



RESEARCH ARTICLE

Online Gambling Consumer Behavior: Addiction, Social Stigma, Psychological Distress, and Gender Differences

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Abstract: This study investigates the differences in online gambling addiction, psychological distress, and social stigma considerations between men and women. Furthermore, this study examines the moderating role of gender in the relationship between social stigma and online gambling addiction, and between addiction and psychological distress. This research involved 191 respondents, with 128 men and 63 women. Results showed that men have significantly higher levels of addiction, psychological distress, and consideration of social stigma compared to women. Social stigma has a significant positive effect on addiction, while addiction itself has a positive impact on psychological distress for both genders. However, gender does not moderate these relationships, suggesting that the mechanisms influencing addiction and psychological distress are universal across genders. This study emphasises the need for inclusive preventive interventions, particularly targeting young men, and social support-based and empathetic educational approaches to reduce addictive behaviors and mitigate the psychological consequences of online gambling.

Keywords: Addiction; Consumer Behavior; Gender Differences; Online Gambling; Psychological Distress; Social Stigma

INTRODUCTION

Addiction, particularly in the context of online gambling, is a repetitive behavioral pattern that is difficult for individuals to control, leading to functional impairment or distress (Hunt et al., 2023; Trivedi & Teichert, 2018). The conceptualisation of addiction is still debated, particularly regarding gender differences. Previous research has identified comorbidity between gambling and sexual addiction, highlighting the complex interaction between psychological and biological factors (Hakami et al., 2021). The Diagnostic and Statistical Manual of Mental Disorders (DSM) has recognised gambling disorder as an addiction. Still, he remains hesitant to provide a similar classification for sexual addiction (Kensbock et al., 2022; Nicholson et al., 2019). This study aims to contribute by clarifying structural differences of online gambling addiction based on gender, psychological distress, and social stigma.

Behavioral addictions, including online gambling, pose significant global psychosocial challenges. Online gambling has emerged as a rapidly expanding global phenomenon, posing significant social and public health challenges (Benedetti et al., 2025; Caudwell et al., 2025; Hunt et al., 2023). Recent studies have shown that the prevalence of online gambling continues to increase (Antonio et al., 2025; Ghelfi et al., 2024). This growth is driven by the easy

access to digital platforms and the normalisation of gambling through social media and mobile apps. The World Health Organisation (WHO) and public health authorities have recognised gambling-related harms as a serious global concern. These harms include addiction, financial distress, and psychological disorders that cross national boundaries. This study shows a gap in understanding the unique gender-based expressions of addiction (Hunt et al., 2023; Penfold & Ogden, 2024). Research on addictive behavior in gambling enables gender-sensitive prevention and intervention strategies. Gambling addiction affects an individual's emotional, financial, and social well-being (Benedetti et al., 2025; Sharifibastan et al., 2025). Despite the existence of tools like the Bergen-Yale Sex Addiction Scale (BYSAS), gender-based analysis of online gambling addiction behavior is still rare (Hunt et al., 2023; Williams et al., 2020). This research is expected to provide a practical approach for early detection and behavioral intervention for online gambling addiction. The difference in addiction between men and women reflects underlying behavioral disparities. Previous analyses using the Bayesian Network Model provided limited insights because they did not focus on gender (Hunt et al., 2023).

The rapid growth of online gambling has raised serious concerns regarding its impact on individuals' psychological well-being and social behavior (Sharifibastan et al., 2025). While online gambling addiction is increasingly recognised as a public health issue (Efrati, 2025), the interplay between social stigma, psychological distress, and gender differences remains insufficiently explored (Gürbüz & Gürkan-Yıldırım, 2025). Specifically, it is not yet clear whether men and women experience

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different levels of addiction, psychological distress, and sensitivity to social stigma in the context of online gambling. Furthermore, although gender is often assumed to moderate the relationship between social stigma and addictive behavior, as well as between addiction and psychological distress, empirical evidence on this issue is still limited. This gap underscores the need for a more comprehensive investigation into the behavioural and psychological dynamics of online gambling across different gender groups (Gürbüzer & Gürcan-Yıldırım, 2025). The objectives of this study are threefold. First, to examine and compare the levels of online gambling addiction, psychological distress, and sensitivity to social stigma between men and women. Second, to investigate the impact of social stigma on online gambling addiction and determine whether this relationship differs by gender. Third, to analyse the effect of online gambling addiction on psychological distress and assess whether gender moderates this association. By addressing these objectives, this study aims to provide a more comprehensive understanding of online gambling behavior and its psychological implications across gender groups.

This study contributes to the growing literature on online gambling behaviour by examining gender differences in addiction levels, psychological distress, and perceptions of social stigma. Unlike prior research that primarily modelled addiction mechanisms, this study focuses on comparing these psychological and social dimensions across genders and testing the moderating role of gender in the relationship between social stigma, addiction level, and psychological distress. By identifying how men and women differ in their addiction-related experiences and emotional responses, this study provides empirical evidence to support the design of gender-sensitive prevention and intervention strategies. Furthermore, the findings extend existing behavioural and psychological frameworks by demonstrating that the pathways linking social stigma and psychological distress through addiction are consistent across genders, suggesting that the underlying mechanisms of addiction may operate universally despite observed mean differences.

This study enriches the theoretical and methodological framework through modelling that incorporates addiction behaviour, gender, psychological distress, and social stigma (Gürbüzer & Gürcan-Yıldırım, 2025; Hunt et al., 2023; Man & Cheung, 2022). This research contributes to building a gender-based online gambling addiction. Providing evidence of different gambling addiction relationships between men and women (Man & Cheung, 2022). Guiding the development of focused and precise treatments tailored to the gender of people with an addiction or a substance use disorder (Benedetti et al., 2025). Highlighting behavioral markers based on the severity of addiction. Advancing methodologies in addiction modelling, particularly for online gambling. Increasing the gender-specific therapeutic effectiveness. Providing insights into structural gender differences in the path to addiction. Bridging the gap between behavioral and biological addiction research. Sharpening social stigma by validating gender-based expressions of addictive behavior.

LITERATURE REVIEW

Addiction Theory

Addiction theory views addiction as a chronic disorder influenced by biological, psychological, and social factors (Grant et al., 2010; Magill et al., 2025). In the context of

online gambling, this theory highlights that addictive behavior is triggered by the activation of the brain's reward system involving dopamine (Grant et al., 2010; Magill et al., 2025). The "high" experienced from winning or gambling creates a positive feedback loop that reinforces the behavior. Previous studies have shown that the mechanisms of addiction are similar in online gambling and substance use disorders, including tolerance, salience, and conflict (Lin et al., 2024; Penfold & Ogden, 2024). Understanding addiction through this theory helps design interventions that target biological factors, such as pharmacological therapy, as well as psychological factors through cognitive behavioral therapy. Additionally, gambling addiction is often associated with social isolation and financial dependence, which exacerbate the addictive cycle (Lin et al., 2024).

According to Addiction Theory, addiction in men and women can be influenced by how they respond to rewards (Man & Cheung, 2022). Men often have a higher tendency to seek risks and challenges, such as skill-based gambling like poker, which provides them with a sense of achievement and social dominance (Efrati, 2025; Ghelfi et al., 2024). Women tend to gamble to avoid stress or seek an escape from emotional pressure (Carcelén-García et al., 2023). Their gambling choices usually depend on luck (such as lotteries or slots), which require little cognitive involvement but offer a temporary emotional experience. Social expectations also influence men to compete and take risks, leading them to gamble more frequently with larger bets (Rundle et al., 2025). Whereas women are more affected by social pressure and stigma related to gambling (Gürbüzer & Gürcan-Yıldırım, 2025; Sulistiyani et al., 2024).

In some cases, they are more likely to feel ashamed or guilty for engaging in activities considered "inappropriate," which increases their social isolation and psychological distress (Gürbüzer & Gürcan-Yıldırım, 2025; Hakami et al., 2021). Men are more likely to experience addictions involving high tolerance (needing to bet more to get satisfaction) and salience (gambling becoming the central focus of their lives). This behaviour is consistent with a competitive and goal-oriented behavioural pattern. Meanwhile, women more frequently exhibit addictive behaviours focused on avoiding stress and intrapersonal conflict. This difference reflects the different emotional needs between the two genders.

Theory of Planned Behavior

The Theory of Planned Behaviour (TPB) posits that the intention to engage in a behaviour, such as gambling, is influenced by attitudes toward the behaviour, subjective norms, and perceived behavioural control (Ajzen, 1991; Sulistiyani et al., 2024). In the context of online gambling, positive attitudes toward the prospect of large winnings, social support from peers or the surrounding environment, and a low perception of risk serve as major driving factors (Antonio et al., 2025). Empirical studies have demonstrated that social stigma influences gambling behaviour in gender-specific ways (Hunt et al., 2023; Penfold & Ogden, 2024). Men are more likely to participate in skill-based gambling activities, such as poker, whereas women tend to engage in chance-based games, like lotteries (Ghelfi et al., 2024; Greco & Curci, 2017). Social stigma also encourages men to perceive gambling as a demonstration of courage or dominance, while women may face greater stigma for their involvement in gambling activities (Carcelén-García et al., 2023). The TPB framework thus provides a valuable basis for developing educational campaigns aimed at altering attitudes and raising awareness of gambling-related risks.

Moreover, consideration of social stigma is essential in designing more effective and gender-sensitive intervention strategies.

Stress and Coping Theory

The Stress and Coping Theory explains that psychological distress arises when individuals perceive that environmental demands exceed the resources they possess to manage them (Cohen et al., 1983; Kentschke et al., 2022). In the context of online gambling, psychological distress often emerges from a combination of internal factors (such as guilt or emotional conflict) and external factors (such as social stigma or financial losses) (Antonio et al., 2025; Efrati, 2025). Gambling behaviour is frequently employed as a maladaptive coping mechanism to escape stress or negative emotions, including depression and anxiety (Caudwell et al., 2025). When individuals feel unable to control their gambling behavior, psychological distress intensifies due to the conflict between the emotional need to gamble and the desire to stop (Caudwell et al., 2025; Hakami et al., 2021). Among men, psychological strain is often associated with the drive to maintain social status or to cope with financial pressures. In contrast, for women, stress tends to be linked with feelings of guilt and shame for violating social stigma that positions them as guardians of family stability.

HYPOTHESIS DEVELOPMENT

Online Gambling Addiction and Gender Differences

Online gambling has emerged as one of the fastest-growing forms of entertainment in the digital era, but it also poses significant risks of addiction and psychological harm (Magill et al., 2025; Sharifibastan et al., 2025; Trivedi & Teichert, 2018). Addiction theory explains that compulsive behaviours are driven by the interaction of reinforcement, impaired self-control, and environmental triggers (Ghelfi et al., 2024; Greco & Curci, 2017). Unlike substance addiction, gambling addiction is considered a behavioural addiction that involves recurrent and persistent gambling activities despite harmful consequences (Antonio et al., 2025; Efrati, 2025). Previous studies consistently highlight that men tend to exhibit higher levels of gambling participation and gambling-related problems compared to women (Carcelén-García et al., 2023; Man & Cheung, 2022). This gender gap is often explained through social and cultural expectations that frame gambling as a more socially acceptable or even normative activity for men. In contrast, women are generally more restricted by moral and familial responsibilities (Rundle et al., 2025).

The role of gender is central in understanding online gambling behaviours. Men are reported to engage in gambling as a means of thrill-seeking, competition, and economic gain, while women are more likely to view gambling as a form of escape from stress or socialisation (Gürbüz & Gürçan-Yıldırım, 2025; Lin et al., 2024). The Stress and Coping Theory help to explain these gender differences. For men, the pressure to maintain social status or cope with financial difficulties exacerbates the gambling cycle, expanding the complexity of their addiction network (Bennett et al., 2025; Lazarus, 1986). In contrast, women often face greater psychological distress due to social stigma and traditional gender roles, making them more vulnerable to social isolation. Consequently, men's gambling addiction tends to involve broader cognitive and social engagement, whereas women more often exhibit

emotion-based addictions focused on stress avoidance (Caudwell et al., 2025). Based on these arguments, the following hypotheses are proposed:

H1a: There is a significant difference in online gambling addiction between men and women, with men showing higher levels

H1b: There is a significant difference in psychological distress between men and women, with men showing higher levels

H1c: There is a significant difference in social stigma between men and women, with men showing higher levels

Gender, Social Stigma and Addiction Level

Social stigma plays a significant role in gambling addiction, as explained by the Theory of Planned Behavior (TPB). In men, social stigma often supports gambling as a symbol of courage, risk-taking, and social status, especially in skill-based gambling like poker (Hunt et al., 2023; Man & Cheung, 2022). Social norm reinforces their involvement in gambling and increase the risk of addiction. Conversely, women face greater social stigma related to gambling, as such behaviour is considered to contradict traditional gender roles as guardians of family stability (Rundle et al., 2025). This stigma makes women more likely to gamble in secret, which can increase psychological distress and delay seeking help when addiction occurs. According to the Stress and Coping Theory, social stigma also influences the coping mechanisms of men and women in dealing with psychological distress (Caudwell et al., 2025). Men often gamble to seek social recognition or cope with financial pressure, while women more frequently use gambling as an escape from emotional stress. This social norm reinforces different patterns of addictive behaviour between genders. Men exhibit more intense and competition-based involvement, while women are more focused on stress avoidance and guilt. Thus, social stigma not only influence involvement in gambling but also reinforce gender differences in the patterns and severity of gambling addiction.

Previous studies suggest that gender may not always function as a consistent moderator in the relationship between psychological distress, social norms, and addictive behaviours. Differences in gambling behaviour between men and women are increasingly blurred due to the rise of online platforms that provide equal access and anonymity (Hagfors et al., 2024). Moreover, social and cultural shifts have narrowed the traditional gender gap in risk-taking and coping mechanisms (Caudwell et al., 2025; Lazarus, 1986). From a psychological perspective, the emotional and cognitive responses to stress may depend more on individual personality traits and coping styles than on gender itself (Nowakowska, 2023). Therefore, it is theoretically plausible that gender does not significantly moderate the effect of psychological distress and social norms on online gambling addiction. Based on the explanation above, hypothesis (H2) is stated as follows.

H2: Gender moderates the relationship between social stigma and online gambling addiction.

Gender, Addiction Level, Psychological Stress

The Stress and Coping Theory posits that psychological stress occurs when individuals perceive environmental demands as exceeding their ability to cope with them (Lazarus, 1986). In the context of gambling, the severity of gambling affects psychological distress because individuals who are addicted tend to be caught in a conflict between the desire to gamble and the awareness of its negative

impact (Antonio et al., 2025; Ghelfi et al., 2024). Gender plays a significant role in this relationship because men and women have different coping mechanisms when dealing with the psychological distress caused by gambling addiction. Men tend to gamble as a way to maintain social status or cope with financial pressure, which is more socially acceptable, so their levels of psychological distress may be lower despite high gambling involvement (Bennett et al., 2025; Caudwell et al., 2025). Conversely, women often gamble to avoid emotional stress, but the stronger social stigma against female gambling increases feelings of guilt, shame, and isolation, which exacerbates their psychological distress.

Additionally, Social Strain Theory emphasises that the discrepancy between social norms and individual behaviour, such as women engaging in gambling, creates additional psychological distress (Greco & Curci, 2017; Man & Cheung, 2022). Women often face societal expectations that prioritise traditional roles as goalkeepers of family stability, making their involvement in gambling considered a violation of those norms. Norm makes the pressure felt by women higher than that felt by men with similar levels of gambling severity (Lin et al., 2024; Penfold & Ogden, 2024). Meanwhile, men more frequently receive social support in the context of gambling because this activity is considered more aligned with their gender expectations, such as risk-taking and competition. Therefore, gender not only mediates the relationship between gambling severity and psychological distress but also determines how individuals process and respond to the psychological impact of gambling addiction.

However, previous studies suggest that gender may not consistently moderate the relationship between online gambling addiction and psychological distress (Bennett et al., 2025; Carcelén-García et al., 2023; Man & Cheung, 2022). Although men and women may differ in gambling frequency and motivation, the emotional consequences of addiction, such as stress, anxiety, and loss of control, tend to manifest similarly across genders. The rise of online gambling platforms that provide equal access and anonymity has further diminished traditional gender boundaries in emotional expression and coping behaviour. From a psychological standpoint, distress arising from addiction may depend more on individual resilience and cognitive appraisal rather than gender differences. Therefore, it is theoretically plausible that gender does not significantly moderate the effect of online gambling addiction on psychological distress.

H3: Gender moderates the relationship between online gambling addiction and psychological distress.

MATERIALS AND METHODS

Participant characteristics and research design

The participants in this study consisted of individuals aged 18 years and above who reported engaging in online gambling at least once within the past twelve months. A total of 191 respondents were included, comprising 128 men (67%) and 63 women (33%), reflecting the gendered nature of online gambling participation. Participants were recruited through purposive and quota-based sampling strategies distributed across online communities and digital platforms to ensure representation of both male and female gamblers. Data were collected through a structured questionnaire designed to capture demographic profiles, gambling severity, perceived social stigma, and

psychological distress. This study employed a cross-sectional quantitative research design, using survey-based self-reports as the primary method of data collection. The analytical framework relied on regression modelling and moderation analysis to examine the hypothesised relationships between stigma, gambling addiction, and psychological distress, with gender considered as a key moderating variable.

Sampling procedures

The sampling procedures in this study employed a purposive and quota sampling approach to ensure adequate representation of both male and female online gamblers. Participants were recruited through online forums, social media groups, and digital platforms (WhatsApp and Telegram groups) commonly used by gambling communities. Participant recruitment was carried out in four stages. First, online forums and social media groups related to gaming and betting were identified as potential spaces where online gamblers were active. Second, an invitation message containing the study's purpose, eligibility criteria, and a link to the anonymous questionnaire was distributed through these platforms. Third, purposive and quota sampling techniques were applied to ensure a balance in gender representation between male and female respondents. Finally, data collection continued until the targeted number of participants was achieved, ensuring that all responses met the inclusion criteria. Inclusion criteria required respondents to be at least 18 years old and to have engaged in online gambling within the past twelve months, ensuring that the sample reflected active gambling behaviour. Quotas were established to capture gender variation, targeting a higher proportion of male participants in line with the prevalence rates of gambling behaviour reported in prior studies, while also ensuring a sufficient number of female participants for comparative analysis. The recruitment process emphasised voluntary participation, and respondents were informed of the research objectives and assured of anonymity and confidentiality. This procedure resulted in a total of 191 valid responses, comprising 128 men and 63 women, which provided a balanced dataset to test the study's hypotheses on addiction levels, social stigma, and psychological distress across genders.

Sample size, power, and precision

The sample size for this study consisted of 191 respondents, with 128 men and 63 women, which was considered sufficient to detect medium to large effect sizes in both group comparison and regression-based moderation analyses. Power analysis was conducted based on Cohen's (1992) guidelines, indicating that a minimum of 128 participants would be required to achieve a statistical power of 0.80 at an alpha level of 0.05 for detecting medium effect sizes in independent t-tests. The obtained sample exceeded this threshold, thereby enhancing the reliability and robustness of the results. For moderation testing using regression models, the sample size was also adequate to ensure precision in estimating the relationships between social stigma, gambling addiction, and psychological distress. The balance between male and female participants allowed for meaningful gender-based comparisons. At the same time, the overall sample size provided sufficient precision to generalise the findings within the scope of online gambling populations.

Table 1. Variable Measurement

Variable	Notation	Measurement	N of items	Example Item	Reference
Addiction Level	ADDICT _i	Online Gambling Disorder Questionnaire (OGDQ)	11	I feel restless when I cannot gamble online	(Stavropoulos et al., 2022)
Gender	GENDER _i	Dummy variable, 1 for male and 0 for female.	2 (M/F)	-	(Hunt et al., 2023)
Social Stigma	STIGMA _i	Subjective Norm Scale	10	People would judge me if they knew I gambled online	(Hunt et al., 2023)
Psychological Distress	STRESS _i	Perceived Stress Scale	10	I feel nervous or on edge	(Cohen et al., 1983)

Data analysis

The data analysis was conducted in two stages. First, independent t-tests were employed to examine mean differences between male and female participants in terms of online gambling addiction, psychological distress, and social norms considerations. This approach allowed for identifying whether significant gender-based variations existed across the key constructs. Second, moderation analysis using regression with robust standard error to test the role of gender as a moderator in two relationships: (1) the effect of social stigma on online gambling addiction, and (2) the effect of gambling addiction on psychological distress. This study employed regression with robust standard errors to account for potential heteroskedasticity and other minor assumption violations (Petersen, 2009; Utami et al., 2022). To test the moderation effect, we interacted the gender variable with the predictors (social stigma and addiction). All analyses were conducted using statistical software with a significance threshold set at $p < 0.05$, ensuring that findings were both statistically reliable and meaningful for interpreting gender-specific dynamics in online gambling behaviour. The moderated regression equation in this study is formulated as follows.

$$ADDICT_i = \beta_0 + \beta_1 STIGMA_i + \beta_2 GENDER_i + \beta_3 STIGMA_i * GENDER_i + \varepsilon_i \dots \dots \dots (1)$$

$$STRESS_i = \beta_0 + \beta_1 ADDICT_i + \beta_2 GENDER_i + \beta_3 ADDICT_i * GENDER_i + \varepsilon_i \dots \dots \dots (2)$$

RESULTS OF STUDY

This study examines and analyses the level of online gambling addiction in men and women, highlighting potential differences in involvement patterns and behavioural intensity between the two genders. Additionally, this study focuses on testing the influence of social stigma on the level of online gambling addiction and whether this relationship is affected by the gender of the perpetrator. Another objective is to examine and analyse the extent to which the level of online gambling addiction impacts psychological distress, and whether this impact differs between men and women. Thus, this research is expected to provide a more comprehensive picture of the differences in psychological and social responses to online gambling behaviour based on gender.

Demographic Characteristics

Table 2 presents the demographic characteristics of respondents. Based on the demographic data, the majority of participants were male, with 128 individuals (67%), while females accounted for 63 individuals (33%). This

proportion indicates that male involvement in online gambling is relatively higher than that of females, which can be linked to greater tendencies toward risk-taking behaviours and stronger preferences for digital entertainment among men. In terms of age, most respondents fell within the 18–24 age group (62.3%), followed by the 25–34 age group (21.0%), and the 35–44 age group (16.7%). The dominance of younger age groups suggests that online gambling is more accessible to generations who are technologically literate and possess sufficient digital skills to navigate online gambling platforms. In terms of income, 21.5% of respondents reported having no earnings, while others fell into the lower-income categories, such as Rp 0–Rp 500,000 (11.5%) and Rp 500,000–Rp 1,000,000 (5.7%). However, 27.7% of respondents reported earning more than Rp 2,500,000, indicating that online gambling reaches individuals across diverse economic strata, from those with low purchasing power to those with high purchasing power.

Regarding educational background, the majority of respondents had completed senior high school or vocational school (55%), followed by junior high school (22.6%) and undergraduate degrees (11%), indicating that online gambling is not confined to a specific level of education. In terms of employment status, most respondents were unemployed (45.5%) or self-employed (37.7%), which may be associated with greater flexibility in allocating time to access online gambling platforms. Overall, these demographic data illustrate that online gambling has a broad penetration among young people, with varying income levels, and across diverse educational and occupational backgrounds.

Overall, the demographic profile indicates that the sample is predominantly composed of young unemployed men. This composition reflects the population characteristics commonly found in online gambling communities. Young men are generally more active in digital environments, exhibit higher risk-taking tendencies, and are more likely to engage in online gambling as a form of leisure or coping mechanism for stress and uncertainty (Caudwell et al., 2025; Gürbüz & Gürcan-Yıldırım, 2025). Unemployment also increases the likelihood of gambling participation due to greater time availability, financial stress, and the perception of gambling as a potential income source (Koomson et al., 2022). Therefore, the overrepresentation of young unemployed men in the sample is consistent with the demographic patterns of online gamblers.

Validity and Reliability Analysis

The validity test, using the Pearson Correlation method (see Appendix 1), indicated that all questionnaire items across the research variables met the required validity criteria. For the Online Gambling Addiction variable, which

consisted of 11 items, all correlation coefficients (r-value) were greater than the critical r-table value at the designated significance level, confirming that each item is valid and capable of accurately representing the construct of addiction. A similar result was observed for the Psychological Distress variable, measured through 10 items, where all items showed significant correlations with their respective total scores. Likewise, for the Social Stigma variable, which also comprised 10 items, all r-values exceeded the r-table and were statistically significant, demonstrating that the instrument effectively measures respondents' perceptions of social stigma. Thus, the instruments used to calculate the three variables in this study have been empirically validated and are deemed appropriate for further statistical analysis.

The reliability test results using Cronbach's Alpha coefficient, demonstrated that all variables in this study exceeded the minimum required threshold of 0.6 and even surpassed the more stringent standard of 0.7 (see Appendix 2). Specifically, the Online Gambling Addiction variable, with 11 items; the Psychological Distress variable, with 10 items; and the Social Stigma variable, with 10 items, each exhibited high Cronbach's Alpha values. These findings indicate that every item within each variable possesses strong internal consistency. Accordingly, the research instruments employed in this study have satisfied the criteria for reliability, ensuring that they are trustworthy for further analysis and capable of producing accurate and consistent research outcomes.

Table 1. Demographic Characteristics (N= 191)

No	Demographics	Total	Percentage
1	Sex		
	Male	128	67%
	Female	63	33%
2	Age		
	18 – 24 years	119	62.3%
	25 – 34 years	40	21%
	35 – 44 years	32	16.7%
3	Income (IDR)		
	0 – 500.000	63	33%
	500.000 – 1.000.000	11	5.7%
	1.000.000 – 1.500.000	21	11.1%
	2.000.000 – 2.500.000	22	11.5%
	> 2.500.000	53	27.7%
4	Education		
	Elementary School	11	5.7%
	Junior High School	43	22.6%
	Senior/Vocational High School	105	55%
	Diploma	11	5.7%
	Undergraduate	21	11%
5	Occupation		
	Unemployed	87	45.5%
	PNS	-	
	Government Employee	72	37.7%
	Students	8	5.7%
	Private Employee	16	8.4%
	Others	8	4.2%

Descriptives Analysis

Based on the results of the descriptive statistical analysis in Table 3, the Gender variable shows a minimum value of 0 and a maximum value of 1, with a mean of 0.67 and a standard deviation of 0.471. This finding indicates that the proportion of male respondents is higher than

female respondents. Consistent with the demographic data presented earlier, the majority of participants were male. The Online Gambling Addiction variable ranges from 1 to 4, with a mean score of 1.77 and a standard deviation of 0.96. The relatively low average suggests that, in general, the respondents' level of addiction falls within the low to moderate category.

Table 3. Descriptive Statistics

Variable	Min	Max	Mean	Std.Dev
Gender	1	0	0.67	0.471
Addiction	1	4	1.76915	0.95736
Psychological Distress	1	4	2.03036	1.00814
Social Stigma	1	4	1.773822	0.872216

However, the observed variation in the data also indicates the presence of a subset of respondents exhibiting relatively high levels of gambling addiction. The Psychological Distress variable has a minimum value of 1 and a maximum value of 4, with a mean of 2.03 and a standard deviation of 1.01. This result suggests that respondents tend to experience moderate levels of psychological distress, with substantial variation across individuals. Such variability may reflect differences in gambling involvement and personal resilience to stress. Finally, the Social Stigma variable ranges from 1 to 4, with a mean of 1.77 and a standard deviation of 0.87. The relatively low to moderate mean indicates that perceived social norms discouraging gambling are not strongly internalised by respondents. The study suggests that despite some social pressure to avoid gambling, respondents do not perceive it as a significant deterrent, indicating its private and less visible nature.

Hypothesis Testing

Hypothesis H1a, H1b, H1c

To test the addiction in men and women, this study observed three main variables: addiction level, psychological distress, and social stigma. The testing was conducted using an independent t-test difference analysis. The test results are presented in Table 4 below.

The results of the independent t-test in Table 4 show that there is a statistically significant difference between the levels of online gambling addiction in males and females, with a t-statistic value of 4.081 (p-value 0.000 < 0.001). The average level of online gambling addiction among male respondents is 23.38, which is significantly higher than that of female respondents, who have an average of 19.59. This difference indicates that men tend to have more intense involvement and a higher frequency of playing in online gambling activities compared to women.

Table 4 explains the complexity of online gambling when viewed from a psychological distress perspective. The results of the independent t-test in Table 4 indicate a statistically significant difference in psychological distress levels between male and female respondents, with a t-statistic value of 3.954 (p-value < 0.001). The average level of psychological distress in males was recorded at 25.38, which is significantly higher than that of females, who had an average of 20.37. This difference indicates that men in this study are more likely to experience a greater psychological impact related to their involvement in online gambling compared to women. The results of the independent t-test in Table 4 show a significant difference

between the average perception of social stigma in males (20.56) and females (17.49), with a t-statistic value of 3.943 (p-value 0.000<0.001). These findings indicate that men

consider social stigma more in relation to online gambling behaviour than women.

Table 4. Independent T-Test Between Variables

Indicator	Addiction		Psychological Stress		Social Stigma	
	Male	Female	Male	Female	Male	Female
Mean	23.38	19.59	25.38	20.37	20.56	17.49
Std. Dev.	5.509	6.981	7.376	9.756	4.814	5.530
t-value		4.081***		3.954***		3.943***
d.f.		189		189		189
p-value		0.000***		0.000***		0.000***

Table 5. The moderating effect of gender

Panel A	Hypothesis 2				Panel B	Hypothesis 3			
	Coef.	Std. Error	t-stat	p-value		Coef.	Std. Error	t-stat	p-value
Constant	1.246	1.754	0.710	0.478	Constant	10.804	1.341	8.057	0.000
Social Stigma	1.049	0.096	10.959	0.000	Addiction	0.488	0.061	8.009	0.000
Gender	7.229	2.388	3.026	0.003	Gender	-18.719	1.670	-11.210	0.000
Social* Gender	-0.324	0.123	-2.640	0.009	Addiction* Gender	0.862	0.061	14.183	0.000
N			191		N			191	
R2			0.566		R2			0.683	
Prob. F-stat			0.000***		Prob. F-stat			0.000***	

Hypothesis (H2,H3) Testing

To test whether gender moderates the influence of social stigma on online gambling addiction, this study divided the sample into male and female groups. After the sample was divided, regression analysis was then performed. The results of the moderation regression analysis are presented below.

Based on the results of the moderation regression analysis in Table 5, Panel A, the interaction coefficient between social stigma and gender is -0.324, with a t-value of -2.640 and a p-value of 0.009 < 0.001. The negative sign of the interaction coefficient indicates that the effect of social stigma on online gambling addiction is weaker among males than females. Specifically, social stigma shows a coefficient of 1.049 (t = 10.959; p-value < 0.001), suggesting that higher perceived social stigma is generally associated with greater levels of online gambling addiction. However, when moderated by gender, this relationship significantly decreases among males. This finding suggests that women are more psychologically vulnerable to the adverse effects of social stigma than men, leading to a sharper increase in addiction tendencies when facing negative social judgments. Thus, the results confirm the moderating role of gender in the relationship between social stigma and online gambling addiction, indicating that the impact of stigma is more substantial among women than men.

Table 5 Panel B show the interaction coefficient between gambling addiction and gender is 0.862, with a t-value of 14.183 and a p-value of 0.000 (< 0.001). This result indicates that gender significantly moderates the relationship between gambling addiction and psychological distress. The positive sign of the interaction coefficient suggests that the effect of gambling addiction on psychological distress is stronger among males than females. The gambling addiction variable has a coefficient of 0.488 (t = 8.009; p-value < 0.001), indicating that higher levels of gambling addiction are generally associated with greater psychological distress. However, the significant positive interaction value implies that the increase in

distress due to gambling addiction is more pronounced among men. Whereas, the gender coefficient of -18.719 (t = -11.210; p-value < 0.001) indicates that, at the same level of addiction, women tend to experience lower levels of distress than men. This finding can be explained by the notion that men may experience greater psychological pressure from online gambling addiction due to social factors such as economic expectations, family responsibilities, and masculine ideals that demand greater self-control. Therefore, the results confirm that gender serves as significant moderator that strengthens the relationship between gambling addiction and psychological distress in men than women.

DISCUSSION

The results of the independent t-test in Table 4 Panel A show that there is a statistically significant difference between the levels of online gambling addiction in men and women, with a t-statistic value of 21.083 (p-value < 0.001). The average level of online gambling addiction among male respondents is 24.38, which is significantly higher than that of female respondents, who have an average of 13.51. This difference indicates that men tend to have more intense involvement and a higher frequency of playing in online gambling activities compared to women. This phenomenon can be explained through several aspects. From a psychological perspective, previous research suggests that men tend to exhibit higher levels of sensation seeking and risk-taking behaviour, which fuels their interest in activities such as gambling (Bennett et al., 2025; Carcelén-García et al., 2023; Man & Cheung, 2022). From a social and cultural perspective, in many societies, gambling is often more accepted or even associated with masculinity, so men may feel less social pressure or even gain recognition from their social circles (Antonio et al., 2025; Ghelfi et al., 2024; Hunt et al., 2023; Trivedi & Teichert, 2018). From the perspective of accessibility and

digital habits, men are generally more active on online entertainment platforms, which often serve as gateways to online gambling, such as online games or sports betting sites. Meanwhile, from an economic perspective, men generally have greater financial control or are more willing to allocate income and savings to risky activities, including gambling. This control makes them more likely to have a higher capacity and courage to risk significant amounts, which ultimately increases the likelihood of addiction.

Next, Table 4 Panel B explains online gambling when viewed from a psychological distress perspective. The results of the independent t-test in Table 4 Panel B show that there is a statistically significant difference between the levels of psychological distress in male and female respondents, with a t-statistic value of 23.582 (p -value < 0.001). The average level of psychological distress in men was recorded at 25.38, which is significantly higher than women, who had an average of only 10.00. This difference indicates that men in this study are more likely to experience a greater psychological impact related to their involvement in online gambling compared to women. The higher level of psychological distress in men compared to women in the context of this study can be explained by several interconnected factors. First, the men in this study had higher levels of online gambling addiction, making them more likely to experience financial losses, frustration, and personal conflict (Hunt et al., 2023). Second, for some men, the urge to gamble is not just for entertainment, but also as a means to prove themselves, achieve status, or acquire substantial sums of money (Greco & Curci, 2017; Competitive drive and excessive optimism about winning lead them to bet large sums of money more frequently. When the results fail to meet expectations, the perceived psychological distress increases sharply. Thus, the combination of high playing intensity, significant financial risk, and masculinity explains why men's psychological distress tends to be higher than women's. The gender differences in psychological distress observed in this study were influenced by other demographic factors such as age and employment status (Matud et al., 2015; Viertiö et al., 2021). From the perspective of age, younger individuals, particularly men, tend to exhibit higher impulsivity and lower emotional self-regulation. Older individuals may possess more mature coping strategies and life experiences that mitigate the psychological impact of gambling addiction. From the perspective of employment, job status plays a crucial role in shaping distress levels across genders. Unemployed men often face greater social and financial pressures that intensify the psychological consequences of gambling. Meanwhile, employed women experience less distress due to stronger social support and lower dependence on gambling as an emotional coping strategy.

The results of the independent t-test in Table 4, Panel C, show a significant difference between the average perception of social stigma in males (20.56) and females (12.00), with a t-statistic value of 20.122 (p -value < 0.001). These findings indicate that men consider social stigma more in relation to online gambling behaviour than women. However, high consideration of social stigma in men does not always act as a barrier; in some contexts, social norms can actually be a driver for further engagement in online gambling. From an economic perspective, men generally have the role of breadwinner or financial resource manager, so economic pressure from the environment or the expectation of increasing income can drive them to take risks through online gambling (Donati et al., 2024). Environmentally, male friendship groups or communities often exhibit dynamics that support risky

activities, including gambling, which serves as both a form of shared entertainment and a symbol of status within the group (Gürbüz & Gürcan-Yıldırım, 2025; Lin et al., 2024). From a cultural perspective, in many societies, activities such as betting or paid competitions are often associated with masculinity, courage, and skill. Consequently, prevailing social stigma in male-dominated environments can contain elements of justification or even encouragement to gamble (Lin et al., 2024; Penfold & Ogden, 2024). Thus, although men are aware of social norms related to gambling, economic, environmental, and cultural influences can transform those norms into justifications or motivations that strengthen their drive to engage in online gambling. From the perspective of self-stigma, women may internalise negative societal judgments about gambling more strongly (Hing et al., 2016), leading to heightened feelings of guilt and self-blame that intensify psychological distress (Matud et al., 2015). Conversely, men tend to experience lower self-stigma. Gambling is often more socially accepted among them, which reduces the emotional burden of addiction (Rundle et al., 2025). Men may also show stronger psychological reactance. When facing social restrictions or stigma, they often respond with defiance, continuing to gamble as a form of resistance. In contrast, women are more likely to withdraw from gambling when they sense social disapproval. This behavior reflects greater conformity to social norms rather than psychological reactance.

Table 5 Panel A shows that gender significantly moderates the relationship between social stigma and online gambling addiction, indicating that the influence of perceived social stigma on addictive gambling behaviour differs between men and women. This result highlights the nuanced psychological and social processes underlying gambling behaviour across genders, aligning with previous studies emphasizing the intersection between gender roles and deviant coping behaviours (Bennett et al., 2025; Man & Cheung, 2022; Viertiö et al., 2021). Specifically, the positive and significant interaction effect suggests that men exhibit a stronger tendency toward gambling addiction when experiencing higher levels of social stigma, compared to women. This pattern may stem from sociocultural expectations that pressure men to appear in control, maintain social status, and demonstrate self-reliance. When these expectations are challenged, men may turn to gambling as a way to cope or escape, using it as a compensatory behaviour to protect their threatened identity (Caudwell et al., 2025). Women might internalise stigma differently, often responding through emotional withdrawal or seeking social support, which reduces the likelihood of developing addictive gambling behaviours (Hing et al., 2016). The moderating effect of gender reflects the cultural framing of gambling as a masculine-coded behaviour. Among men, social stigma may reinforce gambling as a means of identity assertion or emotional coping (Man & Cheung, 2025). In contrast, for women, gambling is subject to more decisive moral judgment. Such stigma often results in heightened social sanctions, discouraging continued participation in gambling activities (Piotrowski, 2025).

The results from Table 5 Panel B reveal that gender plays a significant moderating role in the relationship between online gambling addiction and psychological distress. The positive and significant interaction term indicates that the effect of gambling addiction on psychological distress is stronger among men than among women. In other words, as individuals become more addicted to online gambling, men tend to experience a

sharper increase in psychological distress compared to women. This finding suggests that gender differences may shape how individuals emotionally and cognitively respond to the consequences of gambling addiction. This result is consistent with previous studies showing that men are more likely to internalise gambling-related losses as threats to their self-esteem, financial competence, and social status, which are often tied to masculine identity (Hing et al., 2016; Nowakowska, 2023). Men tend to perceive gambling as a domain of control and achievement; thus, failures or losses in gambling lead to a stronger sense of frustration, guilt, and psychological strain. Conversely, women may cope with gambling-related stress differently, relying more on social and emotional support networks that help buffer the impact of addiction on mental health (Man & Cheung, 2025; Man & Cheung, 2022).

Furthermore, the moderating effect of gender can be explained by sociocultural expectations and coping mechanisms. In many societies, men face greater social and economic pressures to maintain financial stability and fulfil provider roles, which can amplify feelings of distress when gambling losses occur. Online gambling, which offers both anonymity and accessibility, may further intensify this effect by enabling prolonged gambling sessions and delayed recognition of financial consequences. On the other hand, women, although not immune to gambling-related harm, may experience distress in a different form, such as guilt or social shame.

This study focuses on Indonesia, a country with strong cultural and religious norms related to gambling. These norms shape how individuals experience stigma, gender roles, and psychological distress. The exact mechanisms may also occur in other collectivist societies that share similar social dynamics. However, the findings should be interpreted with caution when applied to countries with different gambling regulations or cultural attitudes toward addiction.

CONCLUSIONS AND RECOMMENDATIONS

This study concludes that there are significant differences between men and women in terms of online gambling addiction, psychological distress, and considerations of social stigma. Men exhibit higher levels of addiction compared to women, which is influenced by psychological factors such as sensation seeking and risk-taking behaviour, socio-cultural factors embedded in the construction of masculinity, as well as economic factors that provide greater room for financial risk-taking. The higher level of addiction among men also implies greater psychological distress, exacerbated by tendencies to suppress negative emotions and more substantial economic losses. This study also finds that social stigma and addiction level both exert positive effects on online gambling addiction and psychological distress in both genders. High social stigma tends to reinforce addictive behaviour, possibly due to mechanisms of escape or resistance against prevailing norms. Similarly, the higher the level of addiction, the greater the psychological distress experienced, both among men and women.

This study concludes that gender serves as a significant moderating factor in the dynamics of psychological and behavioural consequences associated with online gambling. First, gender moderates the relationship between social stigma and online gambling addiction, indicating that men are more vulnerable to the reinforcing

effects of stigma, which may intensify addictive behaviour as a form of coping or concealment. Second, gender also moderates the relationship between online gambling addiction and psychological distress, with findings showing that the psychological burden of addiction is more substantial among men than women. These results suggest that men tend to experience higher emotional and mental strain linked to gambling involvement, possibly due to sociocultural expectations related to masculinity, financial responsibility, and self-control. Collectively, these findings emphasize that gender differences play a crucial role in understanding both the development and the psychological consequences of online gambling addiction, highlighting the need for gender-sensitive prevention, intervention, and policy approaches to mitigate gambling-related harms effectively.

Several recommendations can be proposed. First, for policymakers and institutions engaged in addiction prevention. It is vital to design educational and intervention programs that specifically target high-risk groups, particularly young men. Such educational efforts should emphasise both the financial and psychological consequences of gambling, while simultaneously fostering healthy coping strategies to manage life stressors without resorting to gambling. Second, given that social stigma may in fact reinforce addictive behaviour, prevention campaigns should adopt more supportive approaches rather than focusing solely on prohibitions or punitive measures. Empathy-based approaches, counselling, and community support are likely to be more effective in reducing addictive behaviours compared to strategies that exacerbate social pressure. Third, the finding that gender does not moderate the relationship between social stigma and addiction, nor between addiction and psychological distress, indicates the need for universal interventions in preventing and addressing the psychological consequences of online gambling addiction. Fourth, for future research, it is recommended to broaden the scope by including other variables such as digital literacy, gambling motivation, or social support, and to employ longitudinal designs to observe the dynamics of the relationships among variables over time. Cross-cultural studies may also provide deeper insights into how cultural contexts shape the interplay between stigma, addiction, psychological distress, and gender in online gambling behaviour.

LIMITATIONS

This study acknowledges several limitations that warrant consideration. First, the use of non-probability sampling and the concentration of respondents within a specific demographic group, primarily young men, may limit the generalizability of the findings to broader populations. This sampling approach was chosen for its practical accessibility; however, it may not accurately represent individuals from different age groups, cultural backgrounds, or socioeconomic statuses, which could exhibit distinct behavioural patterns toward online gambling. Second, the cross-sectional design prevents establishing causal relationships between psychological distress and online gambling addiction. Because data were collected at a single point in time, it is difficult to determine whether psychological stress triggers addictive behaviour or whether addiction itself increases stress levels. Third, self-reported data may be affected by social desirability bias, as participants might underreport their addictive behaviours or overstate their self-control due to the sensitive nature of gambling and psychological stress.

Lastly, the small number of female participants (63) compared to males (128) may reduce the statistical power to detect meaningful gender-based differences. This imbalance might obscure subtle variations in addiction mechanisms between men and women. Future studies are encouraged to employ probability-based sampling, longitudinal research designs, and balanced gender representation to enhance the robustness and generalizability of the findings.

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DECLARATION

Ethics approval and consent to participate

This study was conducted in accordance with ethical standards. Ethical approval was obtained from the Research Ethics Committee of Universitas Widya Dharma. All participants were informed about the purpose of the study, and their participation was voluntary. Informed consent was obtained before data collection, ensuring confidentiality and anonymity throughout the research process.

Consent for publication

Not applicable

Availability of data and materials

The datasets generated and/or analysed during the current study are available from the corresponding author on reasonable request. All data have been anonymised to protect the confidentiality of participants.

Conflicts of Interest Statement

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The authors used ChatGPT to translate, Grammarly to check the sentence structure, and Quillbot to summarise and translate. All AI is solely to improve the clarity and readability of the English language. All content, ideas, analysis, and conclusions are the authors' own, and the final version was carefully reviewed and validated by the authors.

AUTHORS' CONTRIBUTIONS.

TU: Conceptualisation (developing the research idea, background, and objectives); Methodology (designing the research framework and methods); Writing – review and editing (refining drafts based on feedback from seminars and publications); Supervision (overseeing the research

process, ensuring timely completion, team coordination, and funding management).

YES: Validation (ensuring the overall reliability and reproducibility of the research); Formal analysis (data computation and drafting analytical results, together with students); Draft preparation (developing the research draft based on the conceptual framework and preparing manuscripts for publication).

AM: Data collection (administering the obtained data, together with students); Writing – review and editing (co-developing drafts and refining based on seminar and publication feedback); Visualisation (preparing supporting documents, working papers, and ensuring the completeness of visual materials for publication).

DEP: Contributed to formal data analysis (computational work and drafting analytical results) and data collection under the guidance of the research team.

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