LAPORAN AKHIR

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

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Introduction

In this present era of digital disruption, gambling is a group of activities that can be accessed on various virtual spaces through internet websites. Online gambling sites have been developed since the emergence of websites in 1990, gaining widespread attention as an "internet sensation" in the early 2000s. Access to these websites was initially restricted and was only available to certain groups who understood the intricacies of the internet. However, the development of information technology along with science and technology has changed the internet into a multi-platform entity, making it accessible to individuals through personal devices, such as smartphones. The ease of using the internet through smartphone devices has become the "easy way" for access by individuals at all stages of life, including children. (dalam Setiawati dkk, 2022). Online gambling is considered to be different from traditional gambling due to its ability to be carried out secretly (privately), anytime, anywhere, and with fast and instant feedback (Gainsbury, 2015)

Katadata.co.id (Muhammad, 2023) reported that online gambling transaction activity in Indonesia had continued to increase over the last five years. According to data from the Financial Transaction Reports and Analysis Center (PPATK), during 2017-2022, approximately 157 million online gambling transactions were carried out with a total turnover value of IDR 190 trillion. In addition, these data were obtained from searches and analysis of 887 parties in the online bookie network. In 2017, PPATK found that there were 250,7000 transactions with a total value of Rp. 2 trillion. The number and value are expected to reach a record high in 2022 in line with the consistent increase, as shown in the graph below.

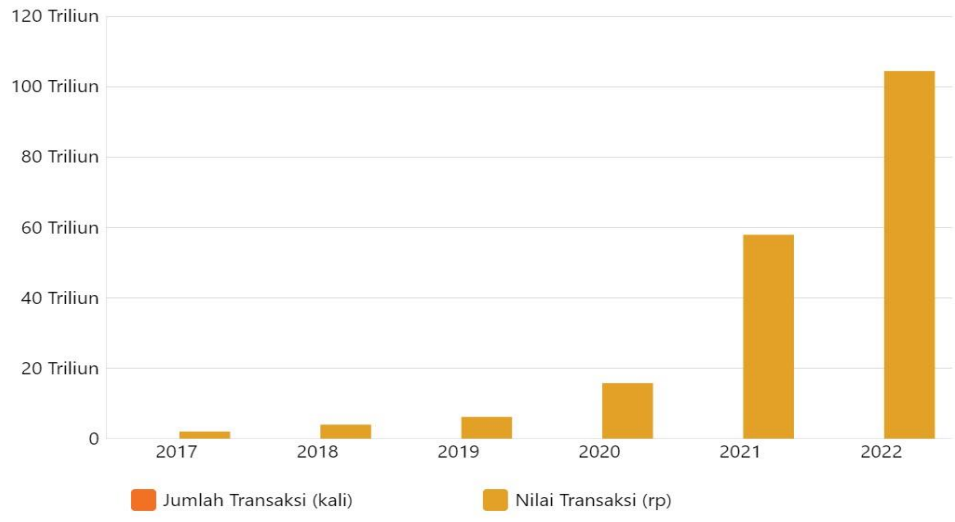

Figure 1. Number and Value of Online Gambling Transactions in Indonesia per Year (2017-2022)

According to previous studies, internet gambling or online gambling refers to a variety of betting and gaming activities offered through internet-enabled devices, including computers,

smartphones, tablets, and digital television devices. This mode of gambling is facilitated by technological advancement, including the availability of the internet and ownership of internet-enabled devices (Gainsbury, 2015). With the development of technology and information, gambling games are also experiencing changes, which are now considered to be safer and more practical. Playing these games is also relatively easy with the use of smartphone or laptop (Budiman et al., 2022). The driving forces behind gambling behavior are primarily social and economic. Individuals from lower socioeconomic backgrounds often view gambling as a potential pathway to improving their standard of living. In addition, societal norms that tolerate gambling behavior play a crucial role in its proliferation within communities (Aidah & Pratama, 2022).

In line with previous studies, online gambling phenomenon is also widespread among students who possess a high level of interest (Petry & Gonzalez-Ibanez, 2013). Technological developments have made it easier for students to make money instantly through gambling activities. Several students consider the activities as an alternative to earn pocket money or even as the primary source of income to meet their daily living needs. For these individuals, online gambling is considered normal and part of their daily lives (Siringoringo, Yunita, & Jamaludin, 2024). The reach of online gambling is vast, with players hailing from various countries, granting accessibility to anyone connected to the internet. Online gambling comprises traditional forms of gambling adapted for electronic platforms and internet accessibility. The common types include poker, slot games, sports betting, lottery, and the emerging trend of binary options trading (Aidah & Pratama, 2022). The lack of control over these activities can lead to the development of pathological gambling behavior in Indonesia, with Nowak dan Aloe (2014) reporting a 10.23% prevalence among students. Several studies have shown that students who gamble online often experience various challenges, including debts, problems with family, truancy, and anxiety. (Petry & Gonzalez-Ibanez, 2013).

Gambling activities have the potential to become an economic, social, and psychological problem. The urge to continue gambling can potentially hinder self-development into a disorder known as pathological gambling (Kusumo et al., 2023). In addition, an excessive desire or urge to play (pathological craving) appears and eventually escalates into a compulsive urge, which is carried out continuously to the point of ignoring other aspects of life. Individuals typically continue to play despite the negative consequences for mental and physical health, personality, family relationships, friendships, work, and education (school, college). The pathological need to engage in online gambling has become very dominant, replacing other interests, hobbies, forms of activities, and relationships as well as basic needs, such as eating, sleeping, intimacy, and child care (Zinchenko, 2021).

Failure to abstain from gambling can trigger a renewed urge to engage, perpetuating a cycle that can result in the accumulation of debt and the potential onset of poverty and contribute to elevated crime rates. Consequently, gambling not only directly inflicts negative consequences but also indirectly fosters detrimental outcomes for both individuals and society at large (Siringoringo, Yunita, & Jamaludin, 2024). These findings were in line with several studies, revealing additional adverse effects,

such as heightened rates of health comorbidities and mental health issues among internet gamblers compared to their non-internet counterparts. Online gambling has also been linked to increased instances of smoking, alcohol consumption, substance abuse or dependence, and mood disorders. A higher frequency of online gambling has been statistically associated with poorer physical and mental health outcomes, after controlling for demographic factors and pathological gambling tendencies (Gainsbury, 2015). This indicates that engagement is related to a propensity for risk-taking behavior, potentially fostering the development of heightened impulsivity among individuals. This, in turn, exacerbates the impact on mental health, contributing to emotional and psychological disorders, as well as a decline in health-related quality of life (HRQoL).

Mental health disorders are conditions where individuals experience difficulty in adapting to their surrounding environment. This can lead to an inability to solve problems, causing excessive stress and making mental health more vulnerable (Putri et.al., 2015). In addition, the tendency for emotional and mental disorders is a condition where individuals experience emotional changes that can develop into pathologies. When students experience emotional and mental disorders, the conditions often lead to a decline in academic grades and the decision to drop out of school (Prasetio et al., 2019). According to previous reports, there are 5 indicators of emotional and mental disorders, namely a) energy symptoms (a decrease in energy in the body), b) cognitive symptoms (difficulty concentrating in carrying out their demands and obligations), c) depression symptoms (showing loss of energy and loss of interest in something, feeling excessive guilt, difficulty concentrating, to the point of having thoughts of ending his life), d) physiological symptoms (the appearance of somatic and motor symptoms), and e) anxiety symptoms (a response to a threat whose source is unknown) (Idaiani, Suhardi, & Kristanto, 2009).

In the definition of quality of life (QoL), the term health-related quality of life (HRQoL) can also be used. QoL is an overall concept that combines all factors affecting individuals' lives, while HRQoL only includes factors that are part of individuals' physical, psychological, and social functioning health. In addition, HRQoL is defined as function and well-being, as well as the health aspects of QoL in physical, psychological, and social aspects (Karimi & Brazier, 2016). According to Ware, Kosinski, and Keller (1995), there are 2 primary dimensions, namely *Physical Component Summary* (PCS) and *Mental Component Summary* (MCS). PCS is a scale that detects all individual conditions in physical health criteria, such as moving a table or climbing stairs. Meanwhile, MCS is a scale that detects all individual conditions in terms of mental health criteria, such as depression. These 2 dimensions have their respective sub-domains. Sub-domains in PCS include a) Physical functioning (physical function), b) Role-physical (physical role), c) Bodily pain (body pain), and d) General health (general health). Meanwhile, the sub-domains in MCS include a) Vitality, b) Social functioning (social function), c) Role-emotional (emotional role), and d) Mental health. Based on a study conducted by McCormack dan Griffiths (2011) regarding the effects of gambling on QoL, gambling was reported to cause health problems, such as mental disorders, physical challenges, and emotional problems related

to QoL. Several reports also examined the relationship between gambling severity and self-evaluation of QoL, revealing that increasingly severe gambling problems were associated with worse general health conditions. Another study explored the mental health conditions and QoL of students who engage in online gambling regularly. The results showed that students had a decreased QoL and symptoms of depression (Kalkan & BHAT, 2022), anxiety, stress, and impulsive behavior (Sidiq & binti Abdullah Suhaimi, 2024). Despite the availability of several publications, there are limited reports on the impact of online gambling on mental health conditions and QoL among students in Indonesia. Therefore, this study aimed to determine the effect of online gambling on mental health conditions and QoL among students in Indonesia. The results are expected to provide theoretical and practical benefits, as well as contribute to the development of knowledge of related variables. The findings can also serve as a reference for further studies as well as raise awareness regarding the associated consequences.

METHOD

Study Design

A cross-sectional study was conducted among college students by distributing questionnaires in June 2022 in Greater Jakarta using a non-experimental quantitative study with an analytical design. This approach (cross-sectional study) focused on data collected once, followed by an assessment of the relationship between the independent and dependent variables through a one-time measurement (Sugiyono, 2013).

Sampling

This study used a non-probability sampling method to gather samples specifically focused on college students who had any experience with online gambling in the last 12 months. The method was used because the samples were readily available and convenient based on sampling criteria (Plano Clark & Creswell, 2005). Online questionnaires were composed using the Google Forms online platform and distributed through several channels. Discussion forums, college students' groups, and social media platforms were used to announce participation in the study. The announcement consisted of information regarding the purpose of the study, informed consent, and links to the online questionnaire. A total of 118 participants completed the questionnaire.

Instruments

Self-Report Questionnare20 (SRQ-20) was utilized to assess and identify symptoms of mental disorders. Originally developed by WHO and various collaborating countries, SRQ-20 was used to identify the need for mental health services in many developing countries (World Health Organization, 1994). In this study, SRQ-20 was translated into Bahasa Indonesia with a Cronbach Alpha of 0.84 (Prasetio et al., 2022). Participants were asked to report any symptoms they experienced for the last 30

days with 20 questions about neurotic disorder symptoms which could be answered in two options, yes (score = 1) and no (score = 0). A previous study conducted by Prasetio et al. (2022b) revealed five factors in SRQ-20 in the Indonesia version, namely energy (e.g. Did you often have headaches?), cognitive (e.g. Did you find it difficult to make decisions), depression (e.g. Did you feel unhappy?), physiological (e.g. Was your digestion poor?), and anxiety (e.g. were you easily frightened?).

The 12-item Short Form Health Survey (SF-12) was an instrument used to measure generic quality of life (QoL) (Hagell et al., 2017). It was developed as a condensed version of SF-36 that yielded two components, namely the physical component summary score (PCS-12) and mental component summary score (MCS-12), but with lesser completion time. SF-12 had proven its validity and reliability in several general and specific 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 consisted of 12 items with several answer options including general health perception (e.g. In General, would you say your health is?) has 5 points answer option, physical functioning (e.g. Did your health now limit you in these activities?) with three answering options, role limitation due to physical health (e.g. Have you had any of the following problems with your work as a result of your physical health?) with two answering option and body pain (How much did pain intervene with your everyday work) with five options and mental health (Did you have much energy?) with six answering option. To calculate PCS-12 and MCS-12 scores, a scoring algorithm based on the U.S. population was employed as no algorithm for the Indonesian population was available.

Data analysis

The data collected through Google Forms was extracted into Excel and subsequently imported into SPSS 25 for analysis. Descriptive statistics were performed to give an overview of the participants' demographic data and mental health characteristics. This included calculating the percentages and frequency distributions that were presented.

Results

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

Table 1 displayed demographic data for the study's participants. The sample was composed predominantly of men (98.30%) than women (1.70%). 98.30% of the participants played slot gambling, followed by lottery (0.80%) and casino (0.80%). Most of them (67.80%) had played online gambling for more than six months, while 32.20% played under six months.

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

As shown in Table 2, the score of MCS-12 was low compared to PCS-12. The participant's mental health condition was described with an SRQ-20 mean score. The energy factor had the highest mean score (5.20), followed by the cognitive factor (2.20), depression factor (1.70), the anxiety factor

(1.50), and the physiological factor (0.90). The overall presence of mental illness in this study was 74.60%, and the percentage of participants with no case of mental illness was 25.60%.

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?		
	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

Table 3 showed each SRQ-20 response item. The items that had the most yes answers were difficulty in sleeping, enjoying daily activities, tiredness, difficulty making decisions, daily work suffering, playing a useful part in life, feeling unhappy and worthless, easily frightened and nervous, and lastly, tense and worried.

Discussion

This study shed light on the quality of life (QoL) and mental health conditions of college students who engaged in online gambling. It was reported that the majority of the participants had probable cases of mental health problems, particularly in energy (difficulty in sleeping and enjoying life, feeling tired all the time and easily getting tired), cognitive functioning (making decisions and functioning in daily life), and emotion (feeling unhappy, worthless, frightened, nervous, tense and worried).

The participants' mean scores `of PCS-12 and MCS-12 were less, compared to quality-of-life scores in Indonesian older adults (Arovah & Heesch, 2021). A good QoL referred to a condition characterized by a high level of physical, mental, and social well-being. The QoL for students could be said to be less suitable when it caused various psychosocial difficulties, such as poor interpersonal relationships, low self-esteem, and depression (Pitil et al., 2020). For students, who were online gambling players, mental health problems related to energy, cognitive function, and emotions will be affected. Students had the chance to channel all their energy into online gambling and ignore their most basic life needs, which could result in feeling extremely tired. This could impact the quality of sleep, concentration in studying, or managing emotions. Exhaustion caused by stress could occur due to behavioral problems, habits, and certain types of addiction or habits including online gambling behavior, they continue this activity for long periods. The fatigue experienced by online gambling players was similar to that seen in athletes or individuals who engaged in continuous physical work or prolonged endurance sports. They tend to lose track of time and forget their routine needs, such as eating and drinking which could lead to dehydration and malnutrition. Other risks associated with prolonged gambling activities could result in worsened conditions of vein thrombosis, acute coronary syndrome, and even seizures, specifically for individuals who have risk factors for the disease. Besides, prolonged cognitive load includes gambling in the example of this study, which could cause difficulty in concentration, and their minds become confused because they think about gambling continuously. The participants even have difficulty making decisions in everyday life, which could be explained by brain performance, involving sympathetic nervous hyperactivity and a decrease in parasympathetic nervous activity. The 2 systems worked in opposition to maintain body balance, specifically when faced with stressful or threatening situations (Lateef, 2013). Psychological conditions as known could influence QoL and mental health conditions related to stress, satisfaction with life, and happiness. Individuals who could accept their life conditions well are assumed not to experience stress, anxiety, or significant psychological disorders and rather achieve happiness. This condition had an impact on academic performance of students who played online gambling, because after a long duration, this mental health problem could have an impact on information processing, attention, memory, decision making, impulse control, and motivation which was one of the components for participating in academics (Jacob & Sandjaya, 2018).

This study aimed to find a descriptive picture of mental health conditions and health-related quality of life (HRQoL) in students who played online gambling in Jakarta. Based on an analysis carried out on 118 online gambling students, it was found that more male students played online gambling compared to female students. Slot gambling is the most played, with an average duration of more than six months. Gambling problems were generally shown to have occurred more frequently in men than women, both in the general population and in clinical settings. (Hakansson & Widinghoff, 2020). More men were thought to suffer from pathological gambling habits compared to women (Lateef, 2013). According to Gainsbury's statement (2015), gender was a risk factor for online gambling, and men and young adults who came from diverse cultural backgrounds were identified to gamble more online. This was also reinforced by the study findings, which consistently showed the relationship between online gambling and male individuals, particularly teenagers and young adults who were vulnerable to the negative impacts of online gambling. However, online gambling among men was an area that required further attention and investigation to minimize the negative impacts that could occur. Although, other study findings showed that both men and women gamble, at least women could also be problem gamblers like men. They could develop a gambling problem to relieve the level of stress they were experiencing, specifically from games based on chance, which were used more frequently compared to men. (Hakansson & Widinghoff, 2020).

Based on the results of this study, it was found that the type of online gambling that was most played was slot gambling. A total of 116 of 118 participants played slot gambling, in which male students gained dominance. Meanwhile, other study findings explained that women were more likely to engage in online casino gambling, land-based casino, and online bingo gambling and were less likely to engage in gambling related to sports betting. Women tend to gamble to acquire more money rather than spend much, however, the chance of losing was also significant (Hakansson & Widinghoff, 2020). Online slot gambling was betting, using popular online slot machines through unique components. This machine gambling is considered safer than real machine gambling because the activity was challenging to be detected.

Nugroho and Haryono (2022)’s study explained that online slot gambling influenced social retention among students. The offers made by their admin and the influence of peers make students tempted through their website. In this factor, students had the same reference which was their peers, because they thought it was a trend where everyone did it a lot, and got a significant profit from small capital, creating this student mindset. They were influenced by peers and this created a feeling of wanting to try in the hope of reaping big results and being able to follow the trends in their environment.

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