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Title: Understanding Psychological Determinants of Nursing Performance in Psychiatric Settings: The Role of Psychological Capital and Stress

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Abstract

Background: Psychiatric nurses work in highly demanding environments that expose them to substantial psychological strain, which may affect their performance and the quality of mental health services. Psychological capital as a composite of self-efficacy, hope, resilience, and optimism, has emerged as a potentially protective factor. This study examined the correlations between psychological capital, psychological distress, and job performance among psychiatric nurses in Indonesia.

Methods: A cross-sectional study was conducted between March and April 2023 among psychiatric nurses at the Aceh provincial mental hospital in Indonesia. A total population sampling approach was used, in which all eligible psychiatric nurses working in clinical units were invited to participate. Of the 190 eligible nurses, 186 completed the survey (response rate: 97.9%). Psychological capital was assessed using the Psychological Capital Questionnaire (PCQ); depression, anxiety, and stress were measured using the Depression Anxiety Stress Scale-21 (DASS-21) and job performance was measured using the Six-Dimension Scale of Nursing Performance (6-DSNP). Data were analyzed using Stata version 13. Descriptive statistics, Pearson correlations, and multiple linear regression were performed and a two-tailed p-value < 0.05 was considered statistically significant.

Results: Psychological capital showed a strong positive correlation with job performance ($r = 0.56$, $p < 0.001$), while stress demonstrated a moderate negative correlation ($r = –0.34$, $p < 0.001$). Depression and anxiety were weakly but significantly correlated with performance in bivariate analysis. In the multivariable model, psychological capital remained a significant positive predictor of performance ($B = 0.63$, $p < 0.001$), while stress remained a significant negative predictor ($B = –0.56$, $p = 0.010$). Depression and anxiety were not significant when other variables were controlled. The model explained 34% of variance in performance.

Conclusion: Psychological capital is a strong predictor of job performance among psychiatric nurses, whereas stress undermines performance. Interventions to enhance psychological capital and reduce workplace stress may strengthen workforce resilience and improve psychiatric nursing care quality.

Keywords: Psychological capital, Job performance, Psychological distress, Psychiatric nurses, Quality of healthcare

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Highlights

- Psychological capital and psychological distress may influence nurses' job performance, but evidence among psychiatric nurses remains limited.
- Our study found that higher psychological capital was independently associated with better job performance among psychiatric nurses.
- Stress was negatively associated with job performance, whereas psychological capital emerged as the strongest predictor.

Plain Language Summary

Psychiatric nurses work in demanding environments that can affect both their mental well-being and their ability to provide high-quality patient care. Personal strengths, such as confidence, resilience, optimism, and hope (known as psychological capital), may help nurses perform better despite workplace challenges. This study evaluated how psychological capital, depression, anxiety, and stress are related to job performance among psychiatric nurses in Indonesia. We found that nurses with higher psychological capital generally performed better in their work, while stress was associated with poorer job performance. Among all the factors examined, psychological capital showed the strongest relationship with performance. These findings suggest that interventions aimed at strengthening psychological capital and reducing stress may help improve the quality of psychiat

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Introduction

Psychiatric hospitals deliver critical mental health services, yet psychiatric nurses often operate under high workload, unpredictable patient behavior, and frequent emotional demands. These conditions may impair both their well-being and job performance. Given these challenges, identifying protective factors that sustain nurses' effectiveness and resilience is paramount. One promising construct is psychological capital (PsyCap), defined as a positive psychological state of development characterized by self-efficacy, hope, optimism, and resilience. Individuals with high PsyCap tend to view problems as challenges, maintain confidence in achieving goals, and bounce back from adversity (Luthans et al., 2007).

In general healthcare settings, growing evidence links higher PsyCap with favorable outcomes including improved job performance, job engagement, coping, and reduced burnout. For example, a recent multicenter study among 575 nurses found that PsyCap significantly predicted job performance, mediated by problem-focused coping and work engagement (Chen et al., 2024). A cross-sectional study in a private Indonesian hospital similarly reported a strong positive correlation between PsyCap and nurse performance (Larasati et al., 2024). These findings suggest that PsyCap may function as a personal resource that supports nurses to sustain high performance even under stressful conditions.

Conversely, occupational stress and psychological distress (e.g. depression, anxiety) are well-informed stressors that undermine nurses' functionality and quality of care. High stress levels have been associated with increased errors, reduced job satisfaction, burnout, and lower organizational commitment across diverse nursing populations (Keykha et al., 2025). Given the emotional burden and environmental unpredictability inherent in psychiatric settings, distress can plausibly detract from performance among psychiatric nurses.

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Despite a growing number of studies examining the relationships between positive psychological resources and work outcomes in nursing, empirical research that concurrently explores PsyCap, psychological distress, and multi-dimensional job performance, especially within psychiatric nursing, remains scarce. Numerous investigations have focused on PsyCap's links to burnout, job satisfaction, retention intention, or organizational commitment among general nurses (An et al., 2020; Flinkman et al., 2023; Gong et al., 2025; Zhang et al., 2024). Others examine PsyCap as a moderator between workplace stressors and emotional exhaustion (Peng et al., 2025). While these studies highlight PsyCap's protective value against burnout and distress, very few assess actual performance outcomes such as patient care quality, clinical competence, or comprehensive nursing performance. Only a small fraction has directly measured job performance, and none focus specifically on psychiatric nurse populations (Chen et al., 2024). This gap underscores an urgent need for studies that integrate psychological resources, distress, and validated performance metrics in mental-health settings.

Therefore, the present study aimed to investigate the associations among psychological capital, symptoms of depression, anxiety and stress, and job performance among psychiatric nurses in Indonesia through a multidimensional nursing performance scale. We hypothesize that higher levels of psychological capital will be positively associated with better performance, whereas higher distress—particularly elevated stress levels—will correlate with poorer performance outcomes. By addressing this under-researched intersection, the study seeks to provide empirical evidence that can inform psychological and organizational interventions to sustain high-quality mental health nursing care under demanding conditions.

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Materials and Methods

Design, setting and sample

A cross-sectional survey was conducted between March and April 2023 among psychiatric nurses at the Aceh Provincial Mental Hospital, Indonesia. The hospital is the only provincial psychiatric referral hospital serving approximately five million people in Aceh Province. A total population sampling approach was employed, whereby all eligible psychiatric nurses working in the inpatient units were invited to participate. Of the 190 eligible nurses, 186 completed the survey, yielding a response rate of 97.9%.

Measures

Psychological capital was measured using the 24-item Psychological Capital Questionnaire (PCQ), which assesses four dimensions: self-efficacy, hope, optimism, and resilience. Each item is rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Total scores range from 24 to 120, with higher scores indicating higher psychological capital. The PCQ has demonstrated strong reliability across cultures, including among nurses (An et al., 2020; Luthans et al., 2007). The original English version of the PCQ was translated using a forward-backward translation process. The original version of the questionnaire was first translated from the original source language into Indonesian and then translated back into the original language by another translator who was fluent in English. The translated version was reviewed for face and content validity by experts in nursing and mental health to ensure conceptual equivalence and clarity before data collection. Content validity was assessed by six experts, yielding I-CVI values ranging from 0.83 to 1.00 (S-CVI/Ave = 0.96) and CVR values ranging from 0.67 to 1.00. All 24

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items were retained; one item was revised for clarity based on expert feedback. The internal consistency of the Indonesian version in the present study was excellent (Cronbach alpha = 0.95).

Depression, anxiety, and stress were assessed using the Indonesian version of the Depression Anxiety Stress Scale-21 (DASS-21), which has been previously used and demonstrated good reliability among Indonesian nurses (Marthoenis et al., 2021). The instrument contains 21 items, with seven items for each subscale (depression, anxiety and stress). Each item is rated on a four-point Likert scale ranging from 0 (did not apply to me at all) to 3 (applied to me very much or most of the time). Raw subscale scores range from 0 to 21, with higher scores indicating greater symptom severity. Raw scores were used for all analyses because the study treated depression, anxiety, and stress as continuous variables rather than categorical outcome. This approach is consistent with recommendations for continuous modeling and common in psychometric and occupational mental health research (Henry and Crawford, 2005; Oei et al., 2013; Tran et al., 2013). Furthermore, for descriptive purposes, DASS-21 scores were interpreted according to the recommended severity categories after doubling the raw subscale scores to obtain equivalent DASS-42 scores. Depression was classified as normal (0–9), mild (10–13), moderate (14–20), severe (21–27), and extremely severe (≥28). Anxiety was classified as normal (0–7), mild (8–9), moderate (10–14), severe (15–19), and extremely severe (≥20). Stress was classified as normal (0–14), mild (15–18), moderate (19–25), severe (26–33), and extremely severe (≥34) (Lovibond and Lovibond, 1995). However, raw subscale scores were retained for all correlation and regression analyses. In the previous Indonesian validation among nurses, the overall Cronbach's alpha was 0.94, with subscale alphas of 0.84, 0.86, and 0.86 for depression, anxiety, and stress, respectively (Marthoenis et al., 2021).

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Job performance was measured using the Six-Dimension Scale of Nursing Performance (6-DSNP), a 52-item instrument developed by Schwirian (1978). The instrument evaluates six domains of nursing performance (leadership, critical care, teaching/collaboration, planning/evaluation, interpersonal relations/communication, and professional development). In this study, the self-report version was used. Each item was rated on a 4-point Likert scale ranging from 1 (never) to 4 (always). Total scores range from 52 to 208, with higher scores indicating better nursing performance (Schwirian, 1978; Ta'an et al., 2024). The translated questionnaire underwent face and expert validation, forward-backward translation procedure, and review by the expert committee. Content validity assessment by six experts showed I-CVI values ranging from 0.83 to 1.00 (S-CVI/Ave = 0.98) and CVR values of 1.00 for all items. All 52 items were retained. Only the total 6-DSNP score was used in the statistical analyses and treated as a continuous variable; the individual domain scores were not analyzed separately. The DSNP self-rating scale showed modest internal consistency ($\alpha = 0.63$), and supervisor ratings yielded a similar reliability level ($\alpha = 0.65$). Considering the DSNP's multidimensional design and differences in rating perspectives, these values are reasonable within the context of this exploratory study. Sociodemographic variables included age, sex, education level, employment status, and years of service.

Data analysis

Data were analyzed using Stata version 13 (StataCorp LP, College Station, TX, USA). Continuous variables were summarized as means and standard deviations (SD), whereas categorical variables were presented as frequencies and percentages. The normality of the continuous variables was assessed using the Shapiro–Wilk test before inferential analyses. Pearson's correlation coefficient was used to examine bivariate associations, and multiple linear regression analysis was performed

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to identify independent predictors of job performance. A two-tailed p-value < 0.05 was considered statistically significant.

Results

A total of 186 psychiatric nurses participated in the study. Most participants were aged 20–40 years (58.6%), female (65.6%), and held a bachelor's degree in nursing (52.7%). The majority were permanent employees (71.0%) and had more than five years of work experience (74.2%). The demographic characteristics of the respondents, including sex, age, education level, and years of service, are presented in Table 1.

Table 1. Sociodemographic Characteristics of Participants

Variable	**Category**	**n**	**%**
Age	20–40 years	109	58.6
	40–64 years	77	41.4
Sex	Male	64	34.4
	Female	122	65.6
Education	Diploma	82	44.1
	Bachelor	98	52.7
	Masters	6	3.2
Employment status	Permanent	132	71.0
	Contract	54	29.0
Years of service	≤5 years	48	25.8
	>5 years	138	74.2

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Table 2. Descriptive Statistics of Key Study Variables

Variable	Mean	SD	Min	Max	Severity Category
Psychological Capital	90.9	13.1	68	120	-
Depression (DASS-21)	1.9	2.8	0	13	Normal (0-9)
Anxiety (DASS-21)	4.8	3.7	0	11	Normal (0-7)
Stress (DASS-21)	5.3	6.1	0	18	Normal (0 – 14)
Nursing Performance (6-DSNP)	173.1	16.4	133	207	-

Note: DASS-21 severity categories (after doubling the raw subscale scores): Depression—normal (0–9), mild (10–13), moderate (14–20), severe (21–27), extremely severe (≥28); Anxiety—normal (0–7), mild (8–9), moderate (10–14), severe (15–19), extremely severe (≥20); Stress—normal (0–14), mild (15–18), moderate (19–25), severe (26–33), extremely severe (≥34).

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Descriptive statistics for the main study variables are presented in Table 2. Participants had a mean psychological capital score of 90.9 (SD = 13.1; range: 68–120). Based on the DASS-21 severity classifications, the mean scores for depression (1.9 ± 2.8), anxiety (4.8 ± 3.7), and stress (5.3 ± 6.1) were within the normal range. The mean nursing performance score was 173.1 (SD = 16.4; range 133 -207), indicating generally high self-reported nursing performance.

Correlation analysis revealed significant associations between psychological factors and performance (see Table 3). Psychological capital demonstrated a strong positive correlation with job performance ($r = 0.56$, $p < 0.001$), suggesting that nurses with greater internal psychological resources tended to report higher performance. Stress showed a moderate negative correlation with job performance ($r = –0.34$, $p < 0.001$). Depression and anxiety were positively correlated with

stress and negatively correlated with psychological capital but did not show significant direct correlations with job performance.

Table 3. Pearson Correlations Between Psychological Variables and Job Performance

Variable	**1**	**2**	**3**	**4**	**5**
1. Psychological Capital	1				
2. Depression	r = -0.16 (p=0.03)	1			
3. Anxiety	r = -0.15 (p=0.03)	r = 0.25 (p=0.001)	1		
4. Stress	r = -0.3 (p=0.001)	r = 0.32 (p=0.001)	r = 0.59 (p=0.001)	1	
5. Nursing Performance	r = 0.56 (p=0.001)	r = -0.18 (p=0.015)	r = -0.16 (p=0.03)	r = -0.34 (p=0.001)	1

Results from the multivariable linear regression analysis are presented in Table 4. After controlling other psychological predictors, psychological capital remained a strong and significant positive predictor of job performance ($B = 0.63$, $\beta = 0.52$, $p < 0.001$). Stress also demonstrated a significant negative association with performance ($B = –0.56$, $\beta = –0.28$, $p = 0.012$). Depression ($p = 0.554$) and anxiety ($p = 0.483$) were not significant predictors in the final model. The overall regression model was statistically significant, $F (4, 181) = 24.38$, $p < 0.001$, explaining 34% of the variance in job performance ($R^2 = 0.34$, Adjusted $R^2 = 0.32$). The overall regression model accounted for a substantial proportion of the variance in job performance, and diagnostic tests confirmed that assumptions of linearity, homoscedasticity, normality of residuals, and multicollinearity were adequately satisfied.

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Table 4. Multiple Linear Regression Predicting Nursing Performance

Predictor	**B**	**SE**	**t**	**p**	**95% CI**
Psychological Capital	0.63	0.08	7.93	0.001	0.47 to 0.78
Depression	-0.27	0.37	-0.73	0.47	-0.99 to 0.46
Anxiety	0.23	0.33	0.71	0.48	-0.42 to 0.88
Stress	-0.56	0.21	-2.61	0.01	-0.98 to -0.14
Constant	118	7.63	15.5	0.001	103 to 133

Note. N = 186. $R^2 = 0.34$; Adjusted $R^2 = 0.32$; **$F(4, 181) = 24.38$, $p < 0.001$**. B = unstandardized coefficients; SE = standard error; CI = confidence interval.

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Discussion

This study demonstrated that psychological capital is a strong and significant predictor of job performance among psychiatric nurses. This finding aligns with a substantial body of recent evidence showing that psychological capital—comprising self-efficacy, hope, resilience, and optimism—plays a vital role in enhancing nurses' engagement, competence, and work outcomes. Several studies have shown that nurses with higher psychological capital tend to display better clinical performance, stronger coping abilities, and greater resilience when encountering stressful situations (An et al., 2020; Liu et al., 2022). Similar research also indicates that psychological capital improves work engagement and reduces vulnerability to burnout, which further contributes to improved performance and care quality in demanding clinical environments (Chen et al., 2024; Zhang et al., 2024). The present findings support these observations and reinforce theoretical perspectives that view psychological capital as a dynamic and developable personal resource capable of enhancing occupational functioning.

The results also revealed that occupational stress was negatively associated with performance in our sample. This finding is consistent with international evidence that work-related stress among nurses can impair decision-making, reduce caring behavior, and lead to suboptimal patient care. For example, a large-scale study found that job stress among nurses was significantly associated with reduced quality of caregiving, diminished care behaviors, and lower productivity (Babapour et al., 2022). In addition, a recent study among Bahraini healthcare workers reported a significant negative correlation between occupational stress and self-rated job performance (Alafoo et al., 2024). These findings support the idea that chronic stress in demanding working environments — such as psychiatric inpatient units — may hinder nurses' ability to maintain high performance consistently.

Although depression and anxiety showed negative correlations with performance in bivariate analyses, their effects were no longer significant after accounting for psychological capital and stress. This pattern aligns with evidence indicating that psychological capital is associated with reduced distress and improved work functioning. Studies have shown that higher psychological capital predicts better care ability and coping among nurses (Liu et al., 2022) and is linked to greater work engagement and performance (Chen et al., 2024). A recent scoping review also concluded that psychological capital consistently relates to lower burnout and stronger occupational functioning in nursing populations (Flinkman et al., 2023). These findings suggest that the influence of depression and anxiety on performance may be attenuated when stronger protective factors—such as psychological capital—are considered.

The findings carry important implications for clinical practice and workforce management. Interventions designed to enhance psychological capital—such as strengths-based coaching, resilience training, and hope-building strategies—may help psychiatric nurses maintain high

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performance and manage work stress more effectively. Evidence indicates that psychological capital is modifiable and can be improved through structured intervention programs, with benefits including reduced burnout and enhanced psychological resources among nurses (Xia et al., 2025). Organizational strategies that address workplace stress, such as supportive leadership, adequate staffing, and fostering psychologically safe work environments, have also been associated with improved nurse well-being and performance (Almeida and Miclos, 2022). These combined individual- and system-level approaches may be especially important in psychiatric settings, where emotional demands and patient acuity are substantial.

This study has limitations. The cross-sectional design does not allow for causal inference. Self-reported measures may also introduce bias, and the use of a single-site sample limits generalizability. Future studies should adopt longitudinal or interventional designs, include multisite sampling, and incorporate organizational factors—such as workload, leadership, and team climate—to more comprehensively evaluate determinants of nursing performance.

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Conclusion

Psychological capital was found to be a strong positive predictor of job performance among psychiatric nurses, whereas stress showed a significant negative association. Depression and anxiety, although correlated with performance, did not remain significant after adjustment. These findings highlight the critical importance of promoting psychological capital and mitigating workplace stress to support optimal performance and well-being among psychiatric nurses. Interventions targeting personal psychological resources and organizational stressors may contribute to higher-quality psychiatric nursing care and a more resilient mental health workforce.

Ethical Considerations

Compliance with ethical guidelines

The ethics committee of Universitas Syiah Kuala approved the study (approval number: 112022130223). All participants provided written informed consent before participation, and the study complied with the Declaration of Helsinki.

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Data availability: Data are available on request from corresponding author.

AI Use Declaration: During the preparation of this manuscript, the authors used ChatGPT (OpenAI) to assist with English language editing and improving the clarity of the manuscript. The authors carefully reviewed and edited all AI-assisted content and take full responsibility for the final version of the manuscript.

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