eley, D., Bansal, V., & Leung, J. (2020). Perfectionism as a mediator of psychological distress: Implications for addressing underlying vulnerabilities to the mental health of medical students. *Medical Teacher,* 42, 1301–1307. https://doi.org/10.1080/0142159X.2020.1805101

Elhai, J. D., Yang, H., Fang, J., Bai, X., & Hall, B. J. (2020). Depression and anxiety symptoms are related to problematic smartphone use severity in Chinese young adults: Fear of missing out

as a mediator. *Addictive Behaviors,* 101, 105962. https://doi.org/10.1016/j.addbeh.2019.04.020

Fang, F., & Wang, J. (2024). The relationship between attachment and depression among college students: The mediating role of perfectionism. *Frontiers in Psychology,* 15, 1352094. https://doi.org/10.3389/fpsyg.2024.1352094

Fang, J., Wang, X., Wen, Z., & Huang, J. (2020). Cybervictimization and loneliness among Chinese college students: A moderated mediation model of rumination and online social support. *Children and Youth Services Review,* 115, 105085. https://doi.org/10.1016/j.childyouth.2020.105085

Fraley, R. C., Waller, N. G., & Brennan, K. A. (2000). An item response theory analysis of self-report measures of adult attachment. *Journal of Personality and Social Psychology, 78*(2), 350. DOI: 10.1037//0022-3514.78.2.350.

Golchha, M., & Raj, Dr R. (2024). "Exploring the Relationship Between Attachment Styles and Loneliness Levels in Young Adults". *International Journal for Multidisciplinary Research*. https://doi.org/10.36948/ijfmr.2024.v06i03.19869

Hao, S., Zhang, X., & Xu, H. (2024). Insecure parental attachment and anxiety in vocational college students: The mediating role of subjective well-being and the moderating role of self-esteem. *Psychology Research and Behavior Management,* 17, 1221–1230. https://doi.org/10.2147/PRBM.S442839

Helm, P., Jimenez, T., Bultmann, M., Lifshin, U., Greenberg, J., & Arndt, J. (2020). Existential isolation, loneliness, and attachment in young adults. *Personality and Individual Differences,* 159, 109890. https://doi.org/10.1016/j.paid.2020.109890

Hibrian, H., Baihaqi, M., & Ihsan, H. (2022). Relationship between academic stress and cyberloafing behavior among Psychology Department Students at Universitas Pendidikan Indonesia. *PSIKOPEDAGOGIA Journal Bimbingan dan Konseling, 10*(2). https://doi.org/10.12928/psikopedagogia.v10i2.17602

Hill, R. W., Huelsman, T. J., Furr, R. M., Kibler, J., Vicente, B. B., & Kennedy, C. (2004). A new measure of perfectionism: The Perfectionism Inventory. *Journal of personality assessment, 82*(1), 80-91. https://doi.org/10.1207/s15327752jpa8201_13

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling: A Multidisciplinary Journal, 6*(1), 1-55. https://doi.org/10.1080/10705519909540118

Jamshidi, B., Hosseinchari, M., Haghighat, S., & Razmi, M. R. (2009). Validation of new measure of perfectionism. *Journal of Behavioral Sciences, 3*(1), 35–43.

Jöreskog KG, Sörbom D. LISREL 8.80 for Windows [Computer Software]. Lincolnwood, IL: Scientific Software International, Inc (2006).

Kardefelt-Winther, D. (2014). Problematizing excessive online gaming and its psychological predictors. *Computers in Human Behavior,* 31, 118-122. https://doi.org/10.1016/j.chb.2013.10.017

Lafontaine, M., Azzi, S., Bell-Lee, B., Dixon-Luinenburg, T., Guérin-Marion, C., & Bureau, J. (2020). Romantic perfectionism and perceived conflict mediate the link between insecure romantic attachment and intimate partner violence in undergraduate students. *Journal of Family Violence,* 36, 195–208. https://doi.org/10.1007/s10896-020-00130-y

Leonard, Nancy H. and Harvey, Michael. (2008). "Negative perfectionism: Examining negative excessive behavior in the workplace". None. https://doi.org/10.1111/J.1559-1816.2007.00318.X

Liu, Y., & Sun, Z. (2026). The relationship between perfectionism and depression among college students: a multiple mediation mechanism based on coping styles, loneliness, and self-esteem. *Frontiers in Psychology,* 17, 1787420. https://doi.org/10.3389/fpsyg.2026.1787420

Liu, Yankuan and Rau, Pei-Luen Patirck. (2025). "Do you feel betrayed? Exploring the impact of workplace-induced loneliness on interactions with varied social structures.". None. https://doi.org/10.1177/10519815241298526

Maldar, A., Maldar, A., and Nayak, Monalisa. (2024). "Examining the impact of emotional intelligence and attachment style on loneliness Alisha Azad Maldar and Monalisa Nayak". *World Journal of Biology Pharmacy and Health Sciences.* https://doi.org/10.30574/wjbphs.2024.18.3.0369

Matsunaga, M. (2008). Item parceling in structural equation modeling: A primer. Communication methods and measures, 2(4), 260-293. https://doi.org/10.1080/19312450802458935

Nottage, M., Oei, N., Wolters, N., Klein, A., Van Der Heijde, C., Vonk, P., Wiers, R., & Koelen, J. (2022). Loneliness mediates the association between insecure attachment and mental health among university students. Personality and Individual Differences, 111233. https://doi.org/10.1016/j.paid.2021.111233

Nottage, Matilda, Oei, Nicole Y.L., Wolters, Nine, Klein, Anke M., Heijde, C.M. Van Der, Vonk, Peter, Wiers, Renout W., & Koelen, Jurrijn. (2021). "Loneliness mediates the association between insecure attachment and mental health among university students". Elsevier BV. https://doi.org/10.1016/j.paid.2021.111233

olak, Murat and etin, Cemile. (2021). "Loneliness and Cyberloafing in the Time of COVID-19: A Psychological Perspective". Wydawnictwo Uniwersytetu Jagielloskiego. https://doi.org/10.2478/ijcm-2021-0002

Padmanabhanunni, A. and Pretorius, T. (2025). "The relationship between loneliness and internalizing disorders among young adults: the mediating and moderating role of ego-resilience". Frontiers in Psychiatry. https://doi.org/10.3389/fpsyt.2024.1466173

Pangani, Jacqueline and Munyenyembe, Benson. (2024). "The Impact of Stress and Loneliness on Cyberloafing of Health Workers in Malawi: The Moderating Role of Age". African Journal of Empirical Research. https://doi.org/10.51867/ajernet.5.3.55

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior research methods, 40*(3), 879-891. https://doi.org/10.3758/BRM.40.3.879

Pretorius, T. and Padmanabhanunni, A. (2021). "A looming mental health pandemic in the time of COVID-19? Role of fortitude in the interrelationship between loneliness, anxiety, and life satisfaction among young adults". *South African Journal of Psychology.* https://doi.org/10.1177/0081246321991030

Pretorius, T. and Padmanabhanunni, A. (2021). "A looming mental health pandemic in the time of COVID-19? Role of fortitude in the interrelationship between loneliness, anxiety, and life satisfaction among young adults". *South African Journal of Psychology.* https://doi.org/10.1177/0081246321991030

Remondi, C., Compare, A., Tasca, G. A., Greco, A., Pievani, L., Poletti, B., & Brugnera, A. (2020). Insecure attachment and technology addiction among young adults: the mediating role of impulsivity, alexithymia, and general psychological distress. *Cyberpsychology, Behavior, and Social Networking, 23*(11), 761-767. https://doi.org/10.1089/cyber.2019.0747

Russell, D., Peplau, L. A., & Cutrona, C. E. (1980). The revised UCLA Loneliness Scale: Concurrent and discriminant validity evidence. *Journal of Personality and Social Psychology, 39*(3), 472–480. https://doi.org/10.1037/0022-3514.39.3.472

Sahin, E. E., & Duy, B. (2023). Attachment and social connectedness: The sequential mediating role of inferiority and perfectionism. *International Journal of Emotional Education,* 15. https://doi.org/10.56300/vrvy9123

Salimi, A. & Jowkar, B. (2012). The Casual Relationships of Perceived Attachment and Personality Vulnerability with Loneliness in Adolescence. Psychological Achievements, 19(1), 245–264. (Persian).

Shokrkon, H., Khojastemehr, R., Attari, Y. A., & Haghighi, J. (2006). Investigating personality characteristics, social skills, attachment styles, and demographic characteristics as predictors of marital relationship success and failure in divorce-seeking and normal couples in Ahvaz. *Journal of Educational and Psychology Sciences*, Shahid Chamran University of Ahvaz, *13*(3), 1–30.

Shorter, P., Turner, K., & Mueller-Coyne, J. (2022). Attachment Style's impact on loneliness and the motivations to use social media. *Computers in Human Behavior Reports,* 7, 100212. https://doi.org/10.1016/j.chbr.2022.100212

Sung, S., & Sung, S. (2022). The effect of insecure adult attachment of college students on the tendency of SNS addiction: Perfectionistic self-presentation and mediating effect of loneliness. The Korean Society of Culture and Convergence. https://doi.org/10.33645/cnc.2022.5.44.5.1155

Tardast, Leili, Ahmadi, Vahid, Mami, S., and Nademi, Arash. (2024). "Structural Relationships between Attachment Styles and Marital Satisfaction with the Mediation of Loneliness". *Shenakht Journal of Psychology and Psychiatry. (Persian).* https://doi.org/10.32598/shenakht.11.3.16

Wise MH. Tobacco use and attachment styles. Available from: https://dc.etsu.edu/cgi/viewcontent.cgi?article=1300 &context=honors. Accessed 2 Dec 2019.

Xu, Wenyu. (2024). "The Impact of Relationship Quality on Well-being: Review of the Mediating Role of Loneliness Across the Different Life Stages". Lecture Notes in Education Psychology and Public Media. https://doi.org/10.54254/2753-7048/73/20241090

Yang, H., Lin, Z., Chen, X., & Peng, J. (2022). "Workplace loneliness, ego depletion and cyberloafing: can leader problem-focused interpersonal emotion management help?". Emerald Publishing Limited. https://doi.org/10.1108/intr-01-2021-0007

Yang, W., Morita, N., Zuo, Z., Kawaida, K., Ogai, Y., Saito, T., & Hu, W. (2021). Maladaptive perfectionism and internet addiction among Chinese college students: A moderated mediation model of depression and gender. *International Journal of Environmental Research and Public Health, 18*(5), 2748. https://doi.org/10.3390/ijerph18052748

Yu, B., Liu, Y., Li, Y., & Wu, Q. (2023). Cross-sectional and prospective relationships between neuroticism and depressive symptoms among college students: The mediating role of loneliness. *Psychological Reports,* 126, 332941231191065. https://doi.org/10.1177/00332941231191065

Zhou, B., Li, Y., Tang, Y., & Cao, W. (2021). An experience-sampling study on academic stressors and cyberloafing in college students: The moderating role of trait self-control. *Frontiers in Psychology,* 12, 514252. https://doi.org/10.3389/fpsyg.2021.514252