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Mental Health under Social Strain: A Sociological Perspective among Healthcare Students in Vietnam

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Abstract: *Mental health is a critical determinant of academic achievement, professional competence, and long-term well-being. Healthcare students are especially vulnerable given their intensive training, financial pressures, and societal expectations. This study examined the determinants of mental health among healthcare students in Ho Chi Minh City, focusing on both positive well-being and psychological distress. An explanatory sequential mixed-methods design was employed. Quantitative data from 525 students were collected using the WHO-5 Well-Being Index, GHQ-12 General Health Questionnaire, and MSPSS-12, alongside indicators of chronic social strain and the academic environment. Logistic regression and PLS-SEM tested direct and moderating effects, guided by Pearlin's stress process model, Cohen & Wills's (1985) and Thoits's (2011) social support theory, and Keyes's dual-continua model. Qualitative data from 15 in-depth interviews were analyzed through interpretative phenomenological analysis. Results indicated that 43.6% of students had low well-being and 59.8% experienced psychological distress. Academic pressure most strongly harmed well-being, while financial strain consistently predicted distress. Peer support sustained well-being, and family support reduced distress. Academic factors such as lecturer relationships, counseling awareness, and student engagement offered conditional protection. Overall, healthcare students' mental health is socially structured, with distinct drivers for well-being and distress. The dual-continua framework provides a proper lens than single-axis models. Policies should tackle structural inequalities, expand institutional support, and strengthen peer- and community-based initiatives.*

Keywords: *mental health, academic stress, healthcare students, social support, sociological perspective.*

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1. Introduction

This study examines the mental health of healthcare students in Ho Chi Minh City from a sociological perspective, framing well-being and distress as outcomes shaped by structural pressures, social resources, and institutional contexts. Mental health is vital for academic achievement, professional competence, and long-term well-being, yet healthcare students face heavy workloads, financial strain, and strong societal expectations, creating persistent social strain (Tran Le Diem Anh et al., 2024a).

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Research across countries has consistently demonstrated that healthcare students are highly vulnerable to mental health difficulties due to demanding curricula, competitive academic environments, and strong societal expectations. Numerous studies in medical and pharmaceutical education report high prevalence rates of burnout, anxiety, and depression, with evidence that these conditions persist across diverse national contexts (Alimohammadzadeh et al., 2017; Alsalhi et al., 2018; Killinger et al., 2017; Frajerman et al., 2022). Scholars further emphasize that such pressures are not episodic but chronic, embedded in the structure of training, clinical responsibilities, and the processes of professional socialization (Anosike et al., 2019; Oates et al., 2020).

In Vietnam, recent studies confirm similar patterns. Research has documented an ecosystem of strain encompassing academic overload, financial hardship, and career-related expectations (Nguyen Thi Bich Ngan & Le Thanh Tai, 2019; Nguyen Thi Nhu Nguyet et al., 2020; Tran Le Diem Anh et al., 2024a). Students frequently describe psychological overload from examinations, clinical placements, and the challenge of balancing study with employment. Financial instability, such as lost scholarships or mounting tuition debt further intensifies distress and may lead to social withdrawal (Huynh Van Son et al., 2022; Nguyen et al., 2023). Most Vietnamese studies remain descriptive, lacking a comprehensive sociological framework to explain how structural stressors shape both well-being and distress, and overlooking the protective role of social connections.

International studies indicate that family ties, peer networks, and close personal relationships help reduce isolation, enhance emotional security, and foster resilience (Rehmani et al., 2018; Liu et al., 2021; Arima et al., 2020; Khan et al., 2022). In most empirical research, social support is assessed using indicators of perceived support from three primary sources: family, friends, and significant others, commonly measured by the MSPSS-12 scale (Zimet et al., 1988; Pham et al., 2021). However, the majority of studies emphasize its role in preventing psychological disorders, with comparatively less attention to its contribution to positive mental well-being (Mofatteh, 2021; Frajerman et al., 2022). In Vietnam, social support is frequently measured but seldom analyzed as a moderator across both well-being and distress, and qualitative insights into how students perceive and experience support in academic life remain largely absent.

The academic environment is more than a backdrop; it actively shapes students' experiences of stress and resilience. International research identifies stress-inducing elements such as exam pressure, intensive clinical practice, and limited individualized support (Alimohammadzadeh et al., 2017; Ryan et al., 2017; Alyousef, 2019), alongside structural supports including counseling services, academic advising, flexible learning policies, and orientation programs (Tran et al., 2014; Huỳnh et al., 2020; Wang et al., 2022; Heumann et al., 2023; Trinh Hoang Hong Hue et al., 2022). Relational aspects, positive lecturer - student ties, peer networks, and interdisciplinary groups, provide psychological safety (Pham et al., 2021; Huynh Van Son et al., 2022), while constructive school cultures may foster openness, though empirical evidence is limited (Gan & Hue, 2019). Conversely, competitive or unsupportive cultures often intensify isolation and burnout (Günaydin & Arguvanli Çoban, 2021; Mahgoub et al., 2022). In Vietnam, the academic environment has been noted as relevant for healthcare students' mental health (Tran et al., 2014; Huỳnh et al., 2020; Trinh Hoang Hong Hue et al., 2022), but most studies remain descriptive, treating it as background rather than a structured determinant. Moreover, research has yet to clarify how different dimensions of the academic environment exert differentiated effects on positive well-being and psychological distress.

In short, international research documents high rates of stress, anxiety, and depression in this population (Frajerman et al., 2022; Killinger et al., 2017), but Vietnamese studies remain limited, descriptive, and focused largely on symptoms (Tran Le Diem Anh et al., 2024b). Structural determinants such as academic environments, social support, and financial insecurity remain underexplored, while the positive dimension of mental health has been overlooked. The dual-continua model (Keyes, 2002) highlights that well-being and distress are distinct yet coexisting, underscoring the need for dual analysis.

Although the mental health of healthcare students has attracted increasing attention, research in Vietnam and internationally remains dominated by psychological and biomedical traditions. Most studies emphasize symptoms and individual-level determinants while overlooking the structural and institutional contexts such as academic culture, training arrangements, and social networks that shape mental health from a sociological perspective. Positive mental health is also neglected, as health is often equated with the absence of illness, leaving dimensions of vitality, meaning, and well-being underexplored. Vietnamese studies are particularly limited, relying on descriptive cross-sectional surveys, with little development of sociological indicators or analysis of mediating and moderating mechanisms. Qualitative inquiry into students' interpretations of these pressures is scarce.

This study addresses these gaps by conceptualizing mental health as a socially structured phenomenon and adopting a dual-dimensional model of distress and well-being. It contributes in three ways: first, by unifying Pearlin's stress process model, Cohen and Wills's and Thoits's social support theories, and Keyes's dual-continua model into an integrated framework; second, by systematically examining both positive and negative dimensions of mental health; and third, by reconceptualizing the academic environment as a structured micro-social system that generates pressures as well as protective resources. In doing so, the study advances sociological theory and provides practical insights for institutional reforms in healthcare education.

2. Theoretical approaches

Before introducing the theoretical frameworks, this study first clarifies its core concepts. Mental health is understood as a multidimensional condition that encompasses both positive psychological functioning and experiences of distress. Chronic social stressors refer to enduring pressures rooted in academic, familial, and socioeconomic circumstances that persist over time and gradually strain individuals' coping capacities. Social support is conceptualized as the perceived availability of emotional, informational, and practical assistance embedded within one's social relationships and institutional context. Drawing on this foundation, the study adopts a dual-dimensional view of mental health, recognizing that well-being and psychological distress represent distinct but related aspects of students' overall mental functioning. These conceptual clarifications provide the basis for the theoretical approaches that follow.

To analyze these dynamics, the study draws on three mid-range sociological theories. Each offers a distinct lens for understanding how stress, support, and well-being interact.

This Pearlin's Stress Process model (1989) views mental health outcomes as the result of chronic stressors that are embedded in broader social structures. Chronic stress is defined as arising from enduring adverse conditions such as inequality, sustained academic pressure,

and economic insecurity. In contrast to psychological models that emphasize individual traits, the stress process framework underscores how stress is structurally reproduced through institutions and social networks (Mirowsky & Ross, 2003; Thoits, 2010). Applied to healthcare students, this perspective shows how heavy academic workloads, financial strain, performance expectations, and family demands function as chronic stressors that shape both positive well-being and psychological distress.

This study also employs Keyes's Dual-Continua Model of Mental Health (2002) because the model posits that well-being and distress are distinct yet interconnected dimensions that must be examined in parallel. Keyes (2002) developed the dual-continua model, which conceptualizes mental health as comprising two independent axes: the presence or absence of mental illness, and the level of positive well-being (ranging from flourishing to languishing). In this study, the model is operationalized through the WHO-5 to assess well-being and the GHQ-12 to measure psychological distress, providing a more comprehensive picture of healthcare students' mental health.

Since healthcare students might face various factors causing stress, the study concerns about how they overcome difficulties. Social Support Theory suggested by Cohen & Wills (1985) and Thoits (2011) explains how perceived social support both directly enhances mental health and buffers against stress. Cohen and Wills (1985) distinguished two mechanisms: the buffering effect, in which support mitigates the adverse impact of stress, and the main effect, where support promotes mental health regardless of stress exposure. Thoits (2011) further elaborated on the importance of social integration and the availability of institutional supports in sustaining well-being. In this study, these frameworks are extended by analyzing perceived social support, measured through the Multidimensional Scale of Perceived Social Support (MSPSS-12; Zimet et al., 1988; Pham et al., 2021), alongside organizational supports within the academic environment. Together, these measures make it possible to test both the protective and moderating roles of social support in shaping healthcare students' mental health across its two dimensions: positive well-being and psychological distress.

Based on these three theoretical approaches, the study proposes the below analytical framework.

Figure 1. Analytical framework

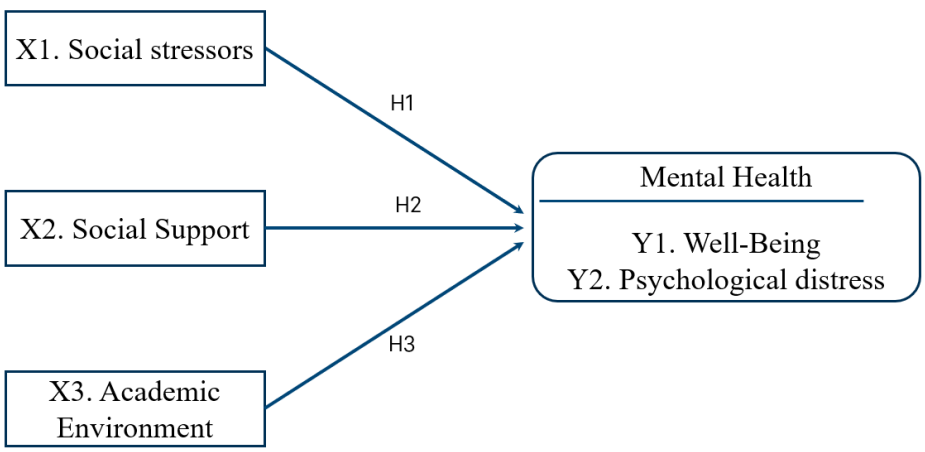
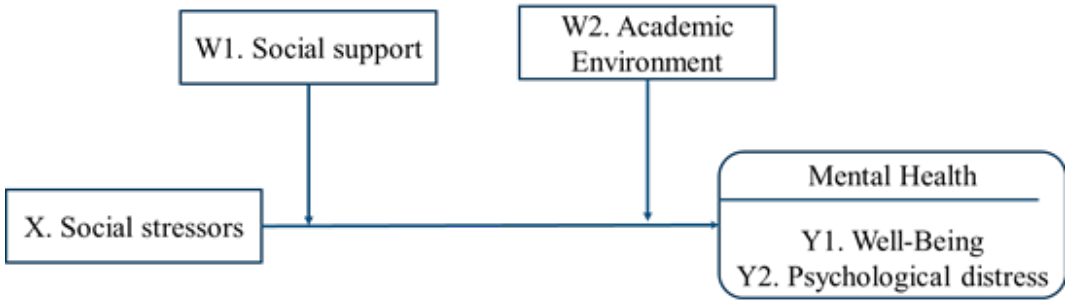


Figure 2. The protective role of social support and academic environment



Through this integrated framework, the study moves beyond descriptive accounts to test hypotheses on the direct effects of chronic stressors, the protective and moderating roles of social support, and the institutional influences of the academic environment. By combining quantitative modeling with qualitative narratives, it captures both generalizable patterns and students' lived experiences, offering a comprehensive sociological account of mental health in healthcare education.

From the above two analytical theory frameworks, here are the hypotheses:

H1: Chronic Social Stressors: Chronic social stressors would have a negative impact on students' mental health: specifically, that they would reduce positive well-being (H1a) and increase psychological distress (H1b).

H2: Perceived Social Support: Higher levels of perceived support were expected to enhance well-being (H2a) and reduce psychological distress (H2b). In addition, perceived support was hypothesized to moderate the effects of chronic stressors, buffering their negative impact on well-being (H2c) and on psychological distress (H2d).

H3: Academic Environment: A supportive academic environment was expected to promote well-being (H3a) and mitigate psychological distress (H3b). Moreover, the academic environment was hypothesized to play a moderating role, reducing the adverse effects of chronic stressors on both well-being (H3c) and psychological distress (H3d).

3. Methodology & methods

3.1. Research design

An explanatory sequential mixed-methods design was employed to capture both statistical patterns and lived experiences. In the first phase, quantitative analysis assessed healthcare students' mental health status and tested theoretical hypotheses. Then, qualitative inquiry explored students' subjective experiences, providing depth and context to the statistical findings.

The quantitative phase surveyed 525 students from two major public universities in Ho Chi Minh City, representing medicine, pharmacy, and dentistry. Sample size was calculated using Yamane's (1967) formula, adjusted to compensate for potential data loss in online surveys (from 20%) (Israel, 2012). A purposive sampling was employed across institutions, disciplines,

and study years and participants completed an online SurveyMonkey questionnaire between February and May 2025. In addition, 15 students from the survey sample were selected to engage in semi-structured interviews, using critical case sampling. Sampling criteria emphasized variation in gender, discipline, year of study, and mental health status.

Validated instruments and contextual indicators were employed to assess mental health, social support, and the academic environment. Positive mental health was measured using the WHO-5 Well-Being Index, a widely validated tool with strong reliability across populations (Topp et al., 2015). Psychological distress was assessed with the GHQ-12 General Health Questionnaire, extensively applied in community and educational research (Goldberg & Williams, 1988). Perceived social support was captured using the MSPSS-12, which measures support from family, friends, and significant others (Zimet et al., 1988). The three standard psychometric instruments were adapted and validated in the study population.

In addition, original indicators were developed for chronic social strain, covering academic pressure, financial strain, performance expectations, family career expectations, and future orientation, guided by Pearlin's stress process theory (Pearlin, 1989; Mirowsky & Ross, 2003). Academic environment measures included availability of mental health programs, lecturer–student relations, and institutional supports, informed by sociological theories of social support and educational context (Cohen & Wills, 1985; Thoits, 2011; House et al., 1988). All instruments demonstrated acceptable internal reliability prior to analysis.

3.2. Data collection and analysis

Quantitative analysis proceeded in two stages. First, binary logistic regression was conducted at three levels - univariate, multivariate, and composite models - to identify factors with independent effects on mental health outcomes. Second, partial least squares structural equation modeling (PLS-SEM) was applied to examine mediating and moderating effects of social support and the academic environment. Analyses were performed using STATA and SmartPLS. Qualitative data were examined through Interpretative Phenomenological Analysis (IPA) combined with thematic coding. Interview transcripts were analyzed in three steps: familiarization, descriptive/interpretative coding with zoom–subzoom categorization, and synthesis into ten thematic clusters. Credibility was enhanced through member checking and triangulation with quantitative findings.

3.3. Ethical considerations

All procedures complied with institutional ethics standards and were approved by the relevant committee. Participation was voluntary, obtained with informed consent, and participants had the right to withdraw at any time. All data were fully anonymized, encrypted, and stored on secure, access-restricted drives. Online surveys and interviews were conducted through protected platforms to ensure respondent confidentiality and data security. Psychological support was available if required, and participants were offered free access to an online stress management course as part of the study's educational component.

4. Main findings

The findings are presented in two stages: quantitative analyses followed by qualitative insights. Each subsection corresponds to the main objectives of the study.

4.1. Mental health status of healthcare students

This subsection presents prevalence rates of well-being and distress, establishing a baseline for analysis. Data from 525 healthcare students in Ho Chi Minh City revealed notable vulnerabilities across both dimensions of mental health. Median WHO-5 scores were 13 (IQR = 10–17), with 43.6% scoring below 13, indicating low well-being, and a smaller subgroup falling below 10, consistent with markedly reduced positive mental health. Median GHQ-12 scores were 3 (IQR = 1–6), and 59.8% scored ≥3, meeting the threshold for psychological distress, with a minority exceeding 9 points, suggesting risk of severe disorder. Female students, early-year cohorts, and those in Dentistry and Pharmacy reported slightly lower well-being and higher distress than their counterparts. Overall, these findings reflect a dual burden of diminished well-being and elevated distress across healthcare students.

4.2. Chronic social stressors

This part examines the effects of academic, financial, and family-related pressures on mental health outcomes. Logistic regression analyses showed that all five chronic stressors: academic workload, financial strain, performance pressure, future orientation, and family expectations, were significantly associated with lower well-being (WHO-5) and higher psychological distress (GHQ-12) in univariate models (Table 2).

Table 1. Composite binary logistic regression model of chronic social stressors and mental health outcomes

	Mental Well-Being (WHO-5)		
Social Stressors	**OR**	**KTC 95%**	**p value**
-Academic workload	1,23	1,09 - 1,38	**0,001**
Financial strain	1,04	0,96 - 1,12	0,350
Performance pressure	1,08	0,97 - 1,20	0,148
Future orientation	1,05	0,95 - 1,17	0,332
Family expectations	0,97	0,89 - 1,05	0,402
Multivariable logistic regression (LR chi2=47,50; p=<0,001; R^2= 0,066)			
	Psychological Distress (GHQ-12)		
Social Stressors	**OR**	**KTC 95%**	**p-value**
Academic workload	1,11	0,99 - 1,25	0,063
Financial strain	1,11	1,03 - 1,20	**0,005**
Performance pressure	1,06	0,95 - 1,17	0,302
Future orientation	1,03	0,93 - 1,15	0,529
Family expectations	0,99	0,92 - 1,08	0,875
Multivariable logistic regression (LR chi2=38,78; p=<0,001; R^2= 0,055)			

For positive mental health, academic pressure was the strongest predictor. Students experiencing higher academic strain were 34% more likely to fall below the WHO-5 cut-off (OR = 1.34). The confidence interval [1.21–1.47] shows this effect is precise and unlikely to be due to chance, and the p-value (<0.001) confirms strong statistical significance. Financial

strain (OR = 1.13, 95% CI [1.06–1.20], p < 0.001), performance expectations (OR = 1.24, 95% CI [1.14–1.34], p < 0.001), future orientation (OR = 1.19, 95% CI [1.11–1.29], p < 0.001), and family expectations (OR = 1.08, 95% CI [1.01–1.15], p = 0.019) were also significant in univariate analysis. However, multicollinearity was assessed indirectly through the correlation matrix and the stability of coefficients across model-building steps. No unusually high correlations or substantial coefficient shifts were observed, indicating that the two remaining significant predictors reflect genuinely independent contributions within the model.

For psychological distress, all five stressors were significant in univariate models: academic pressure (OR = 1.23, 95% CI [1.13–1.35], p < .001), financial strain (OR = 1.18, 95% CI [1.10-1.26], p < .001), performance expectations (OR = 1.19, 95% CI [1.11–1.28], p < .001), future orientation (OR = 1.18, 95% CI [1.09–1.27], p < .001), and family expectations (OR = 1.10, 95% CI [1.03–1.17], p = .004). In the multivariate model, however, financial strain was the only factor that remained significant (OR = 1.11, 95% CI [1.03–1.20], p = .005), indicating that economic pressure exerts a more pervasive and structurally rooted influence on distress than other stressors. This pattern suggests that, once overlapping sources of stress are taken into account, financial difficulties continue to impose an independent psychological burden on students.

Interview narratives show that chronic stress is not internalized uniformly but along socially patterned lines. For middle-year students in intensive programs such as Pharmacy, Medicine, and Dentistry, academic workload was often framed as “mechanized learning,” turning study into survival rather than growth: “I study just to get through, not to grow” (Female/Middle-year/Pharmacy). Some, particularly in Medicine and Dentistry, reported persistent fatigue, intrusive thoughts of lecture slides at night, and sleep disturbances tied to exam anxiety (Female/Middle-year/Medicine; Female/Early-year/Dentistry), indicating that stress is embodied differently across disciplines and stages of training.

Financial strain also varied by socioeconomic background. Students from low-income households described tuition and living costs as a burden inseparable from family sacrifice: “My mother borrows money for my tuition… this pressure is even heavier than grades” (Female/Middle-year/Pharmacy). Others, whose families fully financed their studies, narrated a moral debt: “I cannot allow myself to fail because my family covers everything for me” (Male/Early-year/Medicine).

Family expectations and performance norms were further gendered. Some female students equated self-worth with exam results: “If I don’t do well, I cannot eat” (Female/Middle-year/Dentistry)-and described nightly cycles of self-criticism for perceived inadequacy (Female/Middle-year/Pharmacy). Collectively, these accounts show how structural pressures are filtered through discipline, year of study, class, and gender, becoming embedded as moral obligation in students’ identities and everyday practices.

Findings are linked back to Pearlin’s chronic social stressors, providing both confirmation and refinement. Taken together, the quantitative and qualitative evidence affirm Pearlin’s (1989) central proposition that chronic social stressors systematically erode mental health over time. Yet the effects were not uniform. Logistic regression showed that academic pressure consistently predicted lower well-being, while financial strain exerted the most persistent impact on psychological distress. Qualitative narratives reinforced these patterns: students described “mechanized learning” and unrelenting exam anxiety as sources of exhaustion,

while tuition debt and family sacrifice created enduring feelings of guilt and obligation. Other stressors such as family expectations, performance pressure, and future orientation were significant only in simpler models or emerged as indirect burdens, suggesting they operate through the dominant pathways of academic and financial strain. In the Vietnamese healthcare education context, these findings confirm Pearlin's model while also refining it: structural financial insecurity and relentless academic demands stand out as the primary drivers of mental health decline, with other pressures shaping students' experiences more indirectly.

4.3. Social support

4.3.1. Direct effect of social support on mental health

Perceived social support was assessed across three sources: family, friends, and significant others, using the MSPSS. Logistic regression models demonstrated that support did not operate uniformly across outcomes - Table 2.

Table 2. Composite binary logistic regression model of social support and mental health outcomes

Social support	Mental Well-Being (WHO-5)		
	OR	KTC 95%	p-value
Family Support	0,97	0,93 – 1,02	0,263
Peer Support	0,94	0,90 – 0,99	0,013
Support from Significant Others	0,97	0,94 – 0,99	0,008
Multivariable logistic regression (LR chi2=25,78; p=<0,001; R^2= 0,036)			
Social support	Psychological Distress (GHQ-12)		
	OR	KTC 95%	p-value
Family Support	0,93	0,89 – 0,97	0,003
Peer Support	0,93	0,89 – 0,98	0,004
Support from Significant Others	0,99	0,96 – 1,01	0,449
Multivariable logistic regression (LR chi2=35,22; p=<0,001; R^2= 0,050)			

For positive well-being (WHO-5), peer support emerged as the most consistent and robust protective factor. Students reporting higher levels of peer support were significantly less likely to have low well-being (OR = 0.85, 95% CI [0.78–0.93], p < 0.001). Family and significant other support also showed protective associations in univariate models (family: OR = 0.92, 95% CI [0.86–0.99], p = 0.032; significant others: OR = 0.90, 95% CI [0.83–0.98], p = 0.015). Yet these effects lost significance in multivariate analysis once peer support was included, underscoring the centrality of friendship networks during the training years. Interview narratives suggest that peers' shared schedules, clinical demands, and performance norms create "experiential empathy" and real-time support that families or significant others cannot replicate. Peer networks thus serve as both emotional buffers and practical, context-specific resources, giving them a uniquely protective role in the high-pressure setting of healthcare training.

For psychological distress (GHQ-12), the protective role of social support was less stable. Peer support showed a modest buffering effect in univariate analysis (OR = 0.91, 95% CI [0.85–0.98], p = 0.010), but this association weakened in multivariate models. Family support-often assumed to be central, showed no statistically significant protective effect once other factors were controlled.

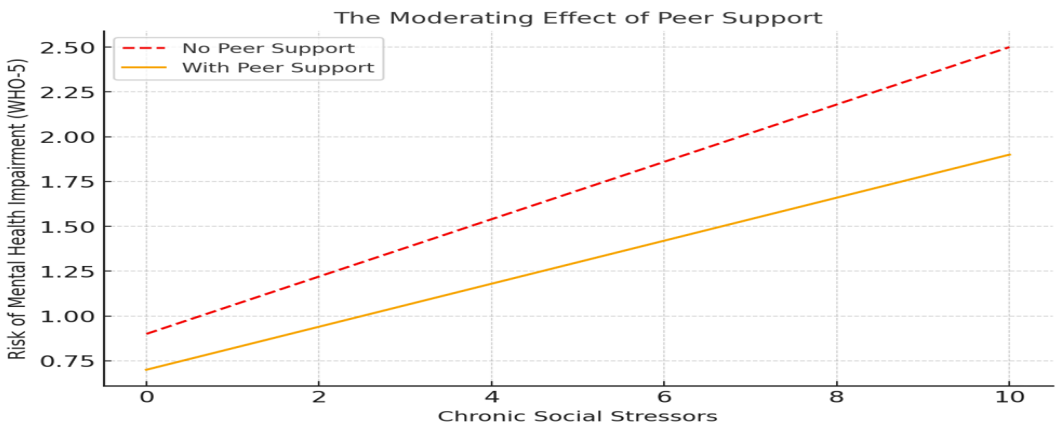
Overall, these findings suggest that perceived social support operates selectively: it plays a clear role in sustaining well-being but is less reliable in protecting against psychological distress.

4.3.2. Moderating role of social support in the relationship between chronic social strain and mental health

The above analyses confirmed the direct protective effects of perceived social support on both dimensions of mental health. To further clarify the underlying protective mechanism, this study examined whether different sources of support (family, peer, and special other person) moderated the negative impact of chronic social strain (H2c, H2d). Structural equation modeling (SEM) revealed that social support exerted significant direct effects, but moderating effects were selective.

For positive mental health (WHO-5), all three sources of support were negatively associated with reduced well-being: family (β = –0.107, p = 0.012), friends (β = –0.149, p < 0.001), and significant others (β = –0.148, p < 0.001). These results indicate that close social connections provide an important foundation for sustaining students' well-being. However, only peer support demonstrated a significant moderating effect, such that high perceived support from friends attenuated the slope of the relationship between chronic stress and reduced well-being (βinteraction = –0.078, p = 0.024) (Figure 3). In practical terms, students with low levels of peer support showed steep declines in WHO-5 scores as stress increased, whereas those perceiving high peer support were better able to maintain well-being even under high stress. By contrast, support from family and significant others did not exhibit significant moderating effects (p > 0.40).

Figure 3. Peer support moderating the social strain–well-being relationship



For psychological distress (GHQ-12), direct protective effects of all three support sources were again observed: family ($\beta = -0.242$, $p < 0.001$), friends ($\beta = -0.206$, $p < 0.001$), and significant others ($\beta = -0.104$, $p = 0.013$). However, none of these supports moderated the relationship between chronic stress and psychological distress, as all interaction terms failed to reach significance ($p > 0.30$). Thus, while social support helps reduce distress directly, it does not alter the strength of association between stress exposure and psychological distress.

In general, these findings highlight both the direct and selective protective roles of social support. Peer and family support were most prominent in sustaining positive well-being, although only peer support exhibited a buffering (moderating) effect against chronic stress. For psychological distress, social support functioned primarily through direct protective pathways, with no evidence of moderation. These results suggest that the protective value of social support among healthcare students is not universal but varies across sources, outcomes, and mechanisms.

4.3.3. Social support: absence, stratification, and functional disruption

Qualitative interviews revealed that the absence of social support among healthcare students was less about physical solitude and more about a lack of meaningful emotional connection. Many described loneliness even within shared living or study arrangements, noting that peer relations were often functional rather than supportive: *"We live together but don't really talk"* (Male/Final-year/Pharmacy). Such accounts underscore how academic and social environments can foster emotional emptiness despite social proximity.

Family support also showed asymmetry. While parents reliably provided financial aid, emotional engagement was limited. For some students, material support became tied to moral obligation and guilt: *"No one supports me except my parents, so I'm not allowed to be tired"* (Female/Middle-year/Dentistry). Others avoided sharing difficulties after experiences of judgment or criticism, leading to silence as a form of self-protection.

Peer networks were constrained by high competition. Students hesitated to share burdens for fear of overloading friends or being seen as weak: *"My friend is stressed too, so I don't want to bother them"* (Female/Middle-year/Dentistry). By contrast, the rare presence of a trusted confidant such as a partner, mentor, or close friend, had notable restorative effects: *"Just having someone by my side makes study pressure lighter"* (Female/Middle-year/Dentistry).

Overall, these findings align with quantitative results, confirming that social support is protective but not universal. Its effectiveness depends on genuine trust and emotional connection, highlighting the selective and asymmetrical role of social support in shaping student mental health.

Results are interpreted within social support theory, showing both confirmation and limitations. These findings partly confirm the social support theories of Cohen and Wills (1985) and Thoits (2011) thatpeer support clearly demonstrated both a main effect (enhancing well-being) and a buffering effect (attenuating the impact of stressors). However, the absence of robust protective effects from family and significant others challenges the assumption of universal supportiveness. Instead, support in this context appears highly selective, contingent on trust, shared experience, and the avoidance of stigma. This suggests that sociological analyses of support must attend to cultural norms and the specific relational configurations of students' lives.

4.4. Academic environment

Finally, the academic environment is analyzed as an institutional determinant of mental health.

4.4.1. Direct effect of the academic environment on mental health

Logistic regression results highlight the effects of lecturer relationships, counseling services, and student union activities. Indicators of the academic environment were assessed, including comfort in approaching lecturers, awareness of counseling services, and participation in student union or volunteer activities. Logistic regression models highlighted the protective role of specific relational and institutional supports – Table 3.

Table 3. Composite binary logistic regression model of the Academic environment and Mental health outcomes

Academic environment	Mental Well-being (WHO-5)		
	OR	KTC 95%	Giá trị p
Psychological counseling (*Unaware vs. Aware*)	1,66	1,13 - 2,44	0,010
Extracurricular and teambuilding activities (*Unaware vs. Aware*)	1,22	0,81 - 1,84	0,337
Exam pressure reduction policies *(Unaware vs. Aware)*	0,91	0,62 - 1,33	0,621
Comfort in approaching lecturers for support *(No/Little Support vs. Support)*	3,61	1,96 - 6,63	<0,001
Support from counseling staff *(No/Little Support vs. Support)*	1,39	0,81 - 2,37	0,232
Multivariable logistic regression; LR chi2=38,78; p=<0,001; R^2= 0,055			
	Psychological Distress (GHQ-12)		
Academic environment	OR	KTC 95%	Giá trị p
Comfort in approaching lecturers for support *(No/Little Support vs. Support)*	1,69	1,01 - 2,84	0,045
Support from counseling staff / student affairs office *(No/Little Support vs. Support)*	1,62	1,00 - 2,65	0,052
Multivariable logistic regression - LR chi2=17,74; p=<0,001; R^2= 0,025			

For positive well-being (WHO-5), students who felt comfortable approaching lecturers reported significantly higher odds of mental well-being (OR = 3.61, 95% CI [2.15–6.08], p < 0.001). Awareness of school-based counseling services also predicted better well-being (OR = 1.66, 95% CI [1.13–2.43], p = 0.010). Participation in student union or volunteer programs showed modest but significant associations with higher well-being in univariate analyses (OR = 1.38, 95% CI [1.01–1.87], p = 0.043), though the effect weakened in multivariate models.

For psychological distress (GHQ-12), lecturer–student relationships again stood out. Students who reported close and supportive ties with lecturers were less likely to experience psychological distress (OR = 1.69, 95% CI [1.01–2.82], p = 0.045). Counseling awareness and student union participation did not retain significance in multivariate models, suggesting their effects are context-dependent or mediated through relational dynamics.

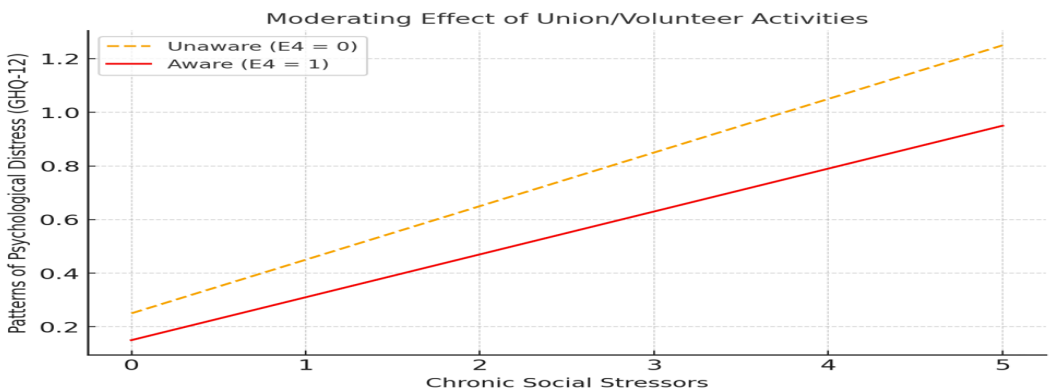
4.4.2. Moderating role of the academic environment in the relationship between social strain and mental health

To test Hypotheses H3c and H3d, we examined whether elements of the academic environment moderated the association between chronic social strain and mental health outcomes.

For positive mental health (WHO-5), no significant interaction effects were found between chronic stress and any of the twelve indicators of the academic environment (all $p > 0.05$). This suggests that, within the scope of analysis, academic environment factors did not attenuate the negative impact of chronic stress on students' ability to maintain well-being. Nonetheless, several indicators such as awareness of psychological counseling services, perceived lecturer support, and sense of belonging within the academic community, exhibited significant *direct* protective effects, lowering the risk of reduced well-being even though they did not function as moderators.

For psychological distress (GHQ-12), only participation in student union and volunteer activities demonstrated both a main effect ($p = 0.035$) and a statistically significant moderating role ($\beta = -0.120$, $p = 0.012$) (Figure 4). Specifically, among students who frequently engaged in union or volunteer work, the adverse effect of chronic stress on psychological distress was substantially weaker compared to those who seldom or never participated. These findings indicate that community-oriented activities are *associated with* lower psychological distress, particularly among students exposed to prolonged stress. Although the correlational data do not permit causal inference, the pattern is consistent with theoretical accounts that view social connectedness and collective meaning as psychosocial resources in high-pressure environments (e.g., Cohen & Wills; Thoits). Qualitative narratives likewise show that participation in clubs, volunteer work, and peer-based events helps students feel understood, included, and less isolated. Together, these insights suggest that community engagement may shape how chronic stress is experienced, even if the pathways cannot be definitively established.

Figure 4. Moderating effect of union and volunteer activities on social strain - distress relationship



Overall, evidence for the moderating role of the academic environment (H3) was limited and selective. Person-centered and community-based components of the learning environment contributed directly to sustaining mental health (supporting H3a and H3b).

However, the capacity of the academic environment to *moderate* the relationship between chronic social strain and mental health outcomes (H3c and H3d) was confirmed only for union and volunteer participation, and primarily with respect to the negative dimension of mental health (psychological distress).

4.4.3. Gaps and challenges in academic support system

Students' narratives provide insight into how these structural supports are experienced. Interview narratives contextualized these patterns. Students frequently described the academic environment as emotionally distant and competitive, with limited spaces for recovery. Counseling services were perceived as formalistic and underutilized, partly due to stigma and a lack of trust: *"We know the service exists, but nobody dares to go because people will say you are weak"* (Female/Middle-year/Dentistry).

In contrast, small but genuine gestures from lecturers were recalled as transformative. One pharmacy student noted: *"Just a kind word from my teacher made me feel human again"* (Female/Middle-year/Pharmacy). Others described supportive lecturers as anchors who recognized their struggles beyond grades and performance. These accounts explain why lecturer–student relationships had the most robust associations with both well-being and distress.

Participation in student union and volunteer activities was reported to provide meaning and social connectedness, functioning as protective outlets: *"Doing volunteer work gave me energy and reminded me why I chose this field"* (Male/Middle-year/Dentistry). However, some students viewed such programs as superficial or too time-consuming, limiting their overall impact.

Viewed through the lens of institutional support, the findings show that the academic environment functions as a micro-institution that can either heighten or be associated with lower social strain. Extending Thoits (2011), the results indicate that institutional supports are helpful only when they are authentic, relational, and accessible when interactions convey genuine care, occur through meaningful person-to-person connection, and can be reached without procedural barriers. Formal services lacking relational trust were rarely used, whereas lecturer responsiveness and everyday interpersonal engagement were consistently linked to lower strain, underscoring that the protective value of institutional support lies in relationship quality rather than its mere existence.

5. Discussion and conclusions

5.1. Discussion

The research findings confirm and extend Pearlin's (1989) stress process model. In line with international evidence on high rates of burnout, anxiety, and depression among healthcare students (Alimohammadzadeh et al., 2017; Alsalhi et al., 2018; Killinger et al., 2017; Prasai et al., 2018; Anosike et al., 2019; Oates et al., 2020; Frajerman et al., 2022), Vietnamese students likewise reported substantial psychological distress.. Other studies in Vietnam described psychological overload from examinations, clinical training, and career pressures (Nguyen Thi Bich Ngan & Le Thanh Tai, 2019; Ho Thi Truc Quynh & Nguyen Van Bac, 2021; Nguyen Thi Nhu Nguyet et al., 2020), but few situated these pressures within structural processes of reproduction.

By distinguishing between two dimensions of mental health, this study demonstrated selective effects: academic strain was strongly linked to reduced well-being, while financial strain had a persistent association with psychological distress. This extends Pearlin's framework by showing that not all stressors operate equally. Financial insecurity reflects broader socioeconomic inequalities and Viewed through the lens of institutional support, the findings show that the academic environment functions as a micro-institution that can either heighten or be associated with lower social strain. Extending Thoits (2011), the results indicate that institutional supports are helpful only when they are authentic, relational, and accessible when interactions convey genuine care, occur through meaningful person-to-person connection, and can be reached without procedural barriers. Formal services lacking relational trust were rarely used, whereas lecturer responsiveness and everyday interpersonal engagement were consistently linked to lower strain, underscoring that the protective value of institutional support lies in relationship quality rather than its mere existence.

The findings also support and refine social support theory. Consistent with international evidence on the protective role of social networks in preventing psychological disorders (Rehmani et al., 2018; Liu et al., 2021; Mofatteh, 2021; Frajerman et al., 2022), perceived social support was a key protective factor. However, its effectiveness was not universal but conditional. Peer support emerged as the most reliable resource for sustaining well-being and was the only source to exhibit a moderating effect, weakening the negative impact of chronic stress on positive mental health. Family support and support from significant others showed direct benefits but no significant buffering effects.

These results go beyond prior Vietnamese studies, which have primarily described direct associations between social support and reduced distress (Pham et al., 2021), by empirically testing moderation effects. From a sociological standpoint, support must be reconceptualized as a conditional institution: its efficacy depends less on formal presence than on trusted, meaningful, and socially recognized relationships (Bourdieu, 2010; Cohen & Wills, 1985; Thoits, 2011).

In addition, the study highlighted the protective yet selective role of the academic environment. Quantitative analyses showed that close lecturer - student relationships and access to counseling services were consistently protective for well-being, while participation in student union or volunteer activities buffered the impact of chronic stress on psychological distress. These findings align with international warnings that competitive, isolating academic environments contribute to burnout and self-isolation (Ryan et al., 2017; Alyousef, 2019; Günaydin & Arguvanli Çoban, 2021; Mahgoub et al., 2022). Yet unlike most prior work, which treated the academic environment descriptively, this study conceptualized it as a micro-social institution within the social support framework (Cohen & Wills, 1985; Thoits, 2011).

Its protective effects were not automatic: only environments that offered *genuine* opportunities for belonging, recognition, and participation-such as approachable lecturers who check in on students, small peer-led study groups, or meaningful involvement in clubs and volunteer teams-were associated with better mental health. By contrast, formal programs without relational depth showed little impact, underscoring that the academic environment can both nurture well-being and reproduce inequalities depending on how it operates (Parsons, 1991).

This heterogeneity supports Pearlin's (1989) view of chronic stress as cumulative and structural, while extending it by clarifying the relational pathways through which such stress

is absorbed. Pearlin identifies where stressors arise, whereas social support theory explains how relational engagement shapes their impact. The findings bridge the two by showing that stress is most harmful when relational ties are weak and less so when students receive credible emotional or practical peer support. It also extends social support theory (Cohen & Wills, 1985; Thoits, 2011), demonstrating that protective effects of support and academic environments are not universal but contingent upon substantive relational engagement. Linked to Keyes's (2002) dual-continua model, the findings provide empirical evidence that mental health comprises two distinct yet coexisting dimensions-well-being and psychological distress-with non-overlapping predictors. This supports the argument that research on student mental health should adopt a multidimensional approach, distinguishing between these states rather than collapsing them into a single indicator.

5.2. Conclusion

Quantitatively, academic and financial pressures operate additively, each contributing independently to distress. Qualitatively, they reinforce one another, as financial insecurity makes academic stress feel more consequential. By reframing mental health as a sociological phenomenon embedded in educational structures and inequalities, it highlights the need to move beyond individualized counseling toward systemic reforms that create sustainable protective environments.

In term of academic contributions, the study advances three theoretical frameworks: Pearlin's stress process model is confirmed, with academic overload and financial strain emerging as persistent stressors; social support theory (Cohen & Wills, 1985; Thoits, 2011) is refined, showing selective protective effects of peers and family; and Keyes's dual-continua model is supported, demonstrating distinct predictors for well-being and distress.

Empirically, the study provides the most comprehensive evidence to date on healthcare students' mental health in Vietnam. Findings underscore the importance of lecturer–student relationships, peer networks, counseling services, and community engagement. Policy implications include reducing academic overload, providing financial assistance, strengthening relational and emotional support, and destigmatizing mental health services. Expanding peer-based and volunteer activities is particularly valuable, given their buffering role.

Although the results of this study contribute significantly to the scholarship of mental health, it also shows the limitation because it was conducted within two universities and a cross-sectional design. Future work should adopt longitudinal and comparative approaches and broaden inquiry to include families, lecturers, and institutional actors.

Based on the results, the study suggests that medical universities should adopt integrated policies that combine structural reforms (e.g., workload and tuition adjustments) with relational interventions tailored to the selective effects of support sources. Because peer support showed the strongest and most consistent association with well-being-exceeding that of family or significant others-institutions can prioritize peer-based mentorship, study groups, and student communities as core protective resources. Strengthening these relational infrastructures can help reduce distress and cultivate resilience among future healthcare professionals.

This study relies on self-reported data collected through an online survey, which may introduce recall bias, social desirability bias, and potential selection effects related to internet access and voluntary participation.

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