



Factors Influencing the Risk of Internet Addiction Disorders in Adolescents in Indonesia

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Abstract

Internet addiction represents a behavioral disturbance marked by an uncontrollable urge to access the internet, often to the extent that it disrupts daily routines and social interactions. The rapid expansion of internet access in Indonesia has made adolescents increasingly susceptible to problematic usage patterns, raising concerns about the long-term impact on their psychological and social well-being. This literature review aims to map out the underlying factors that contribute to the risk of Internet Addiction Disorder (IAD) among Indonesian adolescents. Sources were identified using the keywords "Internet Addiction Disorder" and "Kecanduan Internet" on Google Scholar and Garuda. The analysis reveals that the risk of internet addiction in adolescents is shaped by a combination of internal and external influences. Internal factors include aspects such as self-control, self-regulation, academic stress, and self-esteem. Meanwhile, external factors involve parenting style, peer environment, prosocial behavior, and participation in religious activities. The presence of low self-control and poor self-regulation often correlates with a greater tendency toward excessive internet use, especially when accompanied by high academic pressure or a lack of supportive social structures. On the other hand, positive parenting, strong social bonds, and engagement in community or religious activities appear to provide a protective buffer. Understanding these interconnected factors is essential for developing targeted prevention and intervention strategies that address both personal vulnerabilities and environmental triggers. The insights from this review may assist educators, parents, and policymakers in fostering healthier digital habits among adolescents.

Keywords: Internet Addiction; Adolescents; Risk Factors.

Introduction

The use of the internet in Indonesia has grown rapidly in tandem with technological advancements that continue to reshape daily life. In 2020, the number of internet users in Indonesia reached 175.5 million out of a total population of 268 million, showing a notable increase compared to the previous year (Kominfo, 2020). According to a survey by the Association of Indonesian Internet Service Providers (APJII) in 2017, around 87.13% of internet users access social media, and the majority of these users are young people or adolescents. It is projected that within four years, internet usage in Indonesia will rise significantly, potentially reaching 9.6 million additional users (Devayanti & Handani, 2024). International research by We Are Social in 2019 also noted that Indonesia ranks fifth globally in terms of internet access, with the average user spending approximately 8 hours and 36 minutes online each day. The widespread adoption of the internet among Indonesian adolescents is a phenomenon that warrants special attention. Extended periods spent online can foster feelings of comfort and even euphoria, which may develop into addictive behaviors. Septiania and Proborini (2020) found that positive experiences while browsing can encourage adolescents to increase



both the intensity and duration of their internet use, elevating the risk of addiction. This aligns with Santrock (2013) observation that adolescence is often marked by heightened impulsivity.

Examining the issue of internet addiction among adolescents is crucial, as this developmental stage is characterized by a tendency toward impulsive actions and a search for new sensations. Internet addiction can profoundly affect psychological, emotional, and behavioral well-being, while also undermining social relationships and academic performance. Given these risks, it is essential to investigate the factors that contribute to the emergence of internet addiction disorder in Indonesian adolescents. This study aims to identify and analyze the underlying causes of internet addiction among adolescents in Indonesia, with a particular focus on psychological, social, and behavioral dimensions linked to intensive internet use. The findings are expected to enrich the fields of developmental psychology and adolescent mental health, as well as inform more effective preventive and intervention strategies going forward. The article begins with a literature review on internet addiction, followed by a description of the research methods, presentation of results, discussion, and concludes with recommendations for future action.

Literature Review

The term "Internet Addiction" first emerged in the mid-1990s, introduced as a disorder by Young in 1996 (Griffiths, 1996; Young, 1996). Young formulated the diagnostic criteria for Internet Addiction based on the DSM-IV (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition), originally used for diagnosing substance dependence. Although Internet addiction does not involve any chemical substances, the American Society of Addiction Medicine (ASAM, 2011) supports the notion that addiction is a chronic brain disorder that is not limited to the consumption of harmful chemicals. According to Young (1996), internet addiction is an impulse control disorder that resembles gambling addiction, albeit without the involvement of addictive substances. This condition is characterized by a loss of control over internet use. Shaw and Black (2008) further describe internet addiction as a pattern of excessive or poorly controlled urges or behaviors related to internet use, which leads to significant distress or impairment. The rapid expansion of internet access has contributed to the increasing prevalence of this disorder. Research indicates that patterns of internet addiction may differ by gender; males are more likely to become addicted through online gaming, while females tend to spend more time on social media platforms. Children and adolescents who are addicted to online activities often end up neglecting schoolwork and real-life relationships with family and friends (Beard, 2005; King *et al.*, 2009). Studies also show that internet addiction is more prevalent among adolescents in Asian countries, particularly those aged 12 to 20 years, with onset commonly occurring in late childhood or early adolescence (Pridgen, 2010; Maurer, 2017).

Young (2004) noted that the behavioral patterns of internet addicts mirror those of individuals with alcohol dependency. Just as alcoholics require increasing amounts of alcohol to achieve satisfaction, individuals addicted to the internet *also* find themselves needing to spend progressively more time online to feel gratified. Supporting this, Waheed *et al.* (2024) found that internet addiction is associated with excessive daytime sleepiness and depressive symptoms, likely due to reduced social interaction, lack of physical activity, and diminished engagement in daily routines among adolescents. A study by Herawati and Utami (2022) in Indonesia revealed that internet addiction is linked to emotional and behavioral problems in adolescents. Adolescents showing signs of internet addiction were found to experience greater emotional distress and display abnormal behaviors. These findings highlight a significant positive relationship between the level of internet addiction and the presence of emotional and behavioral issues among Indonesian adolescents. Given these risks, it is crucial to further investigate the underlying factors contributing to internet addiction in this age group. The present literature review aims to offer a comprehensive overview of the factors that sustain internet addiction behavior among adolescents in Indonesia.



Methodology

This study employs a literature review approach. A literature review involves systematically examining and synthesizing the findings of previous studies that are relevant to the topic under investigation (Siddaway *et al.*, 2019). The literature search was conducted using the Google Scholar and Garuda search engines to collect studies carried out in Indonesia. The keywords used during the search process included "Internet Addiction Disorder" OR "Internet Addiction". The selection of research articles was guided by specific inclusion and exclusion criteria. The inclusion criteria were as follows: (1) Articles published within the last five years (2020–2025), (2) Studies focusing on internet addiction, (3) Research subjects being Indonesian adolescents, and (4) Articles available as open access. Meanwhile, the exclusion criteria were: (1) Articles categorized as literature reviews, (2) Studies where the research subjects were not adolescents, and (3) Research findings that did not demonstrate a correlation with internet addiction.

Results and Discussion

Results

Based on the literature search, 10 research literatures were obtained that are aligned and relevant to the objectives of this study, namely research articles that examine the causal factors of the emergence of the risk of internet addiction in adolescents in Indonesia. The literature selection process that has been carried out can be seen in Figure 1 below.

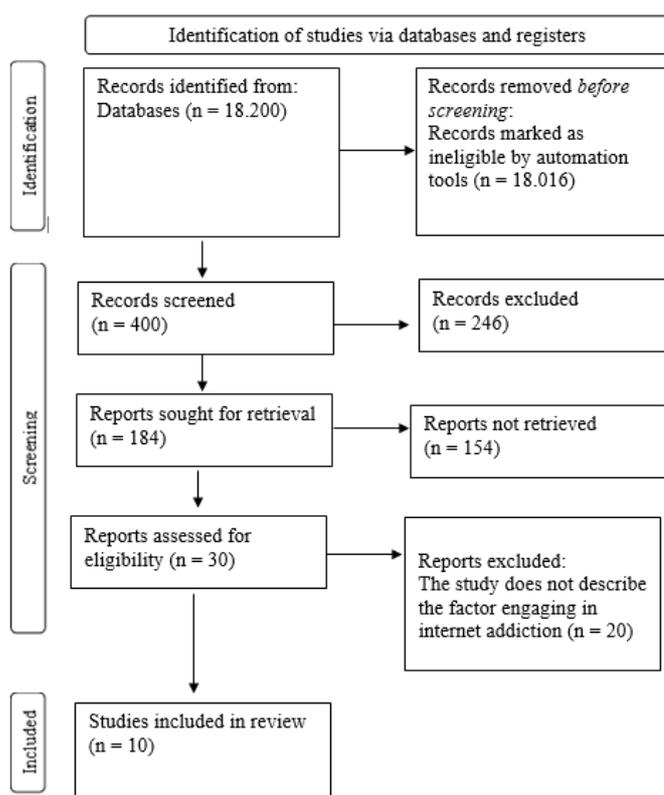


Figure 1. Research literature selection process

The literature search on Google Scholar and Garuda obtained a total of 18,200 articles that were selected into 184 articles that went through the screening stage. Of the 184 screened articles, this left 30 articles with adolescent research subjects in Indonesia, but from further screening it was decided to exclude 20 articles because they did not directly describe factors related to the risk of internet addiction in adolescents in Indonesia. Thus, 10 articles were obtained for review. The findings can be seen in Table 1 below.



Table 1. Results of Research Literature Review

No	Author	Research Objectives	Research Subject	Research Results
1.	Irawan <i>et al.</i> , (2020)	To find out the relationship between self-control and internet addiction in adolescent students of SMA N 11 Bandung	Quantitative research involving 106 adolescents	There is a significant negative relationship between self-control and internet addiction in adolescents.
2.	Buntaran <i>et al.</i> , (2024)	Testing the role of self-control in the relationship between self-regulation and internet addiction in adolescents	Quantitative research involving 122 adolescents	Self-regulation is a factor that mediates the relationship between self-control and internet addiction in adolescents.
3.	Sriati <i>et al.</i> , (2022)	To analyze the relationship between academic stress and internet addiction in adolescents	Quantitative research involving 378 adolescents	The higher the level of adolescent stress, the higher the prevalence of internet addiction.
4.	Setiawati <i>et al.</i> , (2021)	Analyzing the relationship between parental parenting patterns and the level of internet addiction in adolescents	Quantitative research involving 114 adolescents	Adolescents who feel more permissive and authoritarian father's parenting lead to higher levels of internet addiction.
5.	Siste <i>et al.</i> , (2021)	Analyzing the prevalence of internet addiction in adolescents and the influence of psychosocial factors on the increased risk of internet addiction during the pandemic	Quantitative research involving 2.932 adolescents	The prevalence of internet addiction among Indonesian adolescents during the pandemic increased to 19.3%. Risk factors for internet addiction include increased duration of internet use, low prosocial behavior and sleep disturbances.
6.	Muhtarom (2022)	To determine the effect of student self-regulation on the level of internet addiction and fear of missing out	Quantitative research involving 208 active students at PGRI Yogyakarta University	Self-regulation has a significant effect on internet addiction
7.	Nurhayat (2021)	To determine the effect of self-control as a mediator between self-esteem, permissive parenting style and loneliness on internet addiction	Quantitative research involving 103 adolescents	There is an influence between self-esteem, permissive parenting style and loneliness on internet addiction with self-control as a mediator in adolescents
8.	Anastasya <i>et al.</i> , (2022)	To determine the role between FoMO (Fear of Missing Out) and internet addiction	Quantitative research involving 79 students	There is a positive relationship and contribution between FoMO and internet addiction in college students
9.	Dewi dkk., (2021)	To identify the role of social environment on interactions between adolescents in internet use	Quantitative research involving 61 adolescents	There is an impact caused by the social environment on internet addiction in adolescents
10.	Maria <i>et al.</i> , (2025)	To determine the prevalence of internet addiction and identify the contribution of sociodemographic, behavioral, and psychosocial factors to internet addiction.	Quantitative research involving 143 adolescents	The prevalence of internet addiction in adolescents is 34.27%. Weak parental control and low involvement in religious activities increase the risk of adolescent internet addiction

After reviewing the 10 research articles that have been found, the researcher classifies the factors that can cause the risk of internet addiction in adolescents in Indonesia based on the similarity of the explanation patterns found in each



research article. As a result, there are two categories that can explain these factors, namely internal factors that come from the individual and also external factors, namely external factors that contribute to explaining internet addiction behavior in adolescents in Indonesia. These categories are described in table 2 below.

Table 2. Factors Affecting Internet Addiction in Adolescents in Indonesia

Main Categories	SubCategories
Internal Factors	Self-Control
	Self-Regulation
	Academic Stress
	Self Esteem
External Factors	Parenting
	Prosocial Behavior
	Social Environment
	Religious Activities

Discussion

Internal Factors

Internal factors refer to personal experiences as well as factors contained within the individual that then influence or encourage adolescents to use the internet excessively, causing internet addiction. These internal factors are then explained into several parts, including:

1) Self-Control

Bandura in 1991 explained that self-regulation mechanisms that determine the level of self-control in individuals are relevant in explaining internet addiction. Self-control helps individuals realize their behavior and the impact of their behavior. Lack of self-control in individuals is one of the key aspects of addictive behavior in individuals (Young & Rogers, 1998; Davis, 2001). Gottfredson and Hirschi (1990) came up with the understanding that the behavior of individuals who have a low level of self-control tends to perform actions driven by the desire to get pleasure quickly and only focus on short-term goals. Individuals who like to seek the sensation of momentary pleasure and have low self-control are more prone to internet addiction because these individuals are more concerned with instant gratification (Slater, 2003). Thus, low self-control is related to impulsive behavior and lack of consideration of the negative impact of each action taken (Wiers *et al.*, 2007). Based on research by Irawan *et al.* (2020) and Buntaran *et al.* (2024) on a number of adolescent subjects in Indonesia, it shows that self-control has a significant negative effect on internet addiction in adolescents. This shows that when adolescents' self-control is low, it will increase the occurrence of internet addiction in adolescents. Research by Buntaran *et al.* (2024) provides an understanding that self-control plays a role in mediating the role of self-regulation and internet addiction. The results of this study indicate that self-control is an important factor that can protect adolescents (protective factor) from internet addiction. Adolescents with a high level of self-control are able to control internal urges and avoid adolescents from the risk of internet addiction (Irawan *et al.*, 2020; Buntaran *et al.*, 2024). One form of low self-control is Fear of Missing Out which is generally associated with low self-control on the urge to access information via the internet. Research on a number of adolescents in Indonesia explains that there is a significant positive relationship between FoMO and internet addiction, where the higher the level of FoMO in adolescents, the higher the level of internet addiction (Anastasya *et al.*, 2022). The research conducted in Indonesia is in line with research conducted by Yang (2020) on a number of adolescents in Korea which indicates that there is a significant negative relationship between self-control and internet addiction in adolescents. So these studies confirm that low self-control in adolescents tends to cause excessive internet use which leads to internet addiction.

2) Self-Regulation

Based on research by Buntaran *et al.* (2024) and research by Muhtarom (2022) on a number of adolescents in Indonesia, it is explained that there is a significant negative relationship between self-regulation and internet addiction. Where self-regulation is a process that regulates and manages individual thoughts, emotions, and behavior in achieving certain goals. Poor self-regulation skills play an important role in maintaining internet addiction in adolescents. Research by Buntaran *et al.* (2024) and Muhtarom (2022) provides an understanding that self-regulation is an individual factor that can help adolescents control themselves from excessive internet use



which leads to internet addiction. Lazuras *et al.* (2019) argue that self-regulation is an individual's ability to focus on long-term goals and resist the urge to get instant gratification. Self-regulation is a protective factor from risky behavior including addictive behavior and controlling existing urges (Quinn & Fromme, 2010; Martin & McLellan, 2008). Other research results from Debbarma and Umadevi (2021) on a number of adolescent subjects in India reinforce the understanding that self-regulation is negatively correlated with internet addiction in adolescents. These studies indicate that self-regulation is negatively correlated with internet addiction in adolescents.

3) Academic Stress

Based on research by Sriati *et al.* (2022) on a number of adolescents in Indonesia explained that academic stress correlates with adolescent internet addiction. This study indicates that the higher the level of adolescent academic stress, the higher the prevalence of adolescent internet addiction. Academic stress is known to contribute to the emergence of internet addiction in adolescents. Basically, academic stress is a combination of individual perceptions of the amount of knowledge that must be mastered, but not supported by adequate resources (Bedewy and Gabriel, 2015). This concept is in line with a study by Jun and Choi (2015) who added the understanding that adolescents who experience academic stress are at risk of internet addiction, especially when the stress is accompanied by negative emotions. When adolescents experience high levels of academic stress, it will increase the use of the internet as coping, where one of them is used to play online games. Despite adequate social support, high levels of academic stress are associated with high levels of internet addiction (Suh & Lee, 2007). This understanding is also supported by research from Lancy *et al.* (2018) on a number of adolescents in India which indicated that academic stress was significantly positively correlated with internet addiction. This study provides a consistent understanding that adolescents use the internet as a way to reduce perceived academic stress and to regulate negative moods, when internet use is excessive, it can lead to a higher risk of internet addiction in adolescents (Sriati *et al.*, D'Souza *et al.*, 2018).

4) Self Esteem

Based on Nurhayat's research (2021) on a number of adolescents in Indonesia, it explains that self-esteem has a significant influence on adolescent internet addiction, especially in using smartphones. This study provides an understanding that high self-esteem in adolescents will lead to a strong sense of self-confidence and be able to behave according to the situation, so that adolescents who have low self-esteem have a tendency to find it difficult to express their behavior, resulting in dependence on communicating with smartphones which leads to addiction to the internet. Baumeister (1997) argues that low self-esteem can make individuals behave in self-defeating ways. Addiction to the internet, especially to smartphone use, can be used by individuals as a way to escape from unpleasant social situations. Basically, self-esteem is a relatively stable self-assessment which is a self-assessment of how valuable oneself is to that individual. Self-esteem is closely related to an individual's view of self-identity which is closely related to the social relationships built (Coopersmith, 1989; Swan, 1996). This study is reinforced by the results of research by Naseri *et al.*, (2015) on a number of adolescents in Iran that adolescents with low self-esteem are more vulnerable to internet addiction. Low self-esteem is a form of psychological vulnerability that makes it easier for adolescents to become excessive internet users who are at risk of internet addiction (Naseri *et al.*, 2015; Nurhayat, 2021).

External Factors

External factors refer to influences from outside the individual that can encourage or reinforce excessive internet use behavior in adolescents to lead to internet addiction. These external factors are then explained into several parts, including:

1) Parenting

The results of research on adolescents in Indonesia consistently state that parenting patterns are related to internet addiction in adolescents. As in the case of research by Setiawati *et al.*, (2021) and Nurhayat (2021) which states that parenting patterns correlate with the level of adolescent addiction. Specifically, research by Setiawati *et al.* (2021) shows that the father's permissive parenting style is significantly correlated with the level of adolescent internet addiction in Indonesia. Parents who apply permissive parenting contribute to identity confusion in children because parents do not control children's behavior and tend to free children. This results in children having difficulty controlling their impulses towards things that attract attention and are more vulnerable to falling into internet addiction. Adolescents who are less controlled by parents and are in a family that lacks support will be motivated to look for other alternatives as coping, namely by using the internet (Setiawati *et al.*, 2021; Nurhayat, 2021). Baumrind (1991) explains that a permissive parenting style is a parenting style where there are low demands made



by parents but they are very responsive. In the sense that parents do not provide appropriate boundaries for children. It was further explained in Baumrind's study in 1996 that permissive parents encourage children to be autonomous and give children freedom to determine their behavior, but are less demanding in terms of rules. A supporting study by Lo *et al.* (2020) on a number of adolescents in Hong Kong illustrates that permissive parenting styles lead to higher levels of internet addiction in adolescents. Thus, these studies confirm that parenting, especially permissive parenting style, is correlated with the incidence of internet addiction in adolescents.

2) Prosocial Behavior

Research conducted on a number of adolescents in Indonesia by Siste *et al.*, (2021) states that low prosocial behavior contributes to internet addiction in adolescents. The results of this study provide information that the level of prosocial behavior is directly negatively related to internet addiction in adolescents. In general, online games, especially competitive ones among adolescents, are associated with low prosocial behavior of adolescents in everyday life due to the intensity and duration spent playing games on the internet network (Lobel *et al.*, 2017; Coyne *et al.*, 2018). Research conducted on prosocial behavior considers that family support and prevailing social norms are important triggers in the development of adolescents' prosocial behavior, and therefore prosocial behavior is viewed in the context of external influences (Kasap *et al.*, 2023). Bandura (1977) also explains that individuals learn the context of social behavior through observation of surrounding models, so this social behavior is seen as an external factor. Basically, prosocial behavior refers to voluntary actions that aim to help or provide benefits to another individual or group of individuals (Eisenberg & Mussen, 1989). Adolescents who tend to lack prosocial behavior or in other words lack of concern in helping others have been associated as one of the factors in the emergence of internet addiction in adolescents. This is supported by research conducted in China by Zhu *et al.*, (2025) which found that the lower the prosocial behavior of adolescents, the higher the level of internet addiction in adolescents. This indicates that there is a negative direct influence between prosocial behavior and internet addiction. So, from the findings of the studies in Indonesia and China, it is known that prosocial behavior can act as a protective factor (protective factor) of internet addiction, where the lower the prosocial behavior shown, the higher the risk of internet addiction in adolescents (Siste *et al.*, 2021; Zhu *et al.*, 2025).

3) Social Environment

The results of research conducted on a number of adolescents in Indonesia found that the social environment has an impact on increasing internet addiction in adolescents (Dewi *et al.*, 2021). The social environment includes a peer environment or interaction with peers that encourages adolescents to use the internet, and is supported by a digital era environment that never escapes the use of the internet. Dewi *et al.*'s research (2021) provides information that environmental encouragement, especially the peer environment, encourages adolescents to use the internet excessively to follow trends. When explained through Ecological theory according to Bronfenbrenner (1986), it explains that a person's behavior is formed from the various social contexts in which the individual lives. This understanding is supported by research conducted on a number of adolescents in Korea by Chung *et al.*, (2019). The study highlighted that the social environment plays a significant role in encouraging internet addiction in adolescents. In this study, it was found that environmental factors such as easy access to the internet, high exposure to online game advertisements, along with the influence of the peer environment at school have increased the level of internet addiction in adolescents. Thus, the results of studies in Indonesia and Korea also consistently state that the social environment plays a role in shaping internet addiction behavior in adolescents (Dewi *et al.*, 2021; Chung *et al.*, 2021).

4) Religious Activities

Based on research by Maria *et al.*, (2025) to a number of adolescents in Indonesia, it is stated that low participation in religious activities increases the risk of internet addiction in adolescents. The results of this study provide an understanding that adolescents who are less involved in social activities, especially religious activities, tend to be more vulnerable to seeking escape in the world of social networks. Adolescents who are involved in religious activities have a lower tendency to overuse the internet, which indicates that religious activities play a positive role in encouraging healthy internet use so as to avoid excessive internet use (Malinkova *et al.*, 2018). Basically, these religious activities are closely related to religious activities that reflect commitment to religious values and norms. A review conducted by Dossi *et al.* (2022) showed that the higher the level of religiosity, the lower the risk of individuals experiencing internet addiction. Dossi *et al.* (2022) also explained that religiosity functions as a protective factor against internet addiction in adolescents who have a high intensity in participating in religious activities. This statement is supported by a study conducted by Nadeem *et al.* (2018) in Pakistan which shows that



religiosity has a significant relationship with the tendency of internet addiction. This study indicates that the lower the participation in religious activities, the higher the level of internet addiction. Thus, the research findings in Indonesia and Pakistan are in line in explaining that religious activity acts as a protective factor in maintaining healthy internet usage patterns (Maria *et al.*, 2025; Nadeem *et al.*, 2018).

Conclusion

Internet Addiction Disorder is a disorder characterized by a desire to spend excessive time on the internet that can interfere with daily life. Internet addiction is reported to be more prone to occur in adolescents and adolescence is reported to be the initial onset of this disorder. Based on a literature review that has been conducted on a number of studies with adolescent subjects in Indonesia, it is known that the factors that contribute to the increase in internet addiction in adolescents in Indonesia consist of two main factors, namely internal factors within adolescents which include; 1) Self-Control, 2) Self-Regulation, 3) Academic Stress, and 4) Self-Esteem and external factors influenced by things outside of adolescents which include; 1) Parenting, 2) Prosocial Behavior, 3) Social Environment, and 4) Religious Activities. Supporting studies conducted in various other Asian countries further strengthen the understanding that adolescents in Asian countries are more vulnerable to internet addiction. It is hoped that this research can be a step in knowledge development in the form of developing appropriate interventions to prevent more severe internet addiction in adolescents in Indonesia and can promote healthier and wiser internet use.

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