Mental Health Conditions and Quality of Life among Online Gambling College Students: A Descriptive Study

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Abstract

The phenomenon of online gambling is widespread among college students in Indonesia. However, little is known about its impact on their mental health and health-related quality of life. This study aimed to examine the mental health and quality of life of college students affected by online gambling. A cross-sectional survey was conducted with online questionnaires distributed to 118 students who had engaged in online gambling within the past 12 months. The Self-Report Questionnaire-20 (SRQ-20) and the 12-Item Short Form Health Survey (SF-12) were used for assessment. Results showed that Mental Component Summary (MCS-12) scores were lower than Physical Component Summary (PCS-12) scores. Respondents reported issues such as sleep disturbances, difficulty enjoying daily activities, fatigue, decision-making struggles, lack of a sense of purpose, feelings of unhappiness and worthlessness, nervousness, and frequent worry. These findings suggest that online gambling may have a harmful effect on students' mental health and overall quality of life.

Keywords: College students, health related quality of life, mental health, online gambling.

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Introduction

Online gambling promotions remain prevalent today, extending beyond traditional channels into online advertisements and even involving celebrities to endorse these platforms (Asyidiqi, 2024). Online gambling sites have existed since the advent of websites in the 1990s, achieving widespread popularity as an "internet sensation" in the early 2000s (Wood, 2007). Advances in information and

communication technology have transformed the internet into a multi-platform resource, accessible on personal devices like smartphones (Sidiq & binti Abdullah Suhaimi, 2024). Unlike traditional gambling, online gambling can be conducted privately, anytime, anywhere, with rapid and immediate feedback (Gainsbury, 2015). The increasing variety of online gambling options further fuels addiction by offering players flexible and constant access (Rafiqah & Rasyid, 2023). This addiction is driven not only by the prospect of winning or losing but also by the unique characteristics of gambling: its unpredictability, the thrill of risk, and the stimulating tension and fear it provokes (Savelle-Rocklin & Akhtar, 2019).

Katadata.co.id (Muhamad, 2023) reported a steady increase in online gambling transactions in Indonesia over the past five years. Data from the Financial Transaction Reports and Analysis Center (PPATK) shows that between 2017 and 2022, approximately 157 million online gambling transactions were conducted, totaling IDR 190 trillion in turnover. This information was gathered from an analysis of 887 entities within the online bookie network. In 2017 alone, PPATK recorded 250,700 transactions valued at IDR 2 trillion.

Online gambling refers to gambling activities conducted over the internet, where players agree on the rules and place bets electronically. When a selected team wins, the gambler receives a prize corresponding to their wager (Dzaki et al., 2024). Advances in technology, including internet access and internet-enabled devices, have facilitated this form of gambling (Gainsbury, 2015). A key convenience of online gambling is its accessibility anytime and anywhere, requiring only an internet connection and a smartphone or laptop (Budiman et al., 2022). Additionally, gambling opportunities are often concentrated in socio-economically disadvantaged areas (Raisamo et al., 2019). Research from various countries indicates that while higher-income groups spend more on gambling, lower-income groups contribute a larger proportion of their income (Roukka & Salonen, 2020). For those with lower incomes, significant gambling expenditures can lead to financial harm, as they have fewer resources to recover from losses (Grönroos et al., 2022). Furthermore, societal norms that tolerate gambling contribute to its spread within communities (Aidah & Pratama, 2022).

Consistent with previous studies, the phenomenon of online gambling is widespread among students who have a strong interest in it . The accessibility of online gambling sites and the pervasive use of mobile devices put many college students at risk of developing gambling addictions (Prakash et al., 2024). For some students, these activities are viewed as a way to earn extra money or even as a primary income source to cover their daily expenses, making online gambling a normalized part of their lives (Siringoringo et al., 2024). Among students, online gambling has become commonplace, viewed as either entertainment or a potential profit-making activity due to its ease of access (Dzaki et al., 2024).

The reach of online gambling is extensive, reflecting its global presence both technologically and organizationally. Online gambling operates primarily via the internet and digital television and is characterized by electronic operation, service-based organization within the gambling field, and a consumer base (Manzin & Biloslavo, 2008). Common forms of online gambling include poker, slot games, sports betting, lotteries, and the emerging trend of binary options trading (Aidah & Pratama, 2022). In Indonesia, lack of regulation around these activities has led to a 10.23% prevalence of pathological gambling among students (Nowak & Aloe, 2014). Research shows that students who gamble online often encounter serious challenges, such as debt, family conflicts, truancy, and anxiety (Petry & Gonzalez-Ibanez, 2013)

Gambling activities pose potential economic, social, and psychological issues. The compulsion to gamble can obstruct personal development and escalate into a disorder known as pathological gambling (Kusumo et al., 2023). According to the DSM-5, gambling disorder is a recurring, maladaptive pattern of gambling behavior marked by an uncontrollable urge to gamble, despite significant personal consequences. This disorder can lead to social and personal challenges, including impaired functioning, theft, bankruptcy, divorce, imprisonment, and a reduced quality of life (Prasad & Jiriwal, 2019). The pathological drive to gamble online can become all-consuming, creating mistrust in their relationship with their spouse (Järvinen-Tassopoulos, 2020)

Gambling disorder shares clinical and neurobiological characteristics with substance use disorders, including craving and loss of control (Romanczuk-Seiferth et al., 2014). Individuals with gambling disorder often exhibit a pattern of urgently attempting to recoup their losses, driven by a strong need to continue gambling (Mallorquí-Bagué et al., 2023). As a result, gambling not only has direct negative effects but also indirectly leads to harmful outcomes for both individuals and society (Siringoringo et al., 2024). This aligns with other research indicating additional adverse effects: stress-related medical conditions, such as hypertension, peptic ulcers, and migraines, are common among pathological gamblers (Prasad & Jiriwal, 2019). Studies have also linked excessive gambling to mental health issues, including elevated levels of stress, anxiety, depression, and a higher likelihood of gambling addiction (Dash & Howard, 2024). A greater frequency of online gambling is statistically associated with poorer physical and mental health outcomes, even after controlling for demographic factors and gambling pathology (Gainsbury, 2015). This suggests that gambling participation may be associated with a tendency toward risk-taking behavior, which can foster heightened impulsivity. This, in turn, exacerbates the effects on mental health, contributing to emotional and psychological disorders and diminishing health-related quality of life (HRQoL).

Mental disorders impact an individual's thoughts, emotions, and behaviors, often significantly impairing daily functioning and quality of life (Vitoasmara et al., 2024). This can create problem-solving challenges, increase stress, and further weaken mental health (Putri et al., 2015). Prior computational studies have shown that individuals with mental disorders display changes in language and behavior, such as increased negative emotions and heightened self-focus (Uban et al., 2021). When students experience emotional and mental disorders, these conditions frequently lead to declines in academic performance and, in some cases, school dropout (Prasetio et al., 2019). Previous research identifies two categories of common mental disorders namely depressive disorder and anxiety disorder. These disorders impact the mood and or feelings of the affected person for example, feeling of uneasiness, being fearful and nervous or low, sad and miserable (Netsereab et al., 2018)

Quality of life (QoL) is a broad concept encompassing various factors that affect individuals' lives. A more specific term, health-related quality of life (HRQoL), focuses on the effects of health, illness,

and treatment on one's quality of life (Ferrans et al., 2005). HRQoL is often described as an individual's functioning and well-being in relation to health, covering physical, psychological, and social aspects of life (Karimi & Brazier, 2016). According to Ware et al. (1995), HRQoL has two primary dimensions: the Physical Component Summary (PCS) and the Mental Component Summary (MCS). PCS measures physical health-related conditions, such as moving a table or climbing stairs, while MCS assesses mental health aspects, including symptoms of depression. Each dimension includes specific sub-domains. For PCS, these sub-domains are: a) Physical Functioning, b) Role-Physical, c) Bodily Pain, and d) General Health. For MCS, the sub-domains are: a) Vitality, b) Social Functioning, c) Role-Emotional, and d) Mental Health.

Research by McCormack and Griffiths (2011) on the effects of gambling on quality of life (QoL) indicated that gambling can lead to health issues, including mental disorders, physical challenges, and emotional problems, all of which impact QoL. Further studies have linked gambling severity with poorer general health outcomes. For instance, Kalkan and Bhat (2022) found that students who regularly engaged in online gambling experienced decreased QoL and increased symptoms of depression, while Sidiq and binti Abdullah Suhaimi (2024) reported associations with anxiety, stress, and impulsive behavior.

In Indonesia, the impact of online gambling on students' mental health and QoL remains a critical area for ongoing research, given the recent rise in negative consequences such as gambling addiction, financial issues, and other related harms (Kurniawan et al., 2022). Although online gambling is explicitly prohibited by Indonesian law, its prevalence continues to grow (Gunawan et al., 2023), with significant implications for how gambling practices evolve, including the transition of traditional gambling games to new forms online (Sidiq & binti Abdullah Suhaimi, 2024). This study aims to examine the effects of online gambling on mental health and QoL among students in Jakarta, Indonesia. The results are expected to provide both theoretical and practical insights, contribute to the understanding of these related variables, and serve as a foundation for further research. Additionally, these findings may help raise awareness of the associated consequences.

Method

Study Design

A cross-sectional study was conducted among college students in Greater Jakarta by distributing questionnaires in June 2022. This non-experimental, quantitative study used an analytical design, collecting data at a single point in time. The study aimed to assess the relationship between independent and dependent variables based on this one-time measurement (Morling, 2018).

Sampling

This study employed a non-probability sampling method to gather a sample of college students with any experience in online gambling within the past 12 months. This approach was chosen for its convenience and the ease of accessing participants who met the study's criteria (Plano Clark & Creswell, 2005). The online questionnaire, created on the Google Forms platform, was shared across multiple channels, including discussion forums, college student groups, and social media platforms. Each announcement provided details about the study's purpose, informed consent, and a link to the questionnaire. In total, 118 participants completed the survey.

Instruments

The Self-Report Questionnaire 20 (SRQ-20) was used in this study to assess symptoms of mental disorders. Originally developed by the WHO in collaboration with several countries, SRQ-20 has been applied to identify the need for mental health services in numerous developing countries (World Health Organization, 1994). In this study, the SRQ-20 was translated into Bahasa Indonesia, yielding a Cronbach's Alpha of 0.84 (Prasetio et al., 2022). Participants reported any symptoms experienced over the past 30 days by responding to 20 questions on neurotic disorder symptoms with "yes" (score = 1) or "no" (score = 0) options. Previous research by Prasetio et al. (2022b) identified five factors in the Indonesian version of the SRQ-20: energy (e.g., "Do you often have headaches?" "Is your appetite poor?" "Do you sleep badly?"), cognitive (e.g., "Did you find it difficult to make decisions?" "Is your daily work suffering?" "Are you unable to play a useful role in life?"), depression (e.g., "Did you feel unhappy?" "Do you feel that you are a worthless person?" "Has the thought of ending your life been on your mind?"), physiological (e.g., "Was your digestion poor?" "Do you have uncomfortable

feelings in your stomach?"), and anxiety (e.g., "Were you easily frightened?" "Do your hands shake?" "Do you feel nervous, tense, or worried?"). The SRQ-20 had an overall Cronbach's Alpha of 0.782.

The 12-item Short Form Health Survey (SF-12) was used to measure general quality of life (QoL) (Hagell et al., 2017). Developed as a condensed version of the SF-36, the SF-12 captures two components: the physical component summary score (PCS-12) and the mental component summary score (MCS-12), with a shorter completion time. The SF-12 has demonstrated validity and reliability across diverse populations (Arovah & Heesch, 2021; Montazeri et al., 2009; Shah & Brown, 2020; Ashing-Giwa et al., 2010; Salyers et al., 2000; Worcester et al., 2007). The scale consists of 12 items with various response options, including general health perception (e.g., "In general, would you say your health is...?") with a five-point scale, physical functioning (e.g., "Does your health now limit you in these activities?" such as "Climbing several flights of stairs" or "Moderate activities like moving a table, sweeping, or playing golf") with three response options, role limitations due to physical health (e.g., "Have you had any of the following problems with work due to your physical health?" including "Accomplished less than you would like" and "Were limited in the kind of work or other activities") with two response options, body pain (e.g., "How much did pain interfere with your everyday work?") with five options, and mental health (e.g., "Did you have much energy?" "Have you felt calm and peaceful?") with six response options. Scores for PCS-12 and MCS-12 were calculated using a scoring algorithm based on the U.S. population, as an Indonesian-specific algorithm was unavailable. PCS-12 had a Cronbach's Alpha of 0.785, and MCS-12 had a Cronbach's Alpha of 0.746, with scores above 0.7 considered acceptable (Cronbach, 1951).

Data analysis

The data collected through Google Forms was transferred to Excel and then imported into SPSS 25 for analysis. Descriptive statistics were conducted to provide an overview of participants' demographic information and mental health characteristics, including the calculation and presentation of frequency distributions and percentages.

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Result

Table 1 presents demographic data for the study participants. The sample consisted primarily of men (98.3%), with women representing only 1.7%. Among the types of gambling, 98.3% of participants played slot games, while only 0.8% engaged in lottery and another 0.8% in casino gambling. Most participants (67.8%) had been gambling online for more than six months, while 32.2% had been doing so for less than six months. A majority of the respondents (60.1%) resided in the South of Jakarta.

Table 1

Demographic data of participants (N = 118)

Demographic data	N	%
Gender		
Male	115	98.30
Female	2	1.70
Type of online gambling		
Slot gambling	116	98.30
Lottery	1	0.80
Casino	1	0.80
Duration online gambling		
Above six months	80	67.80
Under six months	38	32.20
Location		
West of Jakarta	20	17.2
East of Jakarta	15	12.9
Center of Jakarta	6	5.2
North of Jakarta	6	5.2
South of Jakarta	71	60,1

As shown in Table 2, the MCS-12 score was lower than the PCS-12 score, indicating comparatively lower mental health scores. Participants' mental health status was further assessed using the SRQ-20, which showed that the energy factor had the highest mean score (5.20), followed by the cognitive factor (2.20), depression factor (1.70), anxiety factor (1.50), and physiological factor (0.90). Overall, 74.6% of participants showed signs of mental illness, while 25.6% had no indications of mental illness.

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Table 2.
SF-12 and SRQ-20 Results (N = 118)

SF-12	Mean	SD
PCS-12	42.56	5.20
MCS-12	39.37	6.80
SRQ		
SRQ - Energy	5.20	1.10
SRQ - Cognitive	2.20	0.90
SRQ - Depression	1.70	0.90
SRQ – Physiological	0.90	0.80
SRQ - Anxiety	1.50	1.10
	N	%
Case of mental illness	88	74.60
No case of mental illness	30	25.40

Table 3 displays the individual response items from the SRQ-20. The items with the highest number of "yes" responses were: difficulty sleeping, lack of enjoyment in daily activities, feelings of tiredness, difficulty making decisions, interference with daily work, not feeling useful in life, feeling unhappy and worthless, feeling easily frightened and nervous, and feeling tense and worried.

Table 3
Responses for SRQ-20 items

No	Item	N	%
	Energy		
1	Do you often have headaches?		
	Yes	54	45.80
	No	64	54.20
2	Is your appetite poor?		
	Yes	40	66.10
	No	78	33.90
3	Do you sleep badly		
	Yes	103	87.30
	No	15	12.70
11	Do you find it difficult to enjoy your daily activities?		
	Yes	91	22.90
	No	27	77.10
18	Do you feel tired all the time?		
	Yes	94	79.70
	No	24	20.30
20	Are you easily tired?		
	Yes	100	84.70
	No	18	15.30
	Cognitive		
12	Do you find it difficult to make a decision?		
	Yes	93	78.80
	No	25	21.20
13	Is your daily work suffering?		

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Table 3
Responses for SRQ-20 items

	Yes	93	78.80
	No	25	21.20
14	Are you unable to play a useful part in life?		
	Yes	85	72.0
	No	33	28.0
	Depression		
9	Do you feel unhappy?		
	Yes	89	24.60
	No	29	75.40
16	Do you feel that you are a worthless person?		
	Yes	85	72.0
	No	33	28.0
17	Has the thought of ending your life been on your mind?		
	Yes	22	81.40
	No	96	18.60
	Physiological		
7	Is your digestion poor?		
	Yes	57	51.70
	No	61	48.30
19	Do you have an uncomfortable feeling in your stomach?		
	Yes	47	39.80
	No	71	60.20
	Anxiety		
4	Are you easily frightened?		
	Yes	69	58.50
	No	49	41.50
5	Do your hands shake?		
	Yes	25	29.7
	No	83	70.30
6	Do you feel nervous, tense or worried?		
	Yes	73	61.90
	No	45	38.10

Discussion

This study aimed to provide a descriptive overview of mental health conditions and health-related quality of life (HRQoL) among students engaged in online gambling in Jakarta. An analysis of 118 college students involved in online gambling highlighted their quality of life (QoL) and mental health conditions. The findings revealed that most participants exhibited probable mental health issues, particularly in areas of energy (e.g., difficulty sleeping, feeling persistently tired), cognitive functioning (e.g., decision-making challenges, daily life functioning), and emotional well-being (e.g., feelings of unhappiness, worthlessness, nervousness, and worry).

The participants' mean PCS-12 and MCS-12 scores were lower compared to quality-of-life scores in older Indonesian adults (Arovah & Heesch, 2021). Good QoL is typically marked by high levels of

physical, mental, and social well-being. In contrast, students engaged in online gambling experienced various low level of psychological well-being (Khasmohammadi et al., 2020). These students often directed their energy toward gambling, neglecting basic life needs, which could lead to exhaustion, disturbed sleep, reduced concentration, and emotional regulation difficulties. Stress-induced fatigue, driven by behavioral habits like gambling, can further impact mental health and quality of life (Lateef, 2013; Meriläinen, 2022).

Frequent online gamblers also reported physical fatigue, often losing track of time and neglecting essential needs like eating and drinking, which may lead to dehydration and malnutrition (Bener et al., 2019; Männikkö et al., 2015). Prolonged gambling is associated with musculoskeletal pain and changes in hand and wrist functioning (Kumar et al., 2023). The cognitive strain from extended gambling sessions can impair concentration, heighten impulsivity, and foster cognitive distortions, such as irrational beliefs (Mallorquí-Bagué et al., 2019). Many participants experienced decision-making difficulties, potentially linked to altered brain activity affecting stress responses (Lateef, 2013).

Psychological health strongly impacts QoL, affecting stress, life satisfaction, and happiness. Those who accept their circumstances tend to experience less stress and anxiety and achieve greater happiness. For students involved in online gambling, these mental health challenges can hinder academic performance, affecting information processing, memory, impulse control, and motivation, essential for academic success (Jacob & Sandjaya, 2018).

The study found more male than female students participated in online gambling, with slot games being the most popular, often with an average duration of over six months. Gambling issues are generally more prevalent in men, both in general and clinical populations (Håkansson & Widinghoff, 2020). Men are particularly susceptible to pathological gambling habits (Lateef, 2013). Gainsbury (2015) identified gender and young adulthood as risk factors for online gambling, with men more likely to engage in such behavior. While both genders gamble, women may also become problem gamblers, particularly in games of chance, which can help them cope with stress (Håkansson & Widinghoff, 2020).

In this study, 116 of 118 participants engaged in slot gambling, predominantly male students. Other research suggests women are more likely to participate in online casino and bingo games rather than sports betting. Women often gamble with financial gain in mind, although the risk of loss remains significant (Håkansson & Widinghoff, 2020). Online slot gambling is considered more rewarding than other types of gambling because of man-machine interaction. It is also concluded that adolescents who played slot machines showed more problematic behavior (i.e. excessive gambling, risky behavior, problem gambling behavior) (Lombardi et al., 2024)

This study has several limitations. First, it only included respondents from Greater Jakarta, limiting generalizability. Second, the descriptive design may benefit from additional psychological variables. Lastly, self-report instruments could be affected by social desirability; qualitative methods may offer deeper insights into the phenomenon.This study aimed to provide a descriptive overview of mental health conditions and health-related quality of life (HRQoL) among students engaged in online gambling in Jakarta. An analysis of 118 college students involved in online gambling highlighted their quality of life (QoL) and mental health conditions. The findings revealed that most participants exhibited probable mental health issues, particularly in areas of energy (e.g., difficulty sleeping, feeling persistently tired), cognitive functioning (e.g., decision-making challenges, daily life functioning), and emotional well-being (e.g., feelings of unhappiness, worthlessness, nervousness, and worry).

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Conclusion

Students who engaged in online gambling generally reported a lower quality of life and experienced more mental health issues. This suggests that online gambling may have harmful effects on both mental and physical health. This study has several important implications. First, preventing online gambling addiction could be pursued by raising awareness of its negative effects through social media or campus-based activities. It's also crucial to identify students who gamble frequently online and provide early interventions to prevent further escalation of addiction. Policies to mitigate addiction could include measures like setting limits on playing time or issuing pop-up warnings after multiple attempts. Second, support services should be available for those already affected by online gambling. For instance, university student services could offer counseling programs specifically designed to help students struggling with gambling addiction.

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Conflict of Interest
The researchers declare that this paper has no conflicts of interest.

Author Contribution
All authors have contributed equally to the study's conceptualization, interpreting data, reviewing, and editing the manuscript.

Data Availability
Data can be provided upon request to the author.

Declarations Ethical Statement
The study followed the guidelines of the Declaration of Helsinki.

Informed Consent Statement
Informed consent was obtained from all persons involved in the study.

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