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Parental phubbing and problematic smartphone use among adolescents: The mediating role of parental attachment

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Abstract: In the post-pandemic era, a new challenge has emerged within families: the increasing tendency toward problematic smartphone use (PSU). Parents' attention is often divided between digital interactions and their children, parents appear available but are mentally preoccupied with digital interactions, leaving them physically present but psychologically absent during shared moments—a phenomenon known as parental phubbing. This study examined how parental phubbing contributes to adolescents' PSU and tested whether the quality of parental attachment mediates this relationship. Data were collected from 654 adolescents aged 12–18 years in Medan, Indonesia, using cluster sampling. Participants completed the Parental Phubbing Scale (PPS), the Inventory of Parent and Peer Attachment–Revised (IPPA-R), and the Smartphone Addiction Scale–Short Version (SAS-SV). Path analysis showed that parental phubbing directly predicted higher PSU levels ($\beta = .270$, $p < .001$) and indirectly influenced PSU through reduced parental attachment ($\beta = .054$, $p < .001$). The mediation model, confirmed by the Sobel test ($z = 9.24$, $p < .001$), indicated partial mediation. These findings highlight the need to foster secure parent–child relationships and promote mindful digital engagement among parents to reduce adolescents' vulnerability to smartphone overuse in the evolving post-pandemic family environment.

Keywords: adolescents; digital addiction; parental attachment; parental phubbing; smartphone use

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Introduction

Smartphones have become rapidly integrated into people's daily lives at an unprecedented pace (Kushlev & Dunn, 2019). They are no longer merely "mobile phones." With advanced functionalities, smartphones have evolved beyond being simply communication devices; they now serve as real-time information hubs and powerful portable computers. While they offer significant convenience in daily life, in some cases they are also linked to addictive usage patterns that can have negative consequences (Billieux et al., 2015). Despite their importance and usefulness in modern life, the risks associated with problematic usage should not be overlooked. Smartphones become problematic when individuals lose control over their usage, resulting in disruptions to their daily functioning.

Problematic smartphone use (PSU) is frequently conceptualized as a form of technology addiction, which is operationally defined as a "non-chemical, behavioral addiction involving human-machine interactions" (Young & Abreu, 2017). The terms "problematic smartphone use" and "smartphone addiction" are often used interchangeably, reflecting differing theoretical perspectives among researchers. Scholars who assert that excessive smartphone use meets the diagnostic criteria for addiction typically adopt the term "smartphone addiction" (Fischer-Grote et al., 2019). Conversely, researchers who view such behaviors as maladaptive but not addictive tend to use the term "problematic smartphone use" (Billieux et al., 2015; Kardefelt-Winther et al., 2017).

Although PSU is not formally recognized in the DSM-5 or the ICD-11, it exhibits notable parallels with other behavioral addictions. Gutierrez et al. (2016) demonstrated that each of the eight DSM-5 criteria for substance use disorders has a corresponding manifestation within PSU. In this study, PSU is operationally defined as the inability to resist recurrent urges to use a smartphone, resulting in significant interference with daily functioning (Busch & McCarthy, 2021). It encompasses difficulties in maintaining focus during activities, failure to complete planned tasks, the inability to reduce smartphone use, withdrawal symptoms, and an increasing urge to continue using such devices (Fabio et al., 2022).

PSU appears to be widespread globally. A meta-analysis estimated the global prevalence of smartphone addiction at 26.99%, while the prevalence in the European region was reported at 18.51% (Meng et al., 2022). Research conducted in Korea by M.-S. Lee & Lee (2023) found that 25.1% of adolescents reported experiencing PSU. These prevalence rates are consistent with previous findings, which indicated that PSU affected approximately 23.3% of adolescents and young adults, with a reported range of 10%–30%. The prevalence of smartphone dependence among Indonesian adolescents has been documented in several empirical studies. Primadiana et al. (2019), in a study conducted at SMA X Sidoarjo, reported that 53.1% of 289 students—comprising 41.9% male and 58.1% female participants—exhibited moderate to high levels of smartphone addiction. Similarly, Marini et al. (2024) found that 83% of 241 Indonesian adolescents demonstrated moderate levels of PSU, further underscoring the widespread nature of smartphone-related behavioral concerns in this population.

Numerous studies have identified a range of variables associated with PSU. Socio-demographic factors such as age, socioeconomic status, and gender have been shown to correlate with PSU (Busch & McCarthy, 2021), as has the nature of smartphone usage (Chan et al., 2023). Psychological factors including depression, anxiety, and perceived stress have also been linked to PSU (Busch & McCarthy, 2021). In a cross-cultural study involving adolescents in Indonesia and Malaysia, Safaria et al. (2024) reported a significant negative relationship between self-

control and smartphone use, suggesting that lower self-regulation may contribute to higher levels of PSU. Additionally, research focusing on adolescents has highlighted the influence of family-related factors, with findings indicating that familial issues significantly contribute to mobile phone addiction and problematic use among youth (E. J. Lee & Kim, 2018; Q.-Q. Liu et al., 2020). These findings align with research conducted in Yogyakarta, Indonesia, that demonstrated a relationship between interactions within the nuclear family consisting of fathers and mothers and the level of children's involvement in electronic device use (Fahrizal et al., 2024). Consequently, attention should also be paid to parent-related behavior connected to mobile phone use, with one of the factors correlating with PSU being parental phubbing.

The neglect of children resulting from excessive parental smartphone use is commonly referred to as parental phone snubbing, or parental phubbing. This phenomenon is broadly defined as the extent to which individuals engage with or become distracted by their smartphones while in the presence of others, thereby neglecting social interaction (Chotpitayasunondh & Douglas, 2016; David & Roberts, 2017). In Indonesia, it is related to the term gadget hangover (Hidayat, 2018; Sari et al., 2024). Empirical evidence suggests that parental phubbing exerts both direct and indirect effects on adolescents' smartphone usage behaviors. Several studies have demonstrated a significant positive relationship between parental phubbing and smartphone addiction or PSU among children and adolescents (Hong et al., 2019; K. Liu et al., 2021; Xie et al., 2019).

Parental phubbing frequently occurs within family environments, when parents become distracted by their smartphones while in the presence of their children. The behavior has been identified by several researchers as a significant predictor of PSU among adolescents (Hong et al., 2019; Xie et al., 2019). The family setting, recognized as one of the two primary ecological microsystems influencing adolescent development, along with the peer or school environment, plays a critical role in shaping individuals' thoughts, emotions and behaviors. For example, Chotpitayasunondh and Douglas (2018) found that adolescents who experienced parental phubbing often perceived it as a normative social behavior, subsequently developing tendencies to engage in similar behaviors themselves.

Drawing on observational learning theory, individuals are likely to replicate behaviors modeled by others—particularly when those behaviors appear to yield desirable outcomes. Within this framework, children exposed to frequent parental smartphone use may internalize and imitate such behaviors. Moreover, when parental attention is diverted by mobile devices, children may experience a sense of psychological distance despite the parent's physical presence, potentially leading to feelings of neglect and weakened parental attachment (Hefner et al., 2019; K. Liu et al., 2021). Collectively, these findings suggest that parental phubbing may be negatively associated with the quality of parent–child attachment.

Parental attachment, as a central component of the family environment, has received growing scholarly attention due to its association with PSU. Lepp et al. (2015) reported a significant negative correlation between PSU and parental attachment, suggesting that stronger emotional bonds between children and their parents may serve as a protective factor. Attachment is broadly defined as the emotional bond between children and their primary caregivers, including parents (Cassidy & Shaver, 2017). Recent studies have further demonstrated a positive relationship between mobile phone addiction and insecure attachment styles (Yiming Zhang et al., 2022). Overall, empirical evidence suggests that parental

attachment has a significant and negative association with PSU among adolescents (Long & Qin, 2025; Yan Zhang et al., 2020).

Although prior research has demonstrated that parent–child attachment significantly influences adolescents' smartphone use behaviors (S. Chen et al., 2023; Teng et al., 2020; Xie et al., 2019), and that parental phubbing adversely affects children's social development (Hong et al., 2019; Yan Zhang et al., 2023), the interrelationship between these constructs remains insufficiently understood. Further investigation is needed to clarify how parental attachment and phubbing interact and jointly contribute to PSU among adolescents. In particular, there have been few studies that explicitly test the mediating role of parent-child attachment in explaining the relationship between parental phubbing and PSU. In addition, related studies have been conducted in individualistic cultural contexts, while collectivistic contexts such as that of Indonesia have not been widely explored. Therefore, this study has the novelty of structurally testing the direct and indirect relationships between parental phubbing, parent-child attachment and PSU, making contextual contributions to the literature on attachment and digital addiction. Based on the theoretical foundations and research gaps, the following four hypotheses are proposed:

H_1 Parental phubbing has a direct relationship with problematic smartphone use.

H_2 Parental phubbing has a direct relationship with parental attachment.

H_3 Parental attachment has a direct relationship with problematic smartphone use.

H_4 Parental attachment mediates between parental phubbing and problematic smartphone use.

The research model is depicted in Figure 1.

Methods

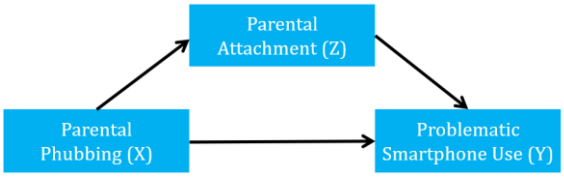
Participants

The research utilized a cross-sectional design involving three key variables: parental phubbing as the independent variable, problematic smartphone uses as the dependent variable, and parental attachment as the mediating variable. Cluster sampling was used to select ten high schools in Medan, Indonesia, representing the five districts: western, eastern, northern, southern, and central regions. Determination of the minimum number of samples was made using the power analysis of Daniel Soper, with the effect size criterion being 0.3; the desired statistical power level 0.8; the number of latent variables 5; the number of observation variables 30; the probability level .05; and with a minimum sample size of 200 people.

This research recruited 654 adolescents aged 12-18 (mean = 93.4, SD = 62.02), consisting of 390 girls (60%) and 264 boys (40%), who used smartphones, lived with their parents (father and mother), and whose parents also used smartphones daily.

Figure 1

Research Model



The general specifications of the smartphones used by the participants included Android/iOS operating systems, with various types of content, including social media, educational learning, and communication tools (Chan et al., 2023). The 654 students who participated comprised 225 junior high school students (Grades 7–9; 34.4%) and 429 senior high school students (Grades 10–12; 65.6%). Participant demographic information was obtained from self-reported data provided during the questionnaire completion. Data collection was conducted using two formats: printed questionnaires and an online version distributed via Google Forms. The researcher met participants in person to distribute printed forms and share the online survey link, particularly in cases where students were not permitted to bring smartphones to school. All participants provided informed consent before participation. Data collection took place over a six-week period, from December 2, 2024, to January 15, 2025. As a token of appreciation, participants received a small gift upon completing the survey. The research received ethical approval from the Research Ethics Committee of the University of Surabaya, with Ethical Clearance certificate No. 371/KE/V/2024.

Instrument

The adaptation process for the cross-cultural measurement used the International Test Commission Guidelines for Translating and Adapting Tests (International Test Commission, 2018). It consists of six stages: i) pre-condition, ii) measuring instrument development, iii) confirmation, iv) administration, v) measuring instrument scoring and interpretation, and vi) documentation.

In the first stage, a pre-condition, a literature review was conducted to evaluate whether the instrument was appropriate for the intended target group. Permission to translate and adapt the scale was requested from the original researchers, as the copyright holders. The second stage, measurement development, began by selecting three translators and three relevant experts. The translators conducted forward-backward translations and synthesis, while three experts conducted qualitative and quantitative assessments, ensuring that the adapted instrument had the same measurement capabilities as the original scale through evidence based on test content. They also conducted a pilot study using a small sample through cognitive interviews. The third stage, confirmation, tested the instrument to be adapted. This stage began with the selection of a sample for the scale pilot test in order to conduct empirical analysis (CFA) to ensure the construct's similarity to the original and to test its validity and reliability. In the fourth stage, administration, preparation for the test administration process was made based on the culture and language of the target population. In the fifth stage, scale scoring and interpretation, guidelines on how to score and interpret the results according to the culture of the target population were created. In the final stage, documentation, a written technical document of each change, including the empirical analysis evidence, was prepared so that the scale could be used by others to test different populations.

In this study, parental phubbing was measured using the Parental Phubbing Scale (PPS), parental attachment was measured using the Inventory of Parent and Peer Attachment-Revised (IPPA-R), and the Smartphone Addiction Scale - Short Version (SAS-SV) was used to assess problematic smartphone use in adolescents.

The PPS, developed by Pancani et al. (2021), comprises seven unidimensional items designed to measure parental phubbing behavior. The instrument was adapted from the Partner Phubbing Scale of Roberts and David (2016) which originally included nine items. Two items were excluded during the adaptation process: item 7, due to its reverse-coded format that could lead to respondent confusion, and item 8, which described

a scenario more relevant to romantic relationships (e.g., going out together) than to parent–child interactions. Responses were on a scale of 1 (never) to 5 (always). The directions for completing the scale were as follows: "Think about the time that you spend with your mother/father (or whoever takes her/his place). How often do you find yourself in the following situations? Even if your mother/father only has an old-fashioned mobile phone, answer the questions anyway. If your mother/father does not have any type of mobile device, answer 'never' to all of the questions." Examples of questions were "During a typical mealtime that we spend together, mother/father pulls out and checks her/his smartphone" and "During leisure time that we spend together, mother/father pays more attention to her/his smartphone than to me". The results of the CFA analysis for the PPS yielded satisfactory results, obtaining item factor loading scores ranging from .544 to .803, while the goodness of fit indices were RMSEA = .000, SRMR = .012, GFI = .999, CFI = 1.000 and TLI=1.006.

Parental attachment was assessed using the IPPA-R, developed by Armsden and Greenberg (1987), which consists of three aspects of attachment: trust, communication and alienation. An example item from the trust aspect was, "mother/father respects my feelings"; an item from the communication aspect was "I talk to mother/father about my problems and difficulties"; while an example of an item from the alienation aspect was, "I easily feel annoyed when I am near mother/father". Responses were measured using a 5-point Likert scale, ranging from 1 (never), 2 (not very often), 3 (sometimes), 4 (often), to 5 (always). The results of the validity test of the test adaptation process show that 18 out of the 25 items had good validity, with loading factors of .505 to .849. The reliability test using Cronbach's alpha achieved a total score of α = .921. The results of the reliability test for each subscale were Trust α = .881; Communication α = .873; and Alienation α = .689. This research also conducted a CFA test for the IPPA-R, whose results were satisfactory. The goodness of fit indices were CFI = .923, TLI = .911, RMSEA = .071, SRMR = .059 and GFI = .980.

PSU was measured using the SAS-SV Indonesian version, developed from the SAS-SV by Kwon et al. (2013), and adopted to the Indonesian cultural context by Arthy et al. (2019), and consisting of 10 unidimensional items. The responses were made on a 6-point Likert scale, ranging from 1 (strongly disagree) to 6 (strongly agree). Sample items in the questionnaire included statements such as "Won't be able to stand not having a smartphone,"; "Using my smartphone longer than I had intended," and "Having my smartphone in my mind even when I am not using it". The SAS-SV was adopted to the Indonesian context for this research. Internal consistency reliability for the scale in this study was α = .820 and ω = .818. This research also conducted CFA analysis for the SAS-SV, obtaining loading factor scores ranging from .510 to .782, while the CFA results indicated a good fit: RMSEA = .105, SRMR = .036, GFI = .994, CFI = .946 and TLI = .911.

Data Analysis

Data were analyzed using path analysis to investigate the indirect relationship between parental phubbing and PSU, with parental attachment functioning as a mediating variable. The analysis was performed using SPSS version 26. Unlike linear regression, which assesses only direct effects, path analysis enables the examination of both direct and indirect relationships between variables (Kline, 2023). In addition to these techniques, the Sobel test (1982) was conducted to determine whether the mediation variable significantly mediated the relationship between the independent and dependent variables. This test is a simple method developed by Sobel. In this study, the calculations were

conducted using the calculator for the Sobel test (Soper, n.d.).

The mediation process was examined through a series of analytical steps. First, the direct relationship parental phubbing and PSU were assessed. Second, the influence of parental phubbing on parental attachment was evaluated. Third, regression analysis was conducted to determine whether parental attachment significantly predicted PSU. Fourth, the indirect effect of parental phubbing on PSU through parental attachment was tested. To further assess the significance of this mediating effect, the Sobel test was employed. This test, developed by Sobel, serves as a straightforward method for evaluating indirect effects and is commonly used as a complement or alternative to the traditional multi-step approach in path analysis (Sidhu et al., 2021).

Results

Before the data analysis, the authors compiled a demographic description of the participants, which is displayed in Table 1. The majority of the respondents were 12–15 years old, and most were girls. In terms of employment status, the majority of fathers were self-employed, whereas most mothers were not formally employed (housewives). Regarding family income, most earned between 3–5 million rupiahs. In terms of parents' use of smartphones while spending time with their children, the majority sometimes did so. Furthermore, most respondents' daily usage smartphone duration ranged between 1-4 hours. With regard to the type of smartphone usage, most respondents used their device to send messages, access social media and search for information.

Table 2 indicates that parental phubbing has a significant effect on problematic smartphone use ($\beta = .270$, $p < .005$) and parental attachment ($\beta = -.457$, $p < .005$). Therefore, hypothesis 1, "Parental phubbing has a direct relationship with problematic smartphone use" and hypothesis 2, "Parental phubbing has a direct relationship with parental attachment" are accepted. In addition, parental attachment significantly affects problematic smartphone use ($\beta = -.120$, $p < .005$), meaning hypothesis 3, can also be accepted. In the mediation model, in which parental attachment serves as a mediator between parental phubbing and problematic smartphone use, the indirect effect shows a significant relationship ($\beta = .054$). A comparison between the direct effect and indirect effect reveals that the direct one is greater than the indirect. These results indicate that parental attachment serves as a partial mediator in the relationship between parental phubbing and adolescents' problematic smartphone use.

In Table 3, the R-squared is shown to be .240, meaning that the effect of parental phubbing and parental attachment on problematic smartphone use is 24%. This indicates that 24% of the variability in the problematic smartphone use variable is described by parental phubbing and parental attachment.

Figure 2 shows that parental attachment is a mediating variable in the effect between parental phubbing and PSU. The standardized coefficient results were compared directly and indirectly. It can be seen that the direct effect of parental phubbing on PSU ($\beta = .270$, $p < .001$) and the indirect effects of parental phubbing on PSU through parental attachment ($\beta = .054$, $p < .001$) are demonstrated to be significant in the same direction, namely positive, so it can be concluded that parental attachment is a partial complementary mediator. It is because the exogenous variable (parental phubbing) is shown to have a direct effect on problematic smartphone use, indicating that the mediator variable (parental attachment), which has been proven significant, plays a complementary role (Hair Jr et al., 2021).

In addition to these techniques, the Sobel test was conducted to further assess the significance of the indirect effect of parental phubbing on PSU

through parental attachment. In this test, if z < 1.96. the variable is considered unable to mediate the relationship between the independent and dependent variables. In this study, calculations were performed using the calculator for the Sobel test (Soper, n.d.) to determine whether parental attachment mediated the relationship between parental phubbing and PSU.

Table 1

Participant Characteristics

No.	Characteristic	Category	N=654	%
1	Age	12-15	414	63.30
		16-18	240	36.70
2	Gender	Boy	264	40.37
		Girl	390	59.63
3	Father's occupation	Civil Servant	65	9.94
		Medical Personnel/Doctor	3	0.46
		Self-employed (Trader/Contractor/Entrepreneur)	325	49.69
		Laborer (Farmer/Fisher/Mason/Driver)	87	13.30
		Private/BUMN Employee	83	12.69
		Indonesian Army/Police	33	5.05
		Unemployed	39	5.96
		Deceased	19	2.91
4	Mother's occupation	Civil Servant	71	10.86
		Medical Personnel/Doctor	12	1.83
		Self-Employed (Trader/Contractor/Entrepreneur)	163	24.92
		Laborer (Farmer/Fisher/Mason/Driver)	19	2.91
		Private/BUMN Employee	37	5.66
		Indonesian Army/Police	2	0.31
		Not formally employed (Housewife)	347	53.06
		Deceased	3	0.46
5	Family income (rupiahs)	< 1 million	101	15.44
		1-3 million	173	26.45
		3-5 million	196	29.97
		5-8 million	112	17.13
		> 8 million	54	8.26
		Not reported	22	3.36
6	How often parents used their smartphone while spending time with their children	Very often	59	9.02
		Often	188	28.7
		Sometimes	386	59.02
		Never	21	3.21
7	Duration of respondent smartphone usage per day	< 1 hour	46	7.03
		1 – 4 hours	270	41.28
		5 – 7 hours	191	29.20
		> 7 hours	147	22.48
8	Type of smartphone usage	Sending messages	654	100.00
		Accessing social media	498	76.15
		Searching for information	470	71.87
		Educational applications (Ruang Guru, Google Classroom, Duolingo, etc.)	448	68.50
		Making voice calls	436	66.67
		Taking photos/videos	437	66.82
		Playing games	419	64.07
		Streaming music/videos	373	57.03
		Functional applications (calendar, clock, memo, etc.)	328	50.12
		Accessing e-mail	301	46.02

Table 2

Hypothesis Test Results

	Parental Attachment			Problematic Smartphone Use		
	β	SE	p	β	SE	p
Direct Effect						
Parental Phubbing	-.457	.111	.000	.270	.044	.000
Parental Attachment	-	-	-	-.120	.014	.000
Indirect Effect						
Parental Phubbing	-	-	-	.054	-	.000

Table 3

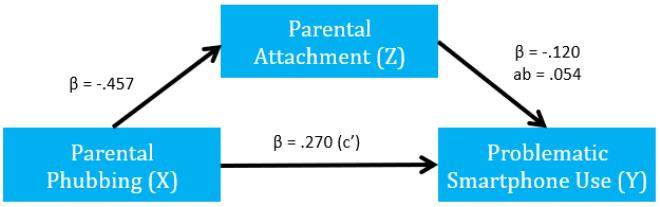
Model Summary

Model	R	R-squared	Adjusted R-squared	Std. Error of the Estimate
1	.490[a]	.240	.238	5.413

a. Predictors (Constant): Parental Phubbing, Parental Attachment
b. Dependent Variable: Problematic Smartphone Use

Figure 2

Correlational Model



The Sobel test results showed z = 9.24 (> 1.96), indicating that parental attachment does serve as a mediator between parental phubbing and PSU, as illustrated in Figure 2. It is thus demonstrated that parental attachment as a mediating variable can explain the indirect effect of parental phubbing on PSU. Therefore, hypothesis 4 "Parental attachment is a mediating variable in the relationship between parental phubbing and problematic smartphone use" is accepted.

Discussion

A mediation model was constructed to examine the mechanism underlying the relationship between parental phubbing and PSU in Indonesian adolescents. The results indicate that parental attachment played a mediating role in the association.

First, it was found that parental phubbing could significantly predict PSU in adolescents. Descriptive data on the frequency distribution of the independent and dependent variables also support the result. Table 4 show a summary of the percentage comparison of the subjects' scores on parental phubbing and PSU. It can be seen that the percentage of PSU scores changes in accordance with the parental phubbing scores. Most of the subjects have moderate PSU (61.8%) and quite

closely, the percentage scores of parental phubbing also fall in the moderate range (47.2%). In summary, parental phubbing is positively associated with PSU among adolescents. The finding is similar to those in a previous study in China by Niu et al. (2020), which reported a significant positive relationship between parental phubbing and adolescents' problematic mobile phone use. While smartphones offer numerous conveniences, their excessive or inappropriate use can lead to social difficulties and disrupt interpersonal interactions. As phubbing becomes increasingly prevalent, it may be perceived as socially acceptable or normative behavior (McDaniel & Radesky, 2018), thereby increasing the likelihood that adolescents will adopt similar patterns of problematic smartphone use (Lam & Wong, 2015).

The demographic data reveal that 59.02% of parents using their smartphones 'occasionally' while spending time with their children. This pattern corresponds with an overall classification of parental phubbing at a moderate level, indicating a consistent trend between self-reported smartphone use and measured phubbing behavior. Based on social learning theory, parents serve as models for their children, with their behaviors conveying particular patterns, attitudes and social norms (Yousefi, 2023). Therefore, intergenerational transmission of behaviors is significant, meaning that parents' actions often lead children to adopt similar behaviors. Furthermore, because phubbing shifts a person's attention from others to their own mobile phone, parental phubbing can cause children and adolescents to feel rejected and overlooked (Chotpitayasunondh & Douglas, 2018; K. Liu et al., 2021; Q.-Q. Liu et al., 2020). Given that parental rejection and neglect are major risk factors for behavioral issues in children and adolescents (Y. Chen et al., 2021; Ferrara et al., 2016) parental phubbing has been found to be positively linked to adolescent PSU.

Second, this research reveals that parental phubbing has a direct relationship with parental attachment. Descriptive data on frequency distribution of the independent and dependent variables also support this finding. Table 4 gives a summary of the percentage comparison of subjects' scores on parental phubbing and parental attachment. It shows that the percentage moves in accordance with the parental phubbing scores. Most subjects have high parental attachment (56.4%), with percentage scores on parental phubbing falling in the moderate range (47.2%). In short, parental phubbing is negatively related to parental attachment.

This finding aligns with previous studies conducted in China by Xie et al. (2019), and Xu and Xie (2023), which reported a negative correlation between parental phubbing and parent–child attachment. Phubbing, often conceptualized as a form of social exclusion (David & Roberts, 2017), may lead adolescents to feel neglected when their parents are distracted by smartphones, thereby weakening the emotional bond between parent and child (Borelli et al., 2015). It is important to acknowledge that phubbing represents a detrimental social behavior, as it undermines the quality of interpersonal relationships and social engagement (Davey et al., 2018; McDaniel & Drouin, 2019). In the context of family dynamics, phubbing has been shown to contribute to the erosion of parent–child relationships (Chotpitayasunondh & Douglas, 2018; McDaniel & Radesky, 2018), and to provoke interpersonal conflict not only between romantic partners but also between parents and children, ultimately disrupting family cohesion and overall functioning (McDaniel & Radesky, 2018; Roberts & David, 2016). The demographic data indicate that the majority (63.7%) of the research subjects were in early adolescence (ages 12–15), and exhibited a high level of parental attachment. This finding aligns with developmental theories that emphasize the importance of emotional bonding between adolescents and their parents,

particularly during the early stages of adolescence (Cassidy & Shaver, 2017).

Third, this research found that parental attachment has a direct relationship with PSU. The descriptive data on the frequency distribution of the independent and dependent variables support this result. Table 4 summarizes the percentage comparison of subjects' scores on parental attachment and PSU. It shows that the percentage PSU scores move in accordance with the parental attachment. scores Most of the subjects have high parental attachment (56.42%), with PSU percentage scores falling in the moderate range (61.77%). In short, parental attachment is negatively related to PSU. The present findings are consistent with those of Zhang et al. (2020), who reported a negative correlation between parental attachment and PSU. Parents who cultivate secure attachment relationships provide their children with a sense of emotional security and the belief that they are worthy of love and care (Bowlby, cited by Bosmans et al., 2022), thereby fulfilling their emotional needs during adolescence and early adulthood. In contrast, when a disconnect exists between parents and children, these emotional needs may remain unmet, prompting adolescents to seek alternative sources of comfort and validation. In such cases, smartphones may serve as a compensatory tool, increasing the likelihood of problematic use. Furthermore, parental attachment may function as a form of social control; adolescents with strong emotional bonds to their parents may avoid excessive smartphone use out of concern that such behavior could negatively affect their relationship or cause distress to their parents (Soh et al., 2018; Zhu et al., 2022). Collectively, these mechanisms help explain why secure parental attachment may function as a safeguard against PSU.

The demographic data show that the majority (41.28%) of the participants used their smartphones for 1–4 hours per day, followed by 5–7 hours (29.2%). This pattern corresponds with the finding that the level of PSU was predominantly in the moderate category (61.8%), followed by the high category (20.9%). These results are consistent with previous studies by Bae (2017), Cha and Seo (2018), and Mostert (2025) which demonstrated that increased daily smartphone use is directly linked to greater levels of PSU.

Table 4

Percentage Comparison of Frequency Distribution of Independent and Dependent Variables (N = 654)

Variable	Category	Frequency	Percentage (%)
Parental Phubbing	Low	302	46.18
	Moderate	309	47.25
	High	43	6.57
Parental Attachment	Low	24	3.67
	Moderate	261	39.91
	High	369	56.42
Problematic Smartphone Use	Low	113	17.28
	Moderate	404	61.77
	High	137	20.95

Fourth, the results of this study indicate that parental attachment significantly mediates the positive relationship between parental phubbing and adolescents' PSU. The Sobel test results showed z = 9.24 (> 1.96), indicating that parental attachment serves as a mediator between the association. This finding is consistent with previous research indicating that parental phubbing influences adolescents' problematic smartphone use both directly and indirectly, with reduced parental attachment serving as a mediating pathway (Niu et al., 2020; Xie et al., 2019). Supportive parent–child interactions, marked by strong parental sensitivity and responsiveness, are closely linked to healthy developmental outcomes and adaptive functioning in individuals (K. Liu et al., 2021). In today's world, modern technology, such as mobile phones, has become an essential part of daily life. As a result, technoference, particularly phubbing, has become more prevalent (Chotpitayasunondh & Douglas, 2018; David & Roberts, 2017). Furthermore, both ecological techno-subsystem theory and family systems theory propose that contemporary information technologies, such as the internet and mobile phones, interact dynamically with family-related factors, including the quality of relationships among family members. These interactions can significantly influence individual adaptation, particularly in terms of psychosocial functioning and overall well-being (Niu et al., 2020). Within this framework, parental phubbing may contribute to adolescents' dependence on smartphones by undermining the quality of the parent–child relationship (S. Chen et al., 2023).

The study offers several theoretical and practical implications. In theoretical terms, it contributes to the growing body of literature examining the influence of family-related factors, such as parental neglect and smartphone use, on adolescents' problematic smartphone behavior. Specifically, the study highlights the role of parental phubbing as a predictor of PSU, with parental attachment serving as a mediating mechanism. Practically, the findings underscore the importance of minimizing parental smartphone use during interactions with adolescents to preserve the quality of parent–child relationships. Moreover, implementing family-based media education programs may help reduce adolescents' engagement in online risk-taking behaviors by promoting healthier digital habits within the family context (Notten & Nikken, 2016). However, parents' healthy media usage serves as the foundation for the effectiveness of such education. The authors recommend that parents participate in media literacy education to cultivate positive media usage habits. Furthermore, parental attachment should be regarded as a critical focus in the prevention and intervention strategies targeting adolescents' PSU.

Despite the valuable findings and contributions of the study, several limitations should be acknowledged. First, employing a cross-sectional survey design restricts the capacity to draw causal conclusions between parental phubbing and problematic smartphone use. Future studies should utilize longitudinal designs to more effectively explore causal relationship. Second, subsequent studies are encouraged to include additional variables that may influence phubbing behavior and smartphone use, particularly those with potentially stronger predictive power. Third, all data in the study were obtained through adolescent self-reports, which may introduce bias. To improve the validity and comprehensiveness of future research, multiple data sources, such as parental self-reports or objective measures (e.g., app-based usage tracking), should be incorporated.

Conclusion

The research results indicate that parental phubbing increases adolescents' risk of PSU. It is not only directly linked to this, but also indirectly connected through diminished parent–child

attachment. In this regard, parental attachment functions as a mediator in the relationship between parental phubbing and adolescents' PSU.

The study makes both theoretical and practical contributions. In theoretical terms, it has developed a family and problematic smartphone use model to explain how parental phubbing intensifies adolescents' problematic smartphone use through parental attachment. The model builds on and extends the classical theories of social learning and attachment. Additionally, it offers a novel theoretical framework for examining parental media use and adolescent development. In conclusion, the proposed mediation model presents a new viewpoint on how parental phubbing intensifies adolescents' PSU. The findings extend the current literature and contribute to understanding of the link between parental behavior and adolescent smartphone usage.

The practical implications emphasize the importance of fostering positive media usage practices and media awareness within the family. Parents should be engaged in initiatives aimed at increasing parental awareness of the importance of quality interactions with their adolescents and encouraged to reduce smartphone use while communicating with them. The authors encourage the establishment of family media usage rules to protect and strengthen the quality of relationships between family members. The study findings can be used to design parenting programs that focus on enhancing parent-child attachment and managing technology use within families. By recognizing that parental attachment may act as a protective factor, the study provides insights for parents, teachers and mental health practitioners to help adolescents develop healthier relationships with technology.

The findings can serve as a foundation for creating an intervention designed to raise societal awareness of the significance of parental attachment in parent-child relationships, particularly in addressing adolescent PSU. Preventing PSU requires the strengthening of parental attachment to foster optimal parent-child relationships, alongside the promotion of parenting programs at schools. Additionally, it is essential to have a thorough understanding of the contributions of both fathers and mothers within the framework of parental attachment.[]

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Author Contribution Statement

Liza Marini: Conceptualization; Data Curation; Formal Analysis; Funding Acquisition; Investigation; Methodology; Project Administration; Resources; Validation; Visualization; Writing Original Draft; Writing, Review & Editing. **Wiwin Hendriani:** Data Curation; Investigation; Methodology; Resources; Validation; Writing, Review & Editing. **Primatia Yogi Wulandari:** Data Curation; Investigation; Resources; Validation; Writing, Review & Editing. **Vahid Norouzi Larsari:** Review & Editing.

References

Armsden, G. C., & Greenberg, M. T. (1987). The inventory of parent and peer attachment: Individual differences and their relationship to psychological well-being in adolescence. *Journal of Youth and Adolescence*, *16*(5), 427–454. https://doi.org/10.1007/BF02202939

Arthy, C. C., Effendy, E., Amin, M. M., Loebis, B., Camellia, V., & Husada, M. S. (2019). Indonesian version of Addiction Rating Scale of smartphone usage adapted from Smartphone Addiction Scale-Short Version (SAS-SV) in junior high school. *Open Access Macedonian Journal of Medical Sciences*, *7*(19), 3235–3239. https://doi.org/10.3889/oamjms.2019.691

Bae, S.-M. (2017). The relationship between the type of smartphone use and smartphone dependence of Korean adolescents: National survey study. *Children and Youth Services Review*, *81*, 207–211. https://doi.org/10.1016/j.childyouth.2017.08.012

Billieux, J., Maurage, P., Lopez-Fernandez, O., Kuss, D. J., & Griffiths, M. D. (2015). Can disordered mobile phone use be considered a behavioral addiction? An update on current evidence and a comprehensive model for future research. *Current Addiction Reports*, *2*(2), 156–162. https://doi.org/10.1007/s40429-015-0054-y

Borelli, J. L., Compare, A., Snavely, J. E., & Decio, V. (2015). Reflective functioning moderates the association between perceptions of parental neglect and attachment in adolescence. *Psychoanalytic Psychology*, *32*(1), 23–35. https://doi.org/10.1037/a0037858

Bosmans, G., Van Vlierberghe, L., Bakermans-Kranenburg, M. J., Kobak, R., Hermans, D., & van IJzendoorn, M. H. (2022). A learning theory approach to attachment theory: Exploring clinical applications. *Clinical Child and Family Psychology Review*, *25*(3), 591–612. https://doi.org/10.1007/s10567-021-00377-x

Busch, P. A., & McCarthy, S. (2021). Antecedents and consequences of problematic smartphone use: A systematic literature review of an emerging research area. *Computers in Human Behavior*, *114*, 106414. https://doi.org/10.1016/j.chb.2020.106414

Cassidy, J., & Shaver, P. R. (Eds.). (2017). *Handbook of attachment: Theory, research, and clinical applications* (3rd ed.). Guilford Press.

Cha, S.-S., & Seo, B.-K. (2018). Smartphone use and smartphone addiction in middle school students in Korea: Prevalence, social networking service, and game use. *Health Psychology Open*, *5*(1), 2055102918755046. https://doi.org/10.1177/2055102918755046

Chan, S. J., Yeo, K. J., & Handayani, L. (2023). Types of smartphone usage and problematic smartphone use among adolescents: A review of literature. *International Journal of Evaluation and Research in Education (IJERE)*, *12*(2), 563–570. https://doi.org/10.11591/ijere.v12i2.22909

Chen, S., Qiu, D., Li, X., & Zhao, Q. (2023). Discrepancies in adolescent–parent perceptions of parental phubbing and their relevance to adolescent smartphone dependence: The mediating Role of parent–child relationship. *Behavioral Sciences*, *13*(11), 888. https://doi.org/10.3390/bs13110888

Chen, Y., Zhu, J., Ye, Y., Huang, L., Yang, J., Chen, L., & Zhang, W. (2021). Parental rejection and adolescent problematic mobile phone use: Mediating and moderating roles of school engagement and impulsivity. *Current Psychology*, *40*(10), 5166–5174. https://doi.org/10.1007/s12144-019-00458-9

Chotpitayasunondh, V., & Douglas, K. M. (2016). How "phubbing" becomes the norm: The antecedents and consequences of snubbing via smartphone. *Computers in Human Behavior*, *63*, 9–18. https://doi.org/10.1016/j.chb.2016.05.018

Chotpitayasunondh, V., & Douglas, K. M. (2018). Measuring phone snubbing behavior: Development and validation of the Generic Scale of Phubbing (GSP) and the Generic Scale of Being Phubbed (GSBP). *Computers in Human Behavior*, *88*, 5–17. https://doi.org/10.1016/j.chb.2018.06.020

Davey, S., Davey, A., Raghav, S., Singh, J., Singh, N., Blachnio, A., & Przepiórkaa, A. (2018). Predictors and consequences of "phubbing" among adolescents and youth in India: An impact evaluation study. *Journal of Family and Community Medicine*, *25*(1), 35. https://doi.org/10.4103/jfcm.JFCM_71_17

David, M. E., & Roberts, J. A. (2017). Phubbed and alone: Phone snubbing, social exclusion, and attachment to social media. *Journal of the Association for Consumer Research*, *2*(2), 155–163. https://doi.org/10.1086/690940

Fabio, R. A., Stracuzzi, A., & Lo Faro, R. (2022). Problematic smartphone use leads to behavioral and cognitive self-control deficits. *International Journal of Environmental Research and Public Health*, *19*(12), 7445. https://doi.org/10.3390/ijerph19127445

Fahrizal, Y., Mariyana, D. M., & Hasan, S. S. (2024). Parents' role in preventing gadget addiction amongst preschoolers living in urban and rural areas: A qualitative study. *Psikohumaniora: Jurnal Penelitian Psikologi*, *9*(2), 179–194. https://doi.org/10.21580/pjpp.v9i2.20572

Ferrara, P., Guadagno, C., Sbordone, A., Amato, M., Spina, G., Perrone, G., Cutrona, C., C. Basile, M., Ianniello, F., C. Fabrizio, G., Pettoello-Mantovani, M., Verrotti, A., Villani, A., & Corsello, G. (2016). Child abuse and neglect and its psycho-physical and social consequences: A review of the literature. *Current Pediatric Reviews*, *12*(4), 301–310. https://doi.org/10.2174/1573396312666160914193357

Fischer-Grote, L., Kothgassner, O. D., & Felnhofer, A. (2019). Risk factors for problematic smartphone use in children and adolescents: A review of existing literature. *Neuropsychiatrie*, *33*(4), 179–190. https://doi.org/10.1007/s40211-019-00319-8

Gutiérrez, J. D.-S., de Fonseca, F. R., & Rubio, G. (2016). Cell-phone addiction: A review. *Frontiers in Psychiatry*, *7*. https://doi.org/10.3389/fpsyt.2016.00175

Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). *A primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. SAGE Publications, Inc.

Hefner, D., Knop, K., Schmitt, S., & Vorderer, P. (2019). Rules? Role model? Relationship? The impact of parents on their children's problematic mobile phone involvement. *Media Psychology*, *22*(1), 82–108. https://doi.org/10.1080/15213269.2018.1433544

Hidayat, C. A. (2018, November 12). *Phubbing smombie dan nomophobia*. Disdik Kab. Purwakarta. https://disdik.purwakartakab.go.id/read/phubbing-smombie-dan-nomophobia

Hong, W., Liu, R.-D., Ding, Y., Oei, T. P., Zhen, R., & Jiang, S. (2019). Parents' phubbing and problematic mobile phone use: The roles of the parent–child relationship and children's self-esteem. *Cyberpsychology, Behavior, and Social Networking*, *22*(12), 779–786. https://doi.org/10.1089/cyber.2019.0179

International Test Commission. (2018). ITC guidelines for translating and adapting tests (second edition). *International Journal of Testing*, *18*(2), 101–134. https://doi.org/10.1080/15305058.2017.1398166

Kardefelt-Winther, D., Heeren, A., Schimmenti, A., van Rooij, A., Maurage, P., Carras, M., Edman, J., Blaszczynski, A., Khazaal, Y., & Billieux, J. (2017). How can we conceptualize behavioural addiction without pathologizing common behaviours? *Addiction*, *112*(10), 1709–1715. https://doi.org/10.1111/add.13763

Kline, R. B. (2023). *Principles and practice of structural equation modeling*. Guilford Press.

Kushlev, K., & Dunn, E. W. (2019). Smartphones distract parents from cultivating feelings of connection when spending time with their children. *Journal of Social and Personal Relationships*, *36*(6), 1619–1639. https://doi.org/10.1177/0265407518769387

Kwon, M., Kim, D.-J., Cho, H., & Yang, S. (2013). The smartphone addiction scale: Development and validation of a short version for adolescents. *PLoS ONE*, *8*(12), e83558. https://doi.org/10.1371/journal.pone.0083558

Lam, L. T., & Wong, E. M. Y. (2015). Stress moderates the relationship between problematic internet use by parents and problematic internet use by adolescents. *Journal of Adolescent Health*, *56*(3), 300–306. https://doi.org/10.1016/j.jadohealth.2014.10.263

Lee, E. J., & Kim, H. S. (2018). Gender differences in smartphone addiction behaviors associated with parent–child bonding, parent–child communication, and parental mediation among Korean elementary school students. *Journal of Addictions Nursing*, *29*(4), 244–254. https://doi.org/10.1097/JAN.0000000000000254

Lee, M.-S., & Lee, H. (2023). Problematic smartphone use and its relationship with anxiety and suicidal ideation among South Korean adolescents. *Psychiatry Investigation*, *20*(9), 843–852. https://doi.org/10.30773/pi.2023.0051

Lepp, A., Li, J., Barkley, J. E., & Salehi-Esfahani, S. (2015). Exploring the relationships between college students' cell phone use, personality and leisure. *Computers in Human Behavior*, *43*, 210–219. https://doi.org/10.1016/j.chb.2014.11.006

Liu, K., Chen, W., Wang, H., Geng, J., & Lei, L. (2021). Parental phubbing linking to adolescent life satisfaction: The mediating role of relationship satisfaction and the moderating role of attachment styles. *Child: Care, Health and Development*, *47*(2), 281–289. https://doi.org/10.1111/cch.12839

Liu, Q.-Q., Yang, X.-J., Hu, Y.-T., Zhang, C.-Y., & Nie, Y.-G. (2020). How and when is family dysfunction associated with adolescent mobile phone addiction? Testing a moderated mediation model. *Children and Youth Services Review*, *111*, 104827. https://doi.org/10.1016/j.childyouth.2020.104827

Long, X., & Qin, W. (2025). The relationship between parental monitoring and adolescent smartphone addiction: The longitudinal mediating role of parent-child attachment. *Humanities and Social Science Research*, *8*(1), p117. https://doi.org/10.30560/hssr.v8n1p117

Marini, L., Hendriani, W., & Wulandari, P. Y. (2024). Gambaran problematic smartphone use pada remaja. *Psikobuletin: Buletin Ilmiah Psikologi*, *5*(1), 43–55. https://doi.org/10.24014/pib.v5i1.26477

McDaniel, B. T., & Drouin, M. (2019). Daily technology interruptions and emotional and relational well-being. *Computers in Human Behavior*, *99*, 1–8. https://doi.org/10.1016/j.chb.2019.04.027

McDaniel, B. T., & Radesky, J. S. (2018). Technoference: Parent distraction with technology and associations with child behavior problems. *Child Development*, *89*(1), 100–109. https://doi.org/10.1111/cdev.12822

Meng, S.-Q., Cheng, J.-L., Li, Y.-Y., Yang, X.-Q., Zheng, J.-W., Chang, X.-W., Shi, Y., Chen, Y., Lu, L., Sun, Y., Bao, Y.-P., & Shi, J. (2022). Global prevalence of digital addiction in general population: A systematic review and meta-analysis. *Clinical Psychology Review*, *92*, 102128. https://doi.org/10.1016/j.cpr.2022.102128

Mostert, N. (2025). Measuring problematic smartphone use among students using the Smartphone Addiction Scale. *South African Family Practice*, *67*(1). https://doi.org/10.4102/safp.v67i1.6120

Niu, G., Yao, L., Wu, L., Tian, Y., Xu, L., & Sun, X. (2020). Parental phubbing and adolescent problematic mobile phone use: The role of parent-child relationship and self-control. *Children and Youth Services Review*, *116*, 105247. https://doi.org/10.1016/j.childyouth.2020.105247

Notten, N., & Nikken, P. (2016). Boys and girls taking risks online: A gendered perspective on social context and adolescents' risky online behavior. *New Media & Society*, *18*(6), 966–988. https://doi.org/10.1177/1461444814552379

Pancani, L., Gerosa, T., Gui, M., & Riva, P. (2021). "Mom, dad, look at me": The development of the Parental Phubbing Scale. *Journal of Social and Personal Relationships*, *38*(2), 435–458. https://doi.org/10.1177/0265407520964866

Primadiana, D. B., Nihayati, H. E., & Wahyuni, E. D. (2019). Hubungan smartphone addiction dengan kecemasan sosial pada remaja. *Psychiatry Nursing Journal (Jurnal Keperawatan Jiwa)*, *1*(1), 21–28. https://doi.org/10.20473/pnj.v1i1.14325

Roberts, J. A., & David, M. E. (2016). My life has become a major distraction from my cell phone: Partner phubbing and relationship satisfaction among romantic partners. *Computers in Human Behavior*, *54*, 134–141. https://doi.org/10.1016/j.chb.2015.07.058

Safaria, T., Abdul Wahab, M. N., Suyono, H., & Hartanto, D. (2024). Smartphone use as a mediator of self-control and emotional dysregulation in nomophobia: A cross-national study of Indonesia and Malaysia. *Psikohumaniora: Jurnal Penelitian Psikologi*, *9*(1), 37–58. https://doi.org/10.21580/pjpp.v9i1.20740

Sari, D. A., Damayanti, A., Bahfen, M., & Zulhaini, L. (2024). Parental education and gadget knowledge: their impact on gadget use behavior in children aged 5-6 years. *Golden Age: Jurnal Ilmiah Tumbuh Kembang Anak Usia Dini*, *9*(1), 171–180. https://doi.org/10.14421/jga.2024.91-15

Sidhu, A., Bhalla, P., & Zafar, S. (2021). Mediating effect and review of its statistical measures. *Empirical Economics Letters*, *20*(4), 29–40.

Sobel, M. E. (1982). Asymptotic Confidence Intervals for Indirect Effects in Structural Equation Models. *Sociological Methodology*, *13*, 290. https://doi.org/10.2307/270723

Soh, P. C.-H., Chew, K. W., Koay, K. Y., & Ang, P. H. (2018). Parents vs peers' influence on teenagers' internet addiction and risky online activities. *Telematics and Informatics*, *35*(1), 225–236. https://doi.org/10.1016/j.tele.2017.11.003

Soper, D. (n.d.). *Mediation models*. Free Statistic Calculators. https://www.danielsoper.com/statcalc/default.aspx

Teng, Z., Griffiths, M. D., Nie, Q., Xiang, G., & Guo, C. (2020). Parent–adolescent attachment and peer attachment associated with Internet Gaming Disorder: A longitudinal study of first-year undergraduate students. *Journal of Behavioral Addictions*, *9*(1), 116–128. https://doi.org/10.1556/2006.2020.00011

Xie, X., Chen, W., Zhu, X., & He, D. (2019). Parents' phubbing increases adolescents' mobile phone addiction: Roles of parent-child attachment, deviant peers, and gender. *Children and Youth Services Review*, *105*, 104426. https://doi.org/10.1016/j.childyouth.2019.104426

Xu, C., & Xie, X. (2023). Put down the phone and accompany me: How parental phubbing undermines prosocial behavior of early adolescents. *Children and Youth Services Review*, *149*, 106958. https://doi.org/10.1016/j.childyouth.2023.106958

Young, K. S., & Abreu, C. N. De. (2017). *Internet addiction in children and adolescents: Risk factors, assessment, and treatment*. Springer Publishing Company.

Yousefi, F. (2023). Parents as role model for social behavior of children: A case study of the short story "A Doll's House" by Katherine Mansfield. *Journal of Critical Studies in Language and Literature*, *4*(6), 20–27. https://doi.org/10.46809/jcsll.v4i6.236

Zhang, Yan, Tan, D., Jiang, B., & Lei, T. (2023). Childhood neglect and problematic smartphone use among Chinese young adults: the mediating roles of peer attachment and fear of missing out. *BMC Psychology*, *11*(1), 303. https://doi.org/10.1186/s40359-023-01326-9

Zhang, Yan, Tan, D., & Lei, T. (2020). Parental attachment and problematic smartphone use among Chinese young adults: A moderated mediation model of interpersonal adaptation and self-control. *Journal of Adult Development*, *27*(1), 49–57. https://doi.org/10.1007/s10804-019-09331-2

Zhang, Yiming, Ding, Y., Huang, H., Peng, Q., Wan, X., Lu, G., & Chen, C. (2022). Relationship between insecure attachment and mobile phone addiction: A meta-analysis. *Addictive Behaviors*, *131*, 107317. https://doi.org/10.1016/j.addbeh.2022.107317

Zhu, Y., Deng, L., & Wan, K. (2022). The association between parent-child relationship and problematic internet use among English- and Chinese-language studies: A meta-analysis. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.885819