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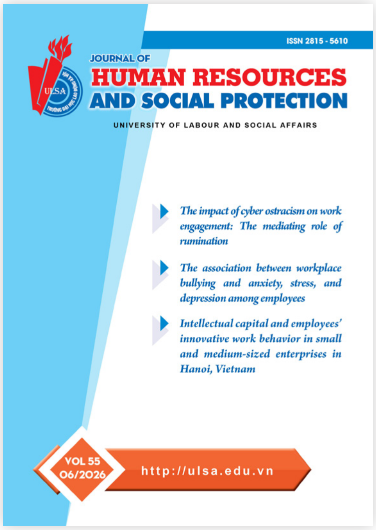

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THE IMPACT OF CYBER OSTRACISM ON WORK ENGAGEMENT: THE MEDIATING ROLE OF RUMINATION

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Abstract: As digital transformation reshapes the modern workplace, online communication platforms have become integral to organizational life. However, their widespread use has also introduced new forms of workplace exclusion, particularly cyber ostracism, where employees feel ignored or excluded in digital interactions. Although interest in this phenomenon has grown, limited research has examined how cyber ostracism influences work engagement and the psychological mechanisms underlying this relationship. Moreover, most existing evidence comes from Western contexts, leaving its applicability to collectivistic cultures such as Vietnam unclear. Vietnamese employees tend to value interpersonal harmony and group belonging while responding to interpersonal difficulties with greater restraint and work-oriented coping, suggesting that cultural context shapes reactions to cyber ostracism. This study examines the relationship between cyber ostracism and work engagement, with rumination as a mediating mechanism, among Vietnamese employees. The findings show that cyber ostracism increases rumination, which subsequently reduces work engagement, confirming rumination's mediating role. At the same time, cyber ostracism has a significant positive direct effect on work engagement, whereas its indirect effect through rumination is negative, indicating a competitive mediation mechanism. These findings suggest that cyber ostracism can simultaneously undermine work engagement through negative cognitive processes while motivating employees to invest greater effort in their work as a compensatory response. By providing evidence from a collectivistic emerging economy, this study extends the cyber ostracism literature, clarifies the contextual boundary conditions of existing theories, and offers practical implications for promoting healthier digital communication and sustaining employee engagement.

Keywords: *Cyber ostracism, digital transformation, rumination, Vietnam, work engagement*

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1. Introduction

Digital transformation has made enterprise social media and online communication platforms central to organizational communication, coordination, and knowledge sharing (Kaplan & Haenlein, 2010; Leonardi, 2015). The expansion of remote and hybrid work has further increased employees' dependence on digitally mediated interaction (Ip & Wagner, 2008; Leonardi, 2015). Alongside these benefits, however, digital communication creates new psychosocial risks. One increasingly salient risk is cyber ostracism, defined as the experience of being ignored, excluded, or denied acknowledgment in online interactions (Williams, 2007).

Research on workplace ostracism has generally shown that exclusion threatens employees' sense of belonging, consumes psychological resources, and is associated with unfavorable work outcomes (Baumeister & Leary, 1995; Ferris et al., 2008). Nevertheless, three gaps remain. First, much of the existing literature examines face-to-face workplace ostracism rather than exclusion embedded in digital communication. Second, relatively little is known about how cyber ostracism influences work engagement, a motivational outcome that is central to employee effectiveness. Third, the cognitive mechanism connecting cyber ostracism to work engagement remains underdeveloped. Rumination is a theoretically relevant mechanism because ambiguous exclusionary cues may prompt employees to repeatedly analyze why they were ignored, thereby diverting attention and psychological resources away from work (Nolen-Hoeksema, 1991; Williams, 2007).

Against this background, the present study investigates the relationship between cyber ostracism and work engagement by examining rumination as the underlying cognitive mechanism among Vietnamese employees. Rather than assuming that cyber ostracism produces only detrimental outcomes, this study addresses the unresolved question of whether employees may simultaneously experience cognitive resource depletion while maintaining or even increasing observable work engagement.

This study contributes to the literature in three ways. First, it extends workplace ostracism research to digitally mediated interactions by focusing specifically on cyber ostracism in organizational communication. Second, it addresses an important theoretical gap by integrating Belongingness Theory, the temporal need-threat model, Response Styles Theory, and Conservation of Resources Theory into a unified framework that explains both the cognitive process (rumination) and the behavioral outcome (work engagement). Third, by simultaneously testing the direct and indirect effects of cyber ostracism, the study reveals whether competing psychological mechanisms coexist, thereby providing new evidence on the complex consequences of cyber ostracism in a collectivistic emerging economy.

2. Theoretical framework

2.1. Theoretical foundation

Four theoretical perspectives collectively underpin the conceptual model proposed in this study.

Amid the rapid pace of digital transformation, social media and online communication platforms are now used extensively within organizations to facilitate communication, coordination, and connection among employees (Kaplan & Haenlein, 2010; Leonardi, 2015). The expansion of remote and hybrid work arrangements in the aftermath of the Covid-19 pandemic has further entrenched digital interaction as a core feature of organizational life (Ip & Wagner, 2008; Leonardi, 2015).

However, alongside the benefits of enhanced communication and collaboration, the digital workplace has also introduced new psychosocial risks, among which cyber ostracism (CO) has drawn increasing scholarly attention (Cao et al., 2019). Cyber ostracism refers to the experience of being ignored, excluded, or denied a response in online interactions (Williams, 2007). Such experiences have been shown to intensify rumination and, in turn, to affect employees' engagement with their work (Amin & Wang, 2024).

While a substantial body of research has examined ostracism in the workplace more broadly, studies addressing the mechanism through which cyber ostracism affects work engagement via rumination remain scarce, particularly within the increasingly digitalized work environment of Vietnam (Yang et al., 2022). Motivated by this gap, the present study examines the effect of cyber ostracism on work engagement through the mediating role of rumination, and offers managerial implications for organizations navigating the challenges of digital transformation.

2.2. Cyber ostracism and rumination

Cyber ostracism (CO) is defined as the extent to which social media users feel excluded, overlooked, or unrecognized during digital communication, such as receiving no reply to a message or being disregarded in online discussion channels (Amin & Wang, 2024). Within today's digitally mediated workforce, CO occurring on internal social platforms disrupts the fundamental need to belong described by Baumeister and Leary (1995), giving rise to rumination, a repetitive thought process centered on negative experiences and characterized by persistent focus on distressing emotions and their causes (Nolen-Hoeksema, 1991). Taken together, these foundational perspectives underscore that CO constitutes not merely a form of digital stress but a substantial risk factor for employees' psychological well-being (Williams, 2007).

A consistent body of research affirms a positive relationship between CO and rumination, as reflected in Hypothesis 1: "Cyber ostracism is positively associated with rumination" (Amin & Wang, 2024; Wagers et al., 2017). Among the most notable consequences of CO are the depletion of psychological resources and prolonged states of anxiety, with no evidence found for a relationship in the opposite direction (Williams, 2007). To mitigate these risks, organizations are encouraged to cultivate a positive culture of communication on internal digital platforms and to provide emotional intelligence training as a means of protecting employee well-being (Amin & Wang, 2024; Goleman, 1995).

Beyond the direct emotional discomfort caused by cyber ostracism, employees often engage in cognitive efforts to interpret the reasons behind their exclusion. According to the temporal need-threat model of ostracism proposed by Williams (2009), experiences of being ignored or excluded threaten fundamental psychological needs, including belongingness, self-esteem, control, and meaningful existence. As employees attempt to make sense of these experiences, they may repeatedly revisit the exclusion event, question their social value, and speculate about potential mistakes or interpersonal conflicts. This repetitive cognitive processing consumes substantial psychological resources and increases the likelihood of rumination. Consequently, the more frequently employees experience cyber ostracism in workplace digital interactions, the more likely they are to develop persistent patterns of negative and repetitive thinking.

Building on the discussion above, cyber ostracism can be understood as a factor capable of intensifying rumination among employees by activating repetitive thinking about experiences of exclusion, neglect, or lack of recognition within the digital environment. When such negative experiences persist, employees tend to focus increasingly on negative emotions and unfavorable self-interpretations, which in turn undermines their psychological well-being at work. Based on this reasoning, the following hypothesis is proposed:

H1: Cyber ostracism has a significant positive effect on employees' rumination.

2.3. Cyber ostracism and work engagement

Work engagement reflects employees' sustained investment of vigor, dedication, and attention in their work. In digitally connected workplaces, online platforms support task coordination, social recognition, information access, and opportunities to demonstrate competence. Exclusion from these interactions may therefore threaten employees' social standing and perceived value within the work group.

Although ostracism research generally emphasizes withdrawal and resource loss, employees' direct responses to exclusion may not always be negative. In the present model, the harmful pathway operates through rumination, whereby cyber ostracism stimulates repetitive negative thought that subsequently reduces work engagement. At the same time, employees may compensate for threatened self-worth and control by investing more strongly in a domain they can influence: their work.

Self-Affirmation Theory supports this compensatory mechanism (Steele, 1988). When employees' social acceptance is threatened, greater effort, persistence, and concentration may help them demonstrate competence, reaffirm personal value, and regain recognition. This response may be particularly salient in Vietnam's collectivistic workplace context, where interpersonal harmony and group membership are strongly valued (Hofstede, 2001). Rather than directly confronting colleagues or openly expressing dissatisfaction, employees may work more proactively and demonstrate stronger commitment to collective goals.

Thus, cyber ostracism may simultaneously produce a positive direct effect on work engagement and a negative indirect effect through rumination, resulting in the competitive mediation pattern proposed in this study. Accordingly:

H2: Cyber ostracism has a significant positive direct effect on employees' work engagement.

2.4. Rumination and work engagement

Rumination is defined as a spontaneous and repetitive thought process that typically arises following negative experiences or exposure to stress, and which tends to intensify and prolong negative emotions (Guo & Wu, 2011).

First, according to the Response Styles Theory (RST) (Nolen-Hoeksema, 1991), rumination represents a maladaptive coping strategy in which individuals repeatedly dwell on their distress and its causes and consequences, rather than directing attention toward practical problem-solving. This repetitive cycle intensifies and prolongs negative thinking. From the perspective of the Conservation of Resources Theory (COR) (Hobfoll, 1989), this same process simultaneously depletes individuals' psychological resources and mental energy. When the mind becomes trapped in unproductive thought loops, employees lose the resilience and energy required to invest in their work, thereby weakening their enthusiasm for current tasks (Shao et al., 2025).

H3: Rumination has a significant negative effect on employees' work engagement.

2.5. The mediating role of rumination

According to Conservation of Resources (COR) theory, experiencing cyber ostracism threatens employees' valuable psychological resources, particularly their sense of belonging and recognition within the organization. In response to this resource threat, individuals are likely to engage in rumination, a repetitive cognitive process in which they continually reflect on and reinterpret experiences of exclusion. This persistent rumination further depletes cognitive and emotional resources, reducing employees' capacity to maintain energy, focus, and investment in their work.

Although previous studies have established associations between rumination and various negative outcomes, such as poorer psychological well-being, increased social anxiety, and emotional distress in the context of cyber ostracism, most have focused on student populations or mental health outcomes. Comparatively little research has examined rumination as the underlying mechanism through which cyber ostracism influences work-related outcomes, particularly work engagement, in organizational settings. Drawing on COR theory and this research gap, the present study proposes that rumination mediates the relationship between cyber ostracism and work engagement. Accordingly, the following indirect-effect hypothesis is proposed:

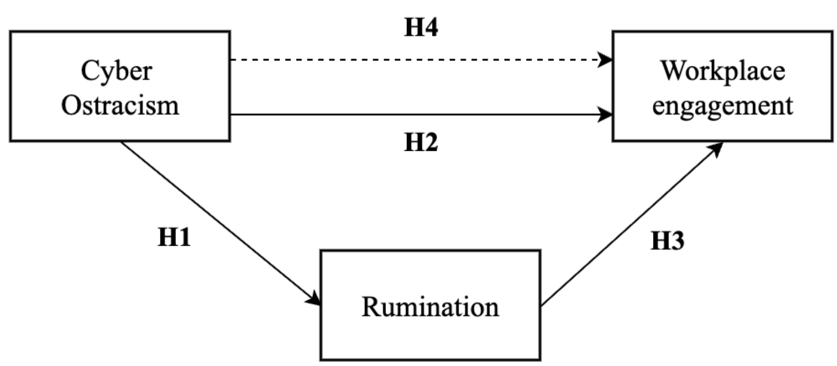
H4: Rumination mediates the relationship between cyber ostracism and work engagement.

3. Research methodology

3.1. Measurement scales

Based on the aforementioned hypotheses, the research team proposes the conceptual model illustrated in Figure 1, in which CO serves as the independent variable, RM as the mediating variable, WE as the dependent variable, and control variables including gender, age, educational attainment, tenure at the current organization, current job position, industry sector, geographic region of the employing organization, and current firm size.

Figure 1. Proposed research model



Source: Proposed by the research team

Regarding the measurement instruments, the research team adopted and adapted well-validated scales that have demonstrated strong applicability and have been widely employed across numerous studies on individual psychology and behavior among diverse populations, particularly young adults and employees. Specifically, the CO scale comprising 14 items was drawn from Xu et al. (2022); the RM scale consisting of 19 items was derived from Sukhodolsky et al. (2001); and the WE scale encompassing 9 items was adapted from Vallières et al. (2017).

Although the measurement scales were originally developed in prior international research, the authors conducted forward translation into Vietnamese and subsequently applied a back-translation procedure from Vietnamese into the source language to ensure semantic equivalence and contextual appropriateness for the target respondents, namely, employees working in Vietnam. The survey instrument was constructed using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

3.2. Data collection

The study employed a non-probability convenience sampling technique, deemed appropriate for reaching a large and accessible population of working individuals. Data were collected via a hybrid approach, combining online surveys through Google Forms, distributed across professional networking groups and employment forums, with face-to-face paper surveys administered at business offices and commercial areas. Target respondents included individuals residing, working, or studying primarily in Northern Vietnam who had current or prior employment experience. The data collection was conducted over four weeks, from April to May 2026.

To ensure analytical reliability, the minimum sample size was determined in accordance with the criterion proposed by Höck and Ringle (2006), which stipulates that the minimum sample size should be at least five times the total number of observed variables ($N = 5 \times m$). Applying this criterion, a minimum of 210 valid responses was required. Ultimately, the research team collected 367 valid questionnaires, comprising 69 paper-based responses and 298 online responses, all of which were retained for subsequent data analysis.

3.3. Data analysis

The authors employed SPSS software to perform descriptive statistics and frequency analysis, and SmartPLS software to evaluate both the measurement model and the structural model. Accordingly, the study conducted assessments of reliability, convergent validity, discriminant validity, and multicollinearity, as well as hypothesis testing for the proposed research model.

4. Results and discussion

4.1. Descriptive statistics

Among the 367 valid respondents, 70.8% were female, 94.6% held a bachelor's degree or higher, 69.8% were staff-level employees, and 82.8% worked in the service sector. In addition, 56.4% were employed by non-state-owned enterprises, while 92.1% worked in firms with more than 10 employees. This sample profile provides a relevant context for examining digitally mediated workplace behaviors, particularly among highly educated employees who may be sensitive to organizational communication and engagement dynamics.

4.2. Measurement model evaluation

4.2.1. Outer loadings

Hair et al. (2017) recommend an outer loading of at least 0.7 for strong indicator reliability. Most indicators met this criterion, except RM17, RM18, and WE9.

4.2.2. Cronbach's alpha and convergent validity (AVE)

Following the criteria proposed by Hair et al. (2006), a Cronbach's Alpha value between 0.8 and 0.95 indicates strong reliability. The results show that all constructs in this study exceeded a Cronbach's Alpha of 0.9, confirming the reliability of the measurement instruments.

Average Variance Extracted (AVE) was used to assess the convergent validity of the latent constructs. Hair et al. (2017) recommend retaining indicators with an outer loading of 0.7 or above; for indicators with loadings between 0.4 and 0.7, retention decisions should be based on composite reliability (CR) and AVE. The results indicate that all constructs achieved strong reliability, with composite reliability (rho_c) exceeding 0.7 and AVE exceeding 0.5, confirming both reliability and convergent validity (Hair et al., 2019). Although CR and AVE already met the required thresholds, the authors nonetheless removed indicators RM17, RM18, and WE9 to further enhance the model's fit and statistical robustness.

Table 1. Convergent validity results

Construct	Cronbach's Alpha	rho_a	rho_c	AVE
RM	0.971	0.980	0.973	0.680
CO	0.971	0.972	0.974	0.725
WE	0.929	0.986	0.938	0.656

Source: Authors' calculations

4.2.3. Discriminant validity

According to Henseler et al. (2015), discriminant validity is considered violated when the Heterotrait-Monotrait (HTMT) ratio between two constructs exceeds 0.9, whereas values below 0.85 indicate that discriminant validity is well established. In this study, HTMT values ranged from 0.098 to 0.403, all below 0.85, confirming that the constructs satisfy the requirement for discriminant validity.

Table 2. Discriminant validity results

Construct	RM	CO	WE
RM			
CO	0.403		
WE	0.098	0.235	

Source: Authors' calculations

The hypotheses were tested using bootstrapping with 5,000 resamples at a 5% significance level. The adjusted R^2 values were 0.172 for RM and 0.074 for WE, indicating that CO explained 17.2% of the variance in RM, while CO and RM jointly explained 7.4% of the variance in WE.

CO had a significant positive effect on RM ($\beta = 0.417$, $p < 0.001$), indicating that exclusion in digital communication intensifies repetitive negative thinking. RM, in turn, had a significant negative effect on WE ($\beta = -0.131$, $p = 0.049$), suggesting that persistent cognitive preoccupation depletes the emotional and cognitive resources needed to remain energetic, dedicated, and absorbed at work.

CO also had a significant positive direct effect on WE ($\beta = 0.309$, $p < 0.001$). This unexpected relationship may reflect a compensatory response in which excluded employees increase their task investment to demonstrate competence, reaffirm their organizational value, and regain recognition.

The indirect effect of CO on WE through RM was negative and significant ($\beta = -0.055$, $p = 0.043$). Thus, CO simultaneously activates two opposing processes:

a positive direct pathway through compensatory work investment and a negative indirect pathway through resource-depleting RM. Hypotheses H1, H2, H3, and H4 were therefore supported.

Table 3. Hypothesis testing results

Hypothesis	Path	Path coefficient	P-value	Type	Conclusion
H1	CO → RM	0.417	0.000	Direct	Supported
H2	CO → WE	0.309	0.000	Direct	Supported
H3	RM → WE	-0.131	0.049	Direct	Supported
H4	CO → RM → WE	-0.055	0.043	Indirect	Supported

Source: Authors' calculations

The bootstrapping results based on 5,000 resamples (Table 4) show that the indirect effect of CO on WE through the mediator RM is β = -0.055 (p = 0.043 < 0.05), with a 95% bootstrap confidence interval excluding zero [-0.108; -0.001], confirming that the mediating role of RM is statistically significant. At the same time, the direct effect of CO on WE within the mediation model remains strongly significant, with β = 0.309 (p = 0.000 < 0.05) and a 95% bootstrap confidence interval of [0.223; 0.406]. Because the direct effect is positive while the indirect effect is negative, the two pathways partially offset one another, placing the model in a state of competitive (inconsistent) mediation, as classified by Zhao et al. (2010), rather than conventional partial mediation.

Table 4. Mediation analysis results for RM

Path	Coefficient (β)	P-value	95% CI	Conclusion
Direct effect: CO → WE	0.309	0.000	0.223; 0.406	Significant (positive)
Indirect effect: CO → RM → WE	-0.055	0.043	-0.108; -0.001	Significant (negative)
Total effect: CO → WE	0.254	0.000	0.149; 0.356	Significant (positive)

Source: Authors' calculations

4.4. Discussion

Drawing on Conservation of Resources Theory (COR) (Hobfoll, 1989) and prior research on digital organizational behavior, this study examines the effects of CO on RM and WE, with RM serving as a mediating mechanism.

First, CO had a significant positive effect on RM (β = 0.417), supporting H1. Employees who feel ignored or excluded in digital interactions are more likely to engage in repetitive negative thinking. This finding is consistent with previous research showing that online exclusion can increase rumination, reduce self-evaluation, and heighten psychological strain. Because digital platforms provide both communication and social recognition, being overlooked may intensify feelings of devaluation and detachment, thereby increasing RM.

Second, CO had a significant positive direct effect on WE (β = 0.309). This finding contrasts with the dominant ostracism literature, which associates exclusion with threatened belongingness, resource depletion, and withdrawal from work (Ferris et al., 2008; Yang et al., 2022). However, it should not be interpreted as evidence that CO is beneficial. Instead, the positive relationship may reflect a compensatory response in which employees redirect their energy toward work when their social standing is threatened.

Self-Affirmation Theory provides a possible explanation for this response (Steele, 1988). When an important aspect of self-worth is threatened, individuals may invest in another controllable domain to restore a positive self-view. Employees with limited control over colleagues' responses may therefore increase their dedication, concentration, and persistence at work to demonstrate competence and regain recognition. This explanation extends prior research by suggesting that exclusion does not always produce immediate withdrawal and may initially encourage greater task investment under certain conditions.

The Vietnamese context may strengthen this compensatory pathway. In collectivistic settings, social belonging, relational harmony, and group approval are highly valued (Hofstede, 2001). Employees experiencing CO may therefore avoid direct confrontation or visible withdrawal and instead increase their dedication to work as an indirect way of reaffirming their value within the group. However, this interpretation remains tentative because the study did not directly measure cultural orientation, self-affirmation, or compensatory motives. Future research should test whether collectivism strengthens the positive direct relationship between CO and WE.

Importantly, the positive direct effect of CO on WE coexists with a negative indirect effect through RM. CO increases RM, which subsequently reduces WE, indicating competitive mediation (Zhao et al., 2010). Employees may therefore increase their work investment as a compensatory response while simultaneously experiencing repetitive negative thoughts that deplete cognitive and emotional resources. This dual-pathway pattern helps reconcile the present findings with earlier studies reporting the harmful effects of workplace ostracism. Although compensatory engagement may emerge in the short term, RM-related psychological strain may gradually undermine employees' ability to sustain it.

Because the data were collected through a cross-sectional design, the study cannot determine whether the positive direct association reflects a temporary compensatory reaction or a stable increase in work engagement. Longitudinal research is needed to examine whether employees initially intensify their work investment following cyber ostracism but subsequently experience declining engagement as rumination and resource depletion accumulate. Accordingly, managers should not regard greater visible dedication among excluded employees as evidence that they are coping effectively. Increased work engagement may conceal unresolved psychological strain and should not reduce the need to address exclusionary digital communication practices.

Third, the results indicate that rumination has an effect on work engagement, with a standardized path coefficient of -0.131. Hypothesis H3 is therefore supported, indicating that as rumination increases, work engagement tends to decline.

This result is consistent with prior studies suggesting that prolonged negative thinking depletes mental energy, reduces concentration, and undermines individual motivation. Employees who repeatedly dwell on negative experiences encountered on social media find it difficult to sustain a positive disposition at work, which in turn diminishes their engagement with the organization. Within the context of constant digital connectivity, rumination emerges as a critical psychological factor shaping employee well-being.

Fourth, the mediation analysis shows that rumination mediates the relationship between cyber ostracism and work engagement, with an indirect effect coefficient of -0.055, thereby supporting Hypothesis H4.

Specifically, when employees experience exclusion on social media, they tend to develop prolonged negative thinking, which in turn diminishes their engagement at work. Cyber ostracism therefore affects work engagement not only directly but also indirectly through rumination. This finding helps clarify the mechanism through which the digital work environment shapes employee well-being amid ongoing digital transformation.

The model yields an adjusted R^2 of 0.074 for WE, indicating that CO and RM jointly explain only 7.4% of its variance. This modest explanatory power does not invalidate the significant path coefficients but suggests that important predictors of WE were excluded. Work engagement is shaped by multiple job, organizational, individual, and digital factors, including autonomy, job resources, leadership support, organizational culture, resilience, self-efficacy, digital literacy, and boundary management.

The low R^2 may also reflect the competitive mediation pattern. CO has a positive direct effect on WE but a negative indirect effect through RM, suggesting heterogeneous coping responses. Some employees may increase their work effort to regain recognition, whereas others experience resource depletion through repetitive negative thinking. Because the model captures only these limited pathways, it explains only a small proportion of WE.

Future research should examine moderators such as psychological safety, leader and peer support, team cohesion, resilience, trait rumination, self-efficacy, work meaningfulness, cultural orientation, job autonomy, digital literacy, and boundary management. These effects may be tested through interaction terms, multi-group analysis, or hierarchical models. Longitudinal and experience-sampling designs could further distinguish short-term compensatory engagement from longer-term declines associated with accumulated RM. Using a broader measure of RM and including relevant controls, such as workload and burnout, may also improve the model's explanatory power.

Practically, the low R^2 implies that organizations should not infer that cyber ostracism is unimportant simply because the model explains a limited share of engagement variance. CO still exerts meaningful direct and indirect effects. Instead, interventions should be multifaceted: strengthen leadership and peer support, foster psychological safety in digital interactions, build employee resilience and digital boundary-management skills, and improve job resources and work design. Such comprehensive approaches will be more effective than single-focus interventions in protecting employee well-being and sustaining work engagement in digital environments.

Overall, the findings indicate that cyber ostracism is a psychosocial factor with a substantial impact on employees in the digital era. Exclusion on social media not only intensifies rumination but also undermines work engagement. Organizations should therefore prioritize cultivating positive digital communication environments, strengthening internal connectivity, and paying closer attention to employee mental health in order to enhance well-being and engagement within the workforce.

This study has several limitations. First, the convenience sample skews toward female, highly educated, service-sector employees in Northern Vietnam, limiting generalizability to other worker groups and regions. Second, rumination was measured using the Anger Rumination Scale (Sukhodolsky et al., 2001), which captures anger-related rumination specifically rather than rumination in a broader sense. Using the Anger Rumination Scale specifically captures thoughts focused on anger and grievance rather than broader forms of rumination (such as sadness or anxiety). This narrow scope may explain the modest indirect effect observed, as cyber ostracism could trigger other cognitive-emotional responses not fully captured by an anger-centric instrument. Third, the cross-sectional, self-reported design raises the possibility of common method bias and limits causal inference; longitudinal designs would strengthen confidence in the observed relationships. Finally, future research could examine moderating factors, such as individual resilience or cultural orientation, that may explain why employees respond to cyber ostracism with withdrawal in some cases and compensatory effort in others.

Although the structural relationships are statistically significant, the model has limited explanatory power for work engagement. The adjusted R^2 of 0.074 indicates that cyber ostracism and rumination jointly explain only 7.4% of its variance, while the effect of rumination is very small ($f^2 = 0.015$). These findings suggest that neither variable should be regarded as a primary determinant of work engagement.

The low explained variance may reflect the multifaceted nature of work engagement, which is shaped by numerous job, organizational, and individual factors, including leadership support, psychological safety, job autonomy, meaningful work, workload, recognition, organizational support, and resilience. Because the present model was intentionally parsimonious, these broader determinants were not included.

The competitive mediation pattern may further limit explanatory power. Cyber ostracism has a positive direct association with work engagement but a negative indirect association through rumination, causing the two pathways to partially offset each other. Employees may temporarily increase their work investment while simultaneously experiencing repetitive negative thoughts that deplete cognitive and emotional resources.

Cyber ostracism may also be episodic and context-dependent. Its influence may vary according to the frequency, duration, source, and perceived intentionality of exclusion, as well as available resources. Supportive leadership and psychological safety may weaken its negative effects, whereas high workload or low organizational support may intensify them.

Accordingly, the low R^2 and small effect size limit the model's explanatory and predictive scope. Future studies should incorporate additional job demands and resources and examine moderators such as psychological safety, leader support, organizational support, resilience, and cultural orientation to clarify when cyber ostracism and rumination become more influential.

5. Conclusion and policy implications

5.1. Conclusion

This study examines the effect of cyber ostracism on work engagement through the mediating role of rumination. The results show that cyber ostracism increases rumination, while rumination in turn reduces work engagement. This suggests that when employees feel ignored or excluded in online interactions, they tend to engage in repeated negative thinking, which subsequently affects their level of engagement at work.

Furthermore, the study finds that cyber ostracism exerts a positive direct effect on work engagement, while its indirect effect through rumination is negative. This pattern reflects a competitive mediation mechanism, indicating that cyber ostracism does not solely produce adverse psychological consequences; in certain circumstances, it may also prompt employees to increase their work effort as a compensatory response.

More importantly, the findings reveal a positive direct effect of cyber ostracism on work engagement, while its indirect effect through rumination is negative. This pattern indicates a competitive mediation mechanism and suggests that cyber ostracism does not lead to a uniform psychological response. In other words, exclusion in digital interactions may simultaneously generate psychological strain and stimulate compensatory effort. Some employees may respond to being ignored or marginalized by investing more energy in their work in order to reaffirm their competence, restore their self-worth, or regain recognition within the organization.

This unexpected positive relationship also has important academic implications. First, it challenges the assumption, widely supported in ostracism research, that exclusion necessarily weakens positive work attitudes in a linear and universally negative manner. Instead, the present findings suggest that cyber ostracism can trigger mixed responses depending on the psychological and contextual conditions under which employees interpret and cope with exclusion. Second, the result highlights the importance of distinguishing between immediate emotional reactions and behavioral compensation.

Employees may appear highly engaged at work even while experiencing underlying distress and rumination, meaning that visible effort does not necessarily reflect psychological well-being. Third, the finding suggests that work engagement in digital contexts may function not only as a positive motivational state but also as a compensatory strategy used to defend self-concept under threat.

Overall, this study contributes to a clearer understanding of the effects of cyber ostracism within the digital workplace, while highlighting the role of rumination as a key mechanism explaining the relationship between exclusionary experiences and work engagement.

5.2. Policy implications

Based on the findings, several managerial implications can be proposed to help organizations mitigate the negative consequences of cyber ostracism and maintain employee work engagement in increasingly digitalized workplaces.

First, organizations should establish clear norms and expectations regarding online communication. Guidelines concerning response times, information sharing, and participation in digital discussions can help reduce ambiguity in virtual interactions and minimize situations in which employees perceive themselves as being ignored or excluded. Such measures are particularly important in remote and hybrid work environments where digital communication serves as the primary channel for collaboration.

Second, organizations should provide training programs that enhance employees' awareness of digital communication etiquette and inclusive online behaviors. Employees may unintentionally engage in actions such as overlooking messages, excluding colleagues from discussions, or failing to acknowledge contributions, all of which can contribute to perceptions of cyber ostracism. Training initiatives can help employees recognize these behaviors and develop more supportive communication practices.

Third, managers should actively monitor team interactions and pay particular attention to employees who participate less frequently in online discussions or appear disconnected from communication networks. Early identification of potential exclusion experiences enables managers to provide timely support, encourage participation, and strengthen employees' sense of belonging within the team.

Fourth, organizations should invest in psychological support mechanisms, including counseling services, coaching programs, and stress-management workshops. Given that cyber ostracism can trigger rumination and prolonged negative thinking, providing employees with effective coping strategies may help reduce psychological distress and protect their well-being.

In addition, organizations should regularly assess the quality of digital communication and employees' perceptions of inclusion. Surveys, feedback systems, and periodic check-ins can help identify communication issues before they escalate into more serious psychological and performance-related problems. Leaders also play a critical role in fostering an inclusive communication climate by acknowledging employees' contributions, encouraging open dialogue, and ensuring that all team members have opportunities to express their opinions.

Finally, organizations should strive to cultivate a respectful, supportive, and inclusive digital work environment. By promoting positive online interactions, strengthening communication practices, and providing adequate psychological resources, organizations can reduce the harmful effects of cyber ostracism, limit employees' tendency to ruminate on negative experiences, and ultimately sustain higher levels of work engagement and long-term organizational effectiveness.

REFERENCES

Amin, M., & Wang, Y. (2024). Cyber ostracism and employee well-being in digital workplaces. *Journal of Organizational Behavior Studies*.

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497-529.

Cao, X., Khan, A. N., Zaigham, G. H. K., & Khan, N. A. (2019). The stimulators of social media fatigue among students: Role of moral disengagement. *Journal of Educational Computing Research*, 57(5), 1083-1107.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates.

Ferris, D. L., Brown, D. J., Berry, J. W., & Lian, H. (2008). The development and validation of the Workplace Ostracism Scale. *Journal of Applied Psychology*, 93(6), 1348-1366.

Goleman, D. (1995). *Emotional intelligence: Why it can matter more than IQ*. Bantam Books.

Guo, M., & Wu, L. (2011). Rumination as a cognitive risk factor for stress-related outcomes. *Journal of Psychological Studies*.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2006). *Multivariate data analysis* (6th ed.). Pearson Prentice Hall.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling* (PLS-SEM) (2nd ed.). SAGE Publications.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2-24.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115-135.

Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44(3), 513-524.

Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations* (2nd ed.). SAGE Publications.

Höck, M., & Ringle, C. M. (2006). *Strategic networks in the software industry: An empirical analysis of the value continuum.* IFSAM VIIIth World Congress.

Ip, R. K. F., & Wagner, C. (2008). *Weblogging: A study of social computing and its impact on organizations. Decision Support Systems*, 45(2), 242-250.

Kaplan, A. M., & Haenlein, M. (2010). *Users of the world, unite! The challenges and opportunities of social media*. Business Horizons, 53(1), 59-68.

Leonardi, P. M. (2015). Ambient awareness and knowledge acquisition: Using social media to learn 'who knows what' and 'who knows whom'. *MIS Quarterly*, 39(4), 747-762.

Martin, L. L., & Tesser, A. (1996). Some ruminative thoughts. In R. S. Wyer Jr. (Ed.), *Advances in social cognition* (Vol. 9, pp. 1-47). Lawrence Erlbaum Associates.

Nolen-Hoeksema, S. (1991). Responses to depression and their effects on the duration of depressive episodes. *Journal of Abnormal Psychology*, 100(4), 569-582.

Shao, B., Li, Y., & Zhang, X. (2025). Rumination and resource depletion: Implications for employee engagement. *Journal of Workplace Psychology*.

Steele, C. M. (1988). *The psychology of self-affirmation: Sustaining the integrity of the self. Advances in Experimental Social Psychology*, 21, 261-302.

Sukhodolsky, D. G., Golub, A., & Cromwell, E. N. (2001). Development and validation of the Anger Rumination Scale. *Personality and Individual Differences*, 31(5), 689-700.

Wagers, T. P., Kiely, B. T., & Suh, J. (2017). Exclusion in digital contexts: Antecedents and outcomes of cyber ostracism. *Computers in Human Behavior*, 73, 235-245.

Williams, K. D. (2007). Ostracism. *Annual Review of Psychology*, 58, 425-452.

Williams, K. D., Cheung, C. K. T., & Choi, W. (2000). Cyberostracism: Effects of being ignored over the Internet. *Journal of Personality and Social Psychology*, 79(5), 748-762.

Xu, S., Wang, Y., & Liu, D. (2022). Development and validation of the Cyber Ostracism Scale for organizational settings. *International Journal of Human-Computer Interaction*.

Yang, J., Liu, H., & Chen, S. (2022). Cyber ostracism in remote work: Effects on employee engagement and well-being. *Journal of Business Research*.

Zhao, X., Lynch, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*, 37(2), 197-206.

THE ASSOCIATION BETWEEN WORKPLACE BULLYING AND ANXIETY, STRESS, AND DEPRESSION AMONG EMPLOYEES

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Abstract: This study aimed to examine the association between workplace bullying and anxiety, stress, and depression among employees. Based on a survey of 211 employees in Hanoi, the findings indicate that workplace bullying is relatively common, with 38.9% of respondents reporting experiences of workplace bullying to varying degrees. Employees across different age groups, genders, educational backgrounds, occupational fields, job positions, and employment sectors were all found to be vulnerable to workplace bullying. However, those who have recently joined an organization tend to be more likely to experience workplace bullying. Workplace bullying was found to be associated with higher levels of anxiety, stress, and depression, with potentially more severe consequences for employees who already had pre-existing mental health problems. The findings indicate that measures to foster a healthy work environment in order to protect employees' mental health are essential in the current context.

Keywords: *anxiety; depression; mental health; stress; workplace bullying.*

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1. Introduction

Workplace bullying is often subtle in its manifestation, yet it is so prevalent that it has been described as a "silent epidemic" (McAvoy & Murtagh, 2003). Based on a meta-analysis, Nielsen et al. (2010) estimated that approximately 15% of employees worldwide are exposed to workplace bullying. A study conducted in the United States found that 23% of employees had experienced workplace bullying (Lutgen-Sandvik et al., 2007). In Vietnam, up to 40% of nurses at a hospital in Ho Chi Minh City were victims of workplace bullying (Huong et al., 2023). Workplace bullying refers to harassment, offense, social exclusion, or negatively affecting another person's work (Einarsen et al., 2020). Workplace bullying has several characteristics: it occurs repeatedly and frequently (e.g., weekly) over a prolonged period (e.g., approximately six months); there is an imbalance of power between the perpetrator and the target, making it difficult for the target to defend themselves; and it results in the target occupying an inferior position and becoming the subject of systematic negative social acts (Einarsen et al., 2020). Maglich-Sespico et al. (2007) distinguished three forms of workplace bullying: work-related bullying, psychological/emotional bullying (person-related bullying), and physical bullying. This classification has been widely used in workplace bullying research (Barlett & Barlett, 2011). Numerous studies have shown that the most common forms are work-related bullying and psychological/emotional bullying (person-related bullying), whereas physical bullying occurs less frequently (Huong et al., 2023; Rayner & Hoel, 1997).

Workplace bullying leads to numerous adverse consequences for employees. Exposure to workplace bullying is associated with a wide range of mental and physical health problems among employees, including anxiety, stress, and depression (Barlett & Barlett, 2011). Anxiety is associated with the perception that something unsafe or dangerous is imminent or that an unpleasant and difficult-to-manage event may occur in the future (Minh et al., 2024). Meanwhile, stress is a psychological response that arises when individuals appraise environmental demands as exceeding or threatening to exceed their personal resources and coping capacity (Lazarus & Folkman, 1984). According to the International Classification of Diseases, 11th Revision (ICD-11) published by the World Health Organization (WHO), depression is characterized by a depressed mood (e.g., sadness, emptiness, or irritability) or diminished interest or pleasure in everyday activities, accompanied by other cognitive, behavioural, or neurovegetative symptoms that significantly impair an individual's functioning (WHO, 2026). In addition, individuals with depression may experience difficulty concentrating, feelings of worthlessness or excessive guilt, hopelessness, thoughts related to death or suicide, sleep disturbances, changes in appetite, and reduced energy or persistent fatigue (WHO, 2026).

Anxiety, stress, and depression have serious adverse effects on employees' quality of life (O'Connor et al., 2021; Olatunji et al., 2007; Rapaport et al., 2005; Wilmer et al., 2021) and job performance (Lépine & Briley, 2011; Lerner & Henke, 2008). Therefore, clearly identifying and systematically examining the effects of workplace bullying on anxiety, stress, and depression among employees is essential for protecting employees' mental health, while also contributing to improvements in workplace culture and organizational productivity.

Vietnam is a developing country with an abundant labour force, reaching 53.6 million people in 2025, of whom approximately 9 million were employed in the country's two largest cities, Hanoi and Ho Chi Minh City (National Statistics Office, 2026). However, previous studies have shown that many Vietnamese employees are exposed to workplace bullying (Diep et al., 2019; Huong et al., 2023; Khang & Ninh, 2023; Quan, 2025a, 2025b; Tam & Ha, 2023). This not only has adverse effects on employees' quality of life (Khang & Ninh, 2023; Quan, 2025a, 2025b), job satisfaction and work engagement (Diep et al., 2019; Khang & Ninh, 2023; Quan, 2025a, 2025b; Tu & Hue, 2023), but also subsequently affects organizational performance (Tam & Ha, 2023). Nevertheless, research on workplace bullying in Vietnam remains limited and has primarily focused on aspects such as work-related stress, job satisfaction, and organizational commitment, while relatively little attention has been paid to the relationship between workplace bullying and other forms of psychological distress among employees. The present study seeks to provide additional empirical evidence on this issue in the Vietnamese context. Specifically, the study surveyed employees in Hanoi regarding their experiences of workplace bullying, identified demographic factors associated with exposure to workplace bullying, and examined the relationship between workplace bullying and employees' anxiety, stress, and depression.

2. Literature review on the association between workplace bullying and employees' anxiety, stress, and depression

Several studies conducted internationally and in Vietnam have demonstrated an association between workplace bullying and employees' anxiety, stress, and depression. Nielsen and Einarsen (2012) reviewed 54 cross-sectional studies and 13 longitudinal studies published between the 1990s and 2011 and concluded that workplace bullying is associated with mental health problems, including anxiety, post-traumatic stress, and depression. Verkuil et al. (2015) synthesized evidence from 42 cross-sectional studies and 21 longitudinal studies published between 1999 and 2015 among the general working population, excluding studies involving targets of workplace bullying receiving treatment in specialized clinical settings, and confirmed this relationship. Similarly, Conway et al. (2021) reviewed more recent evidence on the association between workplace bullying and anxiety, stress, and depression.

While early studies were conducted primarily in Europe and North America, several more recent studies have been carried out in Asia. For example, Nauman et al. (2019) surveyed 211 medical residents in Lahore, Pakistan; Robert (2018) surveyed 250 bank employees in Lahore, Pakistan; Chowdhury et al. (2022) surveyed 1,264 nurses in the Dhaka and Sylhet regions of Bangladesh; and Lee et al. (2022), using data from 55,201 Korean workers obtained from the Korean Working Conditions Survey, all reported an association between workplace bullying and anxiety, stress, and depression among employees.

Studies conducted in Vietnam have shown that workplace bullying increases job-related stress and reduces work commitment among librarians and museum staff

(Quan, 2019, 2025). However, research on workplace bullying in Vietnam has primarily been conducted within individual organizations or specific occupational groups. Therefore, caution is warranted when generalizing these findings (Khang & Ninh, 2023; Huong et al., 2023). In addition, studies in Vietnam have focused mainly on job-related stress and have yet to examine other effects of workplace bullying on employees' mental health, nor have they quantified these effects. Accordingly, there is a clear need for research across a broader range of occupations and for studies that quantify the effects of workplace bullying on different dimensions of employees' mental health, including anxiety, stress, and depression. The present study seeks to address these research gaps.

3. Data and research methods

3.1. Data

Primary data were collected through a survey of employed individuals aged 18–60 years who were working in agencies, organizations, and enterprises in Hanoi. The questionnaire was administered online. A convenience sampling method was employed to recruit participants. A total of 240 questionnaires were returned; however, 29 responses were excluded because the respondents reported residing in provinces or cities other than Hanoi or did not specify their place of residence. The final analytical sample therefore consisted of 211 valid responses.

The questionnaire included items covering:

- Respondents' demographic characteristics, including age, gender, province/city of residence, educational attainment, occupation, tenure with their current organization, job position (employee, team leader, department manager or above), and employment sector (public sector, private sector, or foreign-invested sector).

- Workplace bullying was assessed using the Negative Acts Questionnaire–Revised (NAQ-R). This instrument was developed by Einarsen, Hoel, and Notelaers (2009) as a revised version of the Negative Acts Questionnaire (NAQ) originally developed by Einarsen and Raknes (1997) to measure experiences of workplace bullying across three dimensions: work-related bullying, person-related bullying, and physically intimidating bullying. The NAQ-R comprises 22 negative acts. For each item, participants were asked to indicate how often they had experienced the behavior, using a five-point scale ranging from never (1 point), occasionally (2 points), monthly (3 points), weekly (4 points), to daily (5 points). Workplace bullying was classified into three categories: not bullied (≤32 points), occasionally bullied (33-44 points), and victims of workplace bullying (≥45 points). The study used a Vietnamese translation prepared by the research team with consultation from faculty members of the Faculty of Psychology, VNU University of Social Sciences and Humanities.

- Anxiety, stress, and depression were assessed using the 21-item Depression Anxiety Stress Scales (DASS-21), developed by S. H. Lovibond and P. F. Lovibond (1995). The instrument consists of 21 items divided into three subscales: anxiety, stress, and depression, with each subscale comprising seven items. Participants rated the extent to which each statement applied to them using a four-point scale: did not apply to me at all (0 points), applied to me to some degree, or some of the time (1 point), applied to me to a considerable degree, or a good part of the time (2 points), and applied to me very much, or most of the time (3 points). Scores for each subscale were calculated by summing the scores of the corresponding seven items. Anxiety, stress, and depression were classified into five severity levels: normal, mild, moderate, severe, and extremely severe according to the cut-off scores presented in Table 1. Although no consensus has been reached regarding a cut-off score for the overall DASS-21, several studies have suggested a total score of 14-17 as an indicator of general psychological distress (Chin et al., 2019; Evans et al., 2022). The study employed the Vietnamese translation of the DASS-21 internally circulated by the National Institute of Mental Health, Bach Mai Hospital.

Table 1. Cut-off scores for classifying anxiety, stress, and depression severity using the DASS-21

Severity	Anxiety	Stress	Depression
Normal	0–3	0–7	0–4
Mild	4	8–9	5–6
Moderate	5–7	10–12	7–10
Severe	8–9	13–16	11–13
Extremely severe	10–21	17–21	14–21

Source: S. H. Lovibond & P. F. Lovibond (1995)

3.2. Research methods

3.2.1. Research hypotheses

Based on the literature review, the following hypotheses were developed:

- H1: Workplace bullying is associated with anxiety among employees.

- H2: Workplace bullying is associated with stress among employees.

- H3: Workplace bullying is associated with depression among employees.

- H4: Workplace bullying is associated with overall psychological distress among employees.

3.2.2. Data analysis

After data collection, the dataset was cleaned and analyzed quantitatively using Stata 16. The analysis consisted of descriptive statistics, one-way analysis of variance (one-way ANOVA) to compare levels of workplace bullying and symptoms of depression, anxiety, and stress across groups of employees with different demographic characteristics (e.g., age, gender, and occupation), and regression analysis to test hypotheses

H1-H4.

The association between workplace bullying and anxiety, stress, and depression among employees was examined using the following regression model:

$$y_i = \beta_0 + \beta_1 NAQ\text{-}R_i + \beta_2 Gioitinh_i + \beta_3 Nhomtuoi_i + \beta_4 Hocvan_i + \beta_5 Nganhnghe_i + \beta_6 Thamnien_i + \beta_7 Vitri_i + \beta_8 Khuvuc_i + \varepsilon_i$$

where y_i denotes the dependent variable (the anxiety score, stress score, depression score, or total DASS-21 score for individual i), NAQ-R score is the independent variable, and the control variables include demographic characteristics such as gender, age group, educational attainment, occupation, tenure with the current organization, job position, and employment sector. The β represent the regression coefficients, and ε is the random error term.

4. Results and discussion

4.1. Characteristics of the study participants

The demographic characteristics of the study sample are presented in Table 2. The sample exhibited a relatively balanced gender distribution, with 44.55% of participants identifying as male, 54.03% as female, and the remaining 1.42% not reporting their gender.

Overall, the study sample was relatively young. Participants aged 18–24 years accounted for 51.66% of the sample, followed by those aged 25-35 years (29.38%), while participants aged 35 years and above represented the smallest proportion (18.96%). The participants were generally well educated, with the vast majority holding a bachelor's degree (78.20%) or a postgraduate qualification (14.22%). Those with a high school education, vocational training, or a college diploma each accounted for fewer than 5% of the sample.

Regarding organizational tenure, participants who had worked for their current organization for less than six months and those with more than two years of tenure accounted for similar proportions of the sample (31.75% and 32.23%, respectively). By contrast, those with 6 to less than 12 months and 1 to 2 years of tenure represented approximately 20% and 13% of the sample, respectively. Most participants were employed in non-managerial positions (86.26%), whereas managerial positions were represented by only a small proportion of respondents.

Most participants were employed in the private sector (65.88%), while 25.59% worked in the public sector and 5.69% in the foreign-invested sector. The largest occupational group comprised employees working in science, engineering, and technology (30.81%), followed by those in finance, business, and management (18.01%), and education and office administration and services (both 14.69%).

Overall, the sample was predominantly composed of young, university-educated employees, most of whom were either newly employed or had more than two years of organizational tenure, and the majority held non-managerial positions.

Table 2. Demographic characteristics of the study participants

Characteristic	Category	Frequency	Percentage (%)
Total		211	100
Gender	Male	94	44.55
	Female	114	54.03
	Other/Not reported	3	1.42
Age group	18-24 years	109	51.66
	25-35 years	62	29.38
	Over 35 years	40	18.96
Educational attainment	High school education or vocational training	10	4.74
	College diploma	6	2.84
	Bachelor's degree	165	78.2
	Postgraduate qualification	30	14.22
Organizational tenure	Less than 6 months	67	31.75
	6 to less than 12 months	40	18.96
	1-2 years	29	13.74
	More than 2 years	68	32.23
	Not reported	7	3.32

Characteristic	Category	Frequency	Percentage (%)
Job position	Employee	182	86.26
	Team leader	14	6.64
	Department manager or above	9	4.27
	Not reported	6	2.84
Employment sector	Public sector	54	25.59
	Private sector	139	65.88
	Foreign-invested sector	12	5.69
	Not reported	6	2.84
Occupation	Science, engineering, and technology	65	30.81
	Healthcare	17	8.06
	Finance, business, and management	38	18.01
	Education	31	14.69
	Office administration and services	31	14.69
	Other	29	13.74

Source: Authors' calculations based on the survey data.

4.2. Reliability assessment of the measurement scales

Table 3 presents the Cronbach's alpha coefficients for the measurement scales and their subscales. All Cronbach's alpha values exceeded the recommended threshold of 0.70 (Hair et al., 2010), indicating that the scales and subscales demonstrated satisfactory internal consistency.

Table 3. Cronbach's Alpha Coefficients for the measurement scales and their subscales

Scale or Subscale	Cronbach's Alpha	Scale or Subscale	Cronbach's Alpha
NAQ-R	0.969	DASS-21	0.958
Work-related bullying	0.913	Anxiety	0.871
Person-related bullying	0.955	Stress	0.909
Physically intimidating bullying	0.809	Depression	0.900

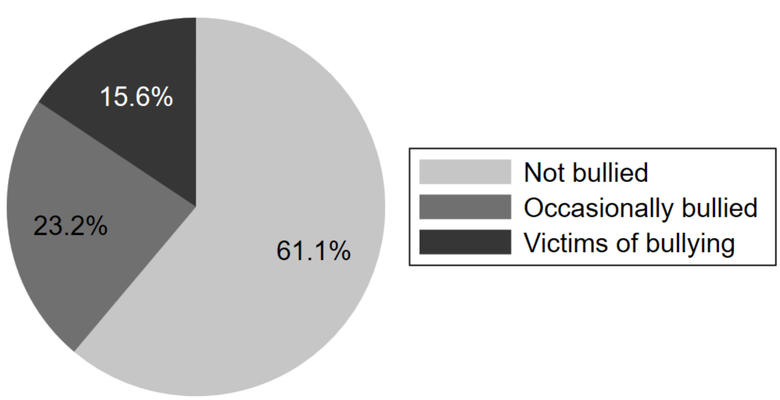
Source: Authors' calculations based on the survey data.

4.3. Workplace bullying

4.3.1. Prevalence of workplace bullying and types of bullying

Figure 1 illustrates the extent to which the study participants experience workplace bullying. Encouragingly, more than 60% of participants reported not experiencing workplace bullying. However, 38.9% had experienced workplace bullying to varying degrees, with 23.2% classified as occasionally bullied and 15.6% identified as victims of workplace bullying.

Figure 1. Distribution of participants by level of exposure to workplace bullying



Source: Authors' calculations based on the survey data.

The mean frequency of the different negative acts ranged from 1.21 to 2.00, indicating that these behaviors occurred only occasionally overall (Table 4). The most frequently reported form of bullying is a person-related bullying behavior, whereby employees are assigned tasks that do not correspond to their designated roles and responsibilities but instead involved duties outside their job responsibilities (mean = 2.00). Nevertheless, work-related bullying behaviors appeared to be more widespread overall, with relatively consistent mean scores that were generally higher than those for person-related or physically intimidating bullying (all >1.50). Physically intimidating bullying had the lowest mean score (1.21), suggesting that physical intimidation rarely occurred in the workplace. In contrast, being shouted at or being the target of spontaneous anger was relatively more common (mean = 1.63), representing the most frequently reported behavior within the physically intimidating bullying dimension.

Table 4. Prevalence of different forms of workplace bullying

No.	Item	Mean	SD	Rank
	Work-related bullying			
1	Someone withholding information which afffects your performance.	1.92	0.94	2
3	Being ordered to do work below your level of competence	1.88	1.04	4
14	Having your opinions ignored.	1.78	0.91	6
16	Being given tasks with unrealable deadlines.	1.90	0.99	3
18	Excessive monitoring of your work	1.55	0.92	10
19	Pressure not to claim something to which by right your are entitled (e.g. sick leave, holiday entitlement, travel expenses)	1.50	0.93	12
21	Being exposed to an unmanageable workload.	1.83	1.02	5
	Person-related bullying			
2	Being humiliated or ridiculed in connection with your work.	1.45	0.83	15
4	Having a key areas of responsibility removed or replaced with more trivial or unpleasant tasks	2.00	1.06	1
5	Spreading of gossip and rumours about you	1.56	0.93	9
6	Being ignored or excluded.	1.46	0.86	13
7	Having insulted or offensive remarks made about your person, attitude or your private life	1.43	0.88	16
10	Hints or signals from others that you should quit your job.	1.41	0.84	17
11	Repeated reminded of your errors or mistakes.	1.61	0.83	8
12	Being ignored or facing hostile reaction when you approach	1.55	0.86	10
13	Persistent criticism of your errors or mistakes.	1.46	0.85	13
15	Practical jokes carried out by people don't get along with	1.35	0.77	18
17	Having allegations made against you	1.33	0.76	19
20	Being subject to excessive teasing and sarcasm	1.32	0.74	20
	Physically intimidating bullying			
8	Being shouted at or the target of spontaneous anger	1.63	0.94	7
9	Intimidated behaviours such as finger-pointing, invasion of personal space, shoving, blocking your way	1.23	0.62	21
22	Threats of violence or physical abuse or actual abuse	1.21	0.63	22

Source: Authors' calculations based on the survey data.

4.3.2. Individual characteristics associated with workplace bullying

A one-way analysis of variance (one-way ANOVA) was conducted to examine the associations between individual characteristics and workplace bullying. The results indicated no statistically significant differences in the level of workplace bullying across groups defined by gender, age, educational attainment, occupation, job position, or employment sector. The only demographic characteristic that showed a statistically significant association was organizational tenure, with employees who had recently joined their current organization reporting higher levels of workplace bullying than those with longer tenure ($p < 0.05$) (Table 5).

Table 5. One-Way ANOVA results for workplace bullying

Variable	F Statistic	p-value
Gender	0.65	0.525
Age group	0.93	0.394
Educational attainment	0.71	0.548
Occupational field	0.21	0.993
Organizational tenure	3.06	0.018
Job position	0.87	0.458
Employment sector	0.55	0.648

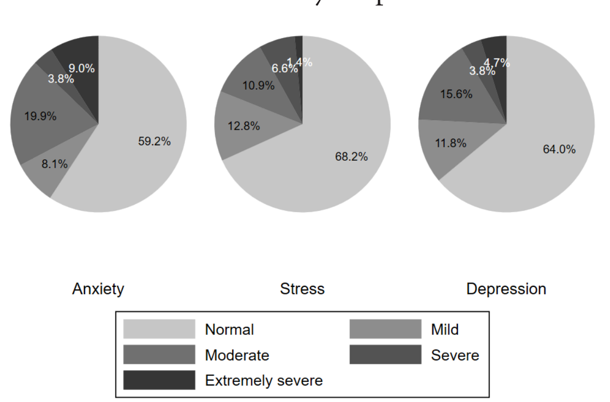
Source: Authors' calculations based on the survey data.

4.4. Anxiety, stress, and depression among employees

4.4.1. Prevalence of anxiety, stress, and depression

Figure 2 illustrates the prevalence of anxiety, stress, and depression at different severity levels among the survey participants. The majority of respondents exhibited normal mental health status, with the proportion ranging from 59.2% to 68.2%, depending on the specific mental health domain. Overall, anxiety was slightly more prevalent than stress and depression. Specifically, 40.8% of participants reported anxiety ranging from mild to extremely severe, compared with 31.8% for stress and 36.0% for depression. The proportion of participants reporting extremely severe anxiety (9.0%) was also higher than that for extremely severe stress (1.4%) and extremely severe depression (4.7%).

Figure 2. Prevalence of anxiety, stress, and depression in the study sample



Source: Authors' calculations based on the survey data.

4.4.2. Individual characteristics associated with workplace bullying

Table 6 presents the results of the one-way ANOVA, in which the dependent variables were the DASS-21 anxiety, stress, and depression scores, and the independent variables were the employees' demographic characteristics. The results indicated no statistically significant differences in stress or depression scores across groups defined by gender, age, educational attainment, occupational field, job position, or employment sector. Only two demographic variables showed a statistically significant association with anxiety levels: age group and tenure with the current organization. Specifically, younger employees and those who had recently joined the organization reported higher levels of anxiety than older employees and those with longer organizational tenure.

Table 6. One-Way ANOVA results for anxiety, stress, and depression

Variable	Anxiety		Stress		Depression	
	F Statistic	p-value	F Statistic	p-value	F Statistic	p-value
Gender	2.05	0.131	0.16	0.849	0.57	0.564
Age group	6.31	0.002	1.22	0.298	0.81	0.448
Educational attainment	0.70	0.556	0.43	0.732	0.56	0.639
Occupational field	0.87	0.550	0.28	0.98	0.40	0.932
Organizational tenure	4.26	0.003	1.47	0.212	1.75	0.141
Job position	1.00	0.395	0.79	0.503	0.73	0.537
Employment sector	0.21	0.888	0.14	0.934	0.95	0.416

Source: Authors' calculations based on the survey data.

4.5. Associations between workplace bullying and anxiety, stress, and depression among employees

Table 7 presents the results of the ordinary least squares (OLS) regression models. The dependent variables were the anxiety score (Column 1), stress score (Column 2), depression score (Column 3), and the total DASS-21 score, representing overall psychological distress (Column 4). The independent variable was the NAQ-R score, which reflects the level of workplace bullying experienced by employees. Demographic characteristics were included in the models as control variables. The models demonstrated relatively good explanatory power for employees' anxiety, stress, and depression. Specifically, 39% of the variance in employees' anxiety scores was explained by the model (Model 1, $R^2 = 0.39$). Similarly, the models explained 37%, 41%, and 42% of the variance in employees> stress scores, depression scores, and total DASS scores, respectively (Models 2, 3, and 4). The residuals of all regression models were approximately normally distributed, indicating that the models were valid and reliable inferences could be made.

4.5.1. Association between workplace bullying and anxiety among employees

The results indicate that higher levels of workplace bullying are associated with higher levels of anxiety among employees. Specifically, each one-point increase in the NAQ-R score is associated with a 0.15-point increase in the anxiety score ($p < 0.01$). When the NAQ-R score increases from 0 to the sample mean of 34.36, the predicted anxiety score is 5.15. This indicates that an employee who experiences no workplace bullying (NAQ-R = 0) is expected to have an anxiety score of 0, whereas exposure to workplace bullying at the sample's average level is associated with an anxiety score of 5.15, corresponding to a moderate level of anxiety.

4.5.2. Association between workplace bullying and stress among employees

Workplace bullying was also significantly associated with stress among employees. Each one-point increase in the NAQ-R score was associated with a 0.18-point increase in the stress score ($p < 0.01$). At the sample mean NAQ-R score of 34.36, workplace bullying was associated with an increase of 6.18 points in the stress score. This implies that an employee with a stress score of zero in the absence of workplace bullying would still remain below the threshold for mild stress, even when exposed to workplace bullying at the average level observed in the sample. However, the impact of workplace bullying may be considerably greater for employees who already experience certain levels of stress. For example, an employee who is already experiencing mild stress could be expected to progress to the severe stress category when exposed to workplace bullying at the average level observed in the sample.

4.5.3. Association between workplace bullying and depression among employees

Workplace bullying was likewise significantly associated with depression among employees. Each one-point increase in the NAQ-R score was associated with a 0.18-point increase in the depression score ($p < 0.01$). At the sample mean NAQ-R score of 34.36, workplace bullying was associated with an increase of 6.18 points in the depression score. This increase would be sufficient to shift an employee with no depressive symptoms in the absence of workplace bullying into the mild-to-moderate depression range.

Table 7. Associations between workplace bullying and anxiety, stress, depression, and psychological distress among employees

Variables	(1)	(2)	(3)	(4)
	Anxiety score	**Stress score**	**Depression score**	**Psychological distress (Total DASS-21 score)**
NAQ-R score	0.15***	0.18***	0.18***	0.51***
	(0.03)	(0.04)	(0.04)	(0.11)
Control variables	Yes	Yes	Yes	Yes
Observations	211	211	211	211
R^2	0.39	0.37	0.41	0.42

*Notes: Robust standard errors are reported in parentheses. *** p < 0.01; ** p < 0.05; * p < 0.10.*
Source: Authors' calculations based on the survey data.

4.5.4. Association between workplace bullying and psychological distress among employees

Workplace bullying was also positively associated with overall psychological distress among employees. A one-point increase in the NAQ-R score was associated with a 0.51-point increase in the DASS-21 score ($p < 0.01$). When the NAQ-R score increased from 0 to the sample mean, the predicted DASS-21 score reached 17.52, indicating that an employee with no psychological distress in the absence of workplace bullying would experience mild psychological distress when exposed to an average level of workplace bullying.

4.6. Discussion

The study found that 38.9% of employees surveyed in Hanoi had experienced workplace bullying to varying degrees, a finding consistent with previous research conducted in Ho Chi Minh City (Huong et al., 2023). The results also corroborate earlier findings regarding the relative prevalence of different forms of workplace bullying, with work-related bullying emerging as the most common form and physically intimidating bullying the least prevalent (Huong et al., 2023).

Employees across both genders, different age groups, occupations, job positions, and employment sectors were found to be vulnerable to workplace bullying. This finding is consistent with previous studies conducted in Vietnam, which reported no evidence of an association between demographic characteristics and the risk of workplace bullying (Khang & Ninh, 2023; Diep et al., 2019). However, unlike Diep et al. (2019), the present study found that longer organizational tenure was associated with a lower likelihood of experiencing workplace bullying. This may reflect the "old-timers bully newcomers" phenomenon, whereby employees who have recently joined an organization are more likely to become targets of workplace bullying by longer-tenured colleagues.

The findings demonstrate a clear association between workplace bullying and anxiety, stress, and depression among employees. Based on the estimated regression coefficients, the average level of workplace bullying observed in this study would be expected to shift an employee with no symptoms of anxiety, stress, or depression into the moderate anxiety, mild stress, and mild-to-moderate depression ranges, respectively. These effects may be even more pronounced among employees who already have pre-existing mental health problems, such as mild stress. The observed associations between workplace bullying and employees' anxiety, stress, and depression are consistent with findings reported in previous studies conducted both internationally (Conway et al., 2021; Nielsen & Einarsen, 2012; Verkuil et al., 2015) and in Vietnam (Quan, 2019, 2025). Moreover, the present study provides quantitative estimates of the strength of these associations.

Despite several limitations, including a relatively small sample size and the use of convenience sampling, this study highlights both the prevalence of workplace bullying and its concerning implications for employees' mental health. These findings underscore the importance of fostering healthy work environments to protect employees' mental well-being and enhance organizational effectiveness.

5. Conclusion

Based on a survey of 211 employees in Hanoi, the study found that workplace bullying was relatively common, with 38.9% of respondents reporting exposure to workplace bullying at varying levels. Work-related bullying was the most prevalent form, followed by person-related bullying. Physical bullying (excluding shouting and displays of anger) was rarely reported. Employees of different ages, genders, educational backgrounds, occupational fields, job positions, and employment sectors were all found to be vulnerable to workplace bullying. However, employees who had recently joined their organizations were more likely to experience workplace bullying than those with longer organizational tenure. The findings further indicate that workplace bullying is associated with higher levels of anxiety, stress, and depression among employees, with potentially more severe consequences for individuals who already experience mental health problems. Overall, the study highlights the urgent need for interventions aimed at fostering healthy work environments to protect employees' mental health in today's workplace.

REFERENCES

Barlett, J. E. II, & Barlett, M. E. (2011). Workplace bullying: An integrative literature review. *Advances in Developing Human Resources*, 13(1), 69-84.

Chin, E. G., Buchanan, E. M., Ebesutani, C., & Young, J. (2019). Depression, anxiety, and stress: How should clinicians interpret the total and subscale scores of the 21-item Depression, Anxiety, and Stress Scales? *Psychological Reports, 122*(4), 1550-1575. https://doi.org/10.1177/0033294118783508

Chowdhury, S. R., Kabir, H., Mazumder, S., Akter, N., Chowdhury, M. R., & Hossain, A. (2022). Workplace violence, bullying, burnout, job satisfaction and their correlation with depression among Bangladeshi nurses: A cross-sectional survey during the Covid-19 pandemic. *PLoS ONE, 17*(9), e0274965.

Conway, P. M., Høgh, A., Balducci, C., & Ebbesen, D. K. (2021). workplace bullying and mental health. In: D'Cruz, P., *et al. Pathways of Job-related Negative Behaviour. Handbooks of Workplace Bullying, Emotional Abuse and Harassment*, vol 2. Springer.

Diep, N. T. N., Teo, S. T. T., Grover, S. L., & Nguyen, N. P. (2019). Respect, bullying, and public sector work outcomes in Vietnam. *Public Management Review*, 21(6), 863-889.

Einarsen, S., Hoel, H., & Notelaers, G. (2009). Measuring exposure to bullying and harassment at work: Validity, factor structure and psychometric properties of the Negative Acts Questionnaire-Revised. *Work & Stress, 23*(1), 24-44.

Einarsen, S., & Raknes, B. I. (1997). Harassment in the workplace and the victimization of men. *Violence and Victims, 12,* 247-263. https://doi.org/10.1891/0886-6708.12.3.247

Einarsen, S. V., Hoel, H., Zapf, D., & Cooper, C. L. (2020). "The concept of bullying and harassment at work: the European tradition". In S. V. Einarsen, H. Hoel, D. Zapf, & C. L. Cooper (Eds.), *Bullying and harassment in the workplace* (pp. 3–54). CRC Press."

Evans, L., Haeberlein, K., Chang, A. et al. (2022). An evaluation of the convergent validity of and preliminary cutoff scores for the DASS-21 Total score as a measure of distress in adolescents. *Current Psychology, 41*, 4283-4290. https://doi.org/10.1007/s12144-020-00937-4

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis*. Pearson College Division.

Huong, L. T. L., Thinh, N. H., & Anh, L. T. K. (2023). *Workplace bullying among nurses and associated factors at the University Medical Center Ho Chi Minh City in 2023*. Vietnam Medical Journal, 532(1B), 299-304.

Khang, D. H. & Ninh, D. H. (2023). Sequential mediation analysis of workplace bullying, work-life conflict, and young employees' outcomes in Vietnam. *Asian Academy of Management Journal, 28*(2), 61-86. https://doi.org/10.21315/aamj2023.28.2.3

Lazarus, R. S., & Folkman, S. (1984). *Stress, Appraisal, and Coping*. Springer.

Lee, N. R., Kim, S. W., Joo, J. H., Lee, J. H., Lee, J. H., & Lee, K. J. (2022). Relationship between workplace violence and work-related depression/anxiety, separating the types of perpetrators: A cross-sectional study using data from the fourth and fifth Korean Working Conditions Surveys (KWCS). *Annals of Occupational and Environmental Medicine, 10*(34), e13. https://doi.org/10.35371/aoem.2022.34.e13

Lépine, J. P., & Briley, M. (2011). The increasing burden of depression. *Neuropsychiatric Disease and Treatment, 7*(sup1), 3-7. https://doi.org/10.2147/NDT.S19617

Lerner, D., & Henke, R. M. (2008). What does research tell us about depression, job performance, and work productivity? *Journal of Occupational and Environmental Medicine, 50*(4), 401–410. https://doi.org/10.1097/JOM.0b013e31816bae50

Lovibond, P. F., & Lovibond, S. H. (1995). *Manual for the Depression Anxiety Stress Scales* (2nd ed.). Psychology Foundation.

Lutgen-Sandvik, P., Tracy, S. J., & Alberts, J. K. (2007). Burned by bullying in the American workplace: Prevalence, perception, degree and impact. *Journal of Management Studies, 44*(6), 837–862.

Maglich-Sespico, P., Faley, R. H., & Knapp, D. E. (2007). Relief and redress for targets of workplace bullying. *Employee Responsibility and Rights Journal, 19*, 31-43.

McAvoy, B. R. & Murtagh, J. (2003). Workplace bullying. The silent epidemic. *BMJ, 326*, 776. https://doi.org/10.1136/bmj.326.7393.776

Minh, D. H., Ha, H. T., & Weiss, B. (2024). *Psychopathology*. Vietnam National University Press.

National Statistics Office. (2026). *Statistical Yearbook of Vietnam 2025*.

Nauman, S., Malik, S. Z., & Jalil, F. (2019). How workplace bullying jeopardizes employees' life satisfaction: the roles of job anxiety and insomnia. *Frontiers in Psychology, 10*, 2292. https://doi.org/10.3389/fpsyg.2019.02292

Nielsen, M. B. & Einarsen, S. (2012). Outcomes of exposure to workplace bullying: A meta-analytic review. *Work & Stress: An International Journal of Work, Health & Organisations, 26*(4), 309-332. https://doi.org/10.1080/02678373.2012.734709

Nielsen, M. B., Matthiesen, S. B., & Einarsen, S. (2010). The impact of methodological moderators on prevalence rates of workplace bullying. A meta-analysis. *Journal of Occupational and Organizational Psychology, 83*(4), 955-979.

O'Connor, D. B., Thayer, J. F., & Vedhara, K. (2021). Stress and health: A review of psychobiological processes. *Annual Review Psychology, 72*, 663-688.

Olatunji, B. O., Cisler, J. M., & Tolin, D. F. (2007). Quality of life in the anxiety disorders: A meta-analytic review. *Clinical Psychology Review, 27*(5), 572-581.

Rapaport, M. H., Clary, C., Fayyad, R., & Endicott, J. (2005). Quality-of-life impairment in depressive and anxiety disorders. *American Journal of Psychiatry, 162*(6), 1171-1178.

Reyner, C., & Hoel, H. (1997). A summary review of literature relating to workplace bullying. *Journal of Community & Applied Social Psychology, 7*, 181-191.

Robert, F. (2018). Impact of workplace bullying on job performance and job stress. *Journal of Management Info, 5*(3), 12-15. https://doi.org/10.31580/jmi.v5i3.123

Quan, T. N. H. (2025a). Exploring relationships among workplace bullying, organizational commitment, work engagement and work-related stress in Vietnamese academic libraries. *Library Management, 46*(3-4), 237-251.

Quan, T. N. H. (2025b). Impact of workplace bullying on commitment in vietnamese museum educators: The mediating effect of stress and work engagement. *Journal of Museum Education*, 1-18. https://doi.org/10.1080/10598650.2025.2491161

Tam, H. L. & Ha, N. M. (2023). Workplace bullying and counterproductive work behavior: The mediation role of emotional labor. *Journal of System and Management Sciences, 13*(4), 583-600.

Verkuil B, Atasayi S, Molendijk ML (2015). Workplace bullying and mental health: A meta-analysis on cross-sectional and longitudinal data. *PLoS ONE, 10*(8), e0135225.

WHO (2026). *ICD-11 for Mortality and Morbidity Statistics: Depressive disorders*. https://icd.who.int/browse/2026-01/mms/en#1563440232

Wilmer, M.T., Anderson, K. & Reynolds, M. (2021). Correlates of quality of life in anxiety disorders: Review of recent research. *Current Psychiatry Reports, 23*, 77.

INTELLECTUAL CAPITAL AND EMPLOYEES' INNOVATIVE WORK BEHAVIOR IN SMALL AND MEDIUM-SIZED ENTERPRISES IN HANOI, VIETNAM

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Abstract: This study examines the relationship between intellectual capital, comprising human capital, structural capital, and relational capital, and employees' innovative work behavior in small and medium-sized enterprises (SMEs) in Hanoi. Primary data were collected through a structured questionnaire administered to 300 middle and senior managers from SMEs operating across a wide range of industries. The data were analyzed using descriptive statistics, Pearson's correlation analysis, reliability testing (Cronbach's alpha), exploratory factor analysis (EFA), and ordinary least squares (OLS) multiple regression. The findings indicate that all three dimensions of intellectual capital have positive and statistically significant effects on employees' innovative work behavior. Among them, human capital has the strongest effect (β = 0.301), followed by relational capital (β = 0.258) and structural capital (β = 0.219). The survey also reveals that SMEs in Hanoi continue to face considerable challenges in internal knowledge management, process standardization, and collaboration with research institutions. Based on these findings, the study proposes four groups of solutions to strengthen the components of intellectual capital and foster an organizational environment that supports innovation, thereby enhancing the sustainable competitiveness of SMEs.

Keywords: *Intellectual capital; relational capital; innovative work behavior; small and medium-sized enterprises; Hanoi.*

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1. Introduction

In the context of international economic integration and the Fourth Industrial Revolution, innovation capability has become a key determinant of an enterprise's long term competitiveness. Innovation is not confined to the organizational strategic level but is also manifested through the daily behaviors of individual employees who directly generate, promote, and implement new ideas in the workplace (Scott & Bruce, 1994; Janssen, 2000).

In Vietnam, SMEs account for more than 97% of all enterprises, contribute approximately 45% of gross domestic product (GDP), and generate more than 60% of total employment in the economy (VCCI, 2023). Hanoi is home to approximately 220,000 operating SMEs across a wide range of sectors, including manufacturing, trade, services, information technology, and construction (Hanoi Department of Planning and Investment, 2023). Despite their fundamental role in local economic development, most SMEs in Hanoi continue to face significant constraints on their innovation capability, including the absence of systematic knowledge management systems, shortages of highly qualified human resources, and the underutilization of relational networks for learning and innovation.

Intellectual capital, comprising human capital, structural capital, and relational capital, is widely regarded as a strategic foundation for developing sustainable innovation capability within organizations (Bontis, 1998; Subramaniam & Youndt, 2005). However, most studies on this topic in Vietnam have focused on large enterprises or specific industries. Empirical evidence from SMEs in Hanoi, which operate across diverse industries and vary considerably in size, remains limited.

Against this research gap, this study pursues three objectives: (i) to systematize the theoretical foundations of intellectual capital and employees' innovative work behavior; (ii) to analyze the current state of the components of intellectual capital and employees' innovative work behavior among SMEs in Hanoi; and (iii) to propose practical solutions for strengthening intellectual capital, thereby promoting employees' innovative work behavior in SMEs in Hanoi.

2. Literature review and theoretical background

2.1. Intellectual capital: concept, nature, and components

Intellectual capital refers to the collection of strategically valuable intangible assets that an enterprise owns or controls and that are created through knowledge, organizational processes, and relational networks. Edvinsson and Malone (1997) defined intellectual capital as the hidden value of an enterprise represented by the difference between its market value and book value, which is generated by intangible assets. Stewart (1997) described intellectual capital as the sum of everything that members of an organization know and that can create a competitive advantage. Bontis (1998) systematized this concept into three core components that are mutually reinforcing.

Human capital (HC) refers to the knowledge, skills, experience, attitudes, and creative capabilities that individual employees bring to the organization (Edvinsson & Malone, 1997). Human capital belongs to individual employees and constitutes the foundation of all forms of value creation within an enterprise. By its nature, it is the only component of intellectual capital that an organization cannot directly own, but can only attract, retain, and develop.

Structural capital (SC) refers to the system of organizational processes, databases, technological infrastructure, organizational culture, and intellectual property that has been institutionalized and stored within the enterprise (Bontis, 1998). Unlike human capital, structural capital exists independently of individuals and is owned by the organization. The essence of structural capital lies in its ability to codify and preserve individual knowledge as organizational assets, thereby maintaining organizational capability even when employees change.

Relational capital (RC) refers to the value generated from an enterprise's relationships with customers, business partners, suppliers, professional associations, and other external stakeholders (Nahapiet & Ghoshal, 1998). The essence of relational capital is the ability to access, exchange, and integrate external knowledge that the organization cannot generate internally into the innovation process.

These three components do not operate independently but reinforce one another. Human capital generates knowledge, structural capital stores and amplifies that knowledge, while relational capital expands access to knowledge from external sources (Bontis, 1998; Subramaniam & Youndt, 2005).

2.2. Innovative work behavior

Innovative work behavior (IWB) refers to the set of intentional behaviors through which individuals generate, promote, and implement new ideas in their work or within their organizations (Scott & Bruce, 1994). This is a multidimensional construct that differs from creativity in that it encompasses not only the generation of ideas but also the social process of promoting them and their subsequent implementation.

According to Janssen (2000), innovative work behavior consists of three consecutive stages: (i) idea generation, in which individuals identify problems and develop ideas for improvement; (ii) idea promotion, in which individuals seek support and mobilize resources to develop those ideas; and (iii) idea realization, in which individuals translate ideas into concrete outcomes in practice. These three stages require different competencies and are influenced by different organizational factors.

In the context of SMEs, employees' innovative work behavior is of particular strategic importance because these firms typically do not have formal research and development (R&D) departments. Consequently, innovation is derived primarily from employees' individual initiatives in their day to day work (Kianto et al., 2017). This suggests that investing in factors that foster innovative work behavior at the individual level is both practically important and directly beneficial to the overall innovation capability of SMEs.

2.3. The relationship between intellectual capital and innovative work behavior: theoretical framework and research hypotheses

The relationship between intellectual capital and innovative work behavior is explained by two fundamental theoretical perspectives. The Resource Based View proposed by Barney (1991) argues that valuable, rare, inimitable, and non substitutable intangible resources, particularly intellectual capital, constitute the foundation of sustainable competitive advantage. The Knowledge Based View advanced by Grant (1996) further posits that knowledge is the most important strategic resource and that an organization's capability to integrate knowledge determines its innovation capability.

From the perspective of human capital, employees who possess extensive knowledge, diverse skills, and well developed creative thinking are more likely to identify opportunities for improvement, connect ideas across different domains, and persist in implementing innovative initiatives (Edvinsson & Malone, 1997). Subramaniam and Youndt (2005) demonstrated that the combination of human capital and relational capital produces a strong synergistic effect on radical innovation.

From the perspective of structural capital, well institutionalized organizational processes, technological platforms, and knowledge sharing cultures help preserve and amplify individual knowledge into organizational capability, while providing the supportive environment necessary for innovative ideas to be tested and implemented. Mention and Bontis (2013) confirmed the mediating role of structural capital in transforming individual knowledge into organizational innovation.

From the perspective of relational capital, extensive networks with customers, business partners, and research organizations enable employees to access diverse external sources of knowledge, learn from best practices, and obtain practical feedback on market needs, all of which stimulate innovative work behavior (Nahapiet & Ghoshal, 1998; Kianto et al., 2017).

Based on the theoretical review and empirical evidence, this study proposes the following research hypotheses:

H1: Human capital has a positive and statistically significant effect on employees' innovative work behavior in SMEs in Hanoi.

H2: Structural capital has a positive and statistically significant effect on employees' innovative work behavior in SMEs in Hanoi.

H3: Relational capital has a positive and statistically significant effect on employees' innovative work behavior in SMEs in Hanoi.

3. Research methodology

3.1. Research design and data collection

This study primarily employed a quantitative research approach, complemented by a review of secondary sources. Primary data were collected using a structured questionnaire administered both in person and through an online platform (Google Forms) to respondents from SMEs operating in Hanoi in 2025.

To ensure the accuracy and reliability of the data, the target respondents were directors, deputy directors, department managers, and deputy department managers. These managerial positions possess sufficient information and authority to provide comprehensive assessments of both the state of intellectual capital and employees' innovative work behavior within their organizations. Restricting the sample to managerial respondents also helped ensure consistency in the level of information available to participants, thereby addressing the limitations associated with collecting data from respondents with different levels of access to organizational information.

Regarding the sample size, a total of 360 questionnaires were distributed. This number was determined based on an estimated response rate of approximately 85% and the minimum requirement of 300 observations for multiple regression analysis with three independent variables, following the guideline of Hair et al. (2019), which recommends a minimum ratio of 10 observations per observed variable. Each SME received between one and three questionnaires depending on its size, with priority given to respondents at different managerial levels within the same enterprise to enhance representativeness. A total of 324 questionnaires were returned. After excluding incomplete or inconsistent responses, the final sample comprised 300 valid questionnaires, representing a valid response rate of 83.3%.

3.2. Data analysis

The data were entered and analyzed using SPSS version 26.0 following a four step analytical procedure. First, descriptive statistics were employed to examine the characteristics of the sample and assess the mean values of the study variables. Second, the reliability of the measurement scales was assessed using Cronbach's alpha, and exploratory factor analysis (EFA) was performed to validate the measurement structure. Third, Pearson correlation analysis was conducted to examine the linear relationships among the variables and detect potential multicollinearity. Finally, ordinary least squares (OLS) multiple regression analysis was performed to test the research hypotheses and determine the relative effects of the individual components of intellectual capital on employees' innovative work behavior.

Table 1. Sample characteristics (n = 300)

Classification criterion	Category	Number of Enterprises	Percentage (%)
Enterprise size	Micro (fewer than 10 employees)	62	20.7
	Small (10-100 employees)	178	59.3
	Medium (101-300 employees)	60	20
Business sector	Manufacturing and processing	84	28
	Trade and services	96	32
	Construction and real estate	54	18
	Information and communication technology	66	22
Years of operation	Less than 5 years	51	17
	From 5 to 10 years	107	35.7
	More than 10 years	142	47.3
Location of operation	Urban districts of Hanoi	156	52
	Outlying districts	102	34
	Son Tay Town and township areas	42	14

Source: Author's survey results (2025).

4. Research results

4.1. Human capital in SMEs in Hanoi

The descriptive statistics (table 2) indicate substantial variation in human capital across the evaluated dimensions among SMEs in Hanoi. Professional skills and practical work experience received the highest mean score (Mean = 3.71), reflecting the advantage of a workforce that has accumulated experience through long term practical work. However, employees' creativity and innovative thinking were rated only at a moderate level (Mean = 3.24), indicating that this remains a key area requiring priority improvement.

Notably, learning activities continue to take place primarily through informal means and have not yet been systematically organized into structured training programmes. The survey found that only 34.7% of the SMEs in the sample allocated an annual budget for employee training, a proportion substantially lower than that of large enterprises operating in the same locality.

4.2. Structural capital in SMEs in Hanoi

Structural capital recorded the lowest overall mean score among the three components of intellectual capital, indicating that it represents the greatest weakness of SMEs in Hanoi. Internal knowledge storage and sharing systems received the lowest rating in the entire survey (Mean = 2.68), suggesting that most enterprises have not invested in knowledge management infrastructure. This shortcoming becomes particularly evident when key employees leave the organization or are reassigned to different positions.

The standardization of business processes and quality management systems also received relatively low mean scores (Mean = 3.12 and Mean = 3.05, respectively). Specifically, only 21.3% of the sampled enterprises had adopted a certified quality management system (ISO 9001 or an equivalent standard). Although the components of structural capital were generally not rated highly, the application of information technology and management software achieved a mean score of 3.29 (SD = 0.88), which was noticeably higher than that of quality management and performance evaluation systems (Mean = 3.05) and substantially higher than that of internal knowledge storage and sharing systems (Mean = 2.68). This finding indicates that SMEs have begun to place greater emphasis on investing in digital tools to support management and operational activities, particularly accounting software, human resource management systems, sales management systems, customer relationship management (CRM) systems, and enterprise management platforms. This trend reflects the positive impact of Vietnam's ongoing digital transformation, in which the adoption of digital technologies has become an essential requirement for improving managerial efficiency, reducing operating costs, and enhancing competitiveness.

4.3. Relational capital in SMEs in Hanoi

Relational capital was the most highly rated of the three components of intellectual capital. The quality of relationships with customers and business partners received the highest score among all relational capital indicators (Mean = 3.82), indicating that SMEs in Hanoi have developed stable networks of business partners through their long term operations.

However, collaboration with universities, research institutes, and science and technology organizations received a mean score of only 2.47, the lowest among all evaluation criteria. This finding reflects the widespread reality that collaboration between enterprises and academic institutions in Hanoi remains limited, despite the city possessing the country's largest concentration of universities and research institutes. This gap is particularly noteworthy because collaboration with research organizations represents an important channel through which enterprises can access new scientific and technological knowledge, which constitutes a fundamental basis for high value innovation.

Table 2. Descriptive statistics of intellectual capital components and innovative work behavior
(Five point Likert scale; 1 = Very Low; 5 = Very High; Mean = Mean Score; SD = Standard Deviation)

Component	Evaluation criterion	Mean	SD	Rank
Human Capital (HC)	Educational attainment and professional qualifications	3.38	0.82	7
	Professional skills and practical work experience	3.71	0.74	3
	Individual creativity and innovative thinking	3.24	0.89	10
	Learning attitude and openness to new knowledge	3.46	0.77	6
Structural Capital (SC)	Degree of standardization of internal processes and procedures	3.12	0.86	11
	Quality management and performance evaluation systems	3.05	0.91	12
	Application of information technology and management software	3.29	0.88	9
	Internal knowledge storage and sharing systems	2.68	0.97	15
Relational Capital (RC)	Quality of relationships with customers and business partners	3.82	0.67	2
	Participation in industry associations and professional networks	3.15	0.84	12
	Collaboration with universities, research institutes, and science and technology organizations	2.47	0.98	16
	Brand reputation in the market	3.58	0.71	5
Innovative Work Behavior (IWB)	Proactively proposing improvement ideas	3.63	0.79	4
	Promoting and advocating for the acceptance of ideas	3.41	0.81	8
	Implementing innovative ideas in the workplace	3.86	0.69	1

Source: Author's survey and analysis (2025).

4.4. Reliability and Exploratory Factor Analysis results

The results of the Cronbach's alpha reliability test indicated that all measurement scales demonstrated high internal consistency (HC: $\alpha = 0.841$; SC: $\alpha = 0.819$; RC: $\alpha = 0.856$; IWB: $\alpha = 0.832$), exceeding the recommended threshold of 0.70. The results of the exploratory factor analysis (EFA) confirmed the extraction of four factors, which explained 68.7% of the total variance. The factor loadings of all observed variables exceeded 0.50. The extracted factor structure was fully consistent with the proposed theoretical model, and no observed variables were removed.

4.5. Correlation analysis results

The correlation analysis results (Table 3) confirm that all three components of intellectual capital are positively and significantly correlated with innovative work behavior at the $p < 0.01$ level. Human capital exhibited the strongest correlation with innovative work behavior ($r = 0.548$), followed by relational capital ($r = 0.507$) and structural capital ($r = 0.462$). The correlation coefficients among the independent variables ranged from 0.374 to 0.436, all well below the threshold of 0.80, indicating that serious multicollinearity was not present.

Table 3. Correlation matrix of the study variables

Variable	HC	SC	RC	IWB
Human Capital (HC)	1	0.436**	0.374**	0.548**
Structural Capital (SC)	—	1	0.421**	0.462**
Relational Capital (RC)	—	—	1	0.507**
Innovative Work Behavior (IWB)	—	—	—	1

*Note: ** indicates statistical significance at the p < 0.01 level.*

Source: Author's SPSS 26.0 analysis (2025).

4.6. Multiple regression analysis results

Table 4 presents the results of the multiple regression analysis. The model yielded an R^2 of 0.527, indicating that the three components of intellectual capital explain 52.7% of the variance in innovative work behavior, representing a relatively good level of explanatory power for organizational behavior data. The overall regression model was statistically significant ($F = 109.481$; Sig. = 0.000). The variance inflation factor (VIF) values for all independent variables were below 2.5, confirming the absence of multicollinearity.

All three research hypotheses (H1, H2, and H3) were supported. Among the three components of intellectual capital, human capital exerted the strongest positive effect on innovative work behavior ($\beta = 0.301$; $t = 4.873$; Sig. = 0.000), followed by relational capital (β = 0.258; t = 4.147; Sig. = 0.000) and structural capital (β = 0.219; t = 3.612; Sig. = 0.000). This pattern of effects highlights that investment in human capital, particularly employees' creative capabilities and a learning oriented culture, should be the highest priority for fostering innovation in SMEs in Hanoi. At the same time, the substantial effect of relational capital suggests that external relationship networks play a role that is no less important than internal knowledge infrastructure.

Table 4. Multiple regression analysis results

Independent Variable	B	Standardized β	t	Sig.
Constant	0.681	—	3.574	0
Human Capital (HC)	0.341	0.301	4.873	0.000***
Structural Capital (SC)	0.247	0.219	3.612	0.000***
Relational Capital (RC)	0.284	0.258	4.147	0.000***

****p < 0.001. VIF values for all variables were below 2.5, indicating the absence of multicollinearity.* $R^2 = 0.527$; *F = 109.481; Sig. = 0.000.*

Source: Author's SPSS 26.0 analysis (2025).

5. Recommendations for strengthening intellectual capital to promote employees' innovative work behavior

5.1. Recommendations for enhancing human capital

As human capital has the strongest effect on innovative work behavior (β = 0.301), this group of recommendations should be given the highest priority. First, SME leaders should develop regular in house training programmes that focus on fostering creative thinking and problem solving skills, rather than concentrating solely on professional competencies. These programmes may be designed following the 70:20:10 learning model, in which 70% of learning occurs through work experience, 20% through interaction with colleagues, and 10% through formal training. Second, enterprises should establish a structured job rotation mechanism to broaden the capabilities of high potential employees. This approach enables employees to gain exposure to different functional areas within the organization and accumulate diverse knowledge, thereby enhancing their ability to integrate ideas from multiple sources into innovative solutions. Third, managers should cultivate a learning culture, which can be implemented through regular professional seminars, idea sharing forums, and policies that encourage self directed learning. This culture should be institutionalized by incorporating it into the annual performance evaluation system.

5.2. Recommendations for strengthening structural capital

Structural capital received the lowest overall mean score among the three components of intellectual capital, indicating the need for systematic investment. The immediate priority is to develop an internal knowledge documentation system, including standard operating procedures (SOPs), guidelines for handling work related situations, lessons learned from completed projects, and an internal knowledge repository. This represents a fundamental step in transforming individual knowledge into organizational assets, thereby preventing the loss of knowledge when employees leave the organization.

From a technological perspective, SMEs should prioritize the adoption of cloud based management platforms that are appropriate for small businesses, such as human resource management systems, project management software, and customer relationship management (CRM) systems. These solutions generally involve relatively low subscription costs, are easy to implement, and do not require sophisticated information technology infrastructure.

In addition, enterprises should design a key performance indicator (KPI) system that incorporates innovation related indicators, such as the number of ideas proposed and the number of process improvements implemented, in order to institutionalize innovation as an integral component of the performance evaluation system.

5.3. Recommendations for expanding relational capital

Although relationships with customers and business partners were rated positively, SMEs in Hanoi have not yet fully leveraged the potential of the city's rich innovation ecosystem. Business leaders should actively participate in business associations, industry forums, and entrepreneurs' clubs, as these provide valuable opportunities to exchange experience, learn from best practices, and identify potential collaborative opportunities.

In particular, although Hanoi has the country's largest concentration of universities and research institutes, the level of collaboration between SMEs and these organizations remains very low (Mean = 2.47). Business leaders should take the initiative in participating in university industry collaboration programmes, particularly through applied research projects and internship programmes. This represents a low cost investment in relational capital with considerable potential for generating new knowledge and fostering innovation.

5.4. Recommendations for creating an organizational environment that promotes innovation

In addition to strengthening each component of intellectual capital, SME leaders should establish an organizational environment that enables intellectual capital to be transformed into actual innovative work behavior. With respect to reward mechanisms, enterprises should develop a transparent and timely system for recognizing innovative ideas and link recognition to tangible rewards. For example, enterprises may organize quarterly innovation competitions with an objective evaluation committee and meaningful incentives. Most importantly, recognition should be provided promptly after ideas are proposed in order to sustain employees' motivation over time.

Regarding leadership style, transformational leadership, which emphasizes inspiring employees, empowering them with autonomy, and stimulating creative thinking, is recommended as the most appropriate approach for SMEs during their development stage. In particular, leaders should foster a psychologically safe work environment in which employees are encouraged to ask questions, propose unconventional ideas, and experiment with new approaches without fear of criticism or punishment if their efforts are unsuccessful. Such an environment constitutes a fundamental prerequisite for sustaining and strengthening innovative work behavior within the organization.

6. Conclusion

The findings indicate that all three components of intellectual capital, namely human capital, structural capital, and relational capital, have positive and statistically significant effects on employees' innovative work behavior in SMEs in Hanoi. Among these, human capital exerts the strongest influence ($\beta = 0.301$), underscoring the central role of knowledge, creative capability, and a learning culture in fostering organizational innovation. The model explains 52.7% of the variance in the dependent variable, indicating that intellectual capital constitutes an important set of predictors of innovative work behavior at the individual level.

From an academic perspective, this study provides empirical evidence from the context of multi industry SMEs in Hanoi, thereby contributing to the limited body of research on intellectual capital and innovation in developing economies. From a practical perspective, the study identifies clear priorities for managerial intervention based on the measured magnitude of the effects and highlights specific weaknesses, particularly deficiencies in internal knowledge management and collaboration with research organizations, enabling SME leaders to take immediate action.

This study has several limitations that should be acknowledged: (i) its cross sectional design does not permit causal inferences; (ii) the geographical scope is limited to Hanoi, which may affect the generalizability of the findings. Future research should adopt a longitudinal design and expand the geographical coverage. It should also consider incorporating moderating variables, such as leadership style, psychological safety, and industry characteristics, to further enrich the analytical framework.

REFERENCE

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management, 17(1), 99-120.* https://doi.org/10.1177/014920639101700108

Bontis, N. (1998). Intellectual capital: An exploratory study that develops measures and models. *Management Decision*, 36(2), 63-76. https://doi.org/10.1108/00251749810204142

Edvinsson, L., & Malone, M. S. (1997). *Intellectual capital: Realizing your company's true value by finding its hidden roots.* HarperBusiness.

Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17(S2), 109-122. https://doi.org/10.1002/smj.4250171110

Hanoi Department of Planning and Investment. (2023). Report on the development of small and medium-sized enterprises in Hanoi in 2023.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis (8th ed.)*. Cengage Learning.

Janssen, O. (2000). Job demands, perceptions of effort-reward fairness and innovative work behavior. *Journal of Occupational and Organizational Psychology*, 73(3), 287-302. https://doi.org/10.1348/096317900167038

Kianto, A., Sáenz, J., & Aramburu, N. (2017). Knowledge-based human resource management practices, intellectual capital and innovation. *Journal of Business Research*, 81, 11-20. https://doi.org/10.1016/j.jbusres.2017.07.018

Mention, A.-L., & Bontis, N. (2013). Intellectual capital and performance within the banking sector of Luxembourg and Belgium. *Journal of Intellectual Capital*, 14(2), 286-309. https://doi.org/10.1108/14691931311323896

Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review*, 23(2), 242-266. https://doi.org/10.2307/259373

Nunnally, J. C., & Bernstein, I. H. (1994). Psychometric theory (3rd ed.). McGraw-Hill.

Scott, S. G., & Bruce, R. A. (1994). Determinants of innovative behavior: A path model of individual innovation in the workplace. *Academy of Management Journal*, 37(3), 580-607. https://doi.org/10.2307/256701

Stewart, T. A. (1997). *Intellectual capital: The new wealth of organizations.* Doubleday.

Subramaniam, M., & Youndt, M. A. (2005). The influence of intellectual capital on the types of innovative capabilities. *Academy of Management Journal*, 48(3), 450-463. https://doi.org/10.5465/amj.2005.17407911

VCCI. (2023). *Vietnam Annual Business Report 2022-2023.*

INVESTIGATING ADVERSE CHILDHOOD EXPERIENCES IN UNIVERSITY STUDENTS

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Abstract: This study investigates the prevalence of exposure to adverse childhood experiences (ACEs) and the Participation in the study was entirely voluntary.among 517 university students in Ha Noi. The research design employs a mixed-methods approach, utilizing the 28-item CDC/Kaiser Permanente ACE questionnaire for quantitative mapping, supplemented by semi-structured in-depth interviews guided by the WHO ACE-IQ framework with 15 participants. Within the present convenience sample, all participants met the study's operational criterion for exposure to at least one ACE. Within this multi-disciplinary university cohort, the moderate exposure group (2-3 experiences) accounted for 69.25%, while the high exposure group (≥ 4 experiences) represented 23.60%. Emotional neglect and structural household dysfunction (specifically substance abuse and parental divorce) emerged as the primary vectors of childhood vulnerability. Furthermore, independent samples T-tests and ANOVA results demonstrated statistically significant differences in cumulative ACE scores based on gender, academic year, geographical background, current living arrangements, and parental occupational stability. These findings corroborate the toxic stress framework and underscore the urgent need to implement trauma-informed mental health screening models within higher education institutions.

Keywords: *Adverse childhood experiences (ACEs); cumulative risk model; toxic stress; university students; developmental psychology.*

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1. Introduction

Childhood is the core foundation that shapes personality structure, emotional regulation capacities, and the establishment of internal working models about the self and the social world throughout the lifespan (Bowlby, 1969; Ainsworth et al., 1978). When the early caregiving environment is disrupted by adversity, a child's healthy development is severely threatened. The toxic stress framework has demonstrated that continuous or chronic exposure to negative experiences before the age of 18 can alter brain structure and function (specifically, the prefrontal cortex and amygdala). This pushes the individual into a state of hyper-arousal, thereby increasing vulnerability to psychosomatic disorders in adulthood (Felitti et al., 1998; Shonkoff et al., 2012).

Theoretically, researching adverse childhood experiences (ACEs) helps elucidate the cumulative and interactive mechanisms of stress on psychological development, reinforcing the ecological systems approach in explaining human behavior and mental health. Practically, domestic empirical studies have documented a high prevalence of childhood adversity among Vietnamese young people and have linked ACE exposure with depression, psychological distress, and suicidal ideation (Thai et al., 2020; Trinh et al., 2025). Particularly, the university stage - a developmental transition period marked by substantial social adaptation pressures in major cities such as Ha Noi - is a critical period in which earlier adverse experiences may remain relevant to psychological adjustment.

Although the high prevalence and linear negative consequences of ACEs on mental health have been widely documented globally (Hughes et al., 2017), studies in Viet Nam typically focus merely on describing single exposure rates or directly linking them to a specific clinical manifestation (such as depression or risk behaviors) among high school students. Currently, there is a lack of in-depth studies analyzing the comprehensive picture of the cumulative risk model of ACEs among university students. Specifically, there is a gap in identifying how demographic characteristics and socio-ecological contexts (gender, geographic background, family structure, parental occupational stratification) interact to influence the level of cumulative trauma in young adults' memories. Therefore, the core problem posed by this study is: *What is the current status of exposure and accumulation of adverse childhood experiences among university students, and which ecological contextual factors play a role in impacting the severity of these experiences?*

To address the aforementioned research problem, this paper focuses on resolving the following three key objectives:

To analyze the distribution patterns of adverse childhood experiences (ACEs) among university students based on the cumulative risk model, stratified into low-, moderate-, and high-exposure groups, in order to examine the trend of trauma accumulation.

To identify the prevalence rates and characteristic manifestations of specific ACEs across three principal domains: abuse (physical, emotional, and sexual abuse), neglect (physical and emotional neglect), and household violence/dysfunction (substance abuse, parental divorce, and witnessing domestic violence).

To examine and interpret statistically significant differences in the cumulative levels of ACEs under the influence of demographic factors and ecological contextual systems, including gender, academic year, place of origin, current living arrangement, and parental occupation, thereby providing an empirical basis for the development of early preventive intervention strategies.

2. Literature review

2.1. Research on a concept and manifestation of adverse childhood experiences

The term "Adverse Childhood Experiences" (ACEs) was first introduced in the 1990s through the landmark study conducted by Felitti et al. (1998) in collaboration with the Centers for Disease Control and Prevention and Kaiser Permanente. According to the authors, ACEs refer to negative experiences occurring before the age of 18, including violence, abuse, neglect, and exposure to household dysfunction, all of which may exert long-term effects on individuals' physical and mental health.

Subsequent studies expanded both the scope and conceptualization of ACEs. Finkelhor et al. (2015) argued that adverse experiences are not limited to the family environment but may also arise from broader social and environmental adversities, such as community violence, discrimination, and bullying, which can likewise produce enduring negative effects on child development. Extending this perspective, Hughes et al. (2017) emphasized that ACEs encompass harmful physical and psychological experiences during childhood or adolescence, such as maltreatment or witnessing violence, which are strongly associated with adverse health, behavioral, and social outcomes across the lifespan. From these perspectives, ACEs may be understood as a broad and evolving construct encompassing multiple forms of personal, familial, and social adversity that exert cumulative and long-lasting effects on psychological and physical well-being throughout human development.

In 2009, the World Health Organization proposed a more biologically oriented conceptualization, defining adverse childhood experiences as "physiological stressors capable of disrupting neurodevelopment and consequently impairing normal cognitive and behavioral functioning" (World Health Organization, 2009). Under this framework, an event is considered an ACE only if it satisfies three conditions: (1) it produces biological stress, (2) the stress is sufficiently severe, and (3) there is evidence of disrupted neurodevelopment. However, this definition poses considerable challenges for empirical measurement, particularly in clinical research, given the current limitations in identifying specific biological indicators of such disruptions.

Subsequently, the World Health Organization (2018) further refined the concept through the Adverse Childhood Experiences International Questionnaire (ACE-IQ), defining ACEs as "sources of chronic or severe stress experienced during early life." According to this framework, an event qualifies as an ACE when it: (1) causes substantial stress or harm to the individual, (2) is repetitive or prolonged in nature, and (3) occurs before adulthood, typically before the age of 18. Such stressors may include violence, abuse, neglect, substance abuse, or collective conflicts such as war and social hostility. Compared with earlier approaches, the WHO (2018) framework is considered more comprehensive and practical because it shifts the focus from long-term consequences toward identifying the nature and characteristics of adverse experiences themselves, thereby facilitating the development of measurement tools and cross-national comparative research. This definition has since been widely adopted as a conceptual standard in contemporary ACEs research.

Based on the foregoing perspectives, the present study adopts the conceptualization developed by the Centers for Disease Control and Prevention and Kaiser Permanente, whereby adverse childhood experiences are understood as negative experiences occurring before the age of 18, including abuse, neglect, and household dysfunction, that may exert long-term effects on individuals' physical health, mental health, and social adaptation.

2.2. Research on the prevalence of adverse childhood experiences

A growing body of international research has shown that adverse childhood experiences (ACEs) are highly prevalent and occur across diverse cultural and socioeconomic contexts. A systematic review conducted by Hughes et al. (2017), involving more than 250,000 participants from 37 countries, reported that over half of the population had experienced at least one ACE, while approximately 12% had experienced four or more ACEs. These findings suggest that childhood adversity is not limited to vulnerable populations but represents a widespread public health concern across different social contexts.

In Viet Nam, empirical evidence has similarly indicated high rates of exposure to childhood adversity. A multicenter study by Tran et al. (2015), conducted across eight universities nationwide, found that 76% of university students had experienced at least one form of adverse childhood experience. Higher prevalence rates have also been reported among adolescents. In a survey of nearly 5,000 secondary school students from different geographical regions, Thai et al. (2020) reported that 86% of participants had experienced at least one ACE, whereas nearly 56% had experienced multiple ACEs (two or more adverse experiences). These findings indicate that a considerable proportion of Vietnamese adolescents enter educational and social environments with prior exposure to psychological adversity.

Similarly, a large-scale study conducted in Ha Noi by Chu et al. (2022) involving 1,070 high school students found that 91.1% of participants had experienced at least one adverse childhood event. The most commonly reported forms of adversity were emotional neglect (69%) and witnessing domestic violence (32.4%), suggesting that psychological and family-related adversities may be more prevalent than direct physical violence in this population.

Related findings have also been observed in clinical populations. A study conducted by Lê, S. M. et al. (2022) at Hai Phong Psychiatric Hospital found that 66.67% of patients receiving treatment for methamphetamine-induced psychosis had experienced at least one ACE. The most common adversities involved household dysfunction, including living with family members who abused alcohol (44.44%), had a history of incarceration (25.93%), or experienced mental illness (24.07%). These findings suggest that early exposure to dysfunctional family environments may be associated with an increased risk of later psychological and behavioral difficulties.

More recently, Trinh et al.(2025), in a survey of 1,391 first-year university students in Viet Nam, reported that 50% of participants had experienced at least one ACE, while 34.8% had experienced multiple ACEs. Students with ACE exposure also reported higher levels of depressive symptoms and lower life satisfaction compared with those without such experiences.

2.3. Research on the consequences of adverse childhood experiences

Research on adverse childhood experiences (ACEs) has mainly focused on identifying the prevalence, characteristics, and distribution patterns of these experiences across different populations, as well as examining their long-term psychological, behavioral, and health-related consequences. The theoretical foundation of this line of research is grounded in the stress-sensitivity model and the toxic stress framework, first introduced in the pioneering study by Felitti et al. (1998).According to this perspective, exposure to adverse experiences during sensitive stages of brain development may produce long-lasting negative effects on psychological and neurobiological functioning.

Neuroscientific studies have provided evidence for the substantial impact of ACEs on brain development. Shonkoff et al.(2012) suggested that prolonged exposure to adversity may generate toxic stress responses capable of disrupting neural development, particularly in the prefrontal cortex and amygdala. Consequently, individuals with histories of childhood adversity may develop heightened sensitivity to threats and excessive activation of stress-response systems, commonly described as "fight-or-flight" responses.

In addition, ACEs are often cumulative and interrelated, meaning that adverse experiences rarely occur independently. Felitti and Anda (1998) reported that increases in the number of ACEs were associated with substantially higher risks of depression, anxiety, substance use disorders, and other maladaptive behaviors. These findings indicate that ACEs should not be understood as isolated risk factors, but rather as interconnected and chronic stressors that may negatively influence psychological development over time.

Globally, the landmark epidemiological study conducted by Felitti et al. (1998) demonstrated a clear dose–response relationship, in which greater exposure to ACEs was associated with increased risks of mental and physical health problems in adulthood. More recent studies have continued to support this association.

For example, Daneshmend et al. (2025), in a study of university students, found that the association between ACEs and depressive symptoms was strongest when adverse experiences, particularly emotional abuse, occurred during adolescence (12–18 years old). Exposure to adversity during this sensitive developmental stage may increase vulnerability to depressive symptoms during the transition to university life. Similarly, Bartolome-Valenzuela et al. (2024) identified four distinct ACE exposure profiles and found that individuals in the highest exposure group reported significantly lower levels of well-being compared with other groups.

An emerging area of research related to ACEs concerns the concept of Positive Childhood Experiences (PCEs), proposed by Crandall et al. (2019). This perspective suggests that positive developmental experiences may buffer individuals against the negative consequences of childhood adversity. In addition, numerous international studies have shown that ACE exposure is a strong predictor of mental health difficulties and impaired social adjustment in adulthood (Hughes et al., 2017).

Consistent with these perspectives, Bowlby's Attachment Theory (1969) emphasizes the foundational role of early caregiver - child relationships in shaping secure or insecure attachment patterns. When adverse experiences occur during this developmental period, they may interfere with the formation of secure attachment and contribute to the development of anxious or avoidant attachment styles. Importantly, insecure attachment patterns may persist into adulthood and manifest in difficulties maintaining intimate relationships, chronic loneliness, and social disconnection (Mikulincer & Shaver, 2016).

General Conclusion: Although both international and Vietnamese empirical evidence has consistently confirmed the high prevalence and negative clinical consequences of adverse childhood experiences (ACEs), the existing literature still reveals several important research gaps.

First, studies conducted in Viet Nam have primarily focused on describing the prevalence of individual ACEs or examining the direct associations between ACE exposure and specific psychological outcomes, such as depression, suicidal ideation, or psychosis, mainly among high school students or clinical populations. Limited attention has been given to understanding how multiple adversities interact and accumulate to create clinically significant risk thresholds among university students, a population currently facing substantial developmental transitions and social adaptation pressures within rapidly urbanizing environments.

Second, most previous studies have tended to conceptualize ACEs as relatively static individual experiences or retrospective memories, rather than examining them within broader developmental ecological systems, including geographical background, family structure and occupational stability, and current living arrangements. As a result, the complex interaction between macro-level contextual conditions and the accumulation of micro-level psychological adversity remains insufficiently explained.

Therefore, the present study not only examines the prevalence of specific ACE domains, including abuse, neglect, and household dysfunction, but also applies a cumulative risk framework to classify participants according to ACE exposure severity and to identify the proportion of students exceeding the clinical risk threshold (≥ 4 ACEs). In addition, through inferential statistical analyses, including independent-samples t-tests and analysis of variance (ANOVA), the study directly investigates and interprets differences in childhood adversity levels under the interactive influence of ecological factors such as gender, regional background, current living arrangements, and parental occupation.

In summary, rather than viewing childhood adversity as isolated, idiosyncratic events, this study conceptualizes ACEs through an integrative framework of Developmental Ecological Systems Theory and Cumulative Risk Models. In this model, macro- and micro-systemic variables—including gender, academic cohort, geographic origin, current living arrangements, and parental socio-economic status - serve as the structural independent variables. These factors interactively shape the environment of the child, determining the density and compounding nature of stressors. The dependent variable, operationalized as the cumulative score of latent childhood trauma, represents the neurobiological and psychological payload that manifests as toxic stress. This theoretical mechanism posits that lower ecosystemic stability linearly intensifies the accumulation of trauma, crossing the clinical risk thresholds during the developmental transition of emerging adulthood. These findings are expected to provide an important scientific basis for the development of proactive screening models and trauma-informed psychological interventions within higher education settings.

3. Research methodology

3.1. Questionnaire surveys method

3.1.1. Participants

The survey was conducted in Ha Noi, Viet Nam. The research sample consisted of N = 517 university students from three higher education institutions: Viet Nam National University, Ha Noi (69.1%), National Academy of Education Management (16.1%), and Viet Nam Youth Academy (14.9%). Female students accounted for 56.3% of the sample, while male students represented 43.7%. Participants were recruited using convenience sampling based on voluntary participation. Students who met the inclusion criteria and agreed to participate during the data collection period were invited to complete the questionnaire. Therefore, the sample should be regarded as a non-probability sample and may not be fully representative of all university students in Ha Noi. The minimum target sample size was evaluated using Cochran's standard formula for descriptive cross-sectional surveys. At a 95% confidence level ($Z = 1.96$) and a 5% margin of error, the minimum required threshold was determined to be $n = 384$. Our actual sample of $N = 517$ structurally exceeds this institutional requirement, ensuring sufficient statistical power.

The sample covered all four academic cohorts, with the largest proportion being third-year students (30.9%) and the smallest being second-year students (18.0%). Participants were structurally drawn from a broad range of academic disciplines to ensure a heterogeneous and diverse representation across the university population. Prior to entering university, most participants had grown up in rural areas (46.8%) or urban areas (44.7%), whereas students from mountainous regions accounted for 8.5% of the sample.

At the time of the study, 38.7% of students were living with their families, while the remainder were living with friends (32.1%) or independently (29.2%). Parental occupations were most frequently reported in the business/self-employed category (fathers: 28.4%; mothers: 30.2%), followed by workers and public employees/civil servants, each accounting for approximately 20%. Self-rated family economic status was predominantly reported as fairly good (38.3%) or average (34.2%), whereas the financially disadvantaged group represented the lowest proportion (12.6%).

Participation in the study was entirely voluntary. Before data collection, participants received an explanation of the study objectives, procedures, confidentiality provisions, and the sensitive nature of questions concerning adverse childhood experiences. Participants were informed that they could decline to answer any question or withdraw from the study at any time without penalty. Only students who agreed to participate completed the questionnaire. For the qualitative component, interviews were written down only with participants consent, and the resulting material was anonymized and used solely for research purposes. Given the sensitive nature of ACE-related questions, participants experiencing emotional discomfort were permitted to pause or discontinue participation.

The present study forms part of the student research project entitled "The effects of adverse childhood experiences on attachment in social relationships among university students in Hanoi." The project was defended before the Scientific Council of the Vietnam Youth Academy. According to the project review record, the Council accepted the research procedures, organization of the study, and the ethical provisions applied to research with university students on sensitive adverse childhood experiences. No separate ethics approval code or approval date was provided in the explanatory review document; therefore, none is reported here.

3.1.2. Research instrument

Content of the scale: To assess adverse childhood experiences (ACEs), the present study employed the Adverse Childhood Experiences Scale developed by the Centers for Disease Control and Prevention and Kaiser Permanente. The ACEs scale has been widely utilized in studies on childhood trauma and mental health to evaluate individuals' exposure to adverse experiences occurring before the age of 18. In this study, adverse childhood experiences were measured using 28 items.

Scale Structure: Adverse childhood experiences were conceptualized across three primary domains: (1) Abuse, including emotional abuse, physical abuse, and sexual abuse. (2) Household violence and dysfunction, including witnessing domestic violence; living with a substance-abusing family member, living with a family member with mental illness or suicidal behavior, having an incarcerated household member; and parental divorce, separation, or death. (3) Neglect, including emotional neglect and physical neglect.

Scoring Procedure: The Adverse Childhood Experiences (ACEs) questionnaire in this study was scored as follows. For the two neglect domains,physical neglect and emotional neglect.The items were retained in their original five-point Likert format (1 = never true, 5 = very often true). Several items were reverse-coded to ensure consistency in measurement direction. Item scores within each domain were then summed to produce total scores ranging from 5 to 25. Scores of ≥ 10 indicated exposure to physical neglect, whereas scores of ≥ 15 indicated exposure to emotional neglect.

For the remaining experiences within the abuse and household dysfunction domains, the original Likert-scale responses were dichotomized into binary variables. Higher-frequency responses ("often true" and "very often true") were coded as 1 (presence of exposure), whereas lower-frequency responses were coded as 0 (absence of exposure). The total ACEs score was calculated as the cumulative number of adverse experience categories endorsed by the participant, with higher scores reflecting greater exposure to adverse childhood experiences.

All ACE categories were ultimately recoded into binary values (0–1), the total cumulative ACE score was calculated by aggregating the 10 binary injury categories, resulting in a discrete ordinal index from 0 to 10. The internal consistency of the scale was assessed using Cronbach's Alpha coefficient. The results indicated a Cronbach's Alpha of $\alpha = .737$, demonstrating good reliability and supporting the suitability of the scale for use in the present study.

3.2. In depth interview method

In addition to the quantitative survey, in-depth interviews were conducted with 15 university students studying at educational institutions in Ha Noi in order to obtain a more comprehensive understanding of adverse childhood experiences and the factors associated with these experiences among students. The WHO ACE-IQ was not used as the quantitative measurement instrument. Instead, it served as a theoretical framework for developing the semi-structured interview guide, enabling exploration of contextual adversities beyond the domains assessed in the CDC/Kaiser ACE questionnaire. Recognizing that the intra-familial focus of the CDC scale omits critical peer dynamics, the qualitative interview protocol was structurally expanded using the World Health Organization's Adverse Childhood Experiences International Questionnaire (ACE-IQ) framework. This theoretical expansion enabled the systematic tracking of macro-level ecological traumas, which are crucial for rendering culturally nuanced interpretations of trauma within the Vietnamese landscape. The interviews were conducted concurrently with the survey data collection process. With participants' consent, all interviews were audio-recorded, transcribed, and subsequently analyzed. Relevant excerpts were then selected and incorporated into the findings section to illustrate the observed patterns and experiences.

3.3. Statistical analysis

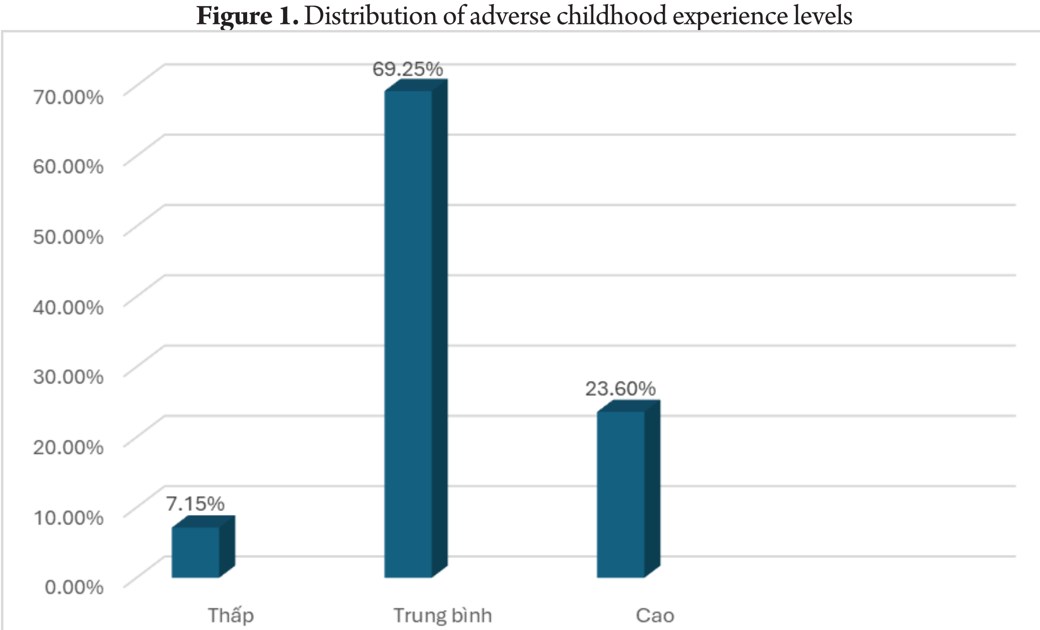
Data collected from the field survey were entered, coded, and analyzed using IBM SPSS statistics to perform descriptive statistical analyses, reliability testing, and other necessary inferential analyses. The study utilized two main categories of statistical procedures: descriptive statistics and inferential statistics.

4. Research findings

4.1. Distribution of adverse childhood experience levels by score categories

To comprehensively assess the level of exposure to childhood adversity, participants' total Adverse Childhood Experiences (ACEs) scores were calculated using the cumulative risk model. Consistent with the standard methodological approach adopted in the meta-analytic study published in The Lancet Public Health by Hughes et al. (2017), ACE exposure in the present study was classified into four ordinal categories: no exposure (0 ACEs), low exposure (1 ACE), moderate exposure (2-3 ACEs), and high exposure (≥ 4 ACEs).

Figure 1. Distribution of adverse childhood experience levels



Source: Authors' survey data (2026).

In the present sample, no students reported a complete absence of adverse childhood experiences (ACEs). Consequently, the distribution was concentrated across the remaining three exposure groups: low, moderate, and high exposure. As illustrated in Figure 1, the majority of students were classified within the moderate-exposure group (69.25%), followed by the high-exposure group (23.60%), whereas the low-exposure group accounted for only a small proportion of the sample (7.15%). This distribution indicates a substantial accumulation of adverse experiences within the study population. This proportion is higher than those reported in previous Vietnamese studies, including 76% among university students across eight provinces (Tran et al., 2015), 86% among secondary-school students (Thai et al., 2020), 91.1% among high-school students in Ha Noi (Chu et al., 2022), and 50% among first-year university students (Trinh et al., 2025). Differences in prevalence across studies may be related, in part, to variations in measurement and operational definitions of ACE exposure. In the present study, the cumulative ACE score was derived from 10 dichotomized adversity categories;

physical and emotional neglect were assessed using multi-item Likert scores and subsequently classified according to the specified cut-off thresholds. Sample characteristics and recruitment procedures should also be considered, as participants were recruited through convenience sampling from three higher education institutions in Ha Noi.

According to Hughes et al. (2017), this form of score stratification plays a critical role in examining the dose–response relationship between ACE exposure and later psychological outcomes. In particular, exposure to four or more ACEs has commonly been regarded as a clinical risk threshold, beyond which the likelihood of mental health problems, emotional dysregulation, and disruptions in social attachment patterns increases markedly compared with non-exposed individuals. Although the high-exposure group did not represent the largest proportion in the present study, the prevalence rate of 23.60% remains noteworthy and warrants further investigation into the mechanisms underlying the development of insecure attachment patterns and psychological maladjustment.

In practice, adverse family events rarely occur in isolation and are often accompanied by multiple overlapping forms of adversity, including violence, abuse, and neglect. For example, one female student described her experiences as follows: "When I was 10 years old, I witnessed my father physically assaulting my mother. One night, he came home drunk, beat my mother, and took all the money for gambling… Whenever I felt sad or struggled as a child, I had no one to turn to because no one understood me" (Interview excerpt, XH_01_F). Similarly, another participant reported: "Whenever my parents argued and stopped talking to each other, my mother often vented her emotions onto me, and I passively absorbed all of that negativity."(Interview excerpt, GD_01_F). Some participants were exposed to multiple severe forms of adversity simultaneously, including both domestic violence and sexual abuse. One participant stated: "I was sexually abused by my cousin during childhood and frequently witnessed domestic violence. These experiences left me constantly feeling unsafe and deeply emotionally hurt." (Interview excerpt, GD_02_F).

These findings are consistent with foundational ACE studies demonstrating the cumulative nature of childhood adversity among individuals with high levels of exposure. Rather than occurring as isolated traumatic events, ACEs tend to accumulate and interact over time, thereby increasing vulnerability to mental health problems in adulthood. The landmark study conducted by Felitti et al. (1998) indicated that individuals exposed to four or more ACEs are generally considered a high-risk group and are significantly more likely to experience depression, substance abuse, and suicidal behaviors later in life.

4.2. Prevalence of adverse childhood experiences among university students

Descriptive statistical analyses indicated that students in the present sample had experienced various forms of adverse childhood experiences (ACEs), although the prevalence of these experiences differed substantially across domains. Based on the structure of the ACEs scale, adverse experiences were categorized into three major groups: abuse, neglect, and household violence or dysfunction.

Table 1. Descriptive Statistics for the Abuse Domain (N = 517)

Types of ACE	YES		NO	
	N	%	N	%
Physical abuse	102	19.7	415	80.3
Emotional abuse	69	13.3	448	86.7
Sexual abuse	48	9.3	469	90.7

Source: Authors' survey data (2026).

Based on variables related to participants' personal experiences, descriptive analyses were conducted to examine the prevalence of abuse-related adverse childhood experiences within the sample. The results presented in Table 1 provide an overview of exposure rates across different forms of abuse. Specifically, physical abuse was the most frequently reported form of abuse, with 19.7% of participants indicating prior exposure. This was followed by emotional abuse (13.3%) and sexual abuse (9.3%). These findings suggest that the prevalence of abuse experiences differed across domains, with physical abuse being comparatively more common within the present sample. However, this internal hierarchy within the abuse domain does not override the broader systemic trends of the study, where chronic structural familial stressors—namely household substance abuse (28.6%) and parental divorce (23.8%) -remained the most dominant forms of ACEs across the absolute sample.

Qualitative findings further illustrated the diversity and severity of these adverse experiences. One participant reported that she had been sexually abused by her cousin during childhood (Interview excerpt, GD_02_F). Another participant described growing up in an environment in which her parents frequently scolded and criticized their children while showing little concern for their opinions (Interview excerpt, XH_02_F). Similarly, one student reported that persistent parental conflict and toxic arguments were accompanied by unfair physical punishment directed toward her (Interview excerpt, KT_01_F). Another participant shared that he had grown up in a financially unstable family environment in which domestic violence was a recurrent part of his childhood experience (Interview excerpt, XH_03_M).

Overall, the findings indicate that physical, emotional, and sexual abuse were all present within the study sample, although with differing prevalence rates and manifestations. These results provide an empirical foundation for further investigation into the psychological and social consequences associated with childhood abuse experiences.

Table 2. Descriptive statistics for the neglect domain (N = 517)

Types of ACE	Minimum Value	Maximum Value	Mean	Standard Deviation
Physical neglect	9	20	14.40	1.994
Emotional neglect	7	25	18.62	5.285

Source: Authors' survey data (2026).

For the neglect domain, Table 2 indicates that the examined experiences included physical neglect and emotional neglect. The results showed that the mean score for emotional neglect was 18.62 (SD = 5.285), whereas the mean score for physical neglect was 14.40 (SD = 1.994). Compared with the binary variables used in other sections of the ACEs scale, these mean values suggest that experiences related to insufficient emotional support, lack of care, and limited family responsiveness were relatively prevalent within the study sample.

The relatively large standard deviation for emotional neglect (SD = 5.285) indicates a considerable degree of variation in students' experiences of this form of adversity, suggesting substantial individual differences in the level of emotional support received within the family environment. In contrast, the lower standard deviation observed for physical neglect (SD = 1.994) suggests that experiences related to this form of neglect were more consistent across participants.

Qualitative findings further suggest that this variation may be associated with emotionally distant, stressful, or disconnected family environments. In-depth interview data provided additional insight into the psychological context underlying these experiences. One participant described her childhood as characterized by "poverty and deprivation, both materially and emotionally" (Interview excerpt, XH_04_F). Another participant reported that family conflicts were typically ignored rather than addressed directly, stating that "problems were usually left unresolved and expected to fade over time" (Interview excerpt, KT_02_F). Similarly, one student shared that persistent parental conflict and toxic arguments were accompanied by unfair physical punishment directed toward her (Interview excerpt, KT_01_F). These findings suggest that emotional neglect may not only reflect the absence of emotional support, but also broader patterns of emotional disengagement and ineffective family interaction.

Table 3. Descriptive statistics for household violence and family dysfunction experiences. (N = 517)

Types of ACE	YES		NO	
	N	%	N	%
Household substance abuse	148	28.6	369	71.4
Parental divorce	123	23.8	394	76.2
Domestic physical violence	42	8.1	475	91.9
Incarcerated household member	41	7.9	476	92.1
Household mental illness	24	4.6	493	95.4

Source: Authors' survey data (2026).

As shown in Table 3, adverse childhood experiences (ACEs) related to household dysfunction were unevenly distributed across different categories of adversity. Among these experiences, household substance abuse was the most frequently reported form of adversity (28.6%), followed by parental divorce or separation (23.8%). These findings suggest that instability in family structure and functioning represented a relatively common source of adversity within the study sample.

Other forms of household dysfunction were reported at lower but still notable rates, including witnessing physical violence within the family (8.1%), having a family member involved in criminal behavior (7.9%), and living with a family member experiencing mental health problems (4.6%). Although these experiences differed in prevalence, they collectively reflected disruptions within the family environment that may influence individuals' sense of safety and psychological development.

Interview data further illustrated the diversity and severity of these experiences. One participant described growing up in conditions characterized by "poverty and deprivation, both materially and emotionally," while family members frequently blamed and verbally criticized one another during conflicts (Interview excerpt, XH_04_F). Another participant recalled witnessing her father physically assaulting her mother after returning home intoxicated and gambling away the family's money. She also described feeling emotionally isolated during childhood, stating that she had no one to seek support from because "no one understood" her (Interview excerpt, XH_01_F).

Several participants described persistent parental conflict and emotionally hostile family environments. One student reported frequent toxic arguments between her parents, accompanied by unfair physical punishment directed toward her (Interview excerpt, KT_01_F). Another participant shared that she grew up in a financially unstable family in which domestic violence was a recurring aspect of daily life (Interview excerpt, XH_03_M).

Similarly, one female student described repeated parental arguments arising from suspicions of infidelity, which contributed to prolonged feelings of anxiety and emotional tension (Interview excerpt, KT_01_F). Another participant characterized her family environment as emotionally stressful, with adults engaging in frequent unresolved conflicts that created ongoing psychological pressure within the household (Interview excerpt, KT_03_F).

In addition, one participant reported that parental conflicts often involved yelling and occasional physical aggression, leading her to become highly sensitive to interpersonal conflict. She further described how periods of emotional withdrawal between her parents resulted in her mother redirecting negative emotions toward her, forcing her to passively absorb these emotional burdens (Interview excerpt, GD_01_F). Another student described repeated violent conflicts between her father and uncle that escalated to the point of police intervention, contributing to persistent feelings of insecurity and chronic anxiety throughout her childhood (Interview excerpt, GD_02_F).

Taken together, the findings indicate that students in the present study were exposed to multiple forms of childhood adversity, although the prevalence of these experiences varied across domains. Adversities associated with family instability and insufficient emotional support, particularly emotional neglect and parental divorce, appeared to be more common than severe forms of direct abuse such as sexual abuse.

Overall, the results suggest that adverse childhood experiences among university students are expressed not only through direct forms of violence, but also through deficiencies in emotional care, support, and family connectedness. These findings highlight the important role of the family environment in individual development and suggest that prolonged exposure to dysfunctional family conditions may have long-term implications for psychological adjustment and later social relationships.

4.3. Factors associated with adverse childhood experiences

The results of the independent-samples t-test indicated a statistically significant difference in the level of adverse childhood experiences (ACEs) between male and female students ($p = .001 < .05$). Specifically, male students reported higher mean ACE scores ($M = 2.97$) than female students ($M = 2.68$).

Table 4. Comparison of total adverse childhood experience (ace) scores between student groups by gender

Characteristic	Mean	Sig
Male	2.97	.001
Female	2.68	

Source: Authors' survey data (2026).

These findings suggest that male students in the present sample tended to report a greater number of adverse childhood experiences than female students. This difference may reflect variations in family environments, parenting practices, or levels of exposure to risk factors between genders. In addition, the findings indicate that gender was significantly associated with differences in reported ACE scores in the present sample. However, the cross-sectional design of this study does not permit conclusions regarding causal relationships or developmental processes.

To further examine the influence of demographic characteristics on students' total ACE scores, One-Way ANOVA was conducted.

Table 5. Comparison of total adverse childhood experience (ace) scores across student groups by demographic characteristics (N = 517)

Characteristic	Mean	Sig.
Academic year		
First year	2.95	*p = .001*
Second year	3.26	
Third year	2.47	
Fourth year	2.73	
Place of residence		
Urban area	2.93	*p = .010*
Rural area	2.62	
Mountainous area	3.11	
Current living arrangement		
Living with family	2.55	*p = .001*
Living with friends	3.05	
Living alone	2.89	
Father's occupation		
Government officials/ Public employee	2.33	*p <.001*
Factory worker	2.65	
Self-employed/ Business	2.72	
Office employee	2.99	
Retired	3.60	
Other	3.25	
Mother's occupation		
Government officials/ Public employee	2.35	*p <.001*
Self-employed/ Business	2.97	
Office employee	2.77	
Factory worker	2.86	
Retired	2.61	
Other	3.55	

Source: Authors' survey data (2026).

Descriptive statistics indicated variations in adverse childhood experience (ACE) scores across academic years. First-year (M = 2.95) and second-year students (M = 3.26) reported higher ACE scores than third-year students (M = 2.47), followed by a slight increase among fourth-year students (M = 2.73). This pattern did not follow a linear trend, suggesting potential differences in the ways individuals recall and interpret childhood experiences across developmental stages. From the perspective of reconstructive memory theory proposed by Elizabeth Loftus, autobiographical memories are not fixed reproductions of past events but may be influenced by current emotional states, contextual factors, and interpretive processes during recall. However, because the present study employed a cross-sectional design, these differences should not be interpreted as developmental changes over time and may instead reflect differences in recall, current psychological status, or cohort characteristics.

From a developmental and social psychological perspective, the ANOVA results for place of origin demonstrated that ACEs were closely associated with individuals' broader ecological developmental contexts rather than representing purely individual-level experiences. The statistically significant difference between residential background groups (p =0 .010) suggests that geographical and social environments during childhood were significantly related to levels of exposure to adversity.

Specifically, students from mountainous areas reported the highest ACE scores (M = 3.11). One possible interpretation may be drawn from the cumulative risk model, which suggests that children growing up in disadvantaged environments may experience multiple concurrent stressors. However, the present study did not directly assess socioeconomic conditions, healthcare access, educational opportunities, or family stress. Therefore, these findings should be interpreted as associations rather than evidence that these contextual factors caused higher ACE scores.

Students originating from urban areas reported the second-highest ACE scores (M = 2.93). This pattern may reflect the presence of more concealed forms of adversity within urban settings, such as economic pressure, weakened family connectedness, and elevated psychological stress associated with child-rearing practices. In contrast, students from rural areas reported the lowest ACE scores (M = 2.62), suggesting that although economic conditions in rural contexts may be less favorable, traditional family structures and stronger community cohesion may function as protective factors during childhood development. However, because socioeconomic conditions, healthcare access, educational opportunities, and family stress were not directly measured in the present study, these findings should be interpreted as associations rather than evidence that these contextual factors caused higher ACE scores

For current living arrangements, statistically significant differences were also observed (p = .001), highlighting the importance of present social support environments as indirect indicators of earlier developmental experiences. Students currently living with their families reported the lowest ACE scores (M = 2.55), suggesting that this group may have experienced relatively stable and emotionally supportive family environments during childhood. Conversely, students living with friends reported the highest ACE scores (M = 3.05). Although current living arrangement was significantly associated with ACE scores, the present study did not examine the reasons for students' housing choices. Therefore, these findings should not be interpreted as evidence of family disruption or insecure attachment.

Students living alone reported intermediate ACE scores (M = 2.89), reflecting the heterogeneity of this group. This category is likely to be heterogeneous and may include students living independently for educational, financial, or personal reasons. The present study did not collect information that allows these different circumstances to be distinguished.

Regarding paternal occupation, the results revealed statistically significant differences across occupational groups (p < .001). Students whose fathers were government officials or public employees reported the lowest ACE scores (M = 2.33). This finding may indicate an association between paternal occupational group and students' reported ACE scores. However, because family income, occupational stability, and family functioning were not directly assessed, the mechanisms underlying this association remain unclear. Students from mountainous areas demonstrated the highest levels of adversity exposure, potentially reflecting the influence of socioeconomic disadvantage and limited social resources, whereas students from urban areas appeared to experience more indirect psychosocial pressures associated with modern urban life. In contrast, students whose fathers were retired (M = 3.60) or employed in other occupations (M = 3.25) reported substantially higher ACE scores, potentially reflecting the influence of occupational instability, socioeconomic insecurity, or age-related family stressors during child-rearing.

Intermediate levels of ACE exposure were observed among students whose fathers worked as factory workers (M = 2.65), self-employed or business workers (M = 2.72), and office employees (M = 2.99). These findings further suggest patterns of social stratification, in which

ACE exposure tended to increase as occupational stability and economic security decreased.

A similar pattern was observed for maternal occupation, with statistically significant differences identified across groups ($p < .001$). These findings underscore the particularly important role of mothers within children's early caregiving and attachment systems. Students whose mothers were government officials or public employees reported the lowest ACE scores ($M = 2.35$), suggesting that maternal occupational and social stability may be associated with less adverse developmental environments. In contrast, the "other occupation" category reported the highest ACE scores ($M = 3.55$), potentially reflecting occupational instability or living conditions associated with greater exposure to childhood adversity.

The remaining maternal occupational groups -including office employees ($M = 2.77$), factory workers ($M = 2.86$), and self-employed or business workers ($M = 2.97$) demonstrated similar stratification patterns, with ACE exposure tending to increase in less stable occupational contexts.

Taken together, these findings suggest that ACE scores differed across several demographic characteristics, including gender, academic year, place of residence, current living arrangement, and parental occupation. However, because this study employed a cross-sectional design, these associations should not be interpreted as evidence of causal relationships. These results provide important implications for early prevention strategies, particularly interventions aimed at strengthening family functioning and supporting children in high-risk contexts.

5. Conclusion

This study empirically mapped the distribution, specific phenotypic patterns, and socio-ecological correlates of adverse childhood experiences (ACEs) among a sample of 517 university students in Ha Noi. Utilizing a sequential mixed-methods approach, the investigation yielded several critical, non-causal baselines regarding the landscape of early-life trauma during the transition to emerging adulthood.

First, the quantitative mapping validated the pervasive nature of childhood adversity within the sampled cohort under the cumulative risk framework. Every participant reported exposure to at least one category of childhood trauma prior to the age of 18. Although this descriptive 100% prevalence rate appears exceptionally high compared to certain international benchmarks, it highlights a remarkably widespread baseline of early-life vulnerability that persists across all nine academic disciplines sampled, regardless of the students' specific fields of study. Within this diverse cohort, the vast majority of students were clustered within the moderate-exposure group (2–3 ACEs; 69.25%), while nearly a quarter of the entire sample (23.60%) exceeded the clinical risk threshold of high exposure (>= 4 ACEs), indicating significant latent vulnerability to toxic stress responses.

Second, the structural distribution of trauma markers was characterized primarily by intangible emotional deprivation and macro-familial instability. Overt physical abuse demonstrated the highest baseline frequency strictly within the boundaries of the direct abuse domain (19.7%). However, when evaluating the absolute landscape of exposure, chronic micro-environmental vulnerabilities predominated; emotional neglect recorded a remarkably high continuous mean baseline ($M = 18.62$, $SD = 5.285$), while household substance abuse (28.6%) and parental divorce or separation (23.8%) constituted the most pervasive structural stressors. This statistical pattern was heavily cross-contextualized by the qualitative inquiry, where narrative prompts unmasked the profound, long-standing psychological erosion caused by prolonged emotional detachment and exposure to domestic violence.

Third, inferential analyses showed statistically significant differences in cumulative ACE scores across several demographic and contextual characteristics. Male students reported higher mean ACE scores than female students, and ACE scores also varied by academic year and geographic place of origin. Students from mountainous regions recorded the highest mean ACE score ($M = 3.11$); however, because macro-level environmental stressors were not directly measured, this result indicates an association rather than a causal pathway. ACE scores also differed by parental occupational group and current living arrangement, with students living with friends reporting a higher mean score ($M = 3.05$) than those living with family ($M = 2.55$). These variables should therefore be interpreted as contextual correlates rather than protective or risk factors established by the present cross-sectional design.

Overall, these findings underscore that adverse childhood experiences cannot be adequately conceptualized as isolated, individualized events; instead, they are systemic products manifested at the intersection of a child's proximal family environment and distal socioeconomic structures. These insights provide a compelling empirical foundation for higher education institutions in Viet Nam to move beyond passive counseling and actively establish proactive, trauma-informed screening networks and targeted mental health intervention models to cultivate psychological resilience.

REFERENCES

Ainsworth, M. D. S. (1978). The Bowlby–Ainsworth attachment theory. *Behavioral and Brain Sciences, 1*(3), 436–438.Cambridge University Press.

Bowlby, J. (1969). *Attachment and loss: Vol. 1. Attachment.* Basic Books.

Chu, N. D., Pham, N. A., & Bui, T. T. H. (2022). Trải nghiệm bất lợi thời thơ ấu và sự thấu cảm ở học sinh trung học phổ thông. [Adverse childhood experiences and empathy among high school students]. *Tạp chí Khoa học Trường Đại học Sư phạm Hà Nội, 67*(2), 192–204. https://doi.org/10.18173/2354-1067.2022-0034

Daneshmend, A. Z. B., Sherratt, F. E., Ethier-Gagnon, M. A., Jarkas, D. A., & McQuaid, R. J. (2025). Types and timing of childhood trauma and their relationship to symptoms of depression, suicidal ideation, and anxiety among Canadian university students. *Journal of Interpersonal Violence*. Advance online publication. https://doi.org/10.1177/08862605251372562

Dang, H. M. (Ed.), Le, T. H. T., Dang, D. A., & Nguyen, M. H. (2023). *Trải nghiệm tuổi thơ tiêu cực: Các vấn đề lý luận và thực tiễn. [Adverse childhood experiences: Theoretical and practical issues]. Nhà xuất bản Đại học Quốc gia Hà Nội, Hà Nội.*

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M. P., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. *American Journal of Preventive Medicine, 14*(4), 245–258. https://doi.org/10.1016/S0749-3797(98)00017-8

Finkelhor, D., Shattuck, A., Turner, H., & Hamby, S. (2015). A revised inventory of adverse childhood experiences. *Child Abuse & Neglect, 48*, 13–21. https://doi.org/10.1016/j.chiabu.2015.07.011

Hughes, K., Bellis, M. A., Hardcastle, K. A., Sethi, D., Butchart, A., Mikton, C., Jones, L., & Dunne, M. P. (2017). The effect of multiple adverse childhood experiences on health. *The Lancet Public Health, 2*(8), e356–e366. https://doi.org/10.1016/S2468-2667(17)30118-4

Kalmakis, K. A., & Chandler, G. E. (2014). Adverse childhood experiences: Towards a clear conceptual meaning. *Journal of Advanced Nursing, 70*(7), 1489–1501. https://doi.org/10.1111/jan.12329

Ha, N. L. (2026). *Ảnh hưởng của trải nghiệm tuổi thơ bất lợi đến sự gắn bó trong mối quan hệ xã hội của sinh viên đại học trên địa bàn thành phố Hà Nội. [The effects of adverse childhood experiences on attachment in social relationships among university students in Hanoi].* [Đề tài nghiên cứu của sinh viên]. Học viện Thanh thiếu niên Việt Nam.

Le, S. M., Nguyen, Q. D., & Nguyen, T. T. D. (2023). Nghiên cứu các trải nghiệm bất lợi thời thơ ấu của bệnh nhân loạn thần do sử dụng methamphetamine điều trị tại Bệnh viện Tâm thần Hải Phòng năm 2022. [Adverse childhood experiences among patients with methamphetamine-induced psychosis treated at Hai Phong Psychiatric Hospital in 2022]. *Tạp chí Khoa học sức khoẻ, 1*(2), 17–25. https://doi.org/10.59070/jhs010223013

Shonkoff, J. P., Garner, A. S., Siegel, B. S., Dobbins, M. I., Earls, M. F., McGuinn, L., & Committee on Early Childhood, Adoption, and Dependent Care. (2012). The lifelong effects of early childhood adversity and toxic stress. *Pediatrics, 129*(1), e232–e246. https://doi.org/10.1542/peds.2011-2663

Thai, T. T., Nguyen, P. T., Tran, T. D., Nguyen, H., Shochet, I., Fisher, J., & Dunne, M. P. (2020). The effect of adverse childhood experiences on depression, psychological distress and suicidal thought in Vietnamese adolescents: Findings from multiple cross-sectional studies. *Asian Journal of Psychiatry, 53*, Article 102134. https://doi.org/10.1016/j.ajp.2020.102134

Tran, Q. A., Dunne, M. P., Vo, T. V., & Luu, N. H. (2015). Adverse childhood experiences and the health of university students in eight provinces of Viet Nam. *Asia-Pacific Journal of Public Health, 27*(8 Suppl), 26S–32S. https://doi.org/10.1177/1010539515589812

Trinh, H. H., Nguyen, T. T., Nguyen, T. Q., Ngo, N. T., Nguyen, S. T., Nguyen, C. V., Mac, T. D., & Nguyen, T. H. (2025). Impacts of adverse childhood experiences on mental health and satisfaction with life in first-year college students: Results from a cross-sectional study in Viet Nam. *Psychiatry Investigation, 22*(8), 939–948. https://doi.org/10.30773/pi.2025.0068

World Health Organization. (2018). *Adverse childhood experiences international questionnaire (ACE-IQ)*. World Health Organization.

ADVERSE CHILDHOOD EXPERIENCES IN THE TREATMENT OF GAMBLING DISORDER: A CLINICAL CASE REPORT APPLYING COGNITIVE BEHAVIORAL THERAPY

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Abstract: Gambling disorder is a behavioural addiction associated with serious adverse consequences. Adverse childhood experiences (ACEs) increase the risk of gambling disorder through impaired emotion regulation and maladaptive core beliefs; however, they are rarely integrated into Cognitive Behavioural Therapy (CBT) protocols. This study illustrates the case conceptualization and implementation of an integrated CBT intervention for a client with a history of ACEs. The case involved client. B., a 40-year-old male accountant with recurrent gambling behaviour since adolescence and cumulative gambling debts reaching VND 4 billion. The intervention consisted of 10 sessions (approximately 60 minutes per session), with standardized assessments conducted at Sessions 5 and 10. The case conceptualization identified gambling as a compensatory coping mechanism driven by the core belief, "I am worthless," which had developed in the context of an emotionally unavailable father and a mother who enabled the behaviour through financial support. The intervention comprised four phases: (1) use of the downward arrow technique to identify the client's core belief; (2) Socratic questioning to challenge maladaptive cognitions; (3) cognitive restructuring to develop healthier alternative core beliefs; and (4) family systems intervention to interrupt the cycle of enabling behaviour. Over the course of treatment, the client progressed from limited insight into his disorder to recognising his maladaptive core belief and actively engaging in therapeutic change, while his family committed to discontinuing enabling behaviours. The therapeutic outcome suggests that integrating childhood trauma-informed case conceptualization, core belief restructuring, and family systems intervention into CBT may enhance treatment effectiveness for gambling disorder in individuals with a history of ACEs.

Keywords: *Adverse childhood experiences; cognitive behavioral therapy; core beliefs; family system intervention; gambling disorder*

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1. Introduction

Gambling disorder is defined in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) as a behavioral addiction characterized by persistent and recurrent gambling behavior that leads to clinically significant impairment or distress (American Psychiatric Association, 2013). It is the only behavioral addiction formally recognized in the DSM-5, with an estimated prevalence of approximately 2.4% among adults (Williams et al., 2012) and is associated with

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substantial adverse consequences for financial well-being, social relationships, and both mental and physical health (Kessler et al., 2008; Lorains et al., 2011).

Against this background, growing evidence indicates that Adverse Childhood Experiences (ACEs) play an important role in the development of gambling disorder. Since the seminal study by Felitti et al. (1998), ACEs have been defined as potentially traumatic events occurring before the age of 18, including physical, emotional, and sexual abuse, as well as household dysfunction, such as domestic violence, substance misuse by family members, mental illness, parental divorce, and family involvement with the criminal justice system. This framework was subsequently expanded to include poverty, parental gambling, and peer violence (Afifi et al., 2017, 2020a, 2020b).

The association between ACEs and gambling disorder has been consistently demonstrated across numerous large scale studies (Afifi et al., 2010; Black et al., 2012; Bristow et al., 2022; Goodrich et al., 2023; Lane et al., 2016; Lotzin et al., 2018; Moxey et al., 2025; Poole et al., 2017; Richard et al., 2024; Sharma & Sacco, 2015; Tucker et al., 2021). The principle proposed to explain this relationship is emotion dysregulation, whereby gambling serves as a means of avoiding negative emotions rooted in childhood trauma (Moxey et al., 2025; Poole et al., 2017). However, an important clinical gap remains. Although Cognitive Behavioral Therapy (CBT) is currently the most evidence-based treatment for gambling disorder (Okuda et al., 2009; Petry et al., 2006), most existing CBT protocols focus primarily on restructuring cognitive distortions related to probability and stimulus control, while giving limited attention to addressing childhood relational trauma and restructuring maladaptive core beliefs.

This report argues that, unless CBT incorporates interventions targeting childhood relational trauma and restructuring core beliefs about self worth, the risk of relapse is likely to remain high, particularly when the family system continues to enable gambling behavior. The case of client B. was selected to provide a clinical illustration of this argument because it presents multiple characteristic ACEs, a clearly conceptualized psychological mechanism, and a well documented course of CBT treatment.

Building on the clinical gap identified above, this case report pursues three objectives: (1) to examine the relationship between ACEs and the development and maintenance of gambling disorder through a clinical case in the Vietnamese context; (2) to describe and analyze the implementation of an integrated CBT model that combines standard cognitive - behavioral techniques with the restructuring of core beliefs rooted in childhood relational trauma and intervention at the family systems level; and (3) to draw implications for clinical practice and future research on the treatment of gambling disorder in Vietnam. Accordingly, the study addresses two research questions: (i) Through what psychological mechanisms do adverse childhood experiences contribute to the development and maintenance of the client's gambling behavior? and (ii) What changes in the therapeutic process and treatment outcomes result from integrating interventions targeting childhood relational trauma, restructuring core beliefs, and family systems intervention into the CBT protocol?

2. Literature review and theoretical background

2.1. Adverse childhood experiences and gambling disorder

Large scale epidemiological studies have consistently demonstrated an association between ACEs and the risk of gambling disorder. Using data from the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC), Sharma and Sacco (2015) identified significant lifetime associations between physical, sexual, and emotional abuse and gambling disorder. In a study of more than 1,000 parents in Canada, Bristow et al. (2022) found that most ACEs significantly increased the risk of problem gambling, with parental gambling showing the highest adjusted odds ratio (AOR = 3.37). Similarly, Tucker et al. (2021) reported that individuals with three or more ACEs had a 69% higher likelihood of frequent gambling (AOR = 1.69) in a population-based study conducted in Nevada.

Within treatment settings, Moxey et al. (2025), in a study of 195 individuals receiving treatment for gambling disorder in the United Kingdom, found that 81.1% reported at least one ACE and 40.5% reported four or more ACEs, representing a prevalence approximately five times higher than that estimated in the general population and indicating an exceptionally high prevalence of ACEs among clinical populations. Goodrich et al. (2023) likewise confirmed that ACEs increased the risk of problem gambling in a study conducted in New Mexico, with significant odds ratios reported for sexual abuse (OR = 1.64), having an incarcerated family member (OR = 2.08), and childhood maltreatment overall (OR = 1.36). From a developmental perspective, Richard et al. (2024), in a study of 6,314 adolescents aged 10 to 19 years in the United States, found that ACEs increased the risk of problem gambling during adolescence. Child maltreatment exerted a stronger influence than household dysfunction, while externalizing problems served as a mediating mechanism.

2.2. Mediating mechanisms: Emotion dysregulation and core beliefs

Poole et al. (2017) provided empirical evidence that emotion dysregulation mediates the relationship between ACEs and gambling disorder. In a community sample of 414 individuals who engaged in gambling, most categories of ACEs were significantly associated with gambling disorder, and emotion dysregulation mediated the majority of these associations. Individuals who had experienced three or more types of ACEs were approximately three times more likely to develop gambling disorder. Within this context, gambling may function as an emotion avoidance strategy used to alleviate emotional distress rooted in childhood trauma (Moxey et al., 2025).

Bristow et al. (2022) also found that good mental health generally did not protect against the association between ACEs and gambling severity, suggesting a deeper underlying mechanism involving core beliefs and early-formed cognitive schemas.

The compensatory mechanism is directly relevant to the present case. Kemnitz et al. (2014) proposed that when parents compensate for the absence of time and emotional connection by providing money or material resources, children may develop distorted beliefs about the relationship between money and self worth. Family boundary dysfunction, particularly financial enabling, may further exacerbate the consequences of childhood trauma and contribute to the maintenance of addictive behavior.

2.3. Cognitive Behavioral Therapy for gambling disorder and the intervention gap

Cognitive Behavioral Therapy (CBT) is the psychological treatment with the strongest empirical support for gambling disorder (Okuda et al., 2009). Okuda et al. (2009) described a CBT protocol based on a relapse prevention treatment manual consisting of ten sessions that focused on functional analysis to identify the sequence of triggers, thoughts, emotions, and behaviors; cognitive restructuring of erroneous beliefs about probability and control; development of alternative coping skills; and stimulus control strategies. The clinical case reported by Okuda et al. (2009) illustrated the adaptation of CBT to a specific cultural context, particularly through an indirect approach to culturally and religiously rooted beliefs, rather than confronting such beliefs directly.

In Vietnam, CBT has been formally recognized within the national healthcare system through Decision No. 2531/QĐ-BYT, issued by the Ministry of Health on 8 August 2025, promulgating the professional guideline entitled "Technical Guidelines for Psychiatry, Volume 1" (Ministry of Health, 2025). On page 518 of this guideline, the CBT protocol is described in detail, including its theoretical framework, implementation procedures, therapeutic techniques, and clinical indications. Notably, under this guideline, the indications for CBT extend beyond emotional and anxiety disorders to include behavioral addictions, including gambling disorder (Ministry of Health, 2025), thereby providing an official clinical and regulatory framework for the implementation of CBT in the treatment of gambling disorder in Vietnam.

However, as identified in the research gap, although numerous studies have applied CBT to the treatment of gambling disorder, most have focused primarily on restructuring erroneous beliefs about probability and implementing stimulus control techniques. Based on the literature on ACEs and cognitive schemas, if CBT does not integrate the resolution of childhood relational trauma and the restructuring of core beliefs about self worth, the risk of relapse is likely to remain high, particularly when the family system continues to enable gambling behavior. The clinical case of client B. presented below provides a concrete illustration of this argument.

Approaches to addressing this gap have been more clearly articulated in the recent international literature through two complementary developments that extend conventional CBT. First, trauma informed CBT approaches emphasize the role of early traumatic experiences in the development and maintenance of addictive behaviors. Accordingly, they prioritize establishing psychological safety, processing trauma related emotions, and avoiding direct confrontation with the client's defensive processes during the early stages of therapy. This perspective is consistent with evidence identifying emotion dysregulation as a mediating mechanism linking ACEs to gambling disorder (Moxey et al., 2025; Poole et al., 2017). Second, schema therapy, developed by Young et al. (2003), extends Beck's cognitive model (Beck, 2011) by directly targeting early maladaptive schemas that arise from unmet core emotional needs during childhood, a framework that is particularly well suited to cases of behavioral addiction rooted in core beliefs about low self worth and disconnection. Integrating the principles of these two approaches into the standard CBT protocol for gambling disorder provides the theoretical foundation for the integrated intervention model described in the Methods section and illustrated through the clinical case presented below.

3. Methods

3.1. Study design

This study employed a case report design, a qualitative approach that is well suited to providing a detailed description of case conceptualization, intervention, and treatment outcomes in an individual case. This design was selected because of the nature of the clinical problem, namely the complex interaction among ACEs, core beliefs, and family system dynamics in the development and maintenance of gambling disorder, aspects that are difficult to capture comprehensively in large scale quantitative studies.

3.2. Participants

The participant was client B., a 40-year-old man who received treatment at a clinical psychology clinic. The case was selected according to the following criteria: (1) meeting the diagnostic criteria for gambling disorder as defined in the DSM-5; (2) having a clearly documented history of characteristic ACEs; (3) agreeing to participate in a structured course of Cognitive Behavioral Therapy (CBT); and (4) providing informed consent for the use of anonymized clinical information for academic purposes. All potentially identifying information was anonymized to ensure confidentiality.

3.3. Data collection

Data were collected using the following methods: (1) semi structured clinical interviews conducted across multiple therapy sessions; (2) assessment of developmental and family history; (3) screening for ACEs based on the conceptual framework proposed by Felitti et al. (1998) and its subsequent extensions (Afifi et al., 2017, 2020a, 2020b); (4) clinical observation of the client's behavior, emotional responses, and interpersonal interactions during and between therapy sessions; and (5) systematic therapy records documenting session content, intervention techniques, and the client's responses to treatment.

3.4. Analytical framework

The study employed an integrated analytical framework comprising three components. First, the ACEs model (Felitti et al., 1998) served as the framework for analysing childhood traumatic experiences. Second, Beck's cognitive model of core beliefs, automatic thoughts, and cognitive schemas provided the framework for conceptualizing the client's psychological structure. Third, the financial–emotional compensation model (Kemnitz et al., 2014) was used to analyse the role of the family system in maintaining gambling behaviour. The intervention followed the standard CBT protocols for gambling disorder developed by Petry et al. (2006) and Okuda et al. (2009), with additional techniques integrated to address core beliefs and incorporate family systems intervention.

3.5. Intervention procedure and outcome measures

The intervention was delivered as individual therapy over ten sessions, each lasting approximately 60 minutes. The intervention was organised into four phases of the integrated CBT model (described in detail in section 4.2): establishing the therapeutic alliance and enhancing illness awareness; identifying and challenging core beliefs; cognitive restructuring; and behavioural intervention together with family systems intervention.

To enhance the transparency and replicability of the intervention process, treatment outcomes were assessed using a standardized battery of instruments administered at three time points to quantify changes in gambling urges, gambling disorder severity, and symptoms of depression, anxiety, and stress. Specifically, at Session 0 (baseline assessment), baseline measures were established by administering all five instruments: the Gambling Urge Scale (GUS), the Gambling Disorder Identification Test (GDIT; Molander et al., 2023), the Patient Health Questionnaire-9 (PHQ-9), the Generalized Anxiety Disorder-7 scale (GAD-7), and the Depression Anxiety Stress Scales-42 (DASS-42). At Session 5 (mid-treatment), the assessment was abbreviated to monitor changes in core gambling behaviour and mood using the GUS and PHQ-9. Finally, at Session 10 (post-treatment), the client completed the full assessment battery again, including the GUS, GDIT, PHQ-9, GAD-7, and DASS-42, to enable quantitative pre- and post-intervention comparisons and comprehensively evaluate the effectiveness of the therapeutic intervention.

4. Results and discussion

4.1. Case presentation

4.1.1. Demographic information and presenting complaints

Client B. was a 40-year-old man (all identifying information has been anonymized to ensure confidentiality). He was employed as an accountant at a public hospital, was married, and had three children (two daughters and one son).

The client presented for treatment after repeated involvement in gambling had resulted in substantial financial debts for his family. Notably, at the initial assessment, he demonstrated little awareness of the severity of his gambling problem or the need for psychological intervention. His attendance at therapy was largely passive and was primarily motivated by pressure from his wife. As he stated, he attended therapy "to make his wife happy" rather than out of intrinsic motivation to change.

4.1.2. History of gambling behaviour

The client's gambling related behaviour began during adolescence and progressed over several developmental stages.

During lower secondary school, he first engaged in betting soft drinks while playing electronic games. During high school, the wagers progressed to cash. At this stage, his motivation was not financial gain but rather the desire to assert himself and derive satisfaction from defeating individuals toward whom he harboured resentment. In his third year at university, he incurred his first substantial gambling debt of approximately VND 30 million. He subsequently deliberately inflated the amount to VND 80 million when informing his mother in order to appropriate the difference and also suspended his university studies during the same year.

Two years later, the client married and opened an electronic gaming business, where he was introduced to poker and began playing it frequently. Three years after his marriage, he informed his mother that he had incurred a second gambling debt of VND 400 million, which was again fully repaid by his mother, despite the fact that he already had his own family. Four years later, during the Covid-19 social distancing period, he expanded his gambling activities to include online gambling and sports betting. His gambling debt reached approximately VND 4 billion, and this debt was once again fully repaid by his mother.

At the time of referral, the client was on unpaid leave to care for his newborn third child. His current psychological state was characterised by feelings of discouragement and emotional exhaustion resulting from the burden of outstanding debts and persistent harassment from creditors. He expressed a desire to seek a new work environment because of feelings of inferiority associated with his past failures and his fear that contact with former friends might expose him to gambling opportunities and increase the risk of relapse.

4.1.3. Family history and adverse childhood experiences

The client's parents were financially well established but were consistently occupied with work. Throughout his childhood, he experienced a lack of communication and emotional connection within the family, particularly with his father. The client clearly perceived that his father showed affection and closeness only when he achieved outstanding academic results. Outside those occasions, there was little meaningful connection between father and son. Differences in personality further widened the emotional distance between them over time.

This emotional absence was compensated for by excessive material indulgence. Every request made by the client, including those for expensive possessions, was readily fulfilled by his parents. This permissive parenting fostered a habit of inflating the actual value of requested items in order to retain the difference, a behavioural pattern that was later repeated when he reported his gambling debts. This behavioural pattern has continued to the present day because his mother has consistently been willing to accept responsibility for and repay virtually all of his gambling debts immediately, regardless of their amount.

From the perspective of ACEs, the client presented with two prominent categories of ACEs: (1) emotional neglect by his father, reflected in the absence of unconditional emotional connection, with affection being contingent upon academic achievement; and (2) household dysfunction in the form of excessive financial enabling by his mother, creating a family environment lacking healthy boundaries regarding financial responsibility and behaviour.

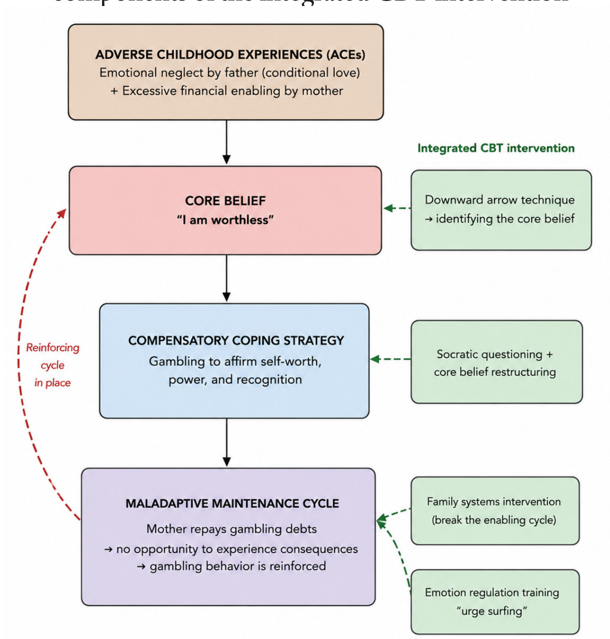
4.1.4. Case conceptualization

The clinical case conceptualization indicated that the client's gambling behaviour did not arise primarily from financial need but rather represented a compensatory coping strategy rooted in a family system characterised by emotional deprivation. Specifically:

The father's emotional absence, combined with a pattern of compensating through material provision, contributed to the development of a maladaptive core belief in the client - that he was not worthy enough for his father to spend time with him - leading money to become "a measure of his self-worth". To counteract his feelings of inferiority, the client developed a compensatory coping strategy characterised by a persistent need to outperform others, to be the best, and to defeat those around him. Gambling became a "stage" that provided an illusory sense of power and temporary validation.

This maladaptive cycle was reinforced by two factors. After each disclosure of his gambling debts, feelings of shame and remorse quickly disappeared because his mother repaid the debts, including the debt of VND 4 billion, thereby preventing him from learning responsibility and from accurately evaluating the real consequences of his gambling behaviour. The relationships among these components are summarised in Figure 1.

Figure 1. Case conceptualization and key components of the integrated CBT intervention



Source: Developed by the Authors

4.2. Cognitive Behavioral Theraby intervention process

4.2.1. Treatment objectives and overall approach

The CBT intervention followed the general framework of standard cognitive - behavioural techniques for the treatment of gambling disorder (Okuda et al., 2009), while integrating additional work on maladaptive core beliefs and the family system based on clinical case conceptualization. The treatment objectives were to enhance the client's awareness of the harmful consequences of gambling behaviour; identify and challenge maladaptive core beliefs related to self worth; develop healthier alternative core beliefs; strengthen emotion regulation and frustration tolerance; and intervene in the family system to disrupt the cycle of enabling.

4.2.2. Phase 1: Bringing core beliefs from outside awareness into conscious awareness

Because the client entered treatment with limited awareness of his gambling problem, having attended therapy primarily at his wife's request, the initial phase focused on using the downward arrow technique to identify the underlying core beliefs beneath his automatic thoughts.

The therapist asked: "What went through your mind at the very moment you decided to place a large bet?" The client replied: "I had to win this hand to show them who I am". The therapist continued: "If you didn't win and couldn't prove yourself, what would be the worst thing that could happen?" The client answered: "Then I'd be a loser, and people would look down on me". The therapist asked further: "And if people looked down on you, what would that mean about you?" The client responded: "It would mean that I'm worthless. Nobody really cares about someone who is worthless".

The final response addressed the client's core beliefs namely, the fear of abandonment and feelings of worthlessness rooted in childhood which were associated with a pattern in which the father showed closeness only when the client achieved success, while money became the primary means of interaction between the client and the family.

4.2.3. Phase 2: Challenging maladaptive core beliefs through Socratic questioning

Once this maladaptive core belief had been identified, the therapist did not challenge it directly but instead used Socratic questioning to help the client recognise the inconsistencies in his own reasoning. The therapist asked: "You said that you gamble to prove your status and maintain control. But when you accumulated a debt of VND 4 billion, were constantly harassed by creditors, and had to rely on your mother to repay your debts, who was actually in control of your life?" and "How long does the pleasure of winning a bet last? How long do the shame and discouragement after admitting your gambling debts last? Is the price of this 'illusion of power' causing you to lose the real authority you have as a father and a husband?".

The objective of this phase was to challenge the client's illusion of control, one of the core cognitive distortions associated with gambling disorder (Okuda et al., 2009), while simultaneously linking it to the deeper maladaptive core belief concerning his self worth. The client was encouraged to recognise that gambling did not conceal his feelings of inferiority but instead reinforced them.

4.2.4. Phase 3: Developing more adaptive core beliefs

Once the client's original maladaptive core belief began to weaken through cognitive work, the third phase focused on developing more adaptive core beliefs. Cognitive restructuring addressed two interrelated issues simultaneously: the client's feelings of inferiority regarding his self worth and his habitual avoidance of responsibility, which had been maintained by his family's enabling behaviour. The client was guided to recognise that self worth is not determined by gambling outcomes or financial wealth but is built through responsibility, honesty, and the ability to stand on one's own without relying on a financial safety net provided by others.

4.2.5. Phase 4: Behavioural intervention and family system intervention

The fourth phase was regarded as an essential condition for achieving sustainable CBT treatment outcomes. The therapist recognised that if the client's mother continued to repay his gambling debts, cognitive changes alone would not be sufficient to maintain the therapeutic gains.

Family system intervention. The therapist conducted several sessions with the client's mother and wife, helping the mother recognise that repaying her son's gambling debts did not represent an act of love but rather an enabling behaviour that perpetuated the maladaptive cycle. The objective was to establish a behavioural commitment to completely discontinue accepting responsibility for and repaying the client's gambling debts.

Exercises to strengthen frustration tolerance. Because the client had developed an expectation of immediate gratification from childhood as a result of an indulgent family environment, a tailored homework assignment was introduced. Whenever he experienced an urge to gamble in order to escape the stress of caring for his infant child, he was instructed to practise urge surfing by remaining with the uncomfortable feelings and recording them in an emotion diary for 30 minutes without accessing any gambling applications.

Confronting responsibility. The client was required to develop his own financial repayment plan or to face pressure from his creditors without seeking financial assistance from his mother. Although this process was emotionally painful in the short term, it provided an opportunity for psychological maturation and for developing a genuine understanding of the consequences of his behaviour.

4.3. Treatment outcomes

4.3.1. Qualitative changes throughout the therapeutic process

At the qualitative level, the therapeutic process demonstrated several notable changes. At the beginning of treatment, the client attended therapy reluctantly, primarily "to please his wife," and showed little awareness of the severity of his gambling problem. Through the application of the downward arrow technique and Socratic questioning, he gradually identified the underlying maladaptive core belief, "I am worthless", that lay beneath his gambling behaviour. He also came to recognise both the illusory nature of the sense of "power" associated with winning and the way in which gambling reinforced, rather than alleviated, his feelings of inferiority. During the later stages of treatment, the client became increasingly willing to engage in emotion regulation exercises and gradually began to confront his financial responsibilities instead of avoiding them.

At the family system level, the sessions conducted with the client's mother and wife resulted in a critical change. The client's mother came to recognise that repaying his gambling debts constituted an enabling behaviour rather than an expression of parental love, and she committed to discontinuing any future assumption or repayment of his gambling-related debts. This change was regarded as a fundamental condition for maintaining the client's cognitive and behavioural gains following treatment.

4.3.2. Changes in standardized assessment measures

The quantitative assessment results obtained using standardized instruments at Session 0, Session 5, and Session 10 are presented in Table 1. The measures were used to monitor gambling urges and gambling disorder severity (GUS, GDIT), as well as depressive symptoms, anxiety symptoms, and stress (PHQ-9, GAD-7, and DASS-42).

Table 1. Assessment results at Sessions 0, 5, and 10

Assessment measure	Construct assessed	Session 0	Session 5	Session 10
GDIT	Gambling disorder severity	40	–	13
GUS	Gambling urge severity	37	9	6
PHQ-9	Depression severity	12	2	2
GAD-7	Generalized anxiety severity	9	–	0
DASS-42	Depression – Anxiety – Stress	13 – 8 – 15	–	0 – 0 – 0

Source: Data collected by the authors from the clinical records of client B.

The results showed that gambling urge severity (GUS) decreased from 37 at Session 0 to 9 at Session 5 and further declined to 6 at Session 10. From Session 5 onward, measures of mood and anxiety remained within the normal range.. PHQ-9 scores remained stable at 2 at both Session 5 and Session 10, while the GAD-7 score was 0 and the DASS-42 scores were 0-0-0 (Depression-Anxiety-Stress) at Session 10. A GDIT score of 13 at Session 10 reflected the client's level of gambling disorder severity at the completion of treatment. The symbol "–" indicates that the corresponding assessment measure was not administered at that time point.

Monitoring both gambling-specific measures and measures of depression, anxiety, and stress enabled the concurrent evaluation of the core symptoms of gambling disorder and its commonly associated psychological symptoms, thereby providing a comprehensive assessment of the effectiveness of the integrated CBT intervention across multiple domains of the client's psychological functioning.

4.4. Discussion

4.4.1. The significance of ACEs in this clinical case

The clinical case of client B. clearly illustrates the relationship between ACEs and the development of gambling disorder, particularly through ACEs involving emotional neglect and family dysfunction, two categories that have consistently been identified in the literature as being associated with gambling disorder (Black et al., 2012; Bristow et al., 2022; Lane et al., 2016; Lotzin et al., 2018; Poole et al., 2017).

Notably, this case highlights the role of the family from a different perspective. Rather than parental gambling itself, it was the family environment that facilitated the client's gambling behavior from an early age. This finding is consistent with Bristow et al. (2022), who reported that parental gambling had the highest adjusted odds ratio (AOR = 3.37) for problem gambling in adulthood.

This case also illustrates the proposition advanced by Moxey et al. (2025) that gambling functions as an emotion avoidance mechanism. The client's gambling behavior did not arise from financial need, as his family was financially secure, but rather from a desire for recognition and a sense of self-worth rooted in experiences of emotional disconnection during childhood.

4.4.2. The role of core beliefs and the compensatory mechanism

This clinical case extends the mediating mechanism of emotion dysregulation proposed by Poole et al. (2017) by examining the underlying cognitive structure in greater depth. Specifically, it highlights the core belief, "I am worthless," together with a compensatory strategy expressed through behaviors aimed at demonstrating superiority, suggesting that an emotion dysregulation model alone may not be sufficient to explain more complex cases. Consistent with the compensatory mechanism model (Kemnitz et al., 2014), when money became the primary medium of family interaction, the client developed a distorted belief about the relationship between money and self-worth. This distortion was continually reinforced by his mother's repeated financial rescues, which consistently shielded him from the financial consequences of his gambling behavior.

4.4.3. Clinical implications: toward an integrated CBT approach

This clinical case demonstrates that treating gambling disorder in individuals with a complex history of ACEs requires an integrated CBT approach that goes beyond restructuring cognitive distortions related to probability and stimulus control. Three implications for clinical practice emerge from this case. First, ACEs should be assessed during the initial evaluation to identify the origins of the client's core beliefs and to guide the development of appropriate interventions. This recommendation is consistent with Moxey et al. (2025), who advocated routine ACE screening in gambling treatment. Second, family systems intervention should be considered an essential component of treatment rather than an optional addition. If enabling behaviours within the family are not addressed, cognitive and behavioural changes achieved during therapy are unlikely to be sustained. Third, treatment should adopt a trauma informed approach. Therapists should avoid confronting core beliefs directly during the early stages of therapy and instead use Socratic questioning to help clients discover and re-evaluate their own maladaptive beliefs, as illustrated by Okuda et al. (2009).

4.4.4. Novelty of the study, factors contributing to therapeutic success, and challenges encountered during treatment

Compared with most previous case reports and CBT protocols for gambling disorder, which have focused primarily on restructuring cognitive distortions related to winning probabilities and stimulus control (Okuda et al., 2009; Petry et al., 2006), the present report offers three notable contributions. First, the study places the assessment and treatment of ACEs at the centre of the case conceptualization process rather than viewing gambling as an isolated behaviour that simply requires behavioural control. Second, the intervention model simultaneously targets three interrelated levels: childhood relational trauma, the core belief "I am worthless," and compensatory gambling behaviour. Third, the study identifies family systems intervention, particularly the interruption of financial enabling, as an essential component of the treatment protocol rather than an optional element. This integrated approach differs from the conventional "single-layer" CBT approach and translates the recommendation for routine ACE screening in gambling treatment (Moxey et al., 2025) into an intervention process that may serve as a reference for clinical practice in Vietnam.

Several factors were considered to have contributed to the effectiveness of the intervention. First, the use of the downward arrow technique and Socratic questioning enabled the client who initially lacked intrinsic motivation to identify his own core beliefs rather than having them imposed by the therapist, thereby reducing resistance to therapy. Second, the involvement of the family system, particularly the mother's commitment to stop repaying the client's gambling debts, provided the practical conditions necessary to reinforce behavioural change. Finally, incorporating specific emotion regulation exercises, such as the "urge surfing" technique, equipped the client with an alternative coping strategy during periods of heightened risk of relapse.

The therapeutic process also revealed several challenges. The client's initial motivation for treatment was largely extrinsic, as he attended therapy primarily to please his wife, requiring considerable effort during the early phase to develop insight into his gambling disorder and establish a therapeutic alliance. The expectation of immediate gratification, shaped by an overindulgent family environment, contributed to the client's low frustration tolerance, thereby increasing the risk of relapse when confronted with stress. In addition, modifying the mother's long-established enabling behaviour proved challenging and required sustained therapeutic work with the family system rather than with the client alone.

4.4.5. Study limitations

As a single clinical case report, this study has inherent limitations regarding generalizability. The conclusions are derived from one individual case and therefore cannot be generalized to the broader population of individuals with Gambling Disorder. From a methodological perspective, the study did not include a comparison or control group. Although standardized assessment instruments were employed to monitor treatment outcomes, measurements were collected only at three time points (Sessions 0, 5, and 10), which may not fully capture the continuous progression of symptom change throughout therapy. Moreover, the study did not include a long-term follow-up after treatment completion. Consequently, the durability of the therapeutic effects and the risk of relapse could not be systematically evaluated. In addition, most clinical information was obtained through the client's self-report, which may be subject to recall bias, particularly regarding childhood experiences, as noted in the ACEs literature (Bristow et al., 2022). Finally, although anonymization of identifying information was ethically necessary to protect the client's confidentiality, it inevitably reduced the transparency of certain aspects of the clinical data.

5. Conclusion and recommendations

5.1. Conclusion

This clinical case report presents the case of Client B., an individual with severe gambling disorder and a history of characteristic ACEs, including paternal emotional neglect and maternal financial enabling. The case illustrates a developmental pathway in which early relational trauma contributed to the formation of a core belief of personal worthlessness, ultimately leading to gambling behavior as a compensatory coping strategy.

The most important conclusion drawn from this case is that effective CBT for gambling disorder in individuals with complex ACEs cannot be limited to restructuring cognitive distortions related to probability estimation or stimulus control alone. To reduce the high risk of relapse, treatment should integrate (1) direct therapeutic work on maladaptive core beliefs rooted in early relational trauma, and (2) intervention targeting the family system that maintains gambling behavior through enabling patterns. This integrated therapeutic approach represents the principal clinical contribution of the present report to the treatment of gambling disorder in Vietnam.

5.2. Recommendations

Clinicians working with individuals with gambling disorder are encouraged to routinely screen for ACEs during the initial assessment, develop integrated Cognitive Behavioral Therapy protocols that incorporate trauma-informed interventions and schema-focused cognitive work, and consistently consider involving key family members in the treatment plan. Future research should conduct randomized controlled trials (RCTs) to compare the effectiveness of traditional CBT with integrated trauma-informed and family-based CBT in the treatment of gambling disorder among individuals with ACE histories in Vietnamese clinical settings.

Ethics statement and Acknowledgements

This clinical case report was conducted in compliance with the ethical principles of research in clinical psychology. This study was approved by the Ethics Committee of Mai Huong Day Psychiatric Hospital (Approval No. 130/BVMH-HĐĐĐ, dated 03 June 2025) and was conducted in accordance with the ethical standards of the Declaration of Helsinki. The authors obtained the client's voluntary informed consent for the use of clinical information for academic and publication purposes; all participants signed a written informed consent form. Participants had the right to withdraw from the interview at any time, and this did not affect their continued access to healthcare services in any way. All potentially identifiable information was coded or altered to ensure the confidentiality of the client's identity and privacy. The Authors declare that there are no conflicts of interest related to the content of this article and would like to express sincere gratitude to Client B. for agreeing to share clinical case information for academic purposes.

REFERENCES

Afifi, T. O., Brownridge, D. A., MacMillan, H., & Sareen, J. (2010). The relationship of gambling to intimate partner violence and child maltreatment in a nationally representative sample. *Journal of Psychiatric Research, 44*(5), 331-337.

Afifi, T. O., Ford, D., Gershoff, E. T., Merrick, M., Grogan-Kaylor, A., Ports, K. A., MacMillan, H. L., Holden, G. W., Taylor, C. A., Lee, S. J., & Bennett, R. P. (2017). Spanking and adult mental health impairment: The case for the designation of spanking as an adverse childhood experience. *Child Abuse & Neglect, 71*(24), 31. https://doi.org/10.1016/j.chiabu.2017.01.014

Afifi, T. O., Salmon, S., Garcés, I., Struck, S., Fortier, J., Taillieu, T., Stewart-Tufescu, A., Asmundson, G. J., Sareen, J., & MacMillan, H. L. (2020a). Confirmatory factor analysis of adverse childhood experiences (ACEs) among a community-based sample of parents and adolescents. *BMC Pediatrics, 20*(1), 1-14. https://doi.org/10.1186/s12887-020-02063-3

Afifi, T. O., Taillieu, T., Salmon, S., Davila, I. G., Stewart-Tufescu, A., Fortier, J., Struck, S., Asmundson, G. J., Sareen, J., & MacMillan, H. L. (2020b). Adverse childhood experiences (ACEs), peer victimization, and substance use among adolescents. *Child Abuse & Neglect, 106*, 104504. https://doi.org/10.1016/j.chiabu.2020.104504

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders: DSM-V* (5th ed.). Arlington.

Beck, J. S. (2011). *Cognitive behavior therapy: Basics and beyond* (2nd ed.). Guilford Press.

Black, D. W., Shaw, M. C., McCormick, B. A., & Allen, J. (2012). Marital status, childhood maltreatment, and family dysfunction: A controlled study of pathological gambling. *Journal of Clinical Psychiatry, 73*(10), 1293-1297. https://doi.org/10.4088/JCP.12m07800

Bristow, L. A., Afifi, T. O., Salmon, S., & Katz, L. Y. (2022). Risky gambling behaviors: Associations with mental health and a history of adverse childhood experiences (ACEs). *Journal of Gambling Studies, 38*(3), 699-716. https://doi.org/10.1007/s10899-021-10040-3

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The adverse childhood experiences (ACE) study. *American Journal of Preventive Medicine, 14*(4), 245-258.

Goodrich, K. M., Trott, A., Rodríguez, M. N., Waller, M., & Lilliott, E. (2023). The impact of adverse childhood experiences on problem gambling in New Mexico. *Journal of Prevention, 44*, 309-324. https://doi.org/10.1007/s10935-023-00725-3

Kemnitz, R., Klontz, B., & Archuleta, K. L. (2014). Financial enmeshment: Untangling the web. *Journal of Financial Therapy, 5*(1). https://doi.org/10.4148/1944-9771.1063

Kessler, R. C., Hwang, I., LaBrie, R., Petukhova, M., Sampson, N. A., Winters, K. C., & Shaffer, H. J. (2008).

The prevalence and correlates of DSM-IV Pathological Gambling in the National Comorbidity Survey Replication. *Psychological Medicine, 38*(9), 1351-1360. https://doi.org/10.1017/S0033291708002900
Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine, 16*(9), 606-613. https://doi.org/10.1046/j.1525-1497.2001.016009606.x
Lane, W., Sacco, P., Downton, K., Ludeman, E., Levy, L., & Tracy, J. K. (2016). Child maltreatment and problem gambling: A systematic review. *Child Abuse & Neglect, 58*, 24-38. https://doi.org/10.1016/j.chiabu.2016.06.003
Lorains, F. K., Cowlishaw, S., & Thomas, S. A. (2011). Prevalence of comorbid disorders in problem and pathological gambling: Systematic review and meta-analysis of population surveys. *Addiction, 106*(3), 490-498. https://doi.org/10.1111/j.1360-0443.2010.03300.x
Lotzin, A., Ulas, M., Buth, S., Milin, S., Kalke, J., & Schäfer, I. (2018). Profiles of childhood adversities in pathological gamblers: A latent class analysis. *Addictive Behaviors, 81*, 60-69. https://doi.org/10.1016/j.addbeh.2018.01.031
Lovibond, S. H., & Lovibond, P. F. (1995). *Manual for the Depression Anxiety Stress Scales* (2nd ed.). Psychology Foundation of Australia.
Ministry of Health. (2025). *Decision No. 2531/QĐ-BYT dated August 8, 2025, on the promulgation of the professional guideline Technical Guidelines for Psychiatry, Volume 1*.
Molander, O., Wennberg, P., & Berman, A. H. (2023). The Gambling Disorders Identification Test (GDIT): Psychometric evaluation of a new comprehensive measure for gambling disorder and problem gambling. *Assessment, 30*(1), 225-237. https://doi.org/10.1177/10731911211046045
Moxey, M., Dennie, E., Rossi, R., Sallis, H., & Herbert, A. (2025). Exploring adverse childhood experiences (ACEs) among those seeking treatment for gambling problems: A mixed-methods study. *Addictive Behaviors, 173*, 108535. https://doi.org/10.1016/j.addbeh.2025.108535
Okuda, M., Balán, I., Petry, N. M., Oquendo, M., & Blanco, C. (2009). Cognitive-behavioral therapy for pathological gambling: Cultural considerations. *American Journal of Psychiatry, 166*(12), 1386. https://doi.org/10.1176/appi.ajp.2009.08081235
Petry, N. M., Ammerman, Y., Bohl, J., Doersch, A., Gay, H., Kadden, R., Molina, C., & Steinberg, K. (2006). Cognitive-behavioral therapy for pathological gamblers. *Journal of Consulting and Clinical Psychology, 74*(3), 555-567. https://doi.org/10.1037/0022-006X.74.3.555
Poole, J. C., Kim, H. S., Dobson, K. S., & Hodgins, D. C. (2017). Adverse childhood experiences and disordered gambling: Assessing the mediating role of emotion dysregulation. *Journal of Gambling Studies, 33*(4), 1187-1200. https://doi.org/10.1007/s10899-017-9680-8
Raylu, N., & Oei, T. P. S. (2004). The Gambling Urge Scale: Development, confirmatory factor validation, and psychometric properties. *Psychology of Addictive Behaviors, 18*(2), 100-105. https://doi.org/10.1037/0893-164X.18.2.100
Richard, J., Deng, J., Ivoska, W., & Derevensky, J. (2024). Adverse childhood experiences, problem gambling and disordered gaming: The mediating role of internalizing and externalizing problems among adolescents. *International Journal of Mental Health and Addiction, 22*, 3835-3858. https://doi.org/10.1007/s11469-023-01086-y
Sharma, A., & Sacco, P. (2015). Adverse childhood experiences and gambling: Results from a national survey. *Journal of Social Work Practice in the Addictions, 15*(1), 25-43. https://doi.org/10.1080/1533256X.2015.996502
Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: The GAD-7. *Archives of Internal Medicine, 166*(10), 1092-1097. https://doi.org/10.1001/archinte.166.10.1092
Tucker, W., Garn, J. V., & Yang, W. (2021). Relationship between adverse childhood experiences and gambling in Nevada. *American Journal of Health Behavior, 45*(2), 246-255. https://doi.org/10.5993/AJHB.45.2.5
Williams, R. J., Volberg, R. A., & Stevens, R. M. G. (2012). *The population prevalence of problem gambling: Methodological influences, standardized rates, jurisdictional differences, and worldwide trends*. Report Prepared for the Ontario Problem Gambling Research Centre and the Ontario Ministry of Health and Long Term Care.
Young, J. E., Klosko, J. S., & Weishaar, M. E. (2003). *Schema therapy: A practitioner's guide*. Guilford Press.

CHALLENGES IN DIGITAL ASSET ACCOUNTING: EMPIRICAL EVIDENCE FROM VIETNAMESE ENTERPRISES

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Abstract: The rapid development of the digital economy has accelerated the adoption of digital assets in business activities in Vietnam. However, the current accounting system has yet to provide specific guidance for their accounting treatment. This study aims to identify and analyze the structural challenges associated with digital asset accounting practices in Vietnamese enterprises. To address the legal gap and the lack of specialized accounting guidance, the study employs a quantitative research approach based on a survey of 382 financial managers and accounting professionals. The data were analyzed using statistical techniques to objectively assess the extent of the impact of the identified barriers. The findings reveal five major categories of barriers hindering accounting practices. First, the absence of a legal definition of digital assets in the 2015 Law on Accounting creates difficulties in recognizing them as legitimate accounting objects. Second, in addition, the complexity of fair value measurement and the absence of a reliable domestic reference market undermine the reliability of financial reporting. Third, the incompatibility between blockchain technology and traditional accounting documentation requirements poses significant risks to internal control systems. In addition, unresolved issues in tax policy, together with limitations in software infrastructure and human resource capabilities, continue to increase the compliance burden on businesses. Based on these findings, the study recommends that regulatory authorities promptly establish a comprehensive legal framework and issue accounting guidance aligned with international standards. It also provides a practical scientific basis for business entities to proactively restructure their internal control processes and enhance the transparency of financial information.

Keywords: *Digital assets; accounting; accounting standards; Vietnam.*

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1. Introduction

The rapid development of the digital economy has accelerated the adoption of digital assets in production, business, and investment activities among Vietnamese enterprises. Transaction volumes and the prevalence of these intangible assets have grown steadily in recent years, reflecting an inevitable shift in the economy's financial structure. However, digital assets are characterized by decentralization, cryptographic mechanisms, and significant price volatility characteristics that introduce new requirements and pose direct challenges to traditional accounting systems originally designed around principles of legal ownership and verification by intermediary institutions. Current Vietnamese accounting standards (VAS) primarily address tangible assets and conventional intangible assets and lack specific guidance on the recognition, measurement, or presentation of digital assets in financial statements. Internationally, standard-setting bodies such as the IFRS Interpretations Committee (IFRS IC) have begun providing guidance indicating that digital assets should be classified as either inventories or intangible assets depending on their holding purpose. Nevertheless, the traditional historical cost model exhibits asymmetry by recognizing impairment losses while failing to reflect increases in digital assets' fair value in a timely manner. Moreover, the Financial Accounting Standards Board (FASB) issued a regulation at the end of 2023, effective from the end of 2024, requiring fair value measurement, highlighting the urgent need to update accounting standards to accommodate the operational characteristics of modern financial technologies.

Accounting for digital assets in Vietnam is currently confronted with profound structural and legal challenges. Experts acknowledge that the absence of a clear legal definition under Vietnam's Law on Accounting 2015 is the fundamental reason why enterprises lack a formal basis for recognizing digital assets as accounting objects. As long as digital assets are not legally recognized as a valid category of assets or commodities under the existing legal framework, enterprises remain reluctant to record related transactions because of concerns over their legal validity. This situation has resulted in considerable uncertainty in practice, largely due to the absence of detailed guidance issued by the Ministry of Finance regarding the chart of accounts and accounting treatments specifically applicable to digital assets.

The lack of coordination among regulatory authorities including the State Bank of Vietnam, the Ministry of Finance, and the tax authorities further increases legal risks for enterprises seeking to account for digital assets based on their economic substance while simultaneously complying with stringent regulations governing foreign exchange management and non-cash payment transactions. In the absence of a dedicated legal framework, accountants are compelled to rely almost entirely on professional judgment, which substantially undermines the comparability and reliability of financial information across enterprises operating in the same industry. Beyond legal constraints, the inconsistency between blockchain-based technical evidence and the documentary requirements prescribed by current accounting regulations has created a significant obstacle to effective corporate governance. In practice, enterprises encounter considerable difficulties in verifying ownership through private cryptographic keys, a mechanism that challenges the fundamental principles of segregation of duties and traditional internal control systems. Furthermore, the risk of asset losses arising from technical failures or cyberattacks often exceeds the current control capabilities of organizations, while the immutable nature of blockchain records prevents accounting errors from being corrected through conventional adjustment procedures. In addition, outdated technological infrastructure and limited human resource capabilities constitute major implementation barriers. Most existing accounting software has not yet been designed to integrate blockchain data directly, and many accounting professionals acknowledge that they lack specialized expertise in digital security. These challenges not only compromise the quality of financial reporting but also increase the risks associated with tax compliance and the independent oversight functions of corporate finance departments.

Against this background, this study aims to identify and analyze the major challenges associated with accounting for digital assets in Vietnamese enterprises across five key dimensions: the legal and regulatory framework, asset recognition and measurement techniques, internal control, tax compliance, and human resource capability. By examining evidence drawn from business practice, the study provides empirical insights into the impact of these systemic barriers while comparing them with international accounting standards and contemporary financial management practices. The findings help clarify the gap between the current regulatory framework and practical business needs, thereby providing a basis for recommending policy refinements and improvements to accounting procedures that are better aligned with Vietnam's evolving economic environment.

2. Theoretical framework on digital assets and digital asset accounting

2.1. The concept of digital assets

In contemporary academic research and legal practice, the concept of digital assets has evolved beyond the traditional notion of electronic files to become a distinct asset category with genuine economic value. Digital assets fundamentally represent ownership rights, financial value, or rights of access to electronic services within the digital environment (World Bank Group, 2020). In Vietnam, the legal recognition of this asset category is explicitly established under the Law on the Digital Technology Industry 2025 (National Assembly, 2025). This legislation formally recognizes digital assets as a category of property under the Civil Code, defining them as digital data that are created, stored, transferred, and authenticated through technological means in an electronic environment. The establishment of this legal status provides a fundamental basis for protecting the property rights of both organizations and individuals while creating a legitimate legal foundation for the possession, use, and disposition of digital assets. Nevertheless, legal scholars and practitioners continue to emphasize the need for more detailed technical guidance from regulatory authorities to distinguish digital assets that generate economic benefits from ordinary digital data, thereby reducing the risk of legal disputes in business and accounting practice. The classification of digital assets into virtual assets, crypto-assets, and other forms of digital assets reflects a flexible regulatory approach that seeks to promote technological innovation while safeguarding national monetary sovereignty.

At the international level, multilateral financial institutions have sought to establish a common terminology for digital assets. Nevertheless, differences in terminology persist because each institution adopts an approach aligned with its own regulatory priorities. The Financial Action Task Force (FATF) uses the term virtual assets to describe a digital representation of value that can be traded or transferred electronically for payment or investment purposes (Financial Action Task Force, n.d.). This definition deliberately excludes digital representations of fiat currencies and traditional financial securities, thereby focusing regulatory attention on instruments that may facilitate the anonymous transfer of value for money laundering and terrorist financing activities.

By contrast, the International Monetary Fund (IMF) and the World Bank generally adopt the term "crypto-assets" (International Monetary Fund, 2021). These institutions define crypto-assets as digital representations of value based on cryptography and distributed ledger technology, emphasizing their role as a financial innovation with far-reaching implications for the global financial system. Across major economies, legal frameworks likewise reflect distinct legislative strategies aimed at strengthening competitiveness in the digital economy. The European Union, through the Markets in Crypto-Assets Regulation (MiCA), defines crypto-assets broadly as digital representations of value or rights that can be stored and transferred using distributed ledger technology (European Parliament, 2025). In contrast, the legislative framework of the United States adopts the broader term "digital assets" to encompass values recorded on cryptographically secured distributed ledgers, while explicitly classifying certain assets, such as Bitcoin, as digital commodities in order to enhance market liquidity and distinguish them from the more stringent regulatory regime applicable to securities (World Economic Forum, 2024).

A comprehensive understanding of digital assets also requires careful consideration of their fundamental technical characteristics, as these characteristics directly influence accounting treatments and internal control practices. Unlike conventional digital data, which can be replicated indefinitely without affecting the original, blockchain-based digital assets possess digital scarcity. Through the consensus mechanisms of distributed networks, each unit of a digital asset is either unique or subject to a strictly limited supply, making arbitrary duplication impossible.

Ownership of digital assets is established and protected through a system of public and private cryptographic keys. This cryptographic architecture grants holders of private keys exclusive control over their assets without requiring authorization or verification from any intermediary institution, thereby creating a decentralized ownership mechanism within the digital environment (Chainalysis, 2026). Today, the digital asset ecosystem extends far beyond cryptocurrencies and is expanding rapidly through the tokenization of real-world assets (RWAs). Tokenization transforms ownership rights in traditional physical assets including real estate, works of art, and securities into blockchain-based digital tokens. This transformation enables fractional ownership, addresses the long-standing liquidity constraints associated with high-value assets, and facilitates continuous trading and near-instant settlement in global financial markets (Kraken, 2026).

2.2. Digital asset accounting

Digital asset accounting is undergoing significant transformation in response to the rapid evolution of financial technologies. A fundamental issue in accounting for digital assets is determining the appropriate classification, as this directly influences the recognition criteria, measurement basis, and disclosure requirements. Under the International Financial Reporting Standards (IFRS), cryptocurrencies held for sale in the ordinary course of business may fall within the scope of IAS 2 Inventories, whereas IAS 38 is generally considered applicable in other circumstances. The implication of this classification approach is that digital assets may be initially recognized at cost and subsequently measured using either the cost model or the revaluation model, provided that an active market exists and meets the conditions specified in IAS 38.

From an accounting perspective, this approach is conceptually coherent. However, it also reveals important limitations because many digital assets are characterized by substantial price volatility, continuous trading, and are held primarily for their current market value rather than for long-term operational use. Applying the traditional accounting model for intangible assets may therefore reduce the relevance of financial information. In particular, impairment losses are generally recognized in a timely manner, whereas increases in value are rarely reflected symmetrically in profit or loss when the cost model is applied (Chou et al., 2022). Chou et al. (2022) found that stakeholders across the financial reporting ecosystem generally agree that the current accounting treatment of crypto-assets under the existing framework is not entirely adequate and that more specific guidance is needed, particularly with respect to measurement and risk disclosure. Similarly, Tiron-Tudor et al. (2024) concluded that contemporary research has focused extensively on debates concerning asset classification, fair value measurement, and the need to develop dedicated accounting standards for crypto-assets.

By contrast, under the United States Generally Accepted Accounting Principles (US GAAP), the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2023-08, which requires certain crypto-assets within its scope to be measured at fair value, with changes in fair value recognized directly in earnings at each reporting date. This approach replaces the traditional intangible asset model that has generally been applied under IFRS, which relies primarily on historical cost and impairment testing. The adoption of fair value measurement enables financial statements to more faithfully reflect market fluctuations in digital asset values. The standard also strengthens disclosure requirements by requiring entities to provide information on changes in crypto-asset holdings, restrictions on ownership rights, and the methods used to determine fair value. This represents a significant shift, reflecting the view that the economic substance of many crypto-assets more closely resembles investment assets with observable market prices than intangible assets in the traditional sense.

Compared with IFRS, the FASB's approach demonstrates a more pragmatic direction in standard-setting, seeking to enhance both the relevance and timeliness of financial information for users of financial statements. Nevertheless, regardless of whether IFRS or US GAAP is applied, accounting for digital assets requires entities to establish robust internal control procedures governing private key access, wallet ownership verification, blockchain transaction validation, impairment assessment or fair value measurement, and the clear distinction between digital assets held for investment purposes and those held for trading activities. From a disclosure perspective, entities are expected not only to describe their accounting policies but also to explain material risks associated with digital assets, including price risk, liquidity risk, technological risk, legal and regulatory risk, and any restrictions on transferability, where applicable. From an academic perspective, the development of digital asset accounting reinforces a consistent principle: Technology may create new forms of assets; however, accounting can only provide an appropriate treatment by focusing on their economic substance, control rights, and the usefulness of information for users' decision-making in financial reporting (Bellucci et al., 2022; Lazea et al., 2024).

3. Research methodology and survey design

This study adopted a mixed-methods research design, with descriptive quantitative analysis serving as the primary approach to assess the extent to which various barriers affect digital asset accounting. The research was conducted in two sequential stages. The first stage was qualitative in nature and focused on establishing the theoretical and regulatory foundations for the development of the measurement instrument. The author reviewed the 2015 Law on Accounting and relevant circulars guiding the accounting regime for enterprises to identify existing legal gaps, while also referring to the guidance issued by the IFRS Interpretations Committee and the latest standards from the Financial Accounting Standards Board as comparative benchmarks. Synthesizing evidence from authoritative international publications in this field enabled the development of a robust conceptual framework and the construction of a survey instrument covering five major categories of challenges: the legal framework, asset measurement, internal control, tax policy, and human resource capacity.

The second stage consisted of a quantitative survey conducted between January and March 2026. The target respondents were professionals with extensive expertise and direct responsibility for corporate financial management, including chief accountants, chief financial officers (CFOs), and internal auditors working in organizations that either engage in or have an interest in digital asset transactions. A convenience sampling approach was employed through professional networks and with the support of relevant professional associations. Data were collected using a structured questionnaire administered online via Google Forms. A total of 450 questionnaires were distributed, of which 394 were returned, representing a response rate of 87.6%. Following data screening, 12 questionnaires were excluded because they contained incomplete information or demonstrated internal inconsistencies, resulting in a final analytical sample of 382 valid responses. The sample comprised 220 chief accountants (57.6%), 103 chief financial officers (27.0%), and 59 internal auditors (15.4%).

The collected data were analyzed primarily using descriptive statistical techniques. Frequencies and percentages were employed to quantify the extent to which respondents confirmed each of the specific barriers identified from the theoretical framework. This descriptive quantitative approach enables the study to clearly identify systematic barriers, such as the absence of clear legal definitions or limitations in the compatibility of existing accounting software, thereby establishing a robust empirical foundation for highly practical policy recommendations.

4. Research findings

The empirical findings, derived from responses provided by 382 experts and financial managers, offer concrete evidence of the structural barriers confronting digital asset accounting in Vietnam. These challenges do not exist in isolation; rather, they form an interconnected system of bottlenecks that directly affects the faithful representation and reliability of information presented in financial statements. Based on the survey results, the identified challenges were classified into five major categories: the legal framework, recognition and measurement, internal control, tax policy, and implementation infrastructure. Clearly identifying these categories provides an essential basis for assessing the gap between the current regulatory framework and the practical requirements of the digital economy.

4.1. Challenges related to the legal and regulatory framework

The first difficulty stems from the fact that the legal framework governing digital assets is still in the process of being developed to achieve consistency among state regulatory authorities. The statistical data presented in Table 1 show that as many as 85.1% of respondents identified the lack of a clear legal definition in legal documents at that time as the core cause. Although regulatory authorities are actively developing regulatory sandbox mechanisms and completing the legal framework for virtual assets, the absence of official legal recognition makes businesses concerned about their legality and leaves them without a solid basis for recognizing digital assets as a legitimate accounting object in their accounting records.

The fact that the regulatory framework is in a transitional stage makes it difficult to classify economic transactions involving digital assets within existing accounting frameworks. This uncertainty was reported by 81.2% of the surveyed enterprises. This finding is fully consistent with previous studies. Specifically, Ezejiofor and Omerbere (2025) emphasized that regulatory ambiguity reduces the transparency of financial reporting in emerging markets; similarly, Sixt and Himmer (2019) pointed to the lack of clear guidance at the global level.

In addition, 75.4% of the survey participants expressed concerns about delays in policy coordination among the State Bank of Vietnam, the Ministry of Finance, and tax authorities. While the State Bank of Vietnam maintains a cautious stance and has not recognized cryptocurrencies as a means of payment in order to control foreign exchange risks, other authorities are still studying the relevant policy framework. As García Martínez and Martínez-Resano (2023) have analyzed, such inter-agency caution is necessary but also creates compliance risks for businesses when they attempt to account for assets based on their economic substance. Finally, 51.8% of enterprises encountered difficulties regarding the timing of transaction recognition. Technical network congestion on blockchains slows the validation process on distributed ledgers, making it difficult for accountants to comply with the accrual principle, particularly when finalizing financial figures at the end of the fiscal year. Therefore, there is currently an urgent need to develop accounting guidance specifically for digital assets to keep pace with the roadmap for upgrading the existing legal framework (Hudu, 2025).

Table 1. Survey results on challenges related to the legal framework

No.	Survey item	Frequency	Percentage (%)
1	Lack of a clear legal definition of digital assets in the 2015 Law on Accounting	325	85.1
2	Absence of detailed guidance issued by the Ministry of Finance	310	81.2
3	Existing regulations governing digital assets in Vietnam remain fragmented and lack coordination across regulatory authorities.	288	75.4
4	Absence of regulations specifying the timing of transaction recognition when transaction confirmation on the blockchain network is delayed	198	51.8

Source: Compiled from the survey results.

4.2. Challenges in the recognition and measurement of digital assets

Challenges related to the recognition and measurement of digital assets continue to present significant obstacles to the preparation of financial statements. As shown in Table 2, difficulties arise as early as the initial classification stage. Specifically, 56.3% of respondents indicated uncertainty over whether digital assets should be classified as inventories under IAS 2 Inventories or intangible assets under IAS 38 Intangible Assets. The current Vietnamese Accounting Standards provide no equivalent guidance specifically applicable to digital assets. Allowing alternative accounting classifications for digital assets may lead to inconsistent accounting treatment, thereby distorting asset valuation and impairing the comparability of financial performance across entities (Luo & Yu, 2024). This finding is consistent with the ongoing debate in the international accounting literature. Luciani Toro et al. (2022) and Pramana et al. (2023) similarly argue that, under International Financial Reporting Standards (IFRS), crypto-assets generally fall between two accounting categories: intangible assets under IAS 38 or inventories under IAS 2, depending on the entity's business purpose. When digital assets are held for sale in the ordinary course of business, classification as inventories is appropriate. Conversely, when they are acquired for long-term investment purposes, recognizing them as intangible assets raises practical issues concerning amortization and the determination of residual value.

Subsequent measurement after initial recognition represents the most significant challenge, reported by 77.2% of surveyed enterprises. Digital assets are traded continuously on a 24-hour, seven-day-a-week global market, resulting in substantial price fluctuations within very short periods. Such extreme volatility renders traditional cost-based impairment models less effective and prevents them from faithfully representing the underlying economic reality (Celestin & Gidisu, 2025). This issue is further emphasized by Simran (2025), who argues that high market volatility combined with limited liquidity substantially reduces the reliability of conventional valuation techniques. Consequently, accountants face considerable pressure in determining the fair value of digital assets at the reporting date in accordance with IFRS 13. The challenge is further compounded by the fact that 79.1% of respondents reported the absence of licensed domestic digital asset exchanges in Vietnam. The absence of a domestic active market forces enterprises to rely on pricing data from foreign exchanges. Using price data from non-authoritative sources weakens the evidential support for accounting measurements and reduces the faithful representation of amounts reported in the statement of financial position.

Selecting an appropriate cost flow assumption for digital assets also represents a technically challenging issue for 63.1% of surveyed enterprises. Smart contracts enable digital assets to be fractionally divided and traded at extremely high frequencies. Tracking the historical cost of each fractional unit in order to apply the first-in, first-out (FIFO) or weighted average cost method exceeds the processing capabilities of conventional accounting systems. In addition, determining and recognizing impairment losses imposes a considerable administrative burden on 48.4% of enterprises. Under IAS 36 Impairment of Assets, an impairment loss must be recognized in profit or loss when the recoverable amount of an asset falls below its carrying amount. However, in the absence of active and stable markets, together with the lack of detailed guidance from the Ministry of Finance, impairment assessments are often highly judgmental, making it difficult for enterprises and independent auditors to reach a consistent conclusion. To address the measurement challenges associated with impairment testing reported by 48.4% of Vietnamese enterprises, Hubbard (2023) proposed applying the revaluation model for intangible assets, with an optional fair value measurement basis, as a means of improving the decision usefulness of reported earnings in relation to digital assets.

Table 2. Summary of survey results on challenges in the recognition and measurement of digital assets

No.	Items	Frequency	Percentage (%)
1	Difficulty in determining whether digital assets should be classified as inventories or intangible assets (under IAS 2/IAS 38)	215	56.3
2	Significant price volatility creates difficulties in determining fair value at the reporting date	295	77.2
3	Lack of licensed domestic digital asset exchanges to provide reliable benchmark prices	302	79.1
4	Difficulty in determining and recognizing impairment losses	185	48.4
5	Uncertainty regarding the application of FIFO, LIFO, or weighted average cost methods to digital assets involving numerous transactions	241	63.1

Source: Compiled from the survey results.

4.3. Challenges in internal control and documentary evidence

Internal control systems and documentation procedures are undergoing a fundamental transformation in their underlying operating principles. The findings presented in Table 3 reveal a clear mismatch between existing internal control requirements and the technical characteristics of blockchain technology. The most significant challenge, identified by 67.5% of respondents, concerns the verification of asset ownership through private cryptographic keys. Under traditional accounting practice, ownership is typically established through legal documents such as contracts or certificates of ownership. In a blockchain environment, however, ownership is determined entirely by control over the private key. This creates a legal paradox in which an entity may effectively control a digital asset but lacks conventional documentary evidence to substantiate ownership before auditors or tax authorities. Moreover, if the private key is lost or compromised, the entity permanently loses control of the asset, with no legal mechanism currently available to restore ownership. This incompatibility is further reflected in the fact that blockchain transaction records do not yet fully satisfy documentary requirements under contract law or the evidentiary standards applicable in the conventional financial system (Cornelius, 2021). This shift in the mechanism of asset ownership also gives rise to a significant risk of asset loss resulting from technical failures, as reported by 51.3% of respondents. A similar concern was raised by Lapiţkaia and Leahovcenco (2022), who argue that auditors require specialized audit procedures and accounting practices to address cybersecurity vulnerabilities and anti-money laundering risks associated with digital assets. Traditional internal control systems are designed to prevent errors through multi-level human authorization and approval procedures. By contrast, vulnerabilities embedded in smart contracts or cyberattacks may result in immediate and irreversible losses. Because blockchain records are inherently immutable, accountants cannot reverse transactions or record correcting journal entries using conventional accounting procedures. The principle of segregation of duties also presents considerable implementation challenges. Specifically, 42.4% of surveyed enterprises reported difficulties in clearly distinguishing the responsibilities of digital asset custodians from those of accounting personnel. Safeguarding private cryptographic keys requires specialized information technology expertise. In practice, access to digital assets is typically concentrated among a small number of system administrators. This concentration of authority undermines the principle of segregation of duties, weakens independent verification procedures, and substantially increases the risk of internal fraud. The legal validity of accounting documentation also represents a significant challenge, as reported by 66.5% of surveyed enterprises. Under the Vietnamese Law on Accounting, electronic accounting documents must bear legally valid digital signatures that comply with national standards. However, transaction reports exported from international digital asset exchanges are generally generated as electronic data files without official seals or digital signatures recognized under Vietnamese law. This discrepancy between blockchain-based technical evidence, which relies on digitally authenticated transaction records, and the formal documentary requirements prescribed by accounting regulations exposes enterprises to the risk that legitimate business expenses may be disallowed during tax finalization. The absence of legal recognition of blockchain records as valid accounting documentation therefore constitutes a major obstacle to digital business operations.

Table 3. Summary of survey results on challenges in internal control and accounting documentation

No.	Items	Frequency	Percentage (%)
1	Challenges in verifying ownership through private cryptographic keys (private keys)	258	67.5
2	Risk of asset loss resulting from technical failures or cybersecurity incidents beyond current control capabilities	196	51.3
3	Difficulties in implementing segregation of duties between digital asset custodians and accounting personnel	162	42.4
4	Difficulty verifying the legal validity of documentation obtained from foreign digital asset exchanges (which do not bear official seals or digital signatures recognized under Vietnamese law)	254	66.5

Source: Compiled from the survey results.

4.4. Challenges related to tax policy and compliance

Current tax policies and regulatory compliance requirements constitute a major obstacle to improving the transparency of digital asset transactions. The survey findings presented in Table 4 reveal a particularly challenging situation: 83.2% of surveyed enterprises reported the absence of clear guidance on electronic invoice issuance and value-added tax (VAT) declaration for transactions involving digital assets. Under the Law on Tax Administration, transactions involving the supply of goods or services must be supported by valid electronic invoices to serve as the basis for tax assessment. However, digital assets have not yet been explicitly classified within Vietnam's national tax framework. Consequently, enterprises are unable to identify appropriate tax codes for counterparties or business activity classifications within the tax authority's electronic invoicing system. The absence of valid invoices exposes enterprises to the risk that tax authorities may disallow all related deductible expenses when determining taxable income for corporate income tax purposes.

Technical difficulties in determining the point at which taxable revenue arises from digital asset exchanges were identified by 72.3% of respondents. Token swap transactions are executed continuously on decentralized platforms without the use of fiat currency. Determining the equivalent value in Vietnamese dong at the time of the exchange is particularly complex because no official government reference exchange rate exists for such transactions. The absence of specific guidance on when gains should be recognized for tax purposes increases the likelihood of inaccurate tax reporting and, consequently, exposes enterprises to a higher risk of administrative tax penalties. This finding is consistent with the evidence reported by Martinčević et al. (2022), who argue that regulatory gaps and inconsistent enforcement have created substantial risks of tax evasion and money laundering across multiple jurisdictions. The challenges associated with tax compliance are therefore not unique to Vietnamese enterprises but represent a broader issue faced by many countries where digital assets have yet to be clearly incorporated into national tax systems.

The divergence between accounting profit and taxable income creates substantial financial management challenges for 55.0% of surveyed enterprises. This finding is consistent with the argument advanced by Havrylenko et al. (2025), who emphasize the need for a harmonized approach to financial accounting and tax accounting in order to improve transparency and enhance comparability. Under international accounting standards, digital assets are often measured at fair value at the reporting date, with resulting valuation changes recognized in the statement of profit or loss. In contrast, the tax authorities recognize income only when it has been realized through transactions settled in fiat currency. This divergence gives rise to significant deferred corporate income tax assets or liabilities, making corporate cash flow planning more challenging.

Concerns over the risk of money laundering and the illicit transfer of funds abroad were reported by 45.8% of respondents. Blockchain technology is characterized by a high degree of pseudonymity and operates across borders, allowing digital assets to be transferred rapidly without passing through the conventional banking system. Consequently, enterprises face considerable difficulties in demonstrating the legitimacy of their business counterparties and the lawful origin of transaction funds when requested by law enforcement authorities. The absence of anti-money laundering regulations specifically designed for digital assets places enterprises in a position of heightened legal risk. To address this issue, regulatory authorities should establish effective information-sharing mechanisms among relevant agencies in order to create a secure business environment, and foster innovation within the digital economy.

Table 4. Summary of survey results on challenges related to tax policy and compliance

No.	Items	Frequency	Percentage (%)
1	Lack of guidance on issuing invoices and declaring VAT for digital asset transactions	318	83.2
2	Differences between accounting profit and taxable income	210	55
3	Risks associated with money laundering or the illegal transfer of funds abroad	175	45.8
4	Difficulty determining the timing of taxable revenue recognition for token swap transactions (Token A exchanged for Token B)	276	72.3

Source: Compiled from the survey results.

4.5. Challenges related to human resources and technological infrastructure

The capabilities of the accounting workforce and the quality of existing technological infrastructure currently pose significant implementation challenges for digital asset accounting. The statistics presented in Table 5 reveal a substantial skills gap, with 72.3% of accounting personnel acknowledging that they lack specialized knowledge of blockchain technology. Accounting for digital assets requires professionals to understand consensus mechanisms, the structure of blockchain transaction records, and the operating principles of cryptographic digital wallets. This lack of interdisciplinary expertise prevents 64.7% of respondents from independently verifying and reconciling transaction data directly through public blockchain explorers. When accountants are unable to interpret the underlying blockchain records, they become entirely dependent on reports generated by third-party service providers. Such dependence undermines the finance function's ability to perform independent verification and effective oversight within the organization.

The shortage of qualified personnel is compounded by the obsolescence of existing accounting software systems. Survey results indicate that 74.3% of enterprises are using accounting software that does not support the direct integration of data from blockchain networks. Existing accounting systems remain inadequately equipped with the functionalities required to process the technical complexities and valuation challenges associated with digital assets (Elsayed, 2025). The absence of an integrated and automated data infrastructure compels accounting personnel to manually record large volumes of transactions, thereby increasing the risk of errors and inaccuracies in financial reporting. Furthermore, 76.7% of surveyed enterprises reported that the accounting software commonly used in Vietnam does not provide specialized functional modules for preparing financial statements relating to digital assets. These findings reveal a substantial capability gap, consistent with the observations of Lardo (2022), who argued that accounting processes must be fundamentally redesigned and professional education enhanced to equip accountants with the competencies required in the digital era. Similarly, Tussibayeva et al. (2023) emphasized that effective digital asset management requires both the modernization of accounting systems and significant improvements in workforce capabilities. The incompatibility between blockchain-based ledgers and traditional accounting ledgers further undermines the accurate reporting of changes in asset values and impairment losses. In addition, the lack of interoperability between domestic accounting software and the underlying data architecture of digital assets reinforces the findings of Atadoga et al. (2024), who identified technological integration challenges and workforce capability development as the most significant barriers to the global adoption of modern accounting practices.

The high cost of upgrading technological infrastructure places considerable pressure on 38.0% of surveyed enterprises. Operating a secure digital accounting system requires substantial investment in private key management solutions, advanced data analytics tools, and cybersecurity systems. Small and medium-sized enterprises (SMEs) in Vietnam often face significant financial constraints, limiting their ability to adopt advanced technologies available in international markets. This imbalance in financial and technological capacity across different groups of enterprises has resulted in marked disparities in their ability to comply with regulatory requirements and ensure the transparency of financial reporting. Without comprehensive reforms in professional training and significant upgrades to accounting software, digital asset accounting is unlikely to evolve into a reliable tool for corporate governance and decision-making.

Table 5. Summary of survey results on challenges related to human resources and technological infrastructure

No.	Items	Frequency	Percentage (%)
1	Accountants lack specialized knowledge of digital assets and digital security	276	72.3
2	Existing accounting software does not support the direct integration of blockchain data	284	74.3
3	The cost of investing in security systems and retraining personnel is excessively high	145	38
4	Accounting personnel are unable to independently verify transaction data on blockchain systems because of technical barriers	247	64.7
5	Accounting software used in Vietnam does not support digital asset-related accounting functions for preparing financial statements under current accounting standards	293	76.7

Source: Compiled from the survey results.

5. Solutions and discussion

To address the structural challenges identified in this study, it is essential to establish a comprehensive and coordinated set of solutions spanning both the regulatory and organizational levels. Such an integrated approach is a prerequisite for enhancing the transparency and consistency of digital asset accounting practices in Vietnam.

First, to overcome the regulatory barriers, the legislative authority should amend the 2015 Law on Accounting by incorporating a formal legal definition of digital assets and recognizing them as legitimate accounting objects within the accounting system. Providing a clear legal definition in primary legislation would establish a solid foundation for the Ministry of Finance to issue detailed implementing regulations governing the chart of accounts, accounting treatments, and financial statement presentation, thereby eliminating the current fragmented application of international accounting standards. At the same time, the State Bank of Vietnam, the Ministry of Finance, and the tax authorities should establish an inter-agency coordination mechanism to harmonize their regulatory approaches. Such coordination would reduce legal uncertainty and enable enterprises to account for digital assets according to their economic substance without facing potential violations of foreign exchange management regulations.

To address the challenges associated with the recognition and measurement of digital assets, enterprises should proactively adopt the accounting framework developed by the IFRS Interpretations Committee by classifying digital assets as either inventories or intangible assets, depending on the purpose for which they are held. To reduce subjectivity in the measurement of fair value and impairment losses, The State should consider licensing domestic digital asset exchanges or establishing an official list of reputable international exchanges as authorized reference sources for market price data. Standardizing the sources of valuation data would not only improve the reliability of amounts reported in the statement of financial position but also promote greater consistency between enterprises and independent auditors.

Regarding internal controls and the management of legal documentation and accounting evidence, the optimal solution is to implement multi-signature wallet technology to ensure strict segregation of duties between the accounting function and the information technology function. Enterprises should establish robust private key governance procedures to mitigate the risk of asset losses arising from cyberattacks or internal fraud. From a regulatory perspective, the competent authorities should formally recognize blockchain records as a distinct form of electronic accounting evidence, thereby allowing them to serve as valid supporting documentation in place of traditional seals or digital signatures for transaction reports generated by foreign digital asset exchanges.

With respect to tax policy, the tax authorities should issue comprehensive guidance on the issuance of electronic invoices and the declaration of value-added tax (VAT) specifically for digital asset transactions. The regulations should clearly define the timing of taxable revenue recognition for token swap transactions by specifying the exchange rate used to convert transaction values into Vietnamese Dong (VND) at the transaction date. Such guidance would help enterprises avoid errors in tax declarations and reduce the risk of administrative penalties. Greater alignment between accounting profit and taxable income would also alleviate the burden associated with deferred corporate income tax, thereby enabling enterprises to manage cash flow more effectively.

Finally, strengthening implementation capacity requires a comprehensive strategy encompassing both human capital development and technological infrastructure modernization. Higher education institutions should incorporate topics such as blockchain technology, consensus mechanisms, and digital security into accounting curricula to address the current shortage of interdisciplinary expertise. At the same time, Vietnamese accounting software developers should invest in developing application programming interfaces that enable direct connectivity with blockchain networks, thereby automating transaction recording and blockchain data reconciliation. Modernizing technological infrastructure would not only reduce errors associated with manual data entry but also enhance the faithful representation and accuracy of financial information in the era of the digital economy.

6. Conclusion

This study provides a systematic analysis of the barriers to digital asset accounting in Vietnamese enterprises, highlighting the urgent need for a dedicated regulatory framework. Based on empirical evidence collected from 382 financial managers and accounting professionals, the findings reveal substantial structural barriers that continue to hinder the effective accounting treatment of digital assets in Vietnam. The survey results were synthesized into five major categories of challenges. These encompass inconsistencies in the current legal and regulatory framework, complexities associated with the recognition and measurement of digital assets, and the incompatibility of traditional internal control mechanisms with blockchain-based transactions. In addition, difficulties related to tax compliance, together with limitations in implementation capacity including the professional competencies of accounting personnel and the capabilities of existing accounting software were identified as critical obstacles to the adoption of effective digital asset accounting practices. The findings underscore the urgent need to establish a dedicated accounting framework for digital assets in order to enhance the transparency and reliability of financial reporting. Vietnamese regulatory authorities should promptly issue detailed implementation guidance that incorporates international financial reporting practices for recognizing digital assets as either inventories or intangible assets, depending on the entity's holding purpose. At the enterprise level, organizations should proactively adopt advanced technological solutions, such as multisignature wallet systems, to strengthen risk management while allocating sufficient resources to professional training and the modernization of accounting information systems. The coordinated implementation of these regulatory, technological, and organizational measures will provide a solid foundation for transforming digital asset accounting in Vietnam from a fragmented and reactive practice into a standardized and professionally managed accounting system capable of supporting international integration and the sustainable development of the digital economy.

REFERENCES

Atadoga, A., Asuzu, O. F., Ayinla, B. S., Ndubuisi, N. L., Ike, C. U., & Adeleye, R. A. (2024). *Blockchain technology in modern accounting: A comprehensive review and its implementation challenges. World Journal of Advanced Research and Reviews, 21*(2), 218-234. https://doi.org/10.30574/wjarr.2024.21.2.0440

Bellucci, M., Cesa Bianchi, D., & Manetti, G. (2022). Blockchain in accounting practice and research: Systematic literature review. *Meditari Accountancy Research, 30*(7), 121-146. https://doi.org/10.1108/MEDAR-10-2021-1477

Celestin, M., & Gidisu, J. A. (2025). Digital asset impairment testing: Applying traditional methods to volatile fintech instruments. *International Journal of Engineering Research & Modern Education, 10*(2), 13–29. https://doi.org/10.13140/RG.2.2.20619.20006

Chainalysis. (2026). *2025 Crypto regulatory round-up: What changed and what's ahead*. https://www.chainalysis.com/blog/2025-crypto-regulatory-round-up/

Chou, J. H., Agrawal, P., & Birt, J. (2022). Accounting for crypto-assets: Stakeholders' perceptions. *Studies in Economics and Finance, 39*(3), 471-489. https://doi.org/10.1108/SEF-10-2021-0469

Cornelius, K. (2021). Betraying blockchain: Accountability, transparency and document standards for non-fungible tokens (NFTs). *Information, 12*(9), 358. https://doi.org/10.3390/info12090358

Elsayed, R. A. A. (2025). Unveiling the black box: Understanding digital assets' complexity. *Future Business Journal*. https://doi.org/10.1186/s43093-025-00456-3

European Parliament. (2025). *Digital assets: EU regulatory framework, market uptake, risks and challenges*.

Ezejiofor, R. A., & Omerbere, E. E. (2025). *Accounting for cryptocurrency and digital assets in Nigeria: Challenges and emerging standards (2015-2025). International Journal of Advanced Academic Research, 11*(10), 32-42. https://doi.org/10.5281/zenodo.17430754

Financial Action Task Force (FATF). (n.d.). *Virtual assets*. https://www.fatf-gafi.org/en/topics/virtual-assets.html

García Martínez, F., & Martínez-Resano, J. R. (2023). Digital assets and reporting: Is there anything new under the sun? *Financial Stability Review*. https://doi.org/10.53479/30052

Havrylenko, V., Krot, I., Tkachenko, A., & Mishchenko, A. (2025). Financial and tax accounting and control of virtual assets: latest international practices and ways of their implementation in Ukraine. *Economic Bulletin of Cherkasy State Technological University, 26*(2), 154-171. https://doi.org/10.24025/2306-4420.75(2).2025.338803

Hudu, A. S. (2025). *Cryptocurrency and financial reporting: Challenges in accounting for digital assets*. SSRN Electronic Journal. https://doi.org/10.51483/ijccr.5.2.2025.136-144

Hubbard, B. (2023). *Decrypting crypto: Implications of potential financial accounting treatments of cryptocurrency. Accounting Research Journal, 36*(4–5), 369–383. https://doi.org/10.1108/ARJ-10-2022-0279

International Monetary Fund (IMF). (2021). *Virtual assets and anti-money laundering and combating the financing of terrorism*. https://www.elibrary.imf.org/view/journals/063/2021/002/article-A001-en.xml

Kraken. (2026). *Tokenization: A complete guide*. https://www.kraken.com/vi/learn/what-is-tokenization

Lapițkaia, L., & Leahovcenco, A. (2022). Features of auditing digital assets in accordance with AICPA requirements. https://doi.org/10.53486/9789975155663.12

Lardo, A. (2022). Exploring blockchain in the accounting domain: A bibliometric analysis. *Accounting, Auditing & Accountability Journal*. https://doi.org/10.1108/aaaj-10-2020-4995

Lazea, G.-I., Bunget, O.-C., & Lungu, C. I. (2024). Cryptocurrencies' impact on accounting: Bibliometric review. *Risks, 12*(6), 94. https://doi.org/10.3390/risks12060094

Luciani Toro, L. R., Castellanos Sánchez, H. A., & Hurtado Briceño, A. J. (2022). Una aproximación al tratamiento contable de criptomonedas en el marco de las NIIF. *Innovar-Revista De Ciencias Administrativas Y Sociales*. https://doi.org/10.15446/innovar.v33n88.106257

Luo, M., & Yu, S. (2024). Financial reporting for cryptocurrency. *Review of Accounting Studies, 29*(2), 1707-1740. https://doi.org/10.1007/s11142-022-09741-w

Martinčević, I., Sesar, V., & Buntak, K. (2022). Accounting and tax regulation of cryptocurrencies. *Interdisciplinary Description of Complex Systems*. https://doi.org/10.7906/indecs.20.5.9

National Assembly. (2025). *Law on the Digital Technology Industry* (Law No. 71/2025/QH15).

Simran. (2025). *The future of fair value accounting in a digital economy*. *Shodh Sari: An International Multidisciplinary Journal, 4*(2), 334-365. https://doi.org/10.59231/SARI7828

Pramana, I. G. G. A., Mayangsari, S., & Oktris, L. (2023). *Accounting analysis for crypto-assets based on IFRS. Jurnal Magister Akuntansi Trisakti, 10*(1), 19-44. https://doi.org/10.25105/jmat.v10i1.9637

Sixt, E., & Himmer, K. (2019). Accounting and taxation of cryptoassets. *Social Science Research Network*. https://doi.org/10.2139/SSRN.3419691

Tiron-Tudor, A., Mierlita, S., & Manes Rossi, F. (2024). Exploring the uncharted territories: A structured literature review on cryptocurrency accounting and auditing. *The Journal of Risk Finance, 25*(2), 253-276. https://doi.org/10.1108/JRF-10-2023-0258

Tussibayeva, G., Sagindykova, G., & Amanova, G. (2023). Transformation of accounting in the digital economy and prospects for its development. *Habaršysy*. https://doi.org/10.32523/2789-4320-2023-4-289-300

World Bank Group. (2020). *Distributed ledger technology & secured transactions: Legal, regulatory and technological perspectives - Guidance notes series (Note 2: Regulatory implications of integrating digital assets and distributed ledgers in credit ecosystems)*. https://documents1.worldbank.org/curated/en/165451588054535734/pdf/Regulatory-Implications-of-Integrating-Digital-Assets-and-Distributed-Ledgers-in-Credit-Ecosystems.pdf

World Economic Forum. (2024). *Digital assets regulation: Insights from jurisdictional approaches*. https://www3.weforum.org/docs/WEF_Digital_Assets_Regulation_2024.pdf

QUY ĐỊNH BÀI VIẾT
GỬI ĐĂNG TRÊN TẠP CHÍ NGUỒN NHÂN LỰC VÀ AN SINH XÃ HỘI
CỦA TRƯỜNG ĐẠI HỌC LAO ĐỘNG – XÃ HỘI

I. HÌNH THỨC CỦA BÀI BÁO

- Bài viết bằng tiếng Việt, soạn thảo trên Word, font Times New Roman (Unicode); cỡ chữ 12; trên khổ giấy A4; lề trên, dưới, trái, phải: 2,54 cm; giãn dòng: 1,5 lines. Mật độ chữ bình thường, không được nén hoặc kéo dãn khoảng cách giữa các chữ.

- Nội dung bài viết cô đọng, súc tích, theo cấu trúc của bài báo khoa học; không quá 15 trang đánh máy giấy A4 (bao gồm cả bảng biểu, hình vẽ, chú thích, tài liệu tham khảo).

II. KẾT CẤU VÀ CÁC THÀNH PHẦN NỘI DUNG CỦA BÀI BÁO

1. Tên bài báo: tên bài báo cần phải ngắn gọn (không nên quá 20 chữ/words), rõ ràng và phải phản ánh nội dung chính của bài báo. Tên bài báo phải viết chữ in hoa, cỡ chữ 12, in đậm, căn giữa trang.

2. Tên tác giả, cơ quan công tác, địa chỉ email (Trường hợp có nhiều tác giả cũng nêu đầy đủ).

3. Tóm tắt bài viết: phần tóm tắt bài báo gồm 2 phần tiếng Việt và tiếng Anh. Tóm tắt bằng tiếng Việt có độ dài từ 150 đến 250 từ, phản ánh khái quát những nội dung chính trong bài báo và thể hiện rõ những kết quả, đóng góp, điểm mới của bài báo.

4. Từ khóa: từ khóa là những từ được cho là quan trọng đối với nội dung nghiên cứu đặc trưng cho chủ đề của bài viết đó. Tác giả đưa ra một số từ khóa (khoảng 3 - 6 từ khóa) của bài viết. Từ khóa có cỡ chữ 12, chữ thường, cách mỗi từ là dấu phẩy.

5. Nội dung bài báo: có thể có hình thức khác nhau nhưng đảm bảo các nội dung sau: Giới thiệu; Tổng quan nghiên cứu và hoặc cơ sở lý thuyết; Phương pháp nghiên cứu; Kết quả nghiên cứu (Thực trạng vấn đề nghiên cứu); Kết luận hoặc /và giải pháp/khuyến nghị/hàm ý và Tài liệu tham khảo.

III. CÁC QUY ĐỊNH VỀ KỸ THUẬT TRÌNH BÀY

1. Quy định về đánh số đề mục

Trong phần nội dung chính của bài viết, các đề mục lớn phải là chữ in đậm, căn trái và được đánh số liên tục theo chữ số Ả-rập. Các tiểu mục cấp1 (ví dụ: 1.1) là chữ in đậm và nghiêng. Các tiểu mục cấp 2 (ví dụ: 1.1.1) là chữ in nghiêng nhưng không in đậm.

2. Quy định về trình bày bảng biểu, hình vẽ, ký hiệu, công thức

Quy định trình bày bảng, hình vẽ

• Các bảng dữ liệu trình bày trong bài báo được ghi thống nhất là Bảng. Các bảng dữ liệu phải là định dạng bảng (table) trong phần mềm Microsoft Word.

• Các đồ thị, biểu đồ, sơ đồ trong bài báo được ghi thống nhất là Hình.

• Các bảng/hình trong bài báo phải được dẫn nguồn.

3. Quy định về trình bày trích dẫn, tài liệu tham khảo

Việc trích dẫn tài liệu tham khảo được thể hiện ở trích dẫn trong bài và tài liệu tham khảo. Tạp chí áp dụng cách trích dẫn kiểu APA.

IV. HÌNH THỨC GỬI BÀI, NHẬN BÀI

Bài viết gửi về Ban Biên tập theo địa chỉ email: **tapchinguonnhanluc@ulsa.edu.vn**

- Quy định thể lệ viết bài Tạp chí, tác giả vui lòng xem chi tiết tại website của Trường: **http://ulsa.edu.vn/**

TẠP CHÍ NGUỒN NHÂN LỰC VÀ AN SINH XÃ HỘI

THÔNG TIN CẢI CHÍNH

Ban Biên tập Tạp chí Nguồn nhân lực và An sinh xã hội trân trọng thông báo cải chính một số thông tin trong Số 54 của Tạp chí, cụ thể như sau:

1. Tại trang Mục lục tiếng Việt:

- Đối với bài viết "Nâng cao năng lực làm việc cho người lao động trong bảo vệ việc làm tại các doanh nghiệp Việt Nam": bổ sung tác giả: Vũ Thị Hà

2. Tại trang Mục lục tiếng Anh:

- Đối với bài viết *"Enhancing employees' work capacity to protect employment in Vietnamese enterprises"*: bổ sung tác giả: Vu Thi Ha.

Tổng Biên tập
PGS. TS. Lê Thanh Hà


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