

The impact of Internet Addiction on the Psychological Health of Young Adults: A Meta-Analysis.

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This study explores the complex relationship between Internet addiction and psychological health in young adults, focusing on the effects of stress, frustration, and aggression. Through an extensive literature review, the research highlights the important role of Internet addiction in increasing psychological distress. The findings suggest that Internet addiction is strongly associated with increased levels of stress, driven by the compulsive nature of online activities that disrupt daily life and increase anxiety. Additionally, the study identifies frustration as both a cause and consequence of Internet addiction, where the inability to obtain satisfaction online leads to further compulsive behaviour, creating a cyclical pattern of frustration and addiction.

Keywords: Internet Addiction, Psychological Health, Stress, Frustration, Aggression.

The phenomenon of internet addiction has evolved significantly since its initial recognition in the mid-1990s. What began as a curiosity about the excessive use of digital technology has grown into a complex psychological issue, deeply intertwined with the mental health and well-being of individuals. Internet addiction is characterized by an inability to control internet use, leading to significant disruptions in daily life and psychological distress. It is now understood as a form of behavioural addiction, similar in nature to gambling or substance abuse, where the affected individual experiences compulsive behaviours and a dependence on internet-related activities, such as gaming, social networking, or online shopping (Kuss et al., 2014). In recent years, the relevance of this issue has become particularly pronounced among young adults, a demographic that is uniquely susceptible to the lure of the internet. Young adults, often defined as individuals aged 18-30, are in a critical period of life where they transition into higher education, enter the workforce, and form significant social relationships. This age

group is highly connected to digital technology, using the internet not only for information and education but also for social interaction, entertainment, and emotional support. The ubiquitous presence of the internet in their lives makes them more vulnerable to developing problematic usage patterns (Pontes et al., 2015).

Moreover, the psychological impact of internet addiction on young adults is profound. This demographic is already at a heightened risk for mental health issues, including anxiety, depression, and stress, due to the pressures of academic achievement, career development, and social expectations. The compulsive use of the internet exacerbates these issues by disrupting sleep patterns, reducing face-to-face social interactions, and increasing exposure to online content that can trigger stress and frustration (Ko et al., 2012). The intertwining of internet addiction with these existing psychological vulnerabilities underscores the importance of addressing this issue within the context of young adult mental health. In the contemporary digital

era, the phenomenon of internet addiction has emerged as a growing concern, particularly among young adults, who are at the forefront of technology usage. This addiction is not merely a matter of excessive internet use but represents a compulsive behaviour that can significantly disrupt an individual's daily life and mental health. The ubiquitous nature of the internet, coupled with the developmental stage of young adults, who are often during establishing their identities and managing life transitions, creates a perfect storm for the development of addictive behaviours. The issue is compounded by the fact that young adults often use the internet as a primary means of communication, socialization, and entertainment, making them more susceptible to dependency (Kuss et al., 2014). The impact of internet addiction on psychological health is multifaceted, affecting various aspects of mental well-being. One of the most significant psychological impacts is the increase in stress levels. Young adults, who are already navigating the pressures of academic, professional, and social expectations, may find that excessive internet use exacerbates their stress rather than alleviating it. The constant engagement with online activities can lead to information overload, cyberbullying, and a distorted sense of reality, all of which contribute to heightened stress (Ko et al., 2012). Beyond stress, internet addiction is strongly associated with feelings of frustration. This frustration frequently stems from a lack of control over internet use, which can create a sense of powerlessness. Young adults may experience frustration when their online activities interfere with their offline responsibilities, such as work or study, or when they feel compelled to continue engaging in online behaviours despite negative consequences. This frustration can be further fuelled by the competitive and often toxic environments found in certain

online spaces, such as social media platforms and gaming communities (Pontes et al., 2015). Aggression is another significant psychological impact associated with internet addiction. Prolonged exposure to violent content, competitive gaming, or hostile interactions online can lead to increased aggressive behaviours in young adults. The anonymity of the internet can also encourage more aggressive expressions of frustration, which might not manifest in face-to-face interactions. Over time, these behaviours can become ingrained, leading to more pervasive issues with anger management and interpersonal conflicts (Sharma et al., 2014).

Understanding internet addiction is of paramount importance in the current digital age, particularly for the development of effective mental health interventions tailored to young adults. This demographic is increasingly susceptible to the negative impacts of excessive internet use, which can manifest in a variety of psychological disorders. By delving into the intricate relationship between internet addiction and mental health, this study contributes crucial insights that can inform the creation of targeted therapeutic strategies aimed at mitigating the adverse effects of this addiction. The significance of this study lies not only in its potential to enhance individual mental health outcomes but also in its broader implications for public health policies and educational programs designed to foster healthier internet usage habits among young adults (Kuss et al., 2014; Ko et al., 2012). Moreover, this research makes a significant contribution to the existing body of literature on behavioural addiction. While substantial research has been conducted on substance-related addictions, the relatively newer phenomenon of internet addiction requires further exploration to be fully understood. This study expands the discourse on

behavioural addictions by providing a comprehensive analysis of how internet addiction specifically affects psychological health, focusing on the emotional and behavioural outcomes of stress, frustration, and aggression. The findings of this study are expected to bridge gaps in the literature, offering new perspectives on how internet addiction parallels and diverges from other forms of addiction (Pontes et al., 2015; Stavropoulos et al., 2013).

Objectives:

- The primary aim of this research is to delve into the intricate relationship between internet addiction and psychological health, particularly in the context of young adults who are disproportionately affected by this modern behavioural concern.
- The study aims to identify and analyze the distinct effects that internet addiction has on stress levels among young adults.
- The research intends to investigate the impact of internet addiction on feelings of frustration.
- The study aims to explore the connection between internet addiction and aggression.

The Concept of Internet Addiction

Internet addiction is a relatively new but increasingly recognized psychological condition that has garnered significant attention in recent years, particularly as the internet has become integral to daily life. The term “internet addiction” refers to a compulsive need to engage in online activities to the extent that it interferes with an individual’s daily functioning and well-being. This addiction is marked by the overuse of the internet, particularly for activities such as gaming, social networking, and browsing, which causes significant interference or

difficulties in personal, social, or professional life. The epidemiology of internet addiction reveals that it is particularly prevalent among young adults, a demographic that is highly engaged with digital technology. Studies suggest that internet addiction affects a significant portion of young adults globally, with varying prevalence rates depending on cultural, social, and economic factors. Research conducted in diverse populations indicates that the prevalence of internet addiction among young adults ranges from approximately 2% to over 10%, with some studies reporting even higher rates in specific subgroups, such as college students or individuals with preexisting mental health conditions (Ko, Yen, Yen, Chen, & Chen, 2012). The widespread availability of internet-enabled devices, combined with the growing importance of online activities in education, work, and social life, has contributed to the rising incidence of this addiction. Moreover, the epidemiological trends show that internet addiction is not evenly distributed across all demographic groups. For example, studies have identified gender-based variations in internet usage and addiction tendencies. Males are more likely to engage in online gaming and exhibit higher rates of addiction related to these activities, while females may be more prone to social media addiction (Pontes, Kuss, & Griffiths, 2015). Additionally, socioeconomic factors, such as access to technology and educational opportunities, play a role in the prevalence of internet addiction. Young adults from higher socioeconomic backgrounds might have greater access to the internet, thereby increasing their risk of developing addictive behaviours (Kraut et al., 2002).

Psychological Health and Internet Addiction

The relationship between internet addiction and psychological health is a critical

area of study, especially considering the increasing prevalence of digital technology in everyday life. Internet addiction has been consistently linked to a range of psychological health issues, with depression, anxiety, and stress being among the most prominently affected conditions. These psychological health problems are not merely corollary to internet addiction; rather, they often function in a bidirectional manner, where each exacerbates the other, creating a vicious cycle that can be challenging to break. Depression is one of the most reported psychological issues associated with internet addiction. Young adults, who are already at a vulnerable stage in their psychological development, may find that excessive internet use further isolates them, reducing meaningful social interactions and contributing to feelings of loneliness and despair. This isolation can lead to or worsen depressive symptoms, as the individual becomes more entrenched in online activities that provide temporary relief but ultimately fail to address underlying emotional needs. Studies have shown that individuals with higher levels of internet addiction often report significantly higher levels of depressive symptoms compared to their non-addicted peers (Kraut et al., 2002; Kuss et al., 2014). This correlation suggests that the internet, while a tool for connection, can paradoxically lead to deeper emotional disconnection and despair when used excessively and compulsively. Anxiety is another critical psychological health issue linked to internet addiction. The constant need to be connected, to check notifications, and to engage in online activities can lead to heightened levels of anxiety, particularly when individuals feel overwhelmed by the demands of their online lives. This is often referred to as “digital anxiety” or “internet-induced anxiety,” where the pressures of maintaining an online presence and the fear of missing out (FOMO) contribute to a

continuous state of anxiety. Young adults, who are particularly sensitive to social feedback and peer approval, may find themselves trapped in a cycle of anxiety fuelled by their internet use. The immediate but fleeting rewards of online interactions do little to alleviate long-term anxiety and may, in fact, deepen it by reinforcing the compulsive behaviours associated with internet addiction (Ko et al., 2012; Pontes et al., 2015). Stress is the third major psychological health issue associated with internet addiction. The overuse of the internet, particularly for activities such as gaming, social networking, and constant browsing, can lead to significant stress, both physically and mentally. The stress is often a result of the time and energy expended on online activities, which can detract from real-life responsibilities such as work, study, and personal relationships. Furthermore, the overstimulation from constant screen time can lead to difficulties in relaxing and unwinding, further contributing to stress-related symptoms like headaches, sleep disturbances, and irritability. This chronic stress, when combined with the pressures of modern life, can lead to more severe health issues, including burnout and severe anxiety disorders (Sharma et al., 2014; Ko et al., 2012).

Internet Addiction and Stress

The relationship between internet addiction and stress is complex and bidirectional, meaning that each can both cause and exacerbate the other. On one hand, stress can drive individuals to engage in excessive internet use as a coping mechanism. On the other hand, the compulsive use of the internet can lead to increased stress, creating a cyclical pattern that can be difficult to break. Individuals experiencing high levels of stress, whether from academic pressures, work demands, or personal life challenges, may turn to the

internet for relief. The internet offers various forms of escapism, such as social media, gaming, and streaming services, which can provide temporary distraction and relief from stressors. However, while these activities may offer short-term relief, they often fail to address the underlying sources of stress and can lead to prolonged periods of internet use. This excessive use can further compound the individual's stress, especially when it interferes with essential daily activities, sleep, and real-world social interactions (Ko et al., 2012; Sharma et al., 2014). Moreover, excessive internet use can directly contribute to heightened stress levels. The constant exposure to online stimuli, such as notifications, updates, and the need to respond quickly to messages, can overwhelm the individual's cognitive and emotional capacities. This overstimulation can lead to a state of chronic stress, characterized by anxiety, irritability, and difficulty concentrating. The demand to maintain an online presence and the fear of missing out (FOMO) can cause continuous stress, particularly in young adults who are heavily involved in digital culture (Pontes et al., 2015). The impact of internet addiction on stress is also evident in the disruption of coping mechanisms. Normally, individuals might manage stress through physical activity, social interactions, or relaxation techniques. However, when internet use becomes compulsive, it can replace these healthier coping strategies with a reliance on online activities. This shift not only reduces the effectiveness of traditional stress management techniques but also makes the individual more dependent on the internet for stress relief. Over time, this can lead to a decreased ability to cope with stress in the offline world, further entrenching the cycle of addiction and stress (Kuss et al., 2014). The bidirectional relationship between stress and internet addiction highlights the need for comprehensive interventions that address

both aspects simultaneously. Strategies aimed at reducing stress through offline activities, such as mindfulness practices, exercise, and social support, could help break the cycle of dependence on the internet for stress relief. Additionally, educational programs that promote healthy internet use and awareness of the signs of addiction could be crucial in preventing the onset of this cycle, particularly among vulnerable populations like young adults (Ko et al., 2012; Stavropoulos et al., 2013).

Internet Addiction and Frustration

Frustration plays a pivotal role in the dynamics of internet addiction, acting both as a precipitating factor and because of the compulsive use of online platforms. Initially, frustration may drive individuals towards the internet as a means of escape or distraction from real-life challenges. For many young adults, the internet offers a quick and easy way to divert attention from personal, academic, or professional difficulties. However, this coping mechanism is often maladaptive, as it does not address the root causes of frustration but instead creates a dependency on digital engagement. Over time, this reliance on the internet can increase the intensity of frustration, especially when online experiences do not provide the expected relief or when they introduce new stressors, such as negative social interactions or unachieved online goals (Pontes, Kuss, & Griffiths, 2015). The frustration stemming from online interactions is particularly significant in the context of social media and gaming environments. Social media platforms often foster unrealistic comparisons and expectations, leading users to feel inadequate or excluded when their experiences do not match those of others. This social comparison can lead to heightened feelings of frustration and dissatisfaction with one's own life, thereby increasing the compulsion to stay online in

search of validation or to numb these negative emotions. Similarly, online gaming, which often involves competitive and high-stakes environments, can result in significant frustration, particularly when players are unable to achieve desired outcomes or are exposed to hostile interactions with other gamers. This frustration can feed into a cycle where the individual feels compelled to spend more time online to overcome these challenges, thus deepening their internet addiction (Kraut et al., 2002; Ko et al., 2012). The impact of this frustration on mental health is profound. Chronic frustration, when left unaddressed, can lead to increased levels of stress, anxiety, and even depression. The constant state of being on edge, coupled with the inability to find lasting satisfaction or relief online, exacerbates the psychological toll on individuals. This is particularly concerning for young adults, who are still developing their emotional regulation skills and are more vulnerable to the negative effects of prolonged frustration. Understanding the role of frustration in internet addiction is crucial for developing effective therapeutic interventions that not only address the addictive behaviours but also equip individuals with healthier ways to manage frustration and its underlying causes (Sharma et al., 2014; Pontes et al., 2015).

Internet Addiction and Aggression

Internet addiction has been found to exacerbate aggressive behaviours, particularly in environments where anonymity and reduced accountability foster such tendencies. Online platforms, especially those centered around gaming and social media, can often become breeding grounds for aggression due to their competitive nature and the frequent exposure to hostile or provocative content. The anonymity provided by the internet can lead to disinhibition, where individuals feel emboldened to express anger and frustration in ways they might

avoid in face-to-face interactions. This disinhibition effect is particularly pronounced in online gaming communities, where trash talk, competitive banter, and the pursuit of dominance can escalate into outright aggression (Kuss et al., 2014). Moreover, the repetitive exposure to violent content in games or aggressive interactions on social media can desensitize individuals to aggression, making it a more normalized part of their behaviour both online and offline. Young adults, who are still in the process of forming their social identities and coping mechanisms, may be particularly susceptible to this desensitization, leading to an increase in aggressive behaviours as a response to perceived threats or challenges within these digital environments (Pontes, Kuss, & Griffiths, 2015). This link between internet addiction and aggression is further reinforced by the frustration often experienced during online interactions, as discussed previously. When individuals are unable to achieve their desired outcomes online or feel provoked by others, their frustration can easily spill over into aggressive actions, whether through hostile communications, cyberbullying, or even physical aggression in extreme cases (Ko et al., 2012). The relationship between internet addiction and aggression highlights the need for targeted interventions that address both the behavioural and emotional aspects of this addiction. Programs designed to reduce internet addiction should include components that help individuals recognize and manage their aggressive impulses, particularly in digital contexts. Additionally, promoting digital literacy and healthy online behaviour can play a crucial role in mitigating the aggressive tendencies that often accompany excessive internet use (Sharma et al., 2014).

Method

Research Design

This study adopts a qualitative research design, which is particularly well-suited for exploring the complexities of psychological health issues, such as internet addiction. Qualitative research allows for an in-depth examination of the subjective experiences and perceptions of individuals affected by internet addiction, offering insights that quantitative methods might overlook. The focus on qualitative analysis enables the researcher to explore the nuances of how internet addiction manifests and affects psychological health, including stress, frustration, and aggression, in a way that captures the depth and richness of these experiences (Creswell, 2013). This approach is essential for understanding the lived experiences of young adults, who are the primary focus of this study, and for identifying patterns and themes that are critical to developing effective interventions.

Data Collection

The primary method of data collection for this study is a systematic literature review. This method involves a comprehensive and structured search of academic databases, such as SpringerLink, Frontiers, and others, to gather relevant studies on internet addiction and its impact on psychological health. The systematic review process ensures that the data collected is thorough and representative of the existing body of research. To ensure the relevance and quality of the studies included in the review, specific inclusion and exclusion criteria are applied.

Inclusion criteria involve selecting studies that: (1) focus on internet addiction and its psychological effects, particularly stress, frustration, and aggression; (2) involve young adults as the primary population; (3)

are published in peer-reviewed journals within the last decade; and (4) use qualitative or mixed methods.

Exclusion criteria involve eliminating studies that: (1) focus solely on other forms of addiction without addressing internet use; (2) involve populations outside the young adult age range (typically 18-30 years); (3) are based on anecdotal evidence or non-academic sources; and (4) are not available in English. These criteria help to refine the literature search, ensuring that the review is focused on the most relevant and high-quality research available (Booth, Sutton, & Papaioannou, 2016).

Data Analysis

Thematic analysis is employed as the primary method of data analysis in this study. Thematic analysis is a qualitative method used to identify, analyze, and report patterns (themes) within data. It involves several key steps: (1) familiarization with the data through repeated reading of the collected studies; (2) generating initial codes to organize data into meaningful groups; (3) searching for themes by examining the coded data for patterns that are significant to the research questions; (4) reviewing themes to ensure they accurately represent the data; (5) defining and naming themes to clarify what each theme represents; and (6) writing up the findings, integrating the thematic analysis with existing literature and theories (Braun & Clarke, 2006). This method is particularly effective for synthesizing qualitative data from multiple studies, allowing the researcher to draw comprehensive and nuanced conclusions about the relationship between internet addiction and psychological health.

Results and Discussion

The literature review conducted in this study reveals a complex and multifaceted relationship between internet addiction and

psychological health among young adults. The findings consistently indicate that internet addiction is a significant contributor to various forms of psychological distress, including heightened levels of stress, frustration, and aggression. These effects are not isolated but often interrelated, creating a cyclical pattern that exacerbates the overall impact on mental health. Firstly, the review highlights that internet addiction is strongly associated with increased stress levels among young adults. This stress is largely driven by the compulsive nature of internet use, which often interferes with essential daily activities such as sleep, academic responsibilities, and social interactions. The constant need to stay connected and the overwhelming volume of information encountered online can lead to cognitive overload, further intensifying stress (Ko et al., 2012; Kuss et al., 2014). The literature suggests that, while the internet is frequently used as a coping mechanism for stress, this reliance only provides temporary relief and ultimately contributes to a greater sense of anxiety and mental fatigue (Sharma et al., 2014).

Secondly, frustration emerges as both a cause and consequence of internet addiction. The review indicates that many young adults turn to the internet to escape from real-world frustrations, such as academic pressures or social challenges. However, this coping strategy often backfires, as the compulsive use of the internet can lead to additional frustrations, particularly when online activities do not yield the desired emotional or social outcomes. This frustration is compounded by the competitive and often toxic environments found in online gaming and social media, where unmet expectations and negative interactions can further aggravate feelings of inadequacy and dissatisfaction (Pontes, Kuss, & Griffiths, 2015). The cyclical nature of frustration and internet addiction

underscores the difficulty many individuals face in breaking free from these behaviours. Aggression is another significant psychological outcome identified in the literature. The findings suggest that internet addiction, particularly in the context of online gaming and social media, is closely linked to increased aggressive behaviours. This aggression is often fuelled by the frustration experienced during online interactions, as well as the anonymity and lack of accountability that the internet provides. The review points out that young adults who are heavily involved in online activities are more likely to display aggressive tendencies both online and in real life, as they may become desensitized to aggressive behaviour due to frequent exposure to violent content and hostile interactions (Berkowitz, 1989; Pontes et al., 2015). Furthermore, the literature review reveals notable gender differences in the manifestation of internet addiction. Men are more likely to develop addiction related to online gaming and pornography, while women are more prone to social media addiction. These differences are not only in the type of addiction but also in the psychological outcomes, with men showing a higher propensity for aggression and women for issues related to self-esteem and social anxiety (Kraut et al., 2002; Ko et al., 2012).

Discussion of Psychological Health Impacts

Internet addiction has profound implications for the psychological health of young adults, with its effects being most evident in the realms of stress, frustration, and aggression. The relationship between internet addiction and these psychological outcomes is complex and multifaceted, with each element influencing and exacerbating the others. Firstly, the connection between internet addiction and stress is particularly concerning. The literature consistently shows

that young adults who are addicted to the internet experience significantly higher levels of stress compared to their peers. This stress often arises from the excessive demands placed on individuals by their online activities, which can interfere with their academic, professional, and personal lives (Ko et al., 2012). The constant engagement with the internet, whether through social media, gaming, or other online platforms, creates a state of perpetual stimulation and distraction. The interference with normal sleep patterns reduces time for relaxation and mental recovery, which can lead to persistent stress. Furthermore, the need to maintain an online presence and the fear of missing out (FOMO) amplify this stress, fostering a cycle of anxiety and excessive internet use (Kuss et al., 2014). Frustration is another significant psychological outcome linked to internet addiction, and it often serves both as a precursor and a consequence of excessive internet use. Many young adults turn to the internet to cope with feelings of frustration stemming from real-life challenges, such as academic pressure or social isolation. However, this coping mechanism is ultimately counterproductive, as the temporary escape provided by the internet does not resolve the underlying issues and can lead to further frustration. For instance, unmet expectations in online gaming or social media interactions can deepen feelings of inadequacy and dissatisfaction. The competitive and often hostile environments of these platforms can also contribute to frustration, as individuals struggle to meet unrealistic standards or face negative feedback (Pontes, Kuss, & Griffiths, 2015). This frustration can accumulate over time, leading to a heightened emotional state that is difficult to manage, especially without proper coping strategies. Aggression is closely tied to the frustration experienced by individuals with internet addiction. The literature highlights that the anonymity and disinhibition provided by the internet can lead

to increased aggressive behaviours, particularly in online gaming and social media contexts. When frustration from failed online goals or negative social interactions builds up, it can manifest as aggression, both in the virtual world and in real life (Berkowitz, 1989). For young adults, who are still developing their emotional regulation skills, this aggression can be particularly destructive. The competitive nature of online games, where winning often requires aggressive tactics, can normalize these behaviours, making them more likely to spill over into offline interactions (Kraut et al., 2002). Additionally, social media platforms, where heated debates and cyberbullying are not uncommon, provide ample opportunities for aggressive responses, which can escalate quickly due to the lack of face-to-face accountability.

6. Future Research Directions:

To build on the current research, future studies should consider several avenues. First, there is a need for longitudinal studies that track individuals over time to better understand the long-term effects of internet addiction on psychological health. Such studies could provide insights into how early interventions might mitigate the progression of addiction and its related mental health issues. Additionally, future research could explore the impact of emerging technologies, such as virtual reality or AI-driven social platforms, on internet addiction, as these technologies are likely to introduce new forms of addictive behaviours. Further research should also focus on cross-cultural comparisons to determine how cultural differences influence the prevalence and manifestation of internet addiction. Given the gender-specific findings in this study, more in-depth research into how gender intersects with other factors, such as socio-economic status or educational background, could provide a richer understanding of how-to

tailor interventions. Finally, experimental studies testing the effectiveness of different intervention strategies, including those that integrate digital detox programs or mindfulness-based approaches, would be invaluable in developing evidence-based practices for treating internet addiction. These directions will not only expand the theoretical framework of internet addiction but also enhance the practical applications of research findings in real-world settings.

Conclusion

The primary purpose of this study was to explore the intricate relationship between internet addiction and psychological health among young adults, focusing specifically on the impacts of stress, frustration, and aggression. Through a systematic literature review, the research synthesized findings from a broad spectrum of studies, providing a comprehensive understanding of how excessive internet use can adversely affect mental health. The key findings revealed that internet addiction is strongly associated with increased stress levels, particularly due to the compulsive nature of online engagement that disrupts daily routines and exacerbates anxiety. The study also identified frustration as both a cause and consequence of internet addiction, where the failure to achieve online satisfaction leads to further compulsive use, creating a vicious cycle. Additionally, the research highlighted the link between internet addiction and heightened aggression, especially in environments like online gaming, where competitive pressures and anonymity contribute to aggressive behavior. Furthermore, gender-specific differences were observed, with men showing a tendency towards addiction related to online gaming and aggression, while women were more prone to social media addiction, which often leads to issues like social anxiety and depression. Overall, this study contributes to the field by deepening the

understanding of the psychological mechanisms underlying internet addiction and offering insights that are critical for developing targeted interventions.

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