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RESEARCH ARTICLE

Roblox addiction and psychological well-being in Generation Z

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ABSTRACT

This study aimed to investigate the relationship between Roblox online game addiction tendency and psychological well-being among Generation Z in Greater Jakarta (Jabodetabek). The research was motivated by the increasing use of the online game Roblox, which has the potential to foster addictive behaviors and diminish psychological well-being. Using a correlational quantitative method, non-parametric Spearman's Rank and Kruskal-Wallis analyses were employed due to non-normally distributed data. Participants consisted of 273 Generation Z individuals selected via purposive sampling. The results indicated a significant negative correlation between Roblox addiction and psychological well-being *(r = -.752, p < .01)*, suggesting that higher addiction levels are associated with lower psychological well-being. The conflict dimension contributed most substantially to the decline in psychological well-being. Furthermore, significant differences were found based on age, residence, frequency of play, duration of play, and reasons for playing. Theoretically, these findings contribute to the literature on the relationship between Roblox addiction and the psychological well-being of Generation Z, while also highlighting opportunities for future research on potential mediating or moderating variables such as self-control and social support. Practically, the results are expected to serve as an educational foundation for adolescents, parents, and educational institutions to promote self-regulation in playing Roblox.

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INTRODUCTION

The advancement of industrial technology and globalization has driven the widespread use of the internet for entertainment, notably through the increasing popularity of online gaming. According to the Indonesian Internet Service Providers Association (APJII, 2024), internet users in Indonesia have reached 229 million (80.66%), with online gamers accounting for 192.1 million. Generation Z (born 1997–2012) constitutes the largest demographic, representing 34.40% of internet users in the country.

Roblox is among the most popular online games, ranking among the top games in 2025, with 27.7 million active players as of May 2025 (Zakia, 2025). Unlike other major online games such as Mobile

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Legends, PUBG Mobile, Free Fire, Genshin Impact, and Fortnite, Roblox offers a unique user-generated content model, allowing players to create their own virtual worlds or servers and engage in experiences designed by others (Siagian, 2023). With more than 55% of U.S. Generation Z registered as users, Roblox has emerged as a significant metaverse platform for this cohort (Tinterri et al., 2023).

The popularity of Roblox among Generation Z stems from its role beyond mere entertainment; for many, it evolves from a leisure activity into a deeply engaging interest (Liu, 2025). However, research by Yashy and Syas (2022) indicates that Roblox does not adequately protect children and adolescents from exposure to risks such as violence, explicit content, and harassment. Similarly, Imania (2025) found negative effects of Roblox on players' emotional regulation, including difficulties in managing anger and frustration during gameplay, which can lead to impulsive behavior and potential game dependency due to the absence of structured time limits.

The phenomenon of online gaming addiction is rising in Indonesia, particularly among adolescents. Jap et al. (2013) reported that among 1,477 adolescents sampled across several Indonesian cities, 150 (10.15%) met criteria for online gaming addiction. Further supporting this trend, Kurniawan (2025) found a negative relationship between online gaming addiction tendencies and psychological well-being, specifically in aspects of self-acceptance, life purpose, and personal growth, among Indonesian Generation Z aged 18–24.

Psychological well-being constitutes a fundamental component of mental health, encompassing happiness, life satisfaction, stress management, and the quality of social relationships (Primack et al., 2017). According to Ryff (as cited in Kurniawan, 2025), adolescents with higher psychological well-being are better equipped to navigate interpersonal and intrapersonal challenges, pursue self-improvement, and contribute positively to their environment. While prior research has explored online gaming addiction broadly, there remains a gap in studies specifically examining the relationship between Roblox addiction tendencies and the psychological well-being of Generation Z.

Consequently, this study is designed to address this significant gap in the literature by providing a focused, empirical investigation into the relationship between Roblox addiction tendencies and the psychological well-being of Generation Z. Specifically, the research will quantify the nature and strength of this association, identify which dimensions of game-related conflict contribute most substantially to diminished well-being, and explore whether demographic and gameplay-related variables (e.g., age, frequency, duration, motivation) moderate this relationship. By isolating the unique dynamics associated with Roblox, a platform that blends gaming, creation, and social interaction within a user-generated metaverse, this investigation moves beyond general studies of online gaming to offer nuanced insights relevant to contemporary digital environments. The findings are expected to inform targeted psychoeducational strategies and preventive frameworks for adolescents, parents, and educators navigating the challenges of healthy engagement with immersive virtual platforms.

METHOD

This study employed a quantitative correlational design to examine the relationship between Roblox addiction tendency and psychological well-being without manipulating the variables. A correlational quantitative approach focuses on numerical data and utilizes statistical analysis to test research hypotheses (Mukhid, 2021). Participants were Generation Z individuals (born between 1997 and 2012) residing in the Greater Jakarta area (Jakarta, Bogor, Depok, Tangerang, and Bekasi) who had been active Roblox players for at least the preceding 6 months. Purposive and snowball sampling techniques were used to recruit participants who met these specific criteria, as they allow selection

based on characteristics directly relevant to the research objectives (Sugiyono, 2024). The final sample comprised 273 participants. The majority were female *(n = 186, 68.1%)*, with males comprising 31.9% *(n = 87).* The most frequently reported age was 21 years *(n = 42, 15.4%)*. Geographically, most participants resided in Jakarta *(n = 128)*, while Bogor had the smallest representation *(n = 30)*.

The tendency toward Roblox addiction was measured using an adapted version of the Game Addiction Scale (GAS; Lemmens et al., 2009), following the translation and adaptation process conducted by Panatra and Tiatri (2023). The scale comprises 21 items assessing seven dimensions of game addiction: salience, tolerance, mood modification, relapse, withdrawal, conflict, and problems. Respondents indicated how frequently they experienced each behavior over the preceding six months using a 5-point Likert scale (1 = never to 5 = very often).

Psychological well-being was measured using an adapted short-form version of Ryff's Psychological Well-Being Scales (RPWBS; Ryff, 1989), adapted by the Faculty of Psychology, Tarumanagara University, as cited in Kurniawan (2025). The 18-item instrument assesses six core dimensions of well-being. It includes 11 positively worded and seven negatively worded items. Responses are recorded on a 6-point Likert scale ranging from 1 (strongly agree) to 6 (strongly disagree).

Validity testing indicated that all items on both the GAS and the RPWBS had corrected item-total correlation values *(r)* exceeding the .30 threshold and were statistically significant *(p < .05),* confirming the validity of all scale items. Reliability analysis demonstrated excellent internal consistency for both instruments. The GAS yielded a Cronbach's alpha coefficient of .975 for its 21 items, and the RPWBS produced a Cronbach's alpha of .936 for its 18 items. These values indicate a very high level of measurement consistency for both scales in the current sample.

All statistical analyses were performed using IBM SPSS Statistics, Version 26.0. After data entry, normality, validity, and reliability tests were conducted. Given that the data violated the assumption of normality, a non-parametric Spearman's rank-order correlation was used as the primary analysis to assess the relationship between Roblox addiction tendency (independent variable) and psychological well-being (dependent variable). Additionally, the Kruskal-Wallis H test was employed to examine group differences based on demographic and gameplay-related variables (e.g., age, residence, frequency, and duration of play).

RESULT

Descriptive analysis of the Roblox addiction variable (Game Addiction Scale, GAS) revealed a total mean score of 64.72 *(SD = 21.82).* At the dimensional level, the Salience *(M = 10.33, SD = 3.54)* and Mood Modification *(M = 11.27, SD = 2.72)* dimensions exceeded their respective hypothetical means, indicating high levels. Conversely, the Conflict dimension *(M = 7.09, SD = 3.64)* fell below its hypothetical mean, indicating a low level.

For the psychological well-being variable (Ryff's Psychological Well-Being Scale, RPWBS), the total mean score was 66.49 *(SD = 15.99)*. Most dimensions, Self-Acceptance *(M = 10.15)*, Positive Relations with Others *(M = 10.10)*, Autonomy *(M = 10.63)*, and Environmental Mastery *(M = 10.25)*, were in the moderate range. Two dimensions, Purpose in Life *(M = 12.13)* and Personal Growth *(M = 13.23)*, were categorized as high. A Kolmogorov-Smirnov test indicated that the data for both the GAS and RPWBS were not normally distributed (p = .004 for both variables). However, a linearity test confirmed a significant linear relationship between the two variables *(p < .001)*.

Given the non-normal distribution of the data, Spearman's rank-order correlation was used to examine the relationship between Roblox addiction tendency and psychological well-being. The

analysis revealed a strong, significant negative correlation between the two variables *(r = -.752, p < .001).* This indicates that higher levels of Roblox addiction are associated with lower levels of psychological well-being.

All seven dimensions of the GAS showed a significant negative correlation with overall psychological well-being (*p < .001* for all). The Conflict dimension demonstrated the strongest negative association *(r = -.759)*, followed by the Problem *(r = -.735)* and Withdrawal *(r = -.713)* dimensions. Kruskal-Wallis H tests were conducted to examine differences based on demographic and gameplay variables. A significant difference was found between age groups *(p < .001).* Participants aged 13–18 reported higher Roblox addiction tendencies and lower psychological well-being compared to those aged 19–28. Significant differences were observed based on residence. Participants from Depok exhibited the highest mean rank for addiction (157.52) and the lowest for psychological well-being (112.16), while those from Jakarta showed the opposite pattern (addiction mean rank = 119.79; psychological well-being mean rank = 155.86). Participants who played daily had the highest addiction levels and the lowest psychological well-being, whereas those playing 1–2 days per week showed the lowest addiction and highest well-being.

A notable finding emerged concerning playing motivation. Participants who played "to forget problems" had the highest mean rank for addiction (215.74) and the lowest mean rank for psychological well-being (62.58). In contrast, those playing for “filling leisure time” or “socializing with friends” exhibited higher psychological well-being.

DISCUSSION

The findings of this study confirm a significant negative relationship between Roblox online game addiction and psychological well-being among Generation Z in the Greater Jakarta area. This indicates that higher levels of game addiction are strongly associated with diminished psychological well-being. This result aligns with previous research (e.g., Griffiths, 2023), which posits that excessive online gaming can contribute to emotional dysregulation, impaired social relationships, and reduced self-control over time.

These findings can be interpreted through the lens of Erik Erikson’s (1959) psychosocial development theory. Participants in the 13–18 age range, who exhibited higher addiction and lower well-being, are situated in the Identity vs. Role Confusion stage. During this period, adolescents are actively exploring their identity and may utilize online games as both a medium for self-expression and an escape from social pressures. This aligns with research indicating that escapist motivations for gaming are correlated with higher addiction and poorer psychological outcomes (Griffiths, 2023). In contrast, participants aged 19–28, who demonstrated lower addiction and higher well-being, are in the Intimacy vs. Isolation stage, characterized by greater emotional and social maturity, which likely facilitates better self-regulation of gaming behavior and more stable psychological health.

The primary hypothesis is robustly supported, with a Spearman’s correlation of r = -.752 *(p < .001).* This strong negative correlation corroborates previous findings, such as those by Fahrizal and Irmawan (2023), who reported a significant negative relationship between online game addiction and adolescent quality of life *(r = -.711, p < .001)*. Dimensional analysis further revealed that all facets of game addiction, particularly the Conflict dimension *(r = -.759)*, are negatively associated with psychological well-being. This suggests that interpersonal and intrapersonal conflicts arising from gaming, such as arguments with family or neglect of responsibilities, are the most potent contributors to declines in well-being. This finding is consistent with the literature linking problematic gaming to

adverse psychosocial outcomes, including poor self-discipline (Advances in Social Science, Education and Humanities Research, 2024).

The results of group difference analyses provide crucial contextual nuance. Significant variations were found across age, play frequency and duration, and, most notably, motivation for playing. The group playing "to forget problems" exhibited the highest addiction levels and the lowest well-being, highlighting the maladaptive, avoidant coping function that gaming can serve. Conversely, groups playing for “filling leisure time” or “socializing with friends” reported higher well-being, suggesting that recreational or socially integrative motivations are less detrimental. These findings affirm that the context and function of gaming behavior are as critical as its quantity.

Overall, this study reinforces the understanding that Roblox addiction and its impact on psychological well-being are multidimensional. The phenomenon is not merely a function of time spent playing but is intricately linked to developmental stage, playing motivations, and social context. Consequently, effective interventions should extend beyond simplistic time-limiting strategies. They should incorporate psychoeducation to foster healthier gaming motivations, enhance self-regulatory skills, and strengthen supportive social networks and a sense of life purpose, particularly among younger adolescents in vulnerable developmental stages.

CONCLUSION

This study confirms a significant negative correlation between Roblox game addiction and psychological well-being among Generation Z in the Greater Jakarta (Jabodetabek) area. Specifically, higher levels of addiction are strongly associated with diminished psychological well-being, with the conflict dimension of addiction, encompassing interpersonal and intrapersonal strife, emerging as the most potent contributing factor. The relationship is further contextualized by key demographic and behavioral variables, including younger age, greater play frequency, and, critically, the motivation to use gaming to escape problems, all of which exacerbate adverse outcomes. These findings underscore that the impact of online gaming is multifaceted, extending beyond mere screen time. Consequently, effective prevention and intervention strategies must adopt a holistic approach. Such efforts should aim not only to moderate play duration but, more importantly, to foster adaptive self-regulation skills, strengthen social support systems, and promote healthier, more recreational motivations for game engagement. Implementing these targeted strategies is essential for safeguarding and enhancing the psychological well-being of adolescents and young adults in an increasingly digital landscape.

DECLARATION

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Author contribution statement

Alfian Ricko Adhitya conducted the research design, data collection, distributed the scales, analyzed the research results, and wrote the manuscript. Rahmah Hastuti served as a supervisor who assisted and approved the research design development, oversaw the data collection process, and reviewed the results and manuscript.

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The authors declare no conflict of interest.

Additional information

No additional information is available for this paper.

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