THE IMPACT OF NOMOPHOBIA ON POOR PERSONAL CONNECTIONS AMONG ADOLESCENTS

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Abstract

This study investigates the combined influence of nomophobia, namely fear of inaccessibility and fear of missing out on personal connections among adolescents in some Asian regions. This paper offers a comprehensive analysis philosophical and academic literature on the integration of these social problems to propose practical solutions to adolescents' social interactions in the current trends that has not been done in prior studies. We utilize a quantitative research design, conducting a survey of 260 respondents with extensive experience in mobile phone use. The sampling process combined stratified sampling with a random selection technique. Data analysis includes the use of descriptive statistics, Cronbach's alpha, exploratory factor analysis (EFA), and the assessment of variable relationships through multiple linear regression, all performed using SPSS software. The results reveal that the two determinants of nomophobia including Fear of inaccessibility and Fear of missing out influence adolescent's poor personal connections. Fear of inaccessibility has the greater impact, with a standardized coefficient of 0.892. Meanwhile, Fear of missing out has a slightly slower, with a standardized coefficient of 0.859. In the digital age, these findings provide useful insights for identifying the factors of nomophobia that put a significant effect on ineffective communication among the young age. Accordingly, this paper makes sharp theoretical contributions to addressing the current trend problems.

Keywords

Nomophobia, Adolescent connections, Philosophical ideology, Multiple linear regression

1. Introduction

The uncontrolled and irresponsible use of mobile devices is causing significant changes in individuals' daily habits, behaviors, and psychological health (Argumosa *et al*., 2017). One particular issue stemming from smartphones is nomophobia, or the fear of being without or unable to access one's mobile device, which becomes particularly pronounced when individuals experience poor connectivity (Yildirim & Correia, 2015). Over the last few years, adolescents' increasing dependence on mobile devices has made them particularly susceptible to negative psychological effects due to poor connectivity, often exacerbating anxiety and the fear of being without a phone (King, *et al*., 2010). Comprehensive details on adolescents' poor connectivity experiences due to nomophobia will be provided in this study, alongside specific data analyses aimed at identifying and proposing appropriate solutions.

At present, there have been numerous studies that offer insights into how connectivity issues impact nomophobic behaviors. D'Arcy *et al*. (2014) explores anxieties and dependencies arising from technology use *among adolescents*, which reflects the growing concern over its manifestations and effects on their psychological well-being (Ergin & Ozer, 2023). In the current era of technological development, the issue of nomophobia leading to poor connections among adolescents has become prevalent and is a significant public health concern (Kuss & Griffiths, 2011). However, with the rapid advancement of technology and the increasing use of mobile devices among adolescents each year, existing studies might still have some limitations, such as outdated findings that might not reflect current trends in smartphone and adolescent behavior and a lack of a robust theoretical framework to explain the mechanisms behind nomophobia's impact on personal connections. Then, this paper aims to clarify the correlated relationship between poor personal connections and nomophobia in terms of a dependent variable

and an independent one respectively in the present social interactions. Additionally, the authors link two theoretical concepts, namely Uses and Gratification theory and Attachment theory, to learn about the impact of the factors of nomophobia on adolescent interactions. Therefore, poor connectivity among adolescents due to the issue of nomophobia requires a deeper understanding of its manifestations and impacts, which can propose practical solutions to minimize the problem.

To make theoretical contribution to the current state of knowledge in this field, the main research question of the paper needs to be addressed: "Does nomophobia impact poor personal connections among adolescents in the current society?". Along with that, the authors also identify how positively two factors of nomophobia including fear of inaccessibility and fear of missing out affect poor personal connections among adolescents. Based on these research questions, this study provides an answer to the research question and suggests three research objectives: the first is to examine the anxiety experienced by adolescents when they are without a phone; the second is to determine the fear of missing out on important information or events; and the third objective is to propose solutions to address the impact of nomophobia on the connectivity of the younger generation in some Asian regions today. Then, we employed a quantitative research design and surveyed 260 respondents who have lots of experience in using mobile phone. The sampling method combined stratified sampling with random selection technique. Data analysis involved applying descriptive statistics, Cronbach's alpha, EFA and evaluating variable relationship with multiple linear relationships, using SPSS tool. Finally, the rest in the structure includes five following sections: section 2 will outline conceptual framework of how nomophobia impacts social connections among adolescents; section 3 and 4 involve methodology and presentation on the findings; section 5 is devoted to a critical discussion; and the last one presents practical solution, suggests future research directions, then concludes with summary remarks.

2. Literature Review

2.1. Personal connections among adolescents

Connection can refer to the social bonds and relationships between individuals. It encompasses interactions, attachment, and feelings of belonging within various contexts, such as families, friendships, and social networks (Baumeister & Leary, 1995). Psychologically, connection involves emotional bonds formed through shared experiences, trust, empathy, and understanding. Emotional connection can strengthen resilience and foster a sense of community (Aron & Aron, 1997). From the issues of connection mentioned above, according to Przybylski & Weinstein (2017), **"Poor personal connection among adolescents"** refers to the disruption of face-to-face communication, reduced empathy, social isolation, and difficulty in forming meaningful relationships, often exacerbated by digital device dependency (Uhls, Ellison & Subrahmanyam, 2017).

Many philosophical perspectives can explain the connection between adolescents. **Idealism**, characterized by a focus on abstract principles and moral ideals, may contribute to poor connection in adolescents in several ways. Idealistic adolescents often have idealized visions of friendships, which can lead to frustration or isolation when friends do not meet these expectations (King & Roeser, 2009). Furthermore, adolescents with strong idealistic views may feel out of place in peer groups that prioritize pragmatism (Lövheim, 2017). Besides, Velez & Spencer (2018) argue that **phenomenology**, as a philosophical approach, focuses on the lived experiences and subjective feelings of individuals. Poor connections among adolescents often stem from the way they construct and internalize these experiences. Ryan & Kuczkowski (1994) take a similar view, arguing that adolescents are prone to self-centered tendencies, such as the **imaginary audience** phenomenon, which lead to cognitive distortions of social interactions.

Currently, the rise in screen time has led many adolescents to prioritize online interactions over face-to-face communication, contributing to social isolation and weakened social skills (Twenge & Campbell, 2018). Increased use of mobile devices and social media has also resulted in a decline in empathy, non-verbal communication, and conflict resolution abilities. Poor personal connections are linked to mental health issues like anxiety, depression, and loneliness, as adolescents struggle to form meaningful offline relationships (Ergün & Ozer, 2023). The issue of poor connections among adolescents, driven by **nomophobia**—regarded as the intense fear of being without a mobile phone—has become an increasing concern. Nomophobia is closely linked to mental health challenges like anxiety, depression, and loneliness, as adolescents struggle to disconnect from their devices (Twenge & Campbell, 2018). This dependency results in lower-quality personal relationships, where digital interactions replace more fulfilling, in-person connections. Additionally, social media pressure and fear of missing out (FoMO) further exacerbate feelings of inadequacy and disconnection (de Bruijn, 2021).

2.2. Nomophobia

Nomophobia, which stands for "no-mobile-phone phobia," is defined as the intense fear of being without one's mobile phone. This fear has emerged as a significant psychological issue with the rise of smartphone dependency, impacting social interactions and mental health (Notara *et al.*, 2021). Nomophobia, or the fear of being without a mobile phone, manifests in various psychological and behavioral symptoms, particularly among adolescents and

young adults (Kanmani et al.,2017). These include anxiety, stress, and dependency, leading to compulsive checking of devices (Rodríguez *et al.*, 2020). Social isolation and diminished communication skills also arise, as excessive phone use replaces face-to-face interactions, affecting empathy and conflict resolution. Furthermore, concentration and memory issues are linked to constant phone use, along with physical symptoms like headaches, eye strain, and disrupted sleep patterns (Bragazzi & Del Puente, 2014; Kuss & Griffiths, 2011). Nomophobia can be viewed through several different philosophical perspectives. **Existentialists** such as Sartre (2008) and Heidegger (2014) argue that humans have an inherent desire to connect with others but often experience alienation. They therefore interpret nomophobia as a manifestation of the fear of losing connection with one's social network, leading to a feeling of existential emptiness. **Marxist** philosophers such as Marcuse (2014) and Adorno & Horkheimer (2019) critique the commodification of human needs and desires. Nomophobia can be understood as a product of the capitalist system that benefits from the fear of the individual. Marx's theory of alienation highlights how technology can separate individuals from real human relationships.

2.3. Anchoring the theoretical framework

To analyze nomophobia and its impact on adolescents' connections, this study adopts Uses and Gratifications Theory (UGT) and Attachment Theory. UGT explains how adolescents actively use smartphones to satisfy their needs for social bonding and identity formation, highlighting their dependence on technology. Meanwhile, Attachment Theory reveals how emotional bonds with smartphones substitute for secure relationships, with the absence of these devices causing anxiety and impairing interpersonal connections. Together, these theories complement one another, offering a comprehensive lens to examine how nomophobia affects adolescents' social interactions and emotional well-being. By integrating these perspectives, this framework provides a robust foundation for understanding the relational and psychological dimensions of nomophobia.

2.3.1. Uses and Gratifications Theory (UGT)

Uses and Gratifications Theory (UGT), initially developed by Blumler and Katz in 1974, focuses on understanding why individuals actively seek out media to meet specific needs and desires. The mobile phone (MP) industry has integrated mobile devices into nearly every facet of daily life and across various human activities, such as entertainment, business, learning, and social networking (Humood *et al.*, 2021). Therefore, nomophobia is strongly associated with addictive behaviors related to technology, evident in the uncontrollable urge to check phones, difficulty disconnecting, and the anxiety of missing important information (Anjana *et al.*, 2021; Gajdics & Jagodics, 2022; Modesto *et al.*, 2022 cited in Medrano-Sánchez *et al.*, 2024). Research by Yildirim and Correia (2015) has highlighted how smartphones meet emotional and social needs, thereby contributing to the development of nomophobia. Similarly, Rodríguez-García *et al.* (2020) explored how the need for social interaction and instant gratification through constant connectivity plays a significant role in smartphone addiction and nomophobia among adolescents.

In the context of nomophobia, UGT explains how adolescents' dependency on smartphones emerges from their need to fulfil emotional and social gratifications (Chan *et al.*, 2023). Various websites and applications simplify daily activities, enabling seamless communication with family and friends anytime and anywhere (Elissavet Vagka *et al.*, 2024). When access to these devices is disrupted, adolescents may experience anxiety due to the unfulfilled need for connection and emotional stability, significantly impacting their interpersonal relationships. Studies by Vagka *et al.* (2024) demonstrate that adolescents actively use smartphones to meet social and emotional needs, such as maintaining constant connections and reassurance, which can lead to heightened stress and anxiety when disrupted. Rather than experiencing the usual joy and satisfaction from engaging with social media, individuals encounter a condition known as nomophobia, characterized by fear and anxiety resulting from losing access to their smartphones (Gezgin, *et al.* 2017 cited in Yıldız Durak, 2018). Through its focus on active audience behavior and psychological motivations, UGT provides valuable insights into how and why nomophobia develops among adolescents, linking their smartphone use to deeper social and emotional dependencies.

2.3.2. Attachment Theory

Attachment Theory, originally developed by John Bowlby and later expanded by Mary Ainsworth, provides an essential framework for understanding the psychological underpinnings of nomophobia. Bowlby (1973) developed attachment theory to explain the emotional bonds between parents and infants, which has since been used to understand individual psychological processes. He also suggested that when individuals interact with important figures during times of need, they form working models of attachment concerning themselves and others. The object attachment approach suggests that constant connectivity to a smartphone serves as an effective method to prevent the activation of the attachment system, providing a sense of safety and security during times of emotional distress (Cheevar *et al.*, 2014 cited in Gohar and Munir, 2022). Moreover, Yildirim and Correia (2015) demonstrated through the Nomophobia Questionnaire that losing access to smartphones leads to significant anxiety due to unmet needs for communication and emotional connectedness, reinforcing their attachment role.

Research involving adolescents has identified a significant correlation between smartphone addiction and attachment styles characterized by avoidance or anxiety (Jin *et al.,* 2023). Individuals with insecure attachments may experience relational instability, difficulty regulating emotions, intense cravings, and a lack of control, all of which heighten their vulnerability to developing addictive behaviors, including smartphone addiction (Kim and Koh, 2018; Gao *et al.*, 2022 cited in Jin *et al.,* 2023).

2.4. The impact of nomophobia

2.4.1. Fear of inaccessibility

The "*fear of inaccessibility*" refers to the anxiety adolescents experience when disconnected from their mobile devices or social media, closely linked to *nomophobia*. This fear can lead to significant social and psychological issues, including isolation and anxiety, as digital communication makes substitutes for in-person interactions (Kuss & Griffiths, 2011). Desiree Valentine's study (2020) on *access intimacy* reveals how access issues affect both digital and offline relationships, highlighting the interpersonal dynamics involved. Similarly, research on *nomophobia* shows its impact on adolescents' social skills and emotional well-being, emphasizing the growing concern of social isolation due to constant digital connectivity (Rodríguez *et al*., 2020). This phenomenon suggests that fear of inaccessibility extends beyond technology, influencing adolescent development and mental health. **Postmodernists** such as Baudrillard (2001) argue that humans are living in a hyper-real world where personal relationships are built through mediated communications, such as social media or instant messaging. Fear of inaccessibility may be related to the fear of being disconnected from the artificial image of social interactions. Foucault's (2011) **theories of surveillance and power dynamics** are also related to the fear of inaccessibility. This theory argues that fear of inaccessibility is a person's anxiety about losing control over one's presence in society or by extension, one's social power. In addition, the idea of the "global village" in McLuhan's theory of **technological determinism** emphasizes how technology connects people over vast distances. According to this theory, fear of inaccessibility is the anxiety of being disconnected from this global network (Drew, 2016).

In Asia, the proliferation of smartphones, affordable internet access, and ubiquitous social media platforms have made constant connectivity the norm (Thakur, 2016). In China, the WeChat ecosystem is integrated into everyday life from socializing to work and life, creating a dependency that increases the fear of being out of reach (Chen *et al*., 2018). In South Korea, the strong social media culture fostered by platforms such as KakaoTalk makes adolescents feel stressed when they cannot respond to messages or participate in group chats (Park & Kim, 2024).

The issue of "**fear of inaccessibility**" among adolescents has been increasingly recognized in both psychological and technological contexts. This fear is often linked to digital exclusion, where young people feel anxious or isolated due to their **inability to connect** with others digitally, particularly through social media platforms. Adolescents, who are heavily reliant on these platforms for socialization, may experience significant distress if they are unable to access or participate in these digital spaces. This fear is particularly more pronounced among those who struggle to maintain constant online presence, as it **contributes to feelings** of **social isolation and anxiety** (Kuss & Griffiths, 2017; Lee, 2019). Additionally, adolescents' mental health can be significantly impacted by this fear. The inability to engage with peers or maintain a digital identity can lead to heightened stress, feelings of loneliness, and even depression. Studies have shown that excessive use of social media is correlated with greater susceptibility to digital exclusion and an increasing reliance on these platforms for emotional support (Valkenburg & Peter, 2013). Adolescents who cannot maintain this connection may feel disconnected not only socially but also emotionally, which can undermine their well-being. Meanwhile, addressing nomophobia has significant positive impacts on emotional and social well-being. Interventions to reduce smartphone dependency alleviate anxiety and promote emotional stability, allowing individuals to reengage in face-to-face interactions. This fosters deeper social bonds and reduces isolation, ultimately enhancing quality of life (Rodríguez, *et al*., 2020). School-based programs further highlight the potential of **reducing digital reliance** to improve empathy and communication skills, **strengthening personal connections** (Bakariwie, *et al*., 2024). These findings underscore the importance of managing digital habits to cultivate healthier social relationships.

H1: Fear of inaccessibility positively impact poor personal connection among adolescents in the current society

2.2.2. Fear of missing out

"Fear of missing out" is commonly known as (FoMO). This term refers to the anxiety where others are experiencing rewarding events or information that one is absent from. This feeling is largely driven by digital technology and social media, where individuals constantly receive updates about others' activities. Research has shown that FoMO can lead to negative emotional and psychological outcomes such as increased anxiety, stress, and dissatisfaction (Przybylski *et al*., 2013). It often results in behaviors like excessive checking of digital devices to stay updated, which, ironically, can decrease one's enjoyment of current activities (Hayran, *et al*., 2020). This phenomenon highlights the deep connection between technology use and emotional well-being (Przybylski *et al*., 2013).

FoMO is a multifaceted phenomenon that can be understood through many philosophical, psychological, and social lenses (Classen, 2018). From a **nihilistic** perspective, FoMO arises when individuals become obsessed with external signs of success and happiness, losing sight of deeper meanings (Van Tongeren, 2018). This theory's idea of "will to power" also explains that people driven by a constant desire to achieve new things may develop FoMO as they constantly seek to prove themselves through social comparison (Nietzsche, 2017). Moreover, **cognitive behavioral theory** (CBT) also identifies several cognitive distortions that promote FoMO, such as catastrophizing or all-or-nothing thinking (Afdilah et al., 2020). CBT also addresses how FoMO can lead to compulsive behavior, namely excessive checking of social media to avoid missing out (Choudhary & Saini, 2024). This can lead to stress and anxiety cycles.

In Asia, FoMO is particularly evident due to high social media penetration, collectivist cultural norms, and pressures related to education, work, and social status (Srivastava *et al*., 2024). In Southeast Asian countries, flash sales and promotions on platforms such as Lazada or Shopee drive consumers to make impulsive purchases due to FoMO (Ngo *et al*., 2024). In South Korea, the concepts of "inssa" (insider) and "assa" (outsider) are popular on social media, as young people try to appear "inssa" in popular trends to avoid feeling left out (Song & Kim, 2022). In India, festivals and cultural events are heavily documented on social media, and people feel pressured to demonstrate their participation (Ghosh, 2011).

The phenomenon of FoMO, also regarded as "fear of disconnection," has been increasingly observed among adolescents, particularly due to the rise of social media and smartphone use (Patani & Kiran, 2023). Adolescents with high levels of FoMO experience anxiety about missing important events or social interactions, often leading them to overuse digital platforms. This fear can result in social isolation, poor mental health, and a decline in offline social skills, as they focus on virtual connections at the expense of real-world interactions (Bloemen and De Coninck, 2020). They suggest that the "**Fear of Missing Out**" (FoMO), specifically the anxiety of missing out on important information, leads adolescents to frequently check their phones. This behavior, driven by a need to stay connected, **disrupts their ability to form meaningful face-to-face relationships**. Holding the same perspective, Kuss and Griffiths (2011) add that this fear of disconnection, tied to nomophobia, exacerbates mental health issues such as anxiety and depression. Accordingly, Bragazzi and Del Puente (2014) assert that the 'fear of missing out' significantly influences the issue of poor connection among adolescents. This constant need to remain digitally connected often leads to emotional disengagement from face-to-face interactions, thereby diminishing the quality of their personal relationships.

The **fear of missing important information** significantly impacts adolescents, especially in the context of **nomophobia**—the fear of being without a mobile phone. However, this issue can be improved positively by promoting a balanced use of technology. When adolescents reduce their dependency on mobile devices, they can alleviate anxiety and re-establish authentic social connections, which are essential for emotional well-being. By overcoming FoMO, they regain control over their time and prioritize **face-to-face communication** and **meaningful offline relationships,** which are critical for developing **empathy** and **social skills** (Hessari, 2023). Moreover, reducing **FoMO** leads to a significant decrease in **social media pressure** and **social comparison,** improving **self-esteem** and mental health (Sidnam and Monge, 2024). Adolescents who can **disconnect from constant digital updates** have **stronger personal relationships**, leading to **greater happiness** and **resilience (**Jahrami *et al*., 2022). This shift not only reduces isolation but also enhances **emotional growth**, allowing adolescents to thrive in their social environments.

H2: Fear of missing out positively impact poor personal connection among adolescents in the current society.
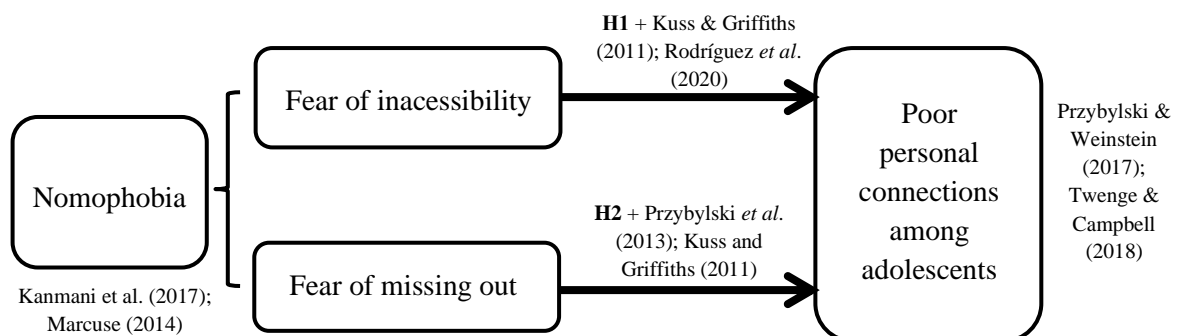
2.3. Research Model

Figure No.1 The paper's research model

3. Methodology

3.1. Research approach and strategy

Quantitative and qualitative research methodologies are widely employed in the social sciences. The authors choose to apply a quantitative method in this study. The quantitative research approach is described as the collecting and analysis of numerical data to evaluate and validate phenomena (Creswell and Creswell, 2018). This strategy frequently employs statistical techniques to examine data, allowing quantifiable and objective conclusions to be formed (Babbie, 2010). From there, the authors can better answer research questions and discover the relationship between factors. This work uses the deductive technique, which is connected with the quantitative approach, to assist form inferences, predict, and confirm hypotheses based on statistical data.

3.2. Method: sample and procedure

To establish data accuracy, the sampling technique, population, and size must all be precisely stated (Bryman, 2012). The two most common forms of sampling strategies employed in scientific research are probability sampling and non-probability sampling (Bryman, 2012). The authors opt to utilize a probability sampling strategy in the study to improve the accuracy of the research findings. Thus, conducting a survey is an appropriate method used in this paper. In the survey, the authors employ a 5-level Likert scale to describe rising levels and collect answer data in numerical form. Respondents indicate their level of agreement with the survey question on a scale of 1 to 5, with 1 indicating "strongly disagree" and 5 indicating "strongly agree" (Brown, 2011). Responses may only be used for research purposes (Brown, 2011). Then the authors officially sent questions in the in-person manner and online to some websites of local high schools, colleges and Asian schools where lots of international students from Asian regions are studying. Regarding sampling technique, the paper uses stratified sampling technique with 50% of respondents coming from Asian countries and the rest in the local. Accordingly, Krejcie & Morgan (1970) stated that the sample size of 260 is suitable for social and behavioral survey research, especially studies with a defined population. The study requires high accuracy because it only takes the results of the survey respondents with the answer "yes" to the question "Do you have your own mobile phone" in the Background Information section of online and in-person survey. Moving forward, simple random sampling is employed to randomly select 260 out of 518 observations collected. Then, the selection was stratified by age of respondents: 60% (156 people) 13-to-19-year-old teenagers, 20% (52 people) 20-to-22-year-old college and university students and 20% (52 people) over-23-year-old working people to consult opinions on the impact of mobile phones.

3.3 Data analysis description

SPSS tool was utilized for a comprehensive analyses of descriptive statistics of relevant variables on the survey results. Then, Cronbach's Alpha is run to test reliability and measure the internal consistency of survey items. Subsequently, this paper employs EFA to explore the relationships among a large number of sub-variables to reduce them into fewer components. Moving forward, Pearson correlation analysis is to measure the strength and direction of linear relationship among variables. Finally, linear regression is used to test hypotheses and determine whether the two independent variables, namely Fear of inaccessibility and Fear of missing out, significantly affects the dependent one known as Poor personal connections.

4. Results

4.1. Descriptive analysis

Statistics

		PPC1	PPC2	PPC3	PPC4
N	Valid	260	260	260	260
	Missing	0	0	0	0
Mean		4.32	4.67	4.22	4.16
Mode		4	5	5	5
Std. Deviation		.695	.415	.238	.868

Table No.1 Descriptive Statistics of the dependent variables

The mean of PPC1 = 4.51 indicates that, on average, respondents strongly agree that Poor personal connection among adolescents refers to challenges in direct communication, diminished empathy, social isolation, and struggles in building meaningful relationships, frequently intensified by reliance on digital devices. According to the mode of PPC1 = 4, the majority of participants agree that Poor personal connection among adolescents describes difficulties with face-to-face interaction, decreased empathy, feelings of isolation, and trouble forming deep relationships, often worsened by dependence on digital technology. With regards to standard deviation of PPC1 = 0.695, which explains the variability of the respondents' answer towards the value of mean of 4.51. Similarly, we can see this same analysis for the rest of sub-variables in the tables (see *Table No.5* in Appendix A).

4.2. Cronbach's Alpha

Reliability Statistics

Cronbach's Alpha	N of Items
.961	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PPC1	11.16	14.085	.924	.942
PPC2	11.28	13.891	.946	.936
PPC3	11.28	14.331	.793	.982
PPC4	11.20	13.440	.958	.931

Table No.2 Cronbach's Alpha of dependent variable PPC

It is obvious that each sub-variable within the Poor personal connections among adolescents has a corrected item-total correlation coefficient of 0.3 or higher. The Cronbach's Alpha coefficient was then calculated to be 0.961, which exceeded the recommended threshold of 0.6 and produced higher values than the Cronbach's Alpha if the appropriate item was eliminated. Furthermore, the Cronbach's Alpha for item deleted exceeded the corrected item-total correlations for all subvariables. Cronbach's Alpha analyses of the remaining independent variables yielded similar results. Therefore, no sub-variables were rejected. Similarly, we can see this same analysis for the rest of variables in the tables (see *Table No.6* in Appendix A).

Rotated Component Matrix^a

Component with loading factors		
1	2	3
PPC1 .992	FOI1 .594	FoMO1 .596
PPC2 .978	FOI2 .835	FoMO2 .654
PPC3 .947	FOI3 .835	FoMO3 .897
PPC4 .749	FOI4 .834	FoMO4 .814

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 7 iterations.

Table No.3 Rotated Component Matrix

4.3. Exploratory Factor Analysis (EFA)

The rotated component matrix arranged 12 subvariables into three factors. Throughout this process, no subvariables were omitted. The subvariables all have factor loading coefficients greater than 0.5.

4.4. Linear Regression Model

PPC (Poor personal connections among adolescents): Mean of PPC1, PPC2, PPC3, PPC4
FOI (Fear of inacessibility): Mean of FOI1, FOI2, FOI3, FOI4
FoMO (Fear of missing out): Mean of FoMO1, FoMO2, FoMO3, FoMO4

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	2.684	.110		24.448	.000		
FOI	.959	.063	.892	15.139	.000	.183	1.476
FoMO	.754	.038	.859	19.758	.000	.335	1.994
a. Dependent Variable: PPC							

Table No.4 Coefficients

Table No.4 shows that the significant level (Sig.) of 0.000, which is lower than the $\alpha = 0.05$, was obtained from the t-test performed on the three variables. According to this, each subvariable has a major effect on the outcome variable, which is Poor personal connections among adolescents. Therefore, none of the two hypotheses are disproved.

Coefficients of Standardization (PPC) = 0.892 FOI + 0.859 FoMO + u

Therefore, more than any other element, the Fear of inaccessibility and the Fear of missing out has a positive effect on Poor personal connections among adolescents.

5.   Discussion

5.1.   Summary Results

The primary research question that the authors first raised was answered by the results. Fear of inaccessibility and Fear of missing out are two elements that have been shown to have an impact on Adolescents' poor personal connections. With a standardized coefficient of 0.892, Fear of inaccessibility has the biggest influence. Furthermore, with a standardized coefficient of 0.859, Fear of missing out is the variable with less impact, although it still has a substantial one. As a result, every sub-research topic has been addressed.

5.2.   Theoretical Implications

The study's findings show that Fear of inaccessibility is one of the key characteristics associated with Poor personal connections among adolescents and is also the factor that has a stronger impact **(H1)**. Fear of inaccessibility in adolescents reflects an increased reliance on digital connection for socialization and emotional support, which often leads to anxiety, isolation, and decreased well-being when disconnected (Kuss & Griffiths, 2017; Rodríguez *et al.*, 2020). Philosophically, Baudrillard's (2001) postmodern theory highlights adolescents' reliance on mediated interactions, while Foucault's (2011) ideas about power dynamics suggest a fear of losing control over digital presence and social power. Addressing this issue by reducing digital dependence and promoting face-to-face interactions is effective in reducing anxiety and increasing empathy and personal connection (Bakariwie *et al.*, 2024), emphasizing the importance of balancing digital life and face-to-face personal interactions for better mental health and social life.

The study also found that Fear of missing out has a substantial impact on Poor personal connections among adolescents **(H2)**. FoMO significantly affects adolescents due to their dependence on digital technology and social media, leading to anxiety, stress, and dissatisfaction as they try to stay connected to online activities and updates (Przybylski *et al.*, 2013; Hayran, *et al.*, 2020). Philosophically, FoMO aligns with nihilistic ideas, in which an obsession with external validation and social comparison replaces deeper meanings in life (Van Tongeren, 2018; Nietzsche, 2017). Psychologically, CBT theory links FoMO to distortions such as catastrophizing, which promotes compulsive behaviors such as excessive social media use that create a cycle of anxiety and stress (Afdilah *et al.*, 2020; Choudhary & Saini, 2024). In Asia, high social media penetration and collective norms increase FoMO, with cultural phenomena such as the Korean "inssa"/"assa" culture and the pressure to demonstrate participation in festivals in India illustrating its prevalence (Song & Kim, 2022; Ghosh, 2011). Adolescents' preoccupation with virtual connections weakens their offline relationships, reduces face-to-face interactions, and increases mental health problems (Bloemen and De Coninck, 2020; Bragazzi and Del Puente, 2014). Addressing FoMO by promoting balanced technology use and prioritizing offline interactions will improve social skills and emotional health and promote stronger personal connections (Sidnam and Monge, 2024; Jahrami *et al.,* 2022).

5.3.   Practical Implications

In general, Fear of inaccessibility is an important factor that determines the Poor personal connections among adolescents of individuals in most of age ranges **(H1)**. The research results also supported this opinion with a standardized coefficient of 0.892. The fear of not being able to access will lead to a long-term addiction to smart phones and social media. To break the cycle of unhealthy social media use, VPIS (2017) recommends that teenagers should clearly identify the reasons for using and need to know what they want from their time using social media. Hefner & Freytag (2024) believes that the first step to using more consciously is to know why you started. When addicted to social media, teenagers will lose time in the real world. Therefore, it is necessary to be aware of the level of use and not set limits for themselves (Baochinhphu, 2017). By activating the limiter on the phone's usage, teenagers will be awakened from their addiction.

Next, according to the research results, the standardized coefficient between Fear of missing out and Poor personal connections among adolescents is 0.859, showing a statistically positive impact **(H2)**. Alutaybi *et al.* (2020) created a FoMO Reduction (FoMO-R) method that includes technological features like autoreply, filtering, status, education on how FoMO arises, and skills for dealing with it, such as self-talk and checklists. Teens can take these classes to help control FoMO. Besides, Eitan & Gazit (2024) suggests to adopt the JOMO (Joy of Missing Out) mindset by setting clear goals for social media use and focusing on the future and something positive. Instead of regretting not surfing the internet, think of yourself as wanting to be more productive, not trying to look at the phone less.

5.4.   Limitation

The study's limitations include two major issues: the survey results' accuracy and its validity in Asian countries. First, the study's most significant challenge is the trustworthiness of survey responds. There are many responders under the age of 19, therefore their knowledge of the survey questions' content and meaning is limited. This may have an impact on the comprehensiveness of the research findings. Second, because the study was only done in a

few educational institutions in Vietnam, the research findings may be specific to Vietnam and cannot be generalized to other similar cases around the world.

5.5.   *Direction for future research*

First and foremost, the author should perform further investigation on this topic; consequently, respondents should be thoroughly explained about the research topics before answering the survey, since this will ensure that they have sufficient knowledge to grasp the survey questions. Second, the goal of the research is to gain a deeper understanding of the variables influencing poor personal relationships among adolescents; thus, the author requires additional time and money to expand the survey to different countries and continents. Many cultures exist in many locations, and each culture has a unique impact on the individual. As a result, broadening the study in this manner allows the author to collect more full and precise data, which has practical relevance worldwide. Third, in the future, the authors will add two new independent variables to the model, Peer Pressure and Parent-Child Relationship, to improve the research efficiency. In addition, the authors will use the SmartPLS tool to assess the influence of all independent variables.

5.6.   *Conclusion*

The authors of this research explained both the findings and the study's limitations. Furthermore, the report offered acceptable and realistic remedies for adolescents experiencing inadequate personal connections. Controlling and improving the elements that contribute to smartphone and social media addiction, such as fear of inaccessibility and fear of missing out, is an effective technique for today's teens to avoid these difficulties. Furthermore, the scientists identified a positive relationship between fear of inaccessibility and fear of missing out among teenagers with poor personal relationships. In conclusion, the study met its aims and research questions.

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Appendix A

Statistics

		FOI1	FOI2	FOI3	FOI4
N	Valid	260	260	260	260
	Missing	0	0	0	0
Mean		4.79	4.65	4.38	4.27
Mode		4	5	4	5
Std. Deviation		.795	.760	.549	.633

Statistics

		FoMO1	FoMO2	FoMO3	FoMO4
N	Valid	260	260	260	260
	Missing	0	0	0	0
Mean		4.51	4.35	4.62	4.13
Mode		4	4	4	5
Std. Deviation		.687	.765	.720	.555

Table No.5 Descriptive Statistics of 2 relevant independent variables

Reliability Statistics

Cronbach's Alpha	N of Items
.813	4

Reliability Statistics

Cronbach's Alpha	N of Items
.760	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
FOI1	10.68	11.223	.759	.805
FOI2	9.23	10.805	.763	.795
FOI3	10.61	11.992	.812	.867
FOI4	12.47	12.575	.797	.802

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
FoMO1	10.62	10.257	.638	.752
FoMO2	9.58	9.887	.645	.657
FoMO3	9.79	11.035	.723	.743
FoMO4	11.35	12.099	.715	.748

Table No.6 Cronbach's Alpha of the 2 relevant independent variables

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.869
Bartlett's Test of Sphericity	Approx. Chi-Square	555.209
	df	47
	Sig.	.000

Table No.7 KMO and Barlett's Test

The Kaiser-Meyer-Olkin (KMO) measure and Bartlett's Test results show that the KMO value is 0.869, which falls within the acceptable range of 0.5 to 1. This indicates that factor analysis is appropriate for this research.

		PPC	FOI	FoMO
PPC	Pearson Correlation	1	.795**	.830**
	Sig. (2-tailed)		.000	.000
	N	260	260	260
FOI	Pearson Correlation	.795**	1	.575**
	Sig. (2-tailed)	.000		.003
	N	260	260	260
FoMO	Pearson Correlation	.830**	.575**	1
	Sig. (2-tailed)	.000	.003	
	N	260	260	260

**. Correlation is significant at the 0.01 level (2-tailed).

Table No.8 Person Correlations of 3 relevant variables

As illustrated in the table, the Sig. (2-tailed) p-value for the relationship between Poor Personal Connections (PPC) and Fear of Inaccessibility (FOI) is 0.000, which is less than the significance level $\alpha = 0.01$. This indicates a statistically significant correlation. Additionally, the Pearson correlation coefficient of 0.795 suggests a strong positive correlation between these variables. Similar strong positive correlations were also identified when analyzing the relationships between the primary variables and the other independent variables.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.871ᵃ	.758	.757	.60999	.860

a. Predictors: (Constant), FOI, FoMO

b. Dependent Variable: PPC

Table No.9 Model Summary

The R Square value of 0.758, which is greater than zero, suggests that the model exists. The Adjusted R Square score of 0.757 indicates that the predictor factors account for 75.7% of the variance in the outcome variable, Poor personal connections among adolescents, with the remaining 24.3% ascribed to external variables and random error.

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	445.152	2	148.384	398	.000ᵇ
Residual	141.766	257	.372		
Total	586.918	259			

a. Dependent Variable: PPC

b. Predictors: (Constant), FOI, FoMO

Table No.10 ANOVA

The regression model is statistically valid because The F test's (Sig.) value of 0.000 is less than $\alpha = 0.05$.

APPENDIX B

Main Survey Questions:
https://docs.google.com/forms/d/e/1FAIpQLSeZz3lhRJDLf6ZxC2AmaeApw53OqOSxw_LsQyp_HLOv2ex5kw/viewform

FOI1, FOI2, FOI3, FOI4 coded for survey questions 1, 2, 3, 4 of independent variable 1 respectively
FoMO1, FoMO2, FoMO3, FoMO4 coded for survey questions 1, 2, 3,4 of independent variable 2 respectively
PPC1, PPC2, PPC3, PPC4 coded for survey questions 1, 2, 3, 4 of the dependent respectively

Conflict of Interest
The authors declared no conflict of interest