

The Mediating Role of Problematic Internet Use on Online Fear of Missing Out and Psychological Well-Being among Gen Z Students

Gian Brylle P. Gemino and Kirstille Angela P. Quillo

*St. Michael's College of Iligan, Inc.
Quezon Avenue, Iligan City*

Abstract

The internet has become a significant part of many individuals in today's digital world. While previous studies have extensively examined the adverse effects of internet use on psychological well-being, limited attention has been given to the mediating role of specific online behaviors. The study involves 325 Gen Z students who were purposively taken accordingly. This quantitative study employed mediation analysis method, with data collected through standardized self-report questionnaires. The findings revealed that the respondents reported relatively low levels of online fear of missing out, mild problematic internet use, and average psychological well-being. Mediation analysis demonstrated a full mediation effect, indicating that problematic internet use is a significant mediator between online fear of missing out and psychological well-being. An intervention program can be formulated based on the findings that are designed to help Gen Z students manage their online habits effectively, enhancing overall well-being and personal development. Furthermore, the study underscores the critical need to address risky online behaviors to mitigate the negative impact of the internet on mental health and promote healthier digital engagement.

Keywords: *Gen Z, online fear of missing out, problematic internet use, psychological well-being*

1.0 Introduction

The internet has reshaped human interactions and behaviors in today's modern age. However, while it offers connectivity and convenience, excessive internet use can negatively affect emotional stability (Venu, 2023). One notable phenomenon linked to internet use is the fear of missing out, which is particularly prevalent in the digital age. Research has shown that social media use exacerbates fear of missing out, with studies indicating that males experience higher levels of fear of missing out than females (Balta et al., 2020; Saligram & Sudheer, 2023). Importantly, individuals experiencing heightened fear of missing out often report lower levels of psychological well-being (Savitri, 2019). These discussions highlight the negative effects of internet use but fail to identify specific online behaviors that mediate its impact on psychological well-being.

This study seeks to address this gap by exploring the mediating role of problematic internet use in the relationship between online fear of missing out and psychological well-being among Gen Z students. Individuals born between 1997 and

2012 called the Generation Z, or simply Gen Z, are often referred to as “digital natives” due to their deep-rooted familiarity with technology and the internet (Pricope-Vancia et al., 2023). For this generation, the internet is not merely a tool but an integral aspect of their daily life (Alruthaya et al., 2021). Consequently, understanding how problematic internet use influences the relationship between online fear of missing out and psychological well-being within this cohort, carries significant implications that contribute to a better understanding of this phenomenon.

The study focuses on Gen Z students from the Higher Education Department of St. Michael’s College of Iligan, Inc., enrolled during the First Semester of the Academic Year 2024-2025. This research aims to contribute to the growing body of literature on digital behaviors and mental health by examining the interplay between online fear of missing out, problematic internet use, and psychological well-being. The findings will inform the development of an intervention program designed to help students cultivate greater self-awareness, manage their online habits effectively, and foster healthier relationships in the digital space. Ultimately, this study aspires to empower Gen Z students to navigate the complexities of the digital world, enhancing their mental well-being and overall personal development.

2.0 Theoretical and Empirical Background

In the investigation of the mediating role of problematic internet use on online fear of missing out and psychological well-being among Gen Z students, the study anchored number of theories to provide a better understanding of this phenomenon.

The Self-Determination Theory (Deci & Ryan, 2015) emphasizes the importance of fulfilling three psychological needs—competence, autonomy, and relatedness, which are essential for well-being. When individuals experience unmet relatedness needs, they may develop online fear of missing out. Autonomy can be compromised as excessive internet use becomes a compensatory mechanism for unaddressed needs, while the pursuit of competence may drive individuals to seek mastery in online spaces. Additionally, Social Comparison Theory (Festinger, 1954) suggests that individuals evaluate themselves by comparing their beliefs and abilities to others. In the digital environment, upward social comparisons can trigger inadequacy, fear of missing out, and problematic internet use, negatively impacting well-being. Conversely, positive comparisons and supportive online interactions may improve psychological health. Furthermore, Social Cognitive Theory (Bandura, 1986) explains behavior through triadic reciprocal causation, where individuals observe and imitate behaviors in their environment. In online spaces, problematic internet use may arise as individuals imitate peers engaging in rewarding activities, learning through observation and the outcomes they perceive.

These theories are considered valuable to this study as they provide a comprehensive framework to understand how psychological needs, social comparisons, and learned behaviors contribute to problematic internet use and its impact on online fear of missing out and psychological well-being among Gen Z students.

3.0 Research Objectives

The study aims to investigate problematic internet use and its mediating role on the online fear of missing out and the psychological well-being of Gen Z students from the Higher Education Department of St. Michael's College in Iligan City.

Specifically, this paper examined the following:

1. The respondents' level of online fear of missing out.
2. The respondents' level of problematic internet use.
3. The respondents' level of psychological well-being.
4. The significant influence of online fear of missing out on problematic internet use.
5. The significant influence of problematic internet use on psychological well-being.
6. The significant influence of online fear of missing out use on psychological well-being.
7. The significant mediation of problematic internet use on online fear of missing out and psychological well-being.

4.0 Methodology

The study employed a quantitative research approach to measure the variables concerned. Specifically, it utilizes descriptive-causal design to assess the significant influence of the independent variable on the outcome variable. Moreover, a mediation analysis was applied to determine the mediating role of problematic internet use on online fear of missing out and psychological well-being. The respondents of this study consist of 325 Gen Z students from St. Michael's College-Higher Education Department who were enrolled during the First Semester of the Academic Year 2024-2025, and were purposively selected accordingly.

A pre-survey was first administered to further evaluate the eligibility of the students to participate in the study. Enclosed informed consent form and a profile sheet were then distributed to each respondent. The researchers fully adopted and disseminated a set of standardized questionnaires utilizing the Online Fear of Missing Out Inventory (Sette et al. 2020) to assess the level of online fear of missing out, the Internet Addiction Test (Young, 1998) to measure the problematic internet use, and the Psychological Well-being Scale (Ryff & Keyes, 1995) to evaluate the level of psychological well-being among the respondents.

Descriptive and inferential statistical procedures were applied in treating the data in this study. Mean and standard deviation was used to describe and measure the average location and variation of the Gen Z students' level of online fear missing out, problematic internet use, as well as the level of their psychological well-being. Additionally, a Simple Linear Regression was executed to examine the significant influence of the independent variable on the outcome variable. Furthermore, a mediation analyses with bootstrapping method were applied to investigate the mediation effect of problematic internet use on online fear of missing out and

psychological well-being. The data gathered in this study are kept with utmost confidentiality and anonymity.

5.0 Results and Discussion

The results and findings are presented chronologically, in accordance with the research objectives as implied within this study.

Table 1

Respondents' Perceived Level of Online Fear of Missing Out

Scoring Scale	Min	Max	Mean	SD	Qualitative Interpretation
Need to Belong	1.00	4.00	1.66	.638	<i>Very Low</i>
Need for Popularity	1.00	4.00	1.65	.668	<i>Very Low</i>
Anxiety	1.00	4.00	2.26	.746	<i>Low</i>
Addiction	1.00	4.00	2.18	.619	<i>Low</i>
Online Fear of Missing Out (Total)	1.00	3.55	1.94	.533	<i>Low</i>

The results showed for the need to belong has an overall mean of 1.65 (SD=.638; *very low*) for the total sample. This aligns with the study of Tolstikova et al. (2023), which highlights that Gen Z tends to prioritize individualism and self-organization in digital spaces, indicating a less need to form strong social bonds online. These findings challenge the common expectation that Gen Z, as digital natives, would heavily engage in online socialization and relationship-building. Instead, the results suggest a shift in how Gen Z students navigate online environments, emphasizing personal autonomy over collective belonging.

On the other hand, the results showed for the need for popularity has an overall mean of 1.65 (SD=.668; *very low*). This is consistent with the study of Tolani and Sao (2020), which highlights that while some Gen Z individuals aspire to become micro-celebrities, this ambition is often regarded as a side hustle rather than a primary career goal. These insights may be contradictory to the common perception that Gen Z is primarily driven by a desire for likes and online popularity, as observed in their frequent postings and content creation activities. Instead, the findings suggest a more nuanced approach to online engagement, where popularity is not an important motivator for Gen Z students.

Additionally, the results showed for the anxiety has an overall mean of 2.26 (SD=.746; *low*). This aligns with the study of Kassymova et al. (2023), suggesting that Gen Z's lower levels of online engagement may help reduce stress and anxiety. These results challenge the common expectation that Gen Z, often characterized by their constant use of smartphones and reliance on internet connectivity, would experience heightened anxiety when disconnected. Instead, the findings present a contrasting narrative, indicating that less frequent online interaction of Gen Z students may contribute positively to their well-being.

And lastly, the results showed for the addiction has an overall mean of 2.18 (SD=.619; *low*). This is consistent with the study of Öze and Zorali (2022), stating that Gen Z demonstrates lower levels of online addiction, with their engagement typically ranging from moderate to low. These findings may be contradicting to the prevalent assumption that Gen Z, often perceived as deeply immersed in digital spaces, would exhibit high levels of online addiction. Instead, the results suggest a more balanced approach to online engagement for the Gen Z students.

Overall, the results showed for the online fear of missing out has an overall mean of 1.94 (SD=.533; *low*) for the total sample. This aligns with the study of Hendrawan (2022), which highlights that psychological needs such as autonomy and relatedness significantly lower fear of missing out, with individuals who experience greater fulfillment of these needs showing lower susceptibility. These results contradict the assumption that Gen Z, often portrayed as highly connected and digitally active, would exhibit heightened fear of missing out. Instead, the findings suggest that Gen Z students have a sense of independence and meaningful connections may mitigate the fear of missing out in online contexts.

Table 2

Respondents' Perceived Level of Problematic Internet Use

Scoring Scale	Min	Max	Mean	SD	Qualitative Interpretation
80.00 – 100.00	81	84	82.0	1.41	<i>Severe</i>
50.00 – 79.00	50	78	59.7	7.14	<i>Moderate</i>
31.00 – 49.00	31	49	40.8	5.30	<i>Mild</i>
0.00 – 30.00	8	30	24.9	4.73	<i>Normal</i>
Problematic Internet Use (Total)	8	84	45.96	13.98	<i>Mild</i>

The results showed an overall mean of 45.96 (SD=13.99; Mild) for problematic internet use from the total sample. These findings suggest early indications of excessive internet use among Gen Z students. This aligns with the study of Raj et al. (2022), which similarly identified mild levels of problematic internet use among students. It also noted that even mild problematic internet use can be associated with significant mental health concerns. In summary, the mild level of problematic internet use of Gen Z students reflects uncontrolled use of internet that could harm their overall well-being.

Table 3

Respondents' Perceived Level of Psychological Well-being

Scoring Scale	Min	Max	Mean	SD	Qualitative Interpretation
Autonomy	2.29	5.86	3.67	.565	<i>Average</i>
Environmental Mastery	2.57	5.43	3.71	.459	<i>Average</i>
Personal Growth	2.43	6.00	4.11	.662	<i>Average</i>
Positive Relations	2.14	6.00	4.11	.617	<i>Average</i>
Purpose in Life	2.14	6.00	3.95	.605	<i>Average</i>
Self-Acceptance	1.14	6.00	3.78	.617	<i>Average</i>
Psychological Well-Being (Total)	2.71	5.19	3.89	.422	<i>Average</i>

The results showed for the autonomy has an overall mean of 3.66 (SD=.565; *average*) for the total sample. These findings suggest that Gen Z students exhibit a moderate level of independence in their actions, decisions, and ability to self-regulate. This aligns with the study of Barhate and Dirani (2021), which stated that Gen Z students exhibit a preference for learning environments that allow for self-paced and independent study, as they seek to balance autonomy with collaborative learning experiences. In summary, these findings underscore that while Gen Z students prioritize autonomy, they also value a balanced approach that integrates independence with teamwork.

On the other hand, the results showed for the environmental mastery has an overall mean of 3.71 (SD=.459; *average*). These findings indicate that Gen Z students have a moderate ability to manage and adapt to their surrounding environment, including handling daily responsibilities and making effective use of available resources. This is consistent with the study of Maharani et al. (2024), which emphasized that environmental mastery is evident in individuals who can control their environment, capitalize on opportunities, and effectively manage their surroundings. In conclusion, these findings highlight that Gen Z students exhibit a reasonable capacity for environmental mastery.

Additionally, the results showed for the personal growth has an overall mean of 4.11 (SD=.662; *average*). The findings imply that Gen Z students possess a moderate level of openness to new experiences and a reasonable drive for self-improvement. This aligns with the study of Wijayanti (2024), which highlights that individuals who engage in community involvement and strive to understand diverse perspectives tend to develop practical skills, foster tolerance, and experience enriched personal growth. In summary, these findings underscore that Gen Z students demonstrate a foundation for personal growth, with a capacity for self-improvement and openness to new opportunities.

Furthermore, the results showed for the positive relations with others have an overall mean of 4.11 (SD=.617; *average*). The findings suggest that Gen Z students maintain moderately healthy and meaningful relationships with other people. This is consistent with the study of Sweet and Avadhanam (2023), which emphasized that Gen Z values positive relationships that are built on mutual support and understanding. In

conclusion, these findings underscore that Gen Z students are capable of building supportive relationships, which are vital for their overall well-being.

Moreover, the results showed for the purpose in life has an overall mean of 3.95 (SD=.605; *average*). These findings indicate that Gen Z students possess a moderate sense of direction and meaning in their lives. This aligns with the study of Grénman et al. (2024), which observed that Gen Z's sense of purpose is increasingly focused on virtuous behaviors and eudaimonic living – prioritizing moderation, meaningfulness, and self-actualization. In summary, these findings highlight that Gen Z students have developed a strong sense of purpose, characterized by a focus on personal fulfillment and ethical values.

Nevertheless, the results showed for the self-acceptance has an overall mean of 3.78 (SD=.617; *average*). These findings imply that Gen Z students have a moderate level of acceptance and appreciation of themselves. This aligns with the study of Oktaviani (2019), which highlights that self-acceptance is a personal ability that individuals cultivate through personal effort and life experiences. In conclusion, these findings suggest that Gen Z students exhibit a reasonable level of self-acceptance that fosters a sense of self-worth.

Overall, the results showed for the psychological well-being has an overall mean of 3.89 (SD=.422; *average*) for the total sample. These findings suggest that Gen Z students currently experience a moderate sense of psychological well-being, reflecting a balance in managing their mental and emotional states. This is consistent with the study of Pertiwi et al. (2022), which also observed a moderate level of psychological well-being, with a relatively high level of self-esteem among Gen Z in relation to their social media use. In summary, these findings reflect a reasonable level of psychological well-being that fosters their emotional resilience and overall quality of life.

Table 4

Influence of the Respondents' Level of Online Fear of Missing Out to their Level of Problematic Internet Use

Predictor	Estimate	SE	R ²	p-value
Online Fear of Missing Out	.522**	.002	.272	<.001

**Coefficient is significant at the 0.01 level (*Highly Significant*); SE – Standard Error

The linear regression analysis reveals that online fear of missing out significantly influences the problematic internet use of Gen Z students. Furthermore, approximately 27.2% of the variance in problematic internet use can be explained by the level of online fear of missing out experienced by these students. These findings align with the study of Qolbi and Hatta (2023), which found that fear of missing out is a significant predictor of problematic internet use among university students. It highlights the role of fear of missing out which contributes to excessive online activities, leading to a problematic internet use.

Additionally, the results also indicated a significant positive correlation between online fear of missing out and problematic internet use, with a moderate strength of

association. This would imply that as the level of online fear of missing out increases among Gen Z students, their problematic internet use also increases as well. These findings are consistent with the study of Hastuti (2023), suggesting that higher levels of fear of missing out are greatly associated with higher levels of problematic internet use. In conclusion, the results of this study provide compelling evidence that online fear of missing out is a key contributor to problematic internet use among Gen Z students.

Table 5

Influence of the Respondents' Level of Problematic Internet Use to their Level of Psychological Well-being

Predictor	Estimate	SE	R ²	p-value
Problematic Internet Use	-.292**	.002	.292	<.001

**Coefficient is significant at the 0.01 level (*Highly Significant*); SE – Standard Error

The linear regression analysis indicates that problematic internet use significantly influences the psychological well-being of Gen Z students. Notably, there is a 29.2% variance in psychological well-being that can be attributed to the level of problematic internet use experienced by these students. These findings are consistent with the study of Yilmaz (2023), which identified that problematic internet use can significantly predict psychological well-being. It underscores the adverse effect of excessive internet use on mental health and well-being.

Furthermore, the results reveal a significant negative correlation between problematic internet use and psychological well-being, demonstrating a weak strength of association. This would suggest that as the level of problematic internet use increases among Gen Z students, their psychological well-being will decrease as a result. These findings align with the study of Bal and Turan (2021), stating that an increase in internet addiction will lead to the deterioration of psychological well-being. In summary, the findings of this study underscore the detrimental effects of problematic internet use on the psychological well-being of Gen Z students.

Table 6

Influence of the Respondents' Level of Online Fear of Missing Out to their Level of Psychological Well-being

Predictor	Estimate	SE	R ²	p-value
Online Fear of Missing Out	-.430**	.040	.185	<.001

**Coefficient is significant at the 0.01 level (*Highly Significant*); SE – Standard Error

The linear regression analysis shows that online fear of missing out significantly influences the psychological well-being of Gen Z students. Moreover, approximately 18.5% of the variance in psychological well-being can be explained by the level of online fear of missing out experienced by these students. These findings align with the study of Savitri (2019), which found that fear of missing out is a significant predictor of

psychological well-being among emerging adulthoods. It emphasizes the detrimental effects of fear of missing out on psychological well-being, driven by actively engaging online.

Additionally, the results also indicated a significant negative correlation between problematic internet use and psychological well-being, with a moderate strength of association. This would suggest that as the level of online fear of missing out increases among Gen Z students, their psychological well-being decreases in return. These findings are consistent with the study published by Qudsyi and Fasya (2024), which similarly noted a decline in psychological well-being among individuals experiencing higher levels of fear of missing out. In conclusion, the results of this study highlight the harmful influence of online fear of missing out on the psychological well-being of Gen Z students.

Table 7

Mediation Effect of Problematic Internet Use between the Relationship of Online Fear of Missing Out and Psychological Well-being

Effect	Estimate	SE	95% Confidence Interval		Percentage Mediated	p-value
			Lower	Upper		
Indirect	-0.006	0.001	-0.008	-0.004	68.1	<.001
Direct	-0.003	0.002	-0.007	-0.001	31.9	.134
Total	-0.009	0.002	-0.012	-0.005	100.0	<.001

SE – Standard Error

The mediation analysis reveals a significant indirect effect, with 68.1 percent of the relationship between online fear of missing out and psychological well-being is mediated by problematic internet use. This finding implies that online fear of missing out substantially impacts psychological well-being primarily through its influence on problematic internet use. On the other hand, the direct effect of online fear of missing out on psychological well-being is non-significant, with only 31.9 percent of the effect attributed to pathways not involving problematic internet use. This indicates that, in the absence of problematic internet use, the direct impact of online fear of missing out on well-being is minimal.

Moreover, the analysis demonstrated that the total effect of online fear of missing out on psychological well-being is fully mediated by problematic internet use. In this sense, online fear of missing out does not directly influence psychological well-being. Instead, online fear of missing out affects psychological well-being entirely by increasing problematic internet use, which in turn impacts psychological well-being. This is reflected in the 100 percent mediation, where all of the total effect is explained by the indirect pathway through problematic internet use. These findings align with the study of Benzi et al. (2024), which highlights that higher levels of fear of missing out contribute to increased problematic internet use, thereby negatively impacting the psychological well-being of emerging adults. In conclusion, these results underscore that Gen Z students' experiences with online fear of missing out significantly affect their psychological well-being, mediated by their problematic internet use. It implies that

excessive internet use and persistent online engagement, resulting in poor digital habits, can have detrimental effects on an individual's overall well-being.

6.0 Conclusion and Recommendations

This study highlights the connection between digital habits and mental health, showing how certain online behaviors can significantly affect well-being. It further emphasizes that problematic internet use is not only influenced by emotional factors like the fear of missing out but also contributes to a cycle that negatively impacts mental health. This relationship shows that digital behaviors go beyond simple technology use but it also deeply affect how people feel and deal with life. Moreover, this study also emphasizes the need to understand how digital interactions shape emotional and psychological well-being. Overall, the findings of this study highlights the importance of taking action to promote better digital habits and protect mental well-being in today's modern world. Hence, this study recommends the following:

To the School Administrators. They may implement programs and policies that address the negative impacts of online fear of missing out and excessive internet use. Additionally, integrating digital literacy and healthy screen time habits into the curriculum can help students develop balanced online and offline interactions.

To the Faculty. They may incorporate discussions about mental health, the risks of excessive internet use, and coping strategies for online fear of missing out into their lessons. Faculty should encourage students to prioritize face-to-face interactions and create assignments or projects that promote offline collaboration, helping to reduce the temptation to overuse digital platforms.

To the Parents. They may actively engage in open discussions with their children about their online activities and the potential risks of online fear of missing out and excessive internet use. Parents should set reasonable boundaries regarding screen time, encouraging their children to disconnect regularly and engage in offline activities such as sports, hobbies, or family bonding.

To the Students. They may practice self-awareness and mindfulness regarding their internet usage, recognizing when online fear of missing out or excessive online engagement starts to negatively impact their mental health. Students should set boundaries for their social media use and explore activities that promote relaxation, socializing, and personal growth outside the digital space.

To the Future Researchers. They may continue exploring the evolving relationship between digital behaviors and mental health among Gen Z students. Researchers can further examine the long-term effects of online engagement on mental health, considering both individual and environmental factors that may contribute to online fear of missing and problematic internet use. Additionally, exploring cross-cultural differences in how online fear of missing manifests and impacts well-being could provide valuable insights for creating globally relevant digital health interventions.

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