

HOW PERCEIVED SOCIAL NORMS SHAPE EXPECTATION OF ONLINE GAMBLING BEHAVIOR: THE MEDIATING ROLE OF INJUNCTIVE NORMS

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ABSTRACT

Social influences have long been recognized as important determinants of gambling behavior. Nevertheless, relatively little is known about the role of perceived social norms in shaping behavioral expectations regarding online gambling. Drawing on the Theory of Normative Social Behavior (TNSB), this study investigates how Descriptive norms and Injunctive norms interact in shaping university students' behavioral expectation of trying online gambling. A quantitative explanatory approach with a cross-sectional survey design was employed. Data were collected from 169 university students using convenience sampling and analysed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings indicate that Descriptive norms do not directly influence behavioral expectation. Instead, their influence operates entirely through Injunctive norms, which emerged as both a significant direct predictor and a full mediator. In contrast, Injunctive norms did not moderate the relationship between Descriptive norms and behavioral expectation. These findings highlight the central role of perceived social acceptance in shaping behavioral expectation regarding online gambling and extend the application of TNSB by demonstrating that Descriptive norms may require social approval mechanisms before influencing pre-behavioral cognitive outcomes. The findings also suggest that interventions should focus on correcting misperceptions about the social acceptability of online gambling among university students.

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INTRODUCTION

In Indonesia, the rapid growth of online gambling has occurred within a complex social and regulatory environment. Although the Electronic Information and Transactions Law (ITE Law) and the Criminal Code (KUHP)

impose criminal sanctions on both gamblers and gambling operators, online gambling continues to expand, as reflected in the increasing number of individuals participating in online gambling. In 2024, at least 9.7 million individuals were reported to have participated in online gambling activities in Indonesia, (komdigi.go.id). Technological advancement is one of the main reasons why this activity continues to flourish, particularly among younger generations. The evolution of technology and digitalization has made online gambling increasingly accessible and easier to promote (Wardle et al., 2024).

One of the groups most vulnerable to online gambling is university students, particularly those between the ages of 18 and 25, a developmental stage commonly referred to as emerging adulthood. Individuals at this stage have a desire to explore new experiences and engage in higher-risk activities compared to when they were in other phases of life. This is partly because, at this phase, college students do not yet have the full responsibilities of adults but are also no longer under the supervision of their parents as they were during adolescence (Sussman & Arnett, 2014; Willoughby et al., 2021). Furthermore, the high exposure to online gambling advertisements on social media, as well as the high rate of internet use among college students, also contribute to their vulnerability to online gambling.

The consequences of online gambling among university students can vary substantially depending on the frequency and severity of gambling involvement. At relatively low levels, gambling may be perceived as a harmless form of entertainment or leisure. However, even occasional participation has the potential to interfere with academic performance by reducing concentration and increasing emotional distress. As gambling behavior becomes more frequent or problematic, its adverse effects may extend beyond academic functioning to other important areas of life. In more severe cases, problematic online gambling can develop into gambling addiction, which is associated with significant financial difficulties, deterioration of interpersonal relationships, depressive symptoms, and, in extreme circumstances, suicidal ideation (Costes et al., 2023; Gómez et al., 2020; Murphy et al., 2024).

Given the diverse array of outcomes precipitated by gambling, gambling behavior cannot be adequately understood through a simple distinction between gamblers and non-gamblers. Rather than being viewed as a binary condition, online gambling should be conceptualized as a behavioral spectrum that reflects varying levels of intensity, frequency, and behavioral characteristics. The Canadian Problem Gambling Index (CPGI) classifies gambling behavior into five categories. When ranked from most problematic to least risky, these categories are: those with problem gambling, those at moderate risk, those at low risk, problem-free gamblers, and non-gamblers (Ferris & Wynne, 2001). From this perspective, gambling behavior can be understood as a gradual process. Consequently, the early stages that precede the development of problematic gambling warrant greater scholarly attention.

One of the most crucial early stages in this process is the emergence of an individual's likelihood of trying online gambling. Within behavioral research, one concept that can be used to assess the probability of engaging in a behavior is behavioral expectation. Unlike intentions, which refer to a deliberate plan of action to avoid or perform a behavior, behavioral expectation refer to an individual's personal assessment or estimation of the likelihood that they will engage in a particular behavior in the future (Warshaw & Davis, 1985). Behavioral expectation is inherently reflective, as they involve a broad consideration of factors such as habits, past experiences, environmental influences, personal capabilities, and other situational conditions (Armitage et al., 2015). Simamora (2022) argues that behavioral expectation is more appropriate than intention for behaviors that can be performed repeatedly and are susceptible to situational triggers.

Despite the growing literature on online gambling, research examining behavioral expectation remains limited. Existing studies have predominantly focused on actual gambling outcomes, such as gambling frequency, betting intensity, and gambling-related problems, often among individuals who have previously engaged in online gambling. Consequently, little is known about the factors that shape individuals' expectation of trying online gambling before the behavior occurs. This gap is particularly important because online gambling participation often develops gradually rather than emerging as an immediate problematic behavior. Although behavioral expectation has been widely applied in other behavioral

domains, including alcohol consumption, dieting, HPV vaccination, exercise, and information system use (Armitage et al., 2015; Fishman et al., 2020; Simamora, 2022), its application in the context of online gambling remains largely unexplored. Therefore, this study extends the online gambling literature by shifting the focus from actual gambling behavior to the pre-behavioral cognitive process that precedes gambling engagement.

Among the various factors that may shape behavioral expectation regarding online gambling, this study focuses on the role of social norms. This focus is motivated by previous findings showing that social interactions, peer groups, and online communities can influence individuals' engagement in gambling-related activities (Kristiansen et al., 2015; Savolainen et al., 2022). However, these studies have not specifically explained how social norms, particularly perceived norms, operate in shaping an individual's likelihood of trying online gambling (behavioral expectation).

To understand how social norms may encourage individuals to engage in a new behavior, one useful framework is the Theory of Normative Social Behavior (TNSB), which explains how and why social norms influence behavior (Rimal & Real, 2005). Within this framework, social norms are conceptualized in two forms. First, norms may operate at the psychological level, and second, they may exist at the collective level, such as within groups, communities, or cultures. Norms at the collective level are referred to as collective norms and represent the aggregation of actual behaviors within a social group. In contrast, norms at the psychological level are referred to as perceived norms, which reflect individuals' perceptions of the collective norms operating within their social groups (Lapinski & Rimal, 2005; Rimal & Yilma, 2022). Because perceived norms are based on individual interpretations, group members may differ in how they perceive and interpret the same collective norm. For example, in the context of gambling behavior, young people have been found to overestimate the amount of money wagered by their peers (Lambuth et al., 2026).

According to TNSB, perceived norms consist of two distinct dimensions: Descriptive norms and Injunctive norms. Descriptive norms capture the behavioral information individuals obtain from observing others. In other words, they indicate how common a particular behavior appears within a relevant social group, whereas Injunctive norms refer to perceptions of whether a particular behavior is approved of or accepted by others (Rimal & Real, 2003). Previous studies have shown that both types of norms can directly influence behavior. Meisel & Goodie (2014) found that, when social references originated from the broader university student population, Descriptive norms had a significant influence on gambling frequency and gambling-related problems. In contrast, when social references came from more immediate social circles, such as friends and family members, Injunctive norms emerged as the more significant predictor. Similar findings were reported by Lambuth et al. (2026) who found that Descriptive norms significantly influenced gambling-related problems. This study uses this evidence to propose that both perceived norms dictate behavioral expectation regarding online gambling.

Beyond their roles as independent predictors, TNSB also proposes that descriptive norms and injunctive norms jointly influence behavioral intentions through their interaction (Rimal, 2008; Rimal & Yilma, 2022). For example, when individuals perceive that many people around them engage in online gambling, they may be more likely to do so if they also perceive social approval or pressure to gamble. Conversely, when online gambling is perceived as socially disapproved, the influence of descriptive norms may be attenuated, suggesting a moderating role of injunctive norms. Furthermore, descriptive norms may indirectly influence behavioral expectation through injunctive norms, as perceiving online gambling to be common may strengthen perceptions of social approval for the behavior. Based on these theoretical assumptions, the following hypotheses are proposed:

- H1: Descriptive norms have a significant influence on behavioral expectation regarding online gambling
- H2: Injunctive norms have a significant influence on behavioral expectation regarding online gambling
- H3: Injunctive norms moderate the relationship between Descriptive norms and behavioral expectation
- H4: Injunctive norms mediate the relationship between Descriptive norms and behavioral expectation

Overall, this study seeks to examine how perceived norms shape behavioral expectation regarding online gambling among university students as a vulnerable population. Understanding how perceived norms operate in shaping behavior is particularly important given the complex environment in which online gambling has developed in Indonesia. On the one hand, online gambling is legally prohibited and subject to criminal sanctions. On the other hand, the number of online gambling participants continues to increase. By understanding how social norms shape behavioral expectation regarding online gambling, the outcomes of this research are expected to assist in designing specific, impactful regulations to minimize online gambling participation. Figure 1 presents the proposed research model:

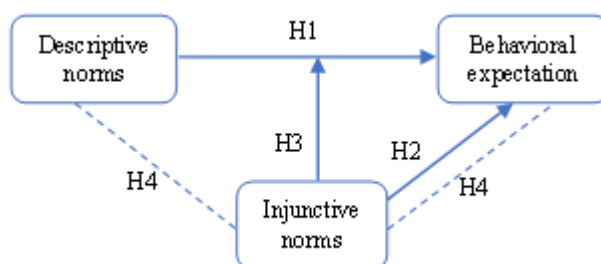


Figure 1. Research model

Source: Modified by author from TNSB

METHOD

This study adopted a quantitative, explanatory cross-sectional survey design to investigate the relationships among the variables proposed in the research model. By collecting data at a single point in time, the study aimed to empirically examine the hypothesized relationships using statistical analysis (Creswell & Creswell, 2023; Sugiyono, 2015).

The study was conducted among students at Universitas Padjadjaran, one of the universities located in a province with the highest number of online gambling participants in Indonesia (Muzakki, 2025), the sampling technique used was convenience sampling, a non-probability sampling approach that selects respondents based on accessibility and willingness to participate. This technique was considered appropriate because the study targeted a specific subgroup of university students who met predetermined eligibility criteria, while allowing efficient data collection within the limited time frame of the study.

To determine an adequate sample size, a statistical power analysis was conducted to estimate the minimum number of respondents required to detect the expected effect in the proposed model. Power analysis considers effect size, significance level, and statistical power (Cohen, 2013). In this study, a medium effect size ($f^2 = 0.15$), a significance level of $\alpha = 0.05$, and a statistical power of 0.95 were specified. Given that the endogenous construct in the research model had three incoming paths, the minimum required sample size was 119 respondents. Eligibility criteria were applied prior to analysis to ensure the suitability of the sample. Only university students aged 18–25 years (emerging adulthood) who had never previously engaged in online gambling were included in the final dataset. Responses that did not meet these criteria or contained incomplete information were excluded from the analysis.

Data were collected through an online questionnaire administered using Google Forms. The questionnaire employed a seven-point Likert scale (1–7). The research instruments were developed based on the operational definitions of each variable and adapted from previous studies to better reflect the context of online gambling among university students. Descriptive norms (DN) were adapted from Pokharel et al. (2024) and Yang & Zhao (2018) and consisted of four items assessing students' perceptions of the prevalence of online gambling among their peers (e.g., “Most students have tried online gambling”). Injunctive norms (IN) were measured using five items adapted from Rimal & Yilma (2022) to assess perceived

social acceptance and social pressure regarding online gambling (e.g., “Most university students consider online gambling to be normal” or “My fellow students suggested that I try online gambling”). Behavioral expectation (BE) was measured using three items adapted from Simamora (2022), assessing respondents' perceived likelihood of trying online gambling under different situations (e.g., “If you needed money, how likely would you be to try online gambling?”).

Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) in SmartPLS version 4.0.9.9 following the standard two-stage analytical procedure. The first stage involved evaluating the measurement model to establish the adequacy of the measurement instruments. Convergent validity was assessed using outer loadings and Average Variance Extracted (AVE), whereas discriminant validity was examined through the cross-loading criterion. Internal consistency reliability was evaluated using Composite Reliability (CR) and Cronbach’s alpha, with values of 0.70 or higher indicating acceptable reliability (J. Hair & Alamer, 2022). After the measurement model satisfied the recommended criteria, the structural model was assessed using the bootstrapping procedure to estimate the direction, magnitude, and statistical significance of the hypothesized relationships among the latent constructs.

RESULT AND DISCUSSION

Based on data collection conducted between January 19 and January 30, 2026, the final sample consisted of 169 respondents after data screening and cleaning procedures were completed. The sample included 105 female and 64 male students. Descriptive analysis showed that Descriptive norms had the highest mean score among the study variables. These findings indicate that respondents perceived online gambling to be relatively more common in their social environment than socially accepted. The mean score for behavioral expectation suggests a low likelihood of trying online gambling among respondents. Furthermore, the standard deviation values indicate that responses across all three variables exhibited a moderate degree of variation and were not entirely homogeneous. More detailed results are presented in Table 1.

Table 1. Descriptive analysis

Variables	Mean	SD
1. Descriptive norms	2.913	1.505
2. Injunctive norms	1.898	1.329
3. Behavioral expectation	1.600	1.227

Source: Primary data analysis

The measurement model was evaluated prior to assessing the structural model, following the standard two-stage PLS-SEM procedure. As shown in Table 2, the measurement properties of all constructs satisfied the recommended criteria for validity and reliability. Although the outer loadings of NI3 and NI5 were below the recommended threshold of 0.70, both indicators were retained because the corresponding construct achieved an AVE above 0.50, supporting adequate convergent validity. This decision is consistent with the recommendation of Hair et al. (2017), who noted that indicators with lower loadings may be retained when overall construct validity remains acceptable. Furthermore, Composite Reliability and Cronbach's alpha values exceeded the recommended thresholds for all constructs, indicating satisfactory internal consistency. These results suggest that the measurement model was adequate for subsequent structural model evaluation.

Table 2. Outer Model Test Results

Construct	Items	Outer Loadings	AVE	CR	Cronbach's α	Cross loadings		
						ND	NI	BE
1. Descriptive norms (ND)	ND1	0.823	0.762	0.927	0.895	0.823	0.399	0.187
	ND2	0.914				0.914	0.457	0.173
	ND3	0.910				0.910	0.477	0.249
	ND4	0.839				0.839	0.442	0.326



Construct	Items	Outer Loadings	AVE	CR	Cronbach's α	Cross loadings		
						ND	NI	BE
2. Injunctive norms (NI)	NI1	0.749	0.553	0.861	0.799	0.267	0.749	0.399
	NI2	0.802				0.481	0.802	0.267
	NI3	0.685				0.321	0.685	0.156
	NI4	0.782				0.481	0.782	0.197
	NI5	0.695				0.327	0.695	0.504
3. Behavioral expectation (BE)	BE1	0.922	0.869	0.952	0.924	0.272	0.383	0.922
	BE2	0.930				0.245	0.402	0.930
	BE3	0.944				0.245	0.407	0.944

Bolded cross-loading values indicate that each indicator loads more strongly on its corresponding construct than on other constructs. This demonstrates adequate discriminant validity and confirms the distinction between constructs.

Source: Data analysis using SmartPLS 4.

Following the assessment of the measurement model, the structural model was evaluated using the bootstrapping procedure in PLS-SEM. This procedure generated path coefficients (β), t-values, and p-values for each hypothesized relationship, enabling the proposed research model to be empirically evaluated. The results of the structural model analysis and the corresponding hypothesis testing are presented in Table 3. A hypothesis was considered supported when the associated path coefficient was statistically significant ($p < 0.05$).

Table 3. Testing of hypotheses

Hypotheses	β	t-value	p-values	Decision
H1 Descriptive norms $\rightarrow$ Behavioral expectation	0.077	0.961	0.337	Rejected
H2 Injunctive norms $\rightarrow$ Behavioral expectation	0.365	2.960	0.003	Accepted
H3 Descriptive norms x Injunctive norms $\rightarrow$ Behavioral expectation	-0.043	0.380	0.704	Rejected
H4 Descriptive norms $\rightarrow$ Injunctive norms $\rightarrow$ Behavioral expectation	0.186	2.466	0.014	Accepted

Source: Bootstrapping using SmartPLS 4.

The findings indicate that Descriptive norms did not directly predict behavioral expectation regarding online gambling. Although the relationship was positive, it was not statistically significant. In contrast, Injunctive norms significantly predicted behavioral expectation, suggesting that perceived social acceptance and social pressure play an important role in shaping an individual's likelihood of trying online gambling.

The interaction analyses yielded mixed results. Injunctive norms did not moderate the relationship between Descriptive norms and behavioral expectation, suggesting that perceived social approval did not strengthen or weaken the association between perceived behavioral prevalence and expectations of engaging in online gambling. However, the mediation analysis revealed a significant indirect effect of Descriptive norms on behavioral expectation through Injunctive norms. This finding indicates that perceiving online gambling as common among peers may not be sufficient to directly shape behavioral expectations. Instead, the influence of Descriptive norms appears to operate primarily when perceptions of behavioral prevalence are accompanied by perceptions that the behavior is socially accepted or approved. In other words, information about what others are perceived to do may become more behaviorally relevant when individuals also perceive that such behavior is considered acceptable within their social environment.

Overall, the findings provided partial support for the proposed research model, with two of the four hypotheses receiving empirical support. The coefficient of determination (R^2) further indicated that the model accounted for a modest proportion of the variance in the endogenous constructs. Specifically, Descriptive norms explained 25.6% of the variance in Injunctive norms ($R^2 = 0.256$), whereas the combined effects of Descriptive norms and Injunctive norms accounted for 17.3% of the variance in behavioral expectation ($R^2 = 0.173$). These findings suggest that although perceived social norms contribute

to explaining behavioral expectation regarding online gambling, a substantial proportion of the variance remains unexplained, indicating that additional individual, psychological, or environmental factors may also play an important role.

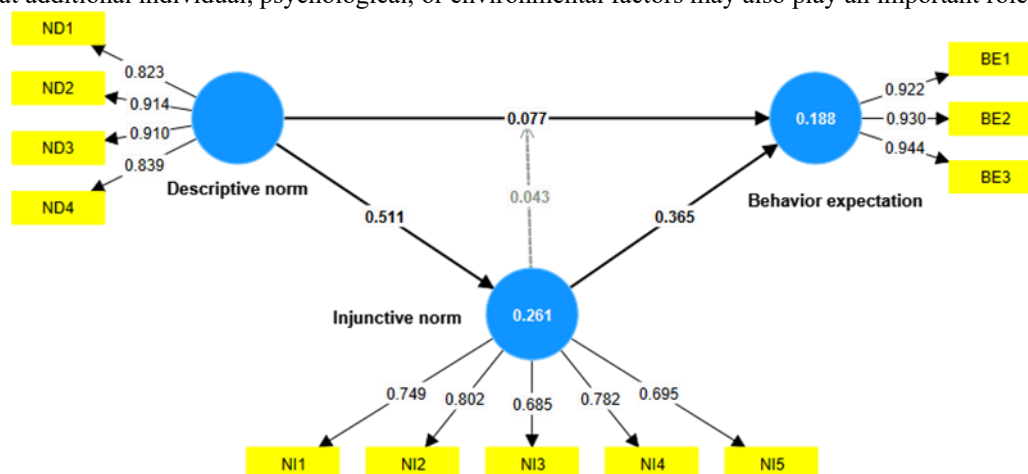


Figure 2. A Graphical Results of Bootstrapping
Source: SmartPLS 4.

This study explores the application of the Theory of Normative Social Behavior (TNSB) in understanding how perceived social norms shape university students' expectation of engaging in online gambling. Rather than operating independently, the findings demonstrate a sequential dependency between normative constructs: Descriptive norms (the perceived prevalence of gambling) only shape behavioral expectation when channelled through Injunctive norms (perceived social acceptance). This structural relationship highlights that Injunctive norms serve not merely as an influencing factor, but as a primary gatekeeper in cognitive pre-behavioral assessments.

The absence of a direct effect of Descriptive norms on behavioral expectation offers a critical theoretical departure from traditional TNSB assumptions and previous empirical findings. While studies by Kasemi et al. (2025) and (Meisel & Goodie, 2014) established a direct and robust impact of Descriptive norms on actual gambling frequency and related problems, the current study restricts this postulate within the context of behavioral expectation. Behavioral expectation is a pre-behavioral stage preceding actual gambling, while gambling frequency and gambling problems are dimensions of the actual behavior. Melnyk et al. (2019) demonstrated that Descriptive norms more readily influence actual behaviors, including gambling frequency and associated problems, rather than the preceding cognitive aspects like behavioral intentions or expectation.

The differences in findings may also be explained by the varying age groups studied across studies. While previous studies focused on adolescents, this study examined emerging adulthood. As previous research has shown, age can substantially influence gambling decision-making processes, resulting in different gambling behavior patterns among adolescents, young adults, and adults (Cauffman et al., 2010). In addition, geographical and cultural differences may also account for the discrepancy in findings. In culturally tight societies such as Indonesia, the influence of Descriptive norms may be less pronounced than in culturally loose societies commonly found in Europe. Previous studies have suggested that Injunctive norms tend to play a stronger role in shaping behavior within tight cultures, where conformity to social expectation is more strongly emphasized (Shi et al., 2024). This suggests that the effectiveness of perceived norms may be context-dependent rather than universal.

Furthermore, this finding expands TNSB by contextualizing normative influence within cultural and legal boundaries. In culturally tight societies like Indonesia, where conformity to social expectation is heavily emphasized, and where online gambling faces strict legal and moral stigmatization, the mere observation that "many peers are gambling" (Descriptive norms) is insufficient to induce a personal expectation to gamble. The direct descriptive pathway is effectively neutralized by the illicit nature of the behavior. Consequently, social influence only materializes when the behavior transitions from being merely prevalent to being actively normalized and accepted by the peer group, as reflected by the direct influence of Injunctive norms. This aligns with Lambuth et al. (2026), who noted that injunctive social approval plays a decisive role in escalating gambling behaviors.

The findings of this study provide further insight into how social norms within a social group operate to shape expectations regarding online gambling behavior. While some previous studies have shown that normative perceptions do not apply uniformly across various contexts of gambling behavior, such as the studies by Abdi et al. (2015) and Sirola et al. (2021), which found that group norms and peer influence can encourage individuals to engage in online gambling, while more recent studies by Kape et al. (2023) and Korsakiene et al. (2024) found that social pressure from close associates was not found to shape gambling intentions. The findings of this study explain that the influence of social norms on behavioral expectations regarding trying online gambling operates through the mechanism of social acceptance of gambling behavior—if individuals perceive that online gambling is socially accepted, then social norms can influence behavioral expectations regarding online gambling. However, if such behavior is not yet socially accepted and is considered abnormal, then social influence cannot encourage individuals to try online gambling. Social influence becomes prominent when peers begin to normalize online gambling, for example, by frequently sharing gambling-related content on social media platforms.

Given that Injunctive norms were found to directly influence behavioral expectation regarding online gambling, one practical implication of this finding is that interventions may focus on increasing awareness that online gambling is neither widely accepted nor considered a socially approved behavior. Such efforts may help correct individuals' misperceptions about the attitudes of people around them. Evidence supporting this approach can be found in a feasibility study conducted by Arden-Close et al. (2025) which examined adult participants and found that interventions designed to correct misperceptions of Injunctive norms through text messaging (SMS) were considered feasible and showed considerable potential for reducing the likelihood of progression toward more problematic gambling behavior.

Another explanation for why students' perceptions of the prevalence of online gambling (descriptive norms) do not directly influence expectations of online gambling behavior is because online gambling in Indonesia is a private behavior and is still prohibited by law. Essentially, Lapinski & Rimal (2005) explained that perceptions of the prevalence of a behavior within their environment will have a stronger effect if the behavior is one that can be performed in public without judgment from the social environment. Meanwhile, for private behavior, perceptions of the prevalence of the behavior can still shape expectations of online gambling behavior indirectly, but through additional mechanisms or requiring intermediary variables. This possibility is reflected in the findings of this study, where descriptive norms have a significant influence on behavioral expectations indirectly due to being mediated by injunctive norms.

The mediating role of Injunctive norms further clarifies this mechanism. While Rimal (2008) observed partial mediation in the context of student alcohol consumption, this study found evidence of full mediation regarding online gambling. This condition limits the traditional TNSB assumption of independent descriptive pathways, proving that for highly private behaviors like online gambling, Descriptive norms require a validating mechanism to be effective. A student may perceive online gambling to be highly prevalent in their environment, but their personal expectation to participate will remain dormant unless Injunctive norms validate the behavior as socially acceptable.

The full mediation pattern found in this study, in which perceptions of social acceptance or perceived social pressure mediate the relationship between perceptions of how common online gambling is and expectations of online gambling behavior is also consistent with findings from related studies examining similar normative mechanisms. Within a conceptually

similar framework, perceived social pressure (often referred to as normative social influence) has also been found to function as a full mediator between perceptions of how common a behavior is and behavioral intentions. For example, a study on the role of perceived norms in handwashing behavior found that descriptive norms required the presence of additional variables to influence behavioral intentions (Moussaoui et al., 2023). Overall, these findings suggest that perceptions of how common online gambling is among college students may not always have a direct influence on the likelihood of an individual trying online gambling; rather, they often operate through other psychological mechanisms.

Conversely, the rejection of the moderation hypothesis further limits the interactive assumptions of TNSB. Although TNSB originally theorized that injunctive and Descriptive norms interact to amplify behavior (Rimal & Real, 2005), the lack of moderation observed here suggests that normative interactions are highly context-dependent. This aligns with previous studies on risky driving and alcohol consumption, which also failed to find moderating effects (Gauld & Reeves, 2023; Rimal & Real, 2005). As Yang (2018) demonstrated, moderation often requires the activation of tertiary variables, such as self-construal. In the context of online gambling expectation among emerging adults, the normative mechanism operates linearly (through full mediation) rather than interactively (through moderation).

Practically, these theoretical insights provide a clear direction for intervention strategies. Since Injunctive norms act as the critical validator that converts the observation of gambling into the expectation to gamble, public health and educational interventions must aggressively target these misperceptions. Correcting normative beliefs to reinforce that online gambling remains socially disapproved should be the priority, instead of merely highlighting its prevalence which could backfire by normalizing it. Feasibility studies, such as the text messaging intervention by Arden-Close et al. (2025), demonstrate that correcting injunctive misperceptions is an effective mechanism for reducing the progression toward gambling behavior.

Limitation

The findings should be interpreted in light of several methodological considerations. Because participants were recruited through convenience sampling, the sample cannot be assumed to represent the broader student population at Universitas Padjadjaran. Moreover, the cross-sectional nature of the study captures the relationships among variables at only one point in time, preventing conclusions about temporal or causal processes. Addressing these issues in future research through probability-based sampling and longitudinal or experimental designs would improve both the external validity of the findings and the strength of causal inference.

Second, the behavioral expectation data were collected using self-report measures. Given that online gambling is an illegal activity in Indonesia, respondents may not have fully disclosed their actual expectation regarding the possibility of trying online gambling. Nevertheless, the use of behavioral expectation as the dependent variable was considered more appropriate than measuring behavioral intentions or actual gambling behavior directly. Asking respondents about their expectation may have reduced the level of discomfort associated with reporting involvement in an illegal activity, thereby minimizing the tendency to provide socially desirable responses.

Finally, the present study examined behavioral expectation regarding online gambling solely from the perspective of perceived social norms within the Theory of Normative Social Behavior (TNSB). Although this framework offers valuable insights into the role of normative perceptions, it does not fully account for the range of factors that may shape individuals' behavioral expectations. Future studies could therefore extend the model by incorporating other relevant determinants, such as media exposure, self-efficacy, and broader psychological or environmental influences, to provide a more comprehensive understanding of online gambling behavioral expectation.

CONCLUSION

This study advances the Theory of Normative Social Behavior (TNSB) by demonstrating that the perceived prevalence of online gambling alone does not directly increase university students' behavioral expectation to gamble. The primary contribution of this research lies in identifying Injunctive norms as a full mediator; observing peers gamble only translates into a personal expectation to gamble when the behavior is also perceived as socially accepted or normalized within

the environment. Consequently, perceived social acceptance and peer pressure act as the critical catalysts in shaping pre-behavioral cognitive assessments regarding online gambling.

While the cross-sectional design of this study precludes establishing definitive causal relationships, the findings suggest a targeted pathway for preventative interventions. Efforts to reduce the likelihood of university students trying online gambling should strategically focus on correcting misperceptions regarding its social acceptability. Institutions might consider developing communication campaigns or involving influential peer educators to continually reinforce the message that online gambling remains a socially disapproved behavior, actively highlighting that it is neither widely accepted nor supported within the student community.

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