

Research Article

Smartphone addiction and partner surveillance: The indirect role of cognitive jealousy among Turkish young adults

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Abstract

Objective: This study examined whether cognitive jealousy functions as an indirect pathway linking smartphone addiction to partner surveillance among Turkish young adults in romantic relationships. Drawing on the behavioral addiction framework and uncertainty reduction perspective, the study focused on how smartphone addiction may be associated with relationship-specific suspicious and ruminative cognitions and digitally enabled monitoring behaviors.

Methods: The sample consisted of 174 Turkish young adults (18 to 30 years) who were currently involved in a romantic relationship. Participants completed self-report measures of smartphone addiction, interpersonal electronic surveillance, and cognitive jealousy. Data were analyzed using Pearson correlations and an indirect effect analysis. The indirect effect was tested using 5,000 bootstrap resamples and 95% confidence intervals.

Results: Smartphone addiction was positively associated with partner surveillance ($r = .34, p < .001$) and cognitive jealousy ($r = .40, p < .001$). Cognitive jealousy was also positively associated with partner surveillance ($r = .38, p < .001$). The indirect effect of smartphone addiction on partner surveillance through cognitive jealousy was significant, $B = 0.126$, $BootSE = 0.053$, 95% CI [0.034, 0.240]. The direct effect remained significant after cognitive jealousy was included in the model.

Conclusion: Findings suggest that cognitive jealousy represents one significant pathway through which smartphone addiction is associated with partner surveillance. Smartphone addiction may be linked to digitally enabled monitoring behaviors not only through increased digital engagement, but also through suspicion, rumination, and perceived relational uncertainty.

Keywords: Smartphone addiction; Behavioral addiction; Jealousy; Romantic relationships; Interpersonal electronic surveillance; Young adults

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INTRODUCTION

Smartphones have become deeply embedded in everyday life, shaping not only individual routines but also the organization of romantic relationships. For many couples, smartphones facilitate connection, availability, and relationship maintenance through instant messaging, social networking platforms, and location-based communication. At the same time, these same affordances may create new opportunities for intrusive monitoring (Tokunaga, 2011). The constant accessibility of digital information can blur the boundary between relational transparency and partner surveillance, particularly when checking, tracking, or monitoring a partner's online presence becomes normalized as an expression of care, curiosity, or relational investment.

Interpersonal electronic surveillance (IES) refers to the use of digital technologies to monitor a romantic partner's behaviors, communications, or social interactions (Tokunaga, 2011). Such behaviors may include repeatedly checking a partner's online activity, monitoring social media interactions, seeking indirect information through digital platforms, or using digital tools to track a partner's whereabouts. Although some forms of digital checking may be perceived as relatively normative within contemporary romantic relationships, frequent or intrusive surveillance may carry important relational costs (Tokunaga, 2011; Imperato et al., 2023). Existing literature has linked technology-facilitated monitoring with relationship distress, anxiety, reduced autonomy, and broader patterns of control and digital abuse (Harris & Woodlock, 2019; Messing et al., 2020; Southworth et al., 2007). Further, recent dyadic research suggests that electronic surveillance may become a relational dynamic in which both partners engage in IES and relational trust may be undermined (Litt & Rodriguez, 2022). Thus, understanding the psychological conditions under which digital access becomes partner-directed surveillance is increasingly important for both addiction research and relationship science.

One factor that may contribute to such behaviors is smartphone addiction. Although the term smartphone addiction is widely used in the behavioral addiction literature, it is important to note that smartphone addiction is not currently recognized as a formal diagnostic category in major classification systems (American Psychiatric Association, 2022). Within the behavioral addiction framework, smartphone addiction is not defined simply by time spent using a device, but rather by a pattern of compulsive engagement characterized by salience, mood modification, tolerance, withdrawal, conflict, and relapse (Griffiths, 2005; Demetrovics et al., 2026). Therefore, smartphone addiction is conceptually distinct from high-frequency smartphone use alone; the emphasis is on dysregulated use and functional or relational impairment.

Individuals with higher levels of smartphone addiction may experience stronger urges to check, greater difficulty disengaging from digital environments, and heightened reliance on smartphones for emotional regulation (Csibi et al., 2021; Kuss et al., 2018; Orsolini et al., 2025). In romantic relationships, these features may have interpersonal consequences. Such dysregulated smartphone use may increase not only access to digital relational information, but also the tendency to attend to, revisit, and cognitively monitor relationship-relevant cues such as delayed responses, visible online activity, or ambiguous social media interactions.

A key psychological process that may help explain the link between smartphone addiction and partner surveillance is cognitive jealousy. Romantic jealousy is commonly conceptualized as a multidimensional construct that includes cognitive, emotional, and behavioral components (Pfeiffer & Wong, 1989). Cognitive jealousy refers specifically to suspicious, intrusive, and ruminative thoughts regarding a partner's fidelity, interest in alternatives, or hidden interactions. In digitally mediated romantic contexts, ambiguous online cues may become especially salient when interpreted through jealous cognitions (Gubler et al., 2023). Smartphone addiction may therefore not simply increase digital exposure; it

may also intensify the cognitive monitoring of the relationship (Borrajó et al., 2015; Quiroz et al., 2024). Cognitive jealousy may function as one interpretive mechanism through which ambiguous digital cues are transformed into suspicion and perceived relational threat.

From an uncertainty reduction perspective, individuals who experience relational ambiguity may engage in information-seeking behaviors to reduce distress or restore a sense of predictability (Berger & Calabrese, 1975). In contemporary romantic relationships, smartphones provide immediate and low-effort access to information about a partner's activities, communications, and social connections. As a result, partner surveillance may appear to serve a regulatory or uncertainty-reduction function, offering a seemingly direct way to seek reassurance or verify suspicions. However, such monitoring may ultimately expose individuals to additional ambiguous information, thereby reinforcing suspicion, jealous rumination, and relational insecurity over time. This interpretation is consistent with prior research linking problematic technology use, jealous cognitions, and surveillance behaviors in romantic relationships (Aloia, 2023; Elphinston & Noller, 2011; Elphinston et al., 2013; Quiroz et al., 2024).

Although existing research provides support for several parts of this pathway, cognitive jealousy as a potential explanatory mechanism linking smartphone addiction with partner surveillance remains underexamined. Prior studies have shown that social media intrusion is associated with romantic jealousy and relationship difficulties (Elphinston & Noller, 2011; Elphinston et al., 2013; Gubler et al., 2023), and that jealousy is linked to cyber dating abuse, intrusive monitoring, and interpersonal electronic surveillance (Aloia, 2023; Borrajó et al., 2015; De Cristofaro et al., 2023). However, much of this work has focused on social media use, attachment insecurity, or broader technology-related behaviors rather than addiction-like smartphone use patterns, compulsivity, salience, and conflict. Therefore, the integrated pathway

from smartphone addiction to cognitive jealousy and, in turn, to partner surveillance requires direct empirical attention.

Examining this pathway in a Turkish sample is also important. Much of the literature on digital surveillance, jealousy, and technology-related relationship difficulties has been conducted in Western, Educated, Industrialized, Rich, and Democratic (WEIRD) populations. Turkey provides a relevant context for examining partner surveillance because rapid digital adoption coexists with culturally shaped expectations regarding closeness, responsiveness, privacy, and relational accountability. Previous research has documented problematic smartphone and social media use in Turkish samples (Altın & Üzgü, 2024; Altundağ et al., 2019; Simsek et al., 2019), suggesting that digital behaviors are deeply embedded in young adults' everyday relational lives. In this context, monitoring a partner's digital activity may be interpreted in multiple ways—as care, transparency, mistrust, or control—making it especially important to examine the psychological processes that underlie surveillance behaviors. Investigating these dynamics in a Turkish sample may therefore help clarify whether models developed largely in Western samples are relevant in contexts where digital availability, privacy, and relational closeness may be negotiated differently.

The present study addresses these gaps by examining whether cognitive jealousy represents a significant indirect pathway linking smartphone addiction and interpersonal electronic surveillance among Turkish young adults in romantic relationships. Drawing on the behavioral addiction framework and uncertainty reduction perspective, it is proposed that smartphone addiction may increase sensitivity to and engagement with digital relational cues, while cognitive jealousy may represent one pathway through which these cues are interpreted as suspicious or threatening. In turn, partner surveillance may emerge as an attempt to reduce uncertainty or regulate relational insecurity. Based on this theoretical model, the following hypotheses were tested:

H1: Smartphone addiction will be positively associated with partner surveillance.

H2: Smartphone addiction will be positively associated with cognitive jealousy.

H3: Cognitive jealousy will be positively associated with partner surveillance.

H4: Smartphone addiction will be indirectly associated with partner surveillance through cognitive jealousy.

METHODS

Participants

Participants were 174 Turkish young adults who were currently involved in a romantic relationship. The original sample consisted of 180 participants; however, six multivariate outliers were excluded during data screening procedures, resulting in a final analytic sample of 174 participants. Participants ranged in age from 18 to 30 years ($M = 21.61$, $SD = 1.88$). The majority of the sample identified as female (71.8%), and most participants reported being in an unmarried romantic relationship (95.4%). Smaller proportions reported being engaged (3.4%) or married (1.1%). The sample primarily consisted of undergraduate students (89.7%).

Eligibility criteria required participants to be between 18 and 30 years old, fluent in Turkish, and currently involved in a romantic relationship. The upper age limit of 30 was selected because the study focused on young adults, a developmental period in which smartphone use, digital communication, and romantic relationship formation are particularly salient (Arnett, 2007; Munshi et al., 2024). Restricting the sample to this age range also helped reduce developmental heterogeneity in relationship experience and digital media use.

Participants were not recruited from a clinical population. Psychiatric diagnoses were not assessed, and no clinical interviews were conducted. Therefore, the findings should be interpreted as reflecting a non-clinical young adult sample rather than a clinically assessed sample.

Measures

Demographic Information Form

Participants completed a brief demographic form assessing age, sex, relationship status, and educational level. Eligibility criteria required participants to be between 18 and 30 years old and currently involved in a romantic relationship.

Smartphone Addiction Scale (SAS)

Smartphone addiction was assessed using the Smartphone Addiction Scale (SAS; Kwon et al., 2013). The SAS is a 33-item self-report measure designed to assess addictive patterns of smartphone use, including daily-life disturbance, withdrawal, cyberspace-oriented relationship, overuse, tolerance, and positive anticipation. Items are rated on a 6-point Likert-type scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*), with higher scores indicating higher levels of smartphone addiction. The Turkish adaptation of the scale developed by Demirci et al. (2014) was used in the present study. Internal consistency in the current sample was excellent ($\alpha = .94$).

Interpersonal Electronic Surveillance Scale for Social Network Sites (IESS)

Partner surveillance behaviors were assessed using the Interpersonal Electronic Surveillance Scale for Social Network Sites (IESS; Tokunaga, 2011). The IESS is a 13-item self-report measure designed to assess the extent to which individuals monitor a romantic partner's online activities and social interactions through social networking sites and other digital platforms. Items are rated on a 7-point Likert-type scale ranging from 1 (*never*) to 7 (*always*), with higher scores indicating greater engagement in partner-directed electronic surveillance. For the present study, the scale was translated into Turkish using a forward-back translation procedure. Internal consistency was excellent in the current sample (Cronbach's $\alpha = .94$; McDonald's $\omega = .94$).

To examine the construct validity of the Turkish version of the IESS, a confirmatory factor analysis

(CFA) was conducted to test the original one-factor structure. The model demonstrated excellent fit to the data, $\chi^2(65) = 50.40$, $p = .908$, Comparative Fit Index (CFI) = 1.00, Tucker–Lewis Index (TLI) = 1.01, Incremental Fit Index (IFI) = 1.00, Normed Fit Index (NFI) = .99, Root Mean Square Error of Approximation (RMSEA) = .00, 90% CI [.00, .02], and Standardized Root Mean Square Residual (SRMR) = .057. Collectively, these indices indicate an excellent fit between the hypothesized one-factor model and the observed data.

All factor loadings were statistically significant ($ps < .001$) and substantial in magnitude, ranging from .68 to .80. Specifically, standardized factor loadings varied from .681 (Item 4) to .795 (Item 10), indicating that each item contributed meaningfully to the latent construct of interpersonal electronic surveillance. The strong factor loadings, combined with the excellent model fit indices and high internal consistency estimates, provide preliminary support for the hypothesized one-factor structure and internal consistency of the Turkish version in the current sample.

Multidimensional Jealousy Scale (MJS)

Cognitive jealousy was assessed using the cognitive subscale of the Multidimensional Jealousy Scale (MJS; Pfeiffer & Wong, 1989). This subscale measures suspicious, ruminative, and intrusive thoughts concerning a romantic partner's fidelity, involvement with alternative partners, or concealed interactions. The cognitive subscale comprises five items rated on a 7-point Likert-type scale ranging from 1 (*never*) to 7 (*always*), with higher scores indicating greater levels of cognitive jealousy. For the present study, the scale was translated into Turkish using forward–back translation procedures. Internal consistency was excellent in the current sample (Cronbach's $\alpha = .92$; McDonald's $\omega = .92$).

To evaluate the factorial validity of the Turkish version of the cognitive jealousy subscale, a confirmatory factor analysis (CFA) was conducted to test the hypothesized one-factor structure. Results indicated an excellent fit to the data, $\chi^2(5) = 0.35$, $p = .997$,

Comparative Fit Index (CFI) = 1.00, Tucker–Lewis Index (TLI) = 1.05, Incremental Fit Index (IFI) = 1.02, Normed Fit Index (NFI) = .998, Root Mean Square Error of Approximation (RMSEA) = .00, 90% CI [.00, .00], and Standardized Root Mean Square Residual (SRMR) = .022. Collectively, these indices provide strong evidence that the unidimensional model adequately represented the data.

All five items loaded significantly on the latent cognitive jealousy factor ($ps < .001$). Standardized factor loadings ranged from .73 to .90, indicating strong associations between the observed items and the underlying construct. Specifically, loadings ranged from .734 (Item 5) to .904 (Item 1), suggesting that the items were robust indicators of cognitive jealousy. Furthermore, no modification indices exceeded the recommended cutoff values, indicating that no substantial model misspecification was evident. Taken together, the excellent model fit, strong factor loadings, and high reliability coefficients support the construct validity and internal consistency of the Turkish version of the cognitive jealousy subscale in the present sample.

Procedure

Data were collected through Qualtrics as part of a broader research project examining digital behaviors and relationship functioning among young adults. The present analyses focus on a distinct relational outcome, partner surveillance, and a theoretically specific mechanism, cognitive jealousy. Participants were recruited through convenience and snowball sampling via social media networks. To improve gender balance in the sample, an additional recruitment phase included undergraduate students who were offered optional course credit for participation. Participation was voluntary across all recruitment methods.

After providing informed consent, participants completed the questionnaire battery anonymously. Measures were presented in a fixed order: smartphone addiction, interpersonal electronic surveillance, cognitive jealousy, and demographic

information. Ethical approval was obtained from the Özyeğin University Human Research Ethics Committee (Date: 30 December 2016; Decision No. 16), and the study was conducted in accordance with the Declaration of Helsinki.

Statistical Analysis

Primary analyses were conducted using SPSS. Confirmatory factor analyses were conducted using IBM SPSS AMOS and Monte Carlo analyses were implemented in Python (version 3.x). Prior to hypothesis testing, the data were screened for missing values, multivariate outliers, and statistical assumptions. No missing data were identified. Six multivariate outliers were detected using Mahalanobis distance criteria and excluded from the analyses, resulting in a final sample of 174 participants.

Descriptive statistics and Pearson correlation coefficients were calculated for all study variables. Assumptions of linearity, homoscedasticity, and multicollinearity were examined and found to be acceptable. Given some non-normality in cognitive jealousy scores, the indirect effect was evaluated using bootstrapped confidence intervals. To test the hypothesized indirect association between smartphone addiction and partner surveillance through cognitive jealousy, indirect effect analysis was conducted using the PROCESS macro for SPSS (Model 4; Hayes, 2022). The indirect effect was estimated using 5,000 bootstrap resamples and 95% confidence intervals.

RESULTS

Descriptive Statistics and Bivariate Correlations

Descriptive statistics for the primary study variables are presented in **Table 1**, and bivariate correlations are presented in **Table 2**. Smartphone addiction was positively associated with partner surveillance, $r = .34, p < .001$, supporting Hypothesis 1. Smartphone addiction was also positively associated with cognitive jealousy, $r = .40, p < .001$, supporting

Hypothesis 2. In addition, cognitive jealousy was positively associated with partner surveillance, $r = .38, p < .001$, supporting Hypothesis 3. Participant sex was significantly associated with cognitive jealousy, $r = -.20, p < .01$.

Table 1: Descriptive Statistics for Age and Primary Study Variables (N = 174)

Scales	M	SD	Range		Skewness	Kurtosis
			Min.	Max.		
Age	21.61	1.88	18	30	1.26	3.46
Smartphone Addiction	2.68	0.78	1.15	5.30	0.69	0.75
Partner Surveillance	3.70	1.35	1	7	0.32	-0.32
Cognitive Jealousy	1.60	0.97	1	5.40	2.31	5.15

Table 2: Bivariate Pearson Correlations Among Study Variables

Variables	1	2	3	4	5
1. Age	-				
2. Sex	.18*	-			
3. Smartphone Addiction	-.05	-.13	-		
4. Partner Surveillance	-.04	-.11	.34***	-	
5. Cognitive Jealousy	-.02	-.20**	.40***	.38***	-

Note. Sex (1 = Female, 2 = Male).

* $p < .05$, ** $p < .01$, *** $p < .001$ (two-tailed).

Gender Differences in Study Variables

Independent-samples t tests were conducted to examine gender differences in smartphone addiction, partner surveillance, and cognitive jealousy. Results indicated that women ($M = 2.71$, $SD = 0.75$) and men ($M = 2.55$, $SD = 0.66$) did not differ significantly in smartphone addiction, $t(172) = 1.34, p = .182$, Cohen's $d = 0.22$, 95% CI $[-0.11, 0.55]$. Similarly, no significant gender difference emerged for partner surveillance. Women ($M = 3.75$, $SD = 1.38$) reported slightly higher levels of partner surveillance than men ($M = 3.46$, $SD = 1.22$), but this difference was not statistically

significant, $t(172) = 1.30$, $p = .195$, Cohen's $d = 0.22$, 95% CI $[-0.11, 0.55]$.

In contrast, women reported significantly higher levels of cognitive jealousy ($M = 1.60$, $SD = 0.92$) than men ($M = 1.28$, $SD = 0.42$). Because Levene's test indicated unequal variances, $F(1, 172) = 14.55$, $p < .001$, Welch's t test was interpreted. The analysis revealed a significant gender difference, $t(169.88) = 3.22$, $p = .002$, Cohen's $d = 0.40$, 95% CI $[0.07, 0.73]$, indicating a small-to-medium effect size. Thus, women exhibited greater cognitive jealousy than men, whereas no significant gender differences were observed for smartphone addiction or partner surveillance.

Indirect Effect Analysis

To test Hypothesis 4, an indirect effect analysis was conducted using PROCESS Macro for SPSS (Model 4; Hayes, 2022) with 5,000 bootstrap resamples. Smartphone addiction was positively associated with cognitive jealousy, $B = 0.329$, $SE = 0.083$, $t(172) = 3.98$, $p < .001$, indicating that higher levels of smartphone addiction were associated with greater cognitive jealousy. Cognitive jealousy, in turn, was positively associated with partner surveillance while controlling for smartphone addiction, $B = 0.383$, $SE = 0.120$, $t(171) = 3.18$, $p = .002$.

The total effect of smartphone addiction on partner surveillance was significant, $B = 0.562$, $SE = 0.134$, $t(172) = 4.20$, $p < .001$. When cognitive jealousy was included in the model, the direct effect of smartphone addiction on partner surveillance remained significant, $B = 0.436$, $SE = 0.136$, $t(171) = 3.20$, $p = .002$. Thus, smartphone addiction continued to predict partner surveillance even after accounting for cognitive jealousy.

Bootstrap analyses further revealed a significant indirect effect of smartphone addiction on partner surveillance through cognitive jealousy, $B = 0.126$, $BootSE = 0.053$, 95% CI $[0.034, 0.240]$. Because the confidence interval did not include zero, the indirect effect was considered statistically significant. Standardized estimates indicated that smartphone addiction was positively associated with

cognitive jealousy ($\beta = .29$), and cognitive jealousy was positively associated with partner surveillance ($\beta = .24$). The standardized indirect effect was approximately $\beta = .07$.

Taken together, these findings support Hypothesis 4 and indicate that cognitive jealousy represents a significant indirect pathway linking smartphone addiction and partner surveillance. Specifically, greater smartphone addiction was associated with higher levels of cognitive jealousy, which in turn were associated with increased partner surveillance, while the direct association between smartphone addiction and partner surveillance remained statistically significant.

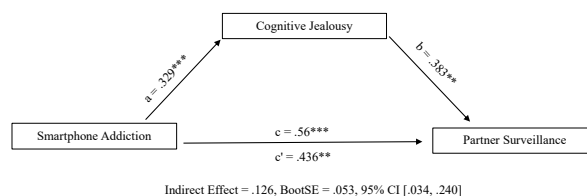


Figure 1. Indirect effect model examining the association between smartphone addiction and partner surveillance through cognitive jealousy. ** $p < .01$; *** $p < .001$.

Sensitivity Analysis

To further evaluate the robustness of the mediation effect, a Monte Carlo simulation was conducted using the unstandardized path coefficients and standard errors obtained from the PROCESS mediation model (Preacher & Selig, 2012). Following recommendations for Monte Carlo estimation of indirect effects, 200,000 replications were generated to estimate the sampling distribution of the indirect effect. The estimated indirect effect was 0.126, and the Monte Carlo 95% confidence interval ranged from 0.039 to 0.239. Because the confidence interval did not include zero, the results provided additional support for the statistical significance and stability of the indirect effect. The Monte Carlo confidence interval closely matched the bootstrap confidence interval obtained from PROCESS (95% CI $[0.034, 0.240]$), suggesting that the mediation effect was robust and that the sample size ($N = 174$) provided adequate sensitivity to detect the observed

indirect association between smartphone addiction and partner surveillance through cognitive jealousy. Monte Carlo confidence intervals were estimated using a simulation-based approach implemented in Python (version 3.x), with 200,000 replications based on the parameter estimates and standard errors from the fitted mediation model.

As a sensitivity analysis, a post hoc Monte Carlo power analysis was conducted to evaluate whether the sample size was sufficient to detect the observed indirect effect in the mediation model. Following Schoemann et al. (2017), the simulation was based on the observed standardized path coefficients from the final model ($a = .29$, $b = .24$), yielding a standardized indirect effect of approximately $ab = .07$, with a sample size of $N = 174$. A total of 5,000 Monte Carlo replications were generated assuming a significance level of $\alpha = .05$. Results indicated an estimated statistical power of .88 to detect the observed indirect effect. This value exceeds the conventional .80 criterion for adequate statistical power (Cohen, 1988), suggesting that the study had adequate sensitivity to detect the indirect effect observed in the data.

DISCUSSION

The present study examined whether cognitive jealousy functions as an indirect pathway linking smartphone addiction to partner surveillance among Turkish young adults in romantic relationships. Consistent with the hypotheses, smartphone addiction was positively associated with cognitive jealousy and partner surveillance, and cognitive jealousy was positively associated with partner surveillance. The indirect effect was also significant, while the direct association between smartphone addiction and partner surveillance remained significant. Because the data are cross-sectional, these findings should not be interpreted causally. However, they suggest that cognitive jealousy may be one relationship-specific cognitive process through which smartphone addiction is associated with digitally enabled partner monitoring.

These findings are consistent with behavioral addiction perspectives suggesting that addiction-like smartphone use may have interpersonal implications beyond the amount of time spent using a device (Griffiths, 2005; Csibi et al., 2021; Kuss et al., 2018). In romantic relationships, features such as compulsive checking, difficulty disengaging, and reliance on smartphones for emotion regulation may increase engagement with ambiguous digital cues, including delayed responses, online visibility, or social media interactions. The present findings extend this literature by suggesting that such smartphone-related dysregulation may be linked not only to individual functioning, but also to relationship-specific cognitions and behaviors.

The association between smartphone addiction and cognitive jealousy is also consistent with research showing that digitally mediated romantic contexts can intensify jealousy-related thoughts and concerns (Elphinston & Noller, 2011; Elphinston et al., 2013; Gubler et al., 2023; Quiroz et al., 2024). Rather than suggesting that smartphone use itself produces jealousy, the present findings point to a more modest interpretation: individuals with higher levels of smartphone addiction may be more likely to encounter, revisit, or interpret digital relational cues through suspicious or ruminative cognitions. In turn, cognitive jealousy was associated with partner surveillance, which aligns with prior studies linking jealousy, digital monitoring, interpersonal electronic surveillance, and cyber dating abuse (Tokunaga, 2011; Borrajo et al., 2015; Aloia, 2023; Quiroz et al., 2024).

From an uncertainty reduction perspective, partner surveillance may function as an attempt to seek reassurance or reduce ambiguity in the face of perceived relational threat (Berger & Calabrese, 1975). However, surveillance may also expose individuals to further ambiguous information and may be associated with lower trust, reduced autonomy, and more controlling relational dynamics when it becomes frequent or intrusive (Harris & Woodlock, 2019; Messing et al., 2020; Litt & Rodriguez, 2022). Therefore, cognitive jealousy may

help explain why smartphone addiction is linked to surveillance behaviors, but it is unlikely to be the only mechanism involved. The remaining direct effect suggests that other processes, such as habitual checking, fear of missing out, attachment insecurity, low trust, or emotion regulation difficulties, may also contribute to partner-directed monitoring.

The gender-related findings should also be interpreted cautiously. Women reported higher levels of cognitive jealousy than men, whereas gender differences in smartphone addiction and partner surveillance were not statistically significant. This pattern may suggest that gender was more closely related to jealous cognitions than to smartphone addiction or surveillance behavior in the present sample. However, the sample was predominantly female, and gender differences were not a central focus of the present study. Future studies with more gender-balanced samples should examine whether gender is differently associated with cognitive, emotional, and behavioral components of jealousy in digital relationship contexts (Pfeiffer & Wong, 1989; De Cristofaro et al., 2023).

The study also contributes to the literature by examining these associations in a Turkish young adult sample. Much of the research on electronic surveillance, digital jealousy, and technology-facilitated partner monitoring has been conducted in Western samples (Tokunaga, 2011; Elphinston & Noller, 2011; Aloia, 2023). Although the present study did not directly test cultural values, the findings suggest that the links among smartphone addiction, cognitive jealousy, and partner surveillance may also be relevant in a non-WEIRD context. Future research should examine how cultural expectations regarding privacy, closeness, responsiveness, trust, and relational accountability may shape the meaning and consequences of partner surveillance.

Limitations and Future Directions

Several limitations should be considered. First, the cross-sectional design prevents conclusions about temporal ordering or causality. Although the proposed model examined smartphone addiction as associated with cognitive jealousy and partner

surveillance, alternative and bidirectional pathways are possible. For example, cognitive jealousy may increase smartphone checking, and partner surveillance may increase exposure to ambiguous relational information, which may further intensify jealousy or smartphone-related dysregulation over time. Longitudinal research is needed to examine these possible reciprocal processes.

Second, all variables were assessed using self-report measures, which may have introduced shared method variance and socially desirable responding, particularly because partner surveillance may be perceived as sensitive or intrusive. Future studies would benefit from partner reports, behavioral indicators of smartphone use, app-based usage data, or ecological momentary assessment.

Third, the sample primarily consisted of young, unmarried university students, most of whom were female. Participants were not recruited from a clinical population, psychiatric diagnoses were not assessed, and no clinical interviews were conducted. Therefore, the findings should be interpreted as reflecting a non-clinical young adult sample rather than a clinically assessed population. The results may not generalize to older adults, married couples, clinical samples, more diverse educational groups, or gender-balanced samples.

Another limitation concerns the potential selection bias introduced by the use of multiple recruitment strategies. Participants were recruited through convenience and snowball sampling via social media and personal networks, and an additional recruitment phase included undergraduate students who were offered optional course credit. These recruitment channels may have attracted participants with different characteristics, such as student status, motivation for participation, comfort with online surveys, digital engagement, or willingness to disclose jealousy and surveillance behaviors. Because recruitment source was not controlled in the analyses, it is not possible to determine whether responses differed across recruitment channels or whether recruitment method influenced the observed associations.

Measurement-related limitations should also be noted. The IESS and the cognitive jealousy subscale of the MJS were translated into Turkish for the present study using forward-back translation procedures. Additional analyses provided preliminary support for their one-factor structure and internal consistency in the present sample. However, the current study was not designed as a formal Turkish adaptation or validation study. Future research should conduct full-scale adaptation studies of the IESS and MJS in Turkish samples, including expert review, pilot testing, convergent and discriminant validity, test-retest reliability, and measurement invariance across gender and other relevant groups.

Despite these limitations, the study contributes to the literature by linking smartphone addiction with partner surveillance through cognitive jealousy. These findings may have implications for prevention, relationship education, and clinical practice. Interventions with young adults and couples may benefit from addressing not only smartphone-related dysregulation, but also the suspicious and ruminative interpretations that give digital cues relational meaning. Relationship education programs may also help young adults distinguish between mutual transparency and monitoring behaviors that undermine autonomy, trust, or safety, particularly given the overlap between partner surveillance, digital coercive control, and cyber dating abuse (Borrajó et al., 2015; Harris & Woodlock, 2019; Messing et al., 2020).

CONCLUSION

In conclusion, the present study suggests that cognitive jealousy may be one pathway linking smartphone addiction and partner surveillance among Turkish young adults in romantic relationships. The findings contribute to a relational understanding of smartphone addiction by showing that addiction-like smartphone use may be associated with digitally enabled monitoring behaviors through suspicion and rumination. At the same time, the cross-sectional, self-report, and non-clinical nature of the data requires caution. Future longitudinal,

dyadic, and culturally informed research is needed to clarify the direction, mechanisms, and relational consequences of these associations.

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