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Original Article

The Prevalence of Occupational Stress and The Impact of Coping Strategies on Occupational Stress Among Healthcare Practitioners

Afifa Latif[1], Iqra Nawaz[1], Emaan Asif[1], Faiza Afzal[1], Arifa Afzal[1], Muhammad Jawad[1], Rahman Ali[2], Maira Nawaz[3], Muhammad Hassan[1]

[1] The Islamia University of Bahawalpur, Bahawalpur, Pakistan
[2] Government College University, Faisalabad, Pakistan
[3] National Textile University, Faisalabad, Pakistan
***Corresponding author: Arifa Afzal, Email: mafzalarifaafzal@gmail.com**

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ABSTRACT

Background: Occupational stress among healthcare practitioners is a significant concern due to its impact on mental health, job performance, and patient care quality. Coping strategies play a critical role in moderating stress outcomes, yet their effectiveness varies across contexts and professional groups. Objective: To assess the prevalence of occupational stress and examine the association between coping strategies and stress levels among healthcare practitioners. Methods: A cross-sectional analytical study was conducted among 150 healthcare professionals in Bahawalpur, Pakistan. Stress was measured using the Maslach Burnout Inventory, and coping strategies were assessed using the Ways of Coping Questionnaire. Statistical analysis included descriptive statistics, chi-square tests, t-tests, and ANOVA, with significance set at $p < 0.05$. Results: Moderate stress was observed in 81.33% of participants, with high emotional exhaustion (40.00%) and depersonalization (48.00%). Coping strategies were predominantly used at moderate levels. Significant associations were found between stress and seeking social support ($p = 0.002$) and accepting responsibility ($p = 0.017$), demonstrating non-linear patterns with lowest high-stress prevalence at moderate coping levels. No significant differences were found by gender or work setting, while profession influenced depersonalization and personal accomplishment. Conclusion: Occupational stress is widely prevalent among healthcare practitioners, with coping strategies showing complex, non-linear associations with stress levels. Optimizing coping approaches and implementing institutional support systems are essential to improve healthcare workforce well-being and performance. Keywords: Occupational stress, Burnout, Coping strategies, Healthcare practitioners, Maslach Burnout Inventory, WCQ.

INTRODUCTION

Occupational stress among healthcare practitioners has emerged as a major workforce and patient-safety concern because clinical practice is characterized by sustained cognitive load, emotional labor, time pressure, high responsibility, and repeated exposure to suffering, uncertainty, and adverse outcomes (1,2). In healthcare settings, prolonged exposure to such demands may progress beyond transient work strain to burnout-related manifestations including emotional exhaustion, depersonalization, and diminished professional accomplishment, all of which can impair clinician well-being, job satisfaction, retention, and quality of care (3,4). The significance of this issue extends beyond individual distress, as occupational stress in clinicians has been associated with reduced work performance, absenteeism, impaired decision-making, lower empathy, and increased risk of medical error, thereby affecting both organizational functioning and patient outcomes (5,6). For this reason, occupational stress is best

understood not as an isolated psychological complaint but as a multidimensional occupational health problem with implications for healthcare systems, workforce sustainability, and service delivery (7).

Within the broader healthcare workforce, stress exposure is not uniform. Differences in professional role, work intensity, level of autonomy, patient contact, and organizational expectations may produce distinct patterns of strain across physicians, physiotherapists, pharmacists, and laboratory professionals (1,8). Evidence from hospital-based and multidisciplinary settings indicates that heavy workload, long working hours, inadequate staffing, role ambiguity, emotionally demanding interactions, and conflict between professional and personal life are among the most consistent contributors to occupational stress and burnout (1,5,9,10). These pressures may be amplified in resource-constrained environments where staffing limitations, administrative burdens, and limited psychosocial support intersect with high patient volume and complex care demands (11). Importantly, the adverse effects of occupational stress are not restricted to mental fatigue alone; chronic stress has been linked to sleep disturbance, somatic complaints, impaired coping capacity, reduced job satisfaction, and greater vulnerability to anxiety and depressive symptoms (5,12).

How healthcare practitioners respond to stress is therefore a question of both theoretical and practical importance. Contemporary stress theory conceptualizes coping as the dynamic cognitive and behavioral effort used to manage demands perceived as taxing or exceeding available resources (13). In healthcare contexts, coping strategies may influence whether occupational stress is contained, prolonged, or translated into maladaptive behavioral and psychological outcomes. Problem-focused approaches such as planning, active problem solving, and seeking instrumental support may help practitioners manage modifiable stressors, whereas emotion-focused or avoidance-oriented strategies may be variably effective depending on the context and chronicity of exposure (13,14). Empirical literature has shown that adaptive coping resources, including social support, resilience, positive reappraisal, and mindfulness-related strategies, are associated with lower burnout and better occupational functioning, while maladaptive strategies such as avoidance, venting, or self-blame are more commonly linked with greater distress and poorer adjustment (14–16). However, these relationships are not always consistent across settings, professions, and measurement approaches, suggesting that the utility of specific coping strategies may be context-dependent and influenced by local work culture and professional role (10,15,16).

Although occupational stress in healthcare workers is widely recognized, important knowledge gaps remain. Much of the published literature has focused on single professional groups, particularly physicians or nurses, or has examined stress and burnout without simultaneously evaluating the pattern of coping strategies used by a broader range of healthcare practitioners (3,10,15). In addition, many studies originate from high-income settings and may not be directly generalizable to South Asian clinical environments, where institutional resources, staffing patterns, and occupational expectations differ substantially (1,11). Evidence from Pakistan and comparable contexts remains limited, particularly for studies that compare multiple healthcare professions within the same analytic framework and examine how coping strategy domains relate to burnout-related stress dimensions and overall stress categories. This gap is clinically relevant because understanding which coping patterns are associated with lower stress burden may inform targeted staff-support interventions, profession-specific wellness strategies, and institutional policies aimed at preserving workforce capacity and care quality (2,6,16).

The present study was designed to address this gap by examining occupational stress and coping strategies among healthcare practitioners working in hospitals, clinics, academic institutions, and private practice settings in Bahawalpur, Punjab, Pakistan. Stress was conceptualized through the Maslach framework of emotional exhaustion, depersonalization, and personal accomplishment, while coping was assessed across multiple behavioral and cognitive domains using the Ways of Coping Questionnaire, enabling a multidimensional evaluation of both occupational strain and response patterns (3,13,17,18). By including medical practitioners, physiotherapists, pharmacists, and medical laboratory specialists, the

study sought to generate comparative evidence across professional groups rather than restricting inference to a single discipline. It further aimed to evaluate whether stress and coping varied according to gender, educational level, profession, and work setting, thereby providing a more contextually informative picture of occupational stress within a multidisciplinary healthcare sample.

Accordingly, the primary objective of this study was to determine the distribution and severity of occupational stress among healthcare practitioners and to examine the association between coping strategies and occupational stress. A secondary objective was to explore whether stress dimensions and coping patterns differed across gender, profession, educational qualification, and work setting. The study was guided by the hypothesis that coping strategies are significantly associated with occupational stress among healthcare practitioners, and that these associations vary across professional subgroups and workplace contexts (13,15,16).

MATERIALS AND METHODS

This study was designed as a cross-sectional analytical survey to estimate the distribution of occupational stress and evaluate its association with coping strategies among healthcare practitioners. A cross-sectional design was selected because it permits simultaneous measurement of burnout-related stress dimensions, coping behaviors, and participant characteristics within a real-world professional sample, thereby allowing comparison across occupational groups and workplace contexts in accordance with recommendations for observational research reporting (19). The study was conducted over a three-month period in Bahawalpur, Punjab, Pakistan, and included participants from three principal healthcare environments: The Islamia University of Bahawalpur, Bahawal Victoria Hospital, and private clinical practice settings. These settings were selected to capture practitioners working across academic, hospital-based, and ambulatory models of care.

The target population comprised actively practicing healthcare professionals from four disciplines: medical practitioners, physiotherapists, pharmacists, and medical laboratory specialists. Eligible participants were men and women aged 25 to 45 years who were currently working in a clinical, hospital, academic, or private practice setting at the time of data collection and were able to understand and complete the study questionnaire independently. Individuals were not eligible if they were no longer in active professional practice, were on extended leave from work, or had a severe psychiatric disorder or acute mental health condition likely to impair questionnaire completion or introduce substantial distortion in self-reported occupational stress. These eligibility criteria were defined to retain a professionally active sample exposed to routine workplace demands relevant to the study question while reducing the likelihood of major information bias from temporary detachment from work or severe non-occupational psychopathology.

Participants were recruited using convenience non-probability sampling through direct approach at participating institutions and through professional networks affiliated with the study settings. Recruitment was undertaken in person by the research team, who explained the study purpose, voluntary nature of participation, confidentiality procedures, and approximate completion time before inviting eligible practitioners to participate. Written informed consent was obtained from all participants prior to enrolment. To reduce selection-related imbalance as far as feasible within a non-probability design, recruitment was conducted across multiple professional groups and workplace environments rather than from a single department or discipline, and data collection was continued until the predefined target sample of 150 practitioners had been reached. This sample size was set to provide stable descriptive estimates of stress and coping distributions and to permit planned subgroup comparisons across major demographic and professional categories.

Data were collected using a structured self-administered questionnaire composed of three parts: a demographic form, the Maslach Burnout Inventory, and the Ways of Coping Questionnaire. The demographic component recorded age, gender, profession, highest educational qualification, and work

setting. Occupational stress was assessed using the Maslach Burnout Inventory, a widely used instrument that evaluates burnout-related occupational strain across the three dimensions of emotional exhaustion, depersonalization, and personal accomplishment (3,17). Coping responses were assessed using the Ways of Coping Questionnaire, which measures the frequency of coping efforts across domains including confrontive coping, distancing, self-controlling, seeking social support, accepting responsibility, escape-avoidance, planful problem-solving, and positive reappraisal (13,18). Questionnaires were administered once to each participant during the study period. Completed forms were reviewed at the time of collection for completeness and internal consistency, and responses were entered into the study database using standardized coding procedures. To strengthen reproducibility and data integrity, the same instruments, variable coding framework, and analytic thresholds were applied uniformly to all participants throughout the study period.

The primary outcome variable was occupational stress, operationalized through the three Maslach Burnout Inventory dimensions and the overall categorical stress level derived from the study scoring framework. Emotional exhaustion and depersonalization were interpreted as adverse burnout-related dimensions, whereas personal accomplishment was interpreted inversely, with lower scores reflecting poorer perceived professional efficacy. The principal explanatory variables were coping strategy domains derived from the Ways of Coping Questionnaire. Additional covariates included gender, profession, educational qualification, and work setting, all of which were prespecified because of their potential relationship with both occupational stress exposure and coping behavior. In line with the study objectives, these variables were included to evaluate subgroup variation and to reduce overinterpretation of crude associations between coping and stress that may otherwise reflect professional or workplace differences.

Several procedural steps were used to minimize bias. Recruitment across multiple institutions and professions was intended to reduce narrow setting-specific sampling effects. Standardized, previously established instruments were used to improve measurement consistency and comparability with prior literature (3,13,17,18). All participants completed the same questionnaire package under the same data collection protocol, which reduced differential measurement procedures between groups. Because the study relied on self-report, the consent process emphasized confidentiality and anonymity to limit social desirability bias and encourage candid reporting of stress and coping responses. Forms were checked for missing or inconsistent entries at the point of collection whenever possible, thereby reducing preventable item non-response. During analysis, demographic and occupational variables with plausible confounding roles were examined alongside the main exposure and outcome measures to support more cautious interpretation of observed associations.

Data were analyzed using SPSS version 26. Descriptive statistics were generated for all study variables. Categorical variables were summarized as frequencies and percentages, and continuous scale scores were summarized as means and standard deviations. Stress dimensions and coping strategy scores were categorized according to the study scoring framework to describe the distribution of low, moderate, and high levels across domains. Associations between categorical stress levels and coping strategy categories were examined using the chi-square test. Mean differences in stress dimensions and coping scores between male and female participants were evaluated using independent-samples t tests. Comparisons across professions and work settings were conducted using one-way analysis of variance. All statistical tests were two-tailed, and a p-value of less than 0.05 was considered statistically significant. Records were reviewed before analysis to ensure completeness, and questionnaires with substantial incompleteness were not retained in the final analytic dataset. To preserve analytic consistency, all variables were coded before inferential testing, and outputs were cross-checked against source tables prior to interpretation.

The study was conducted in accordance with accepted ethical principles for human participant research. Participation was entirely voluntary, informed written consent was obtained before data collection, and respondents were assured that their information would remain confidential and would be used solely

for research purposes. No identifying personal information was included in the analytical dataset, and responses were handled in anonymized form to protect participant privacy. The study procedures were designed to pose minimal risk to participants, and the questionnaire-based format avoided any invasive or interventional component. Research records were maintained securely, and only the study team had access to the compiled dataset, thereby supporting both ethical compliance and data integrity throughout the study process (19,20).

RESULTS

The demographic profile of the study population, as presented in Table 1, indicates a relatively balanced gender distribution, with males constituting 53.33% (n = 80) and females 46.67% (n = 70). In terms of professional representation, medical practitioners formed the largest subgroup at 40.00% (n = 60), followed by physiotherapists at 28.67% (n = 43), pharmacists at 20.67% (n = 31), and medical laboratory specialists at 10.67% (n = 16). The majority of participants were working in hospital settings (57.33%, n = 86), while 19.33% (n = 29) were in private practice, 14.67% (n = 22) in academic institutions, and 8.67% (n = 13) in clinics. Regarding educational attainment, 40.00% (n = 60) held a bachelor's degree, 34.67% (n = 52) a master's degree, 20.00% (n = 30) a doctorate, and 5.33% (n = 8) reported other qualifications, reflecting a highly educated cohort.

The distribution of occupational stress and its components in Table 2 reveals that a substantial proportion of participants experienced elevated burnout-related dimensions. High emotional exhaustion was reported by 40.00% (n = 60), while 28.00% (n = 42) and 32.00% (n = 48) reported moderate and low levels, respectively. Depersonalization was even more pronounced, with 48.00% (n = 72) of participants reporting high levels, compared to 35.33% (n = 53) moderate and 16.67% (n = 25) low levels.

In contrast, personal accomplishment showed a more favorable distribution, with 50.67% (n = 76) reporting high levels, 25.33% (n = 38) moderate, and 24.00% (n = 36) low. When aggregated into overall stress categories, the majority of participants fell within the moderate stress group at 81.33% (n = 122), followed by 16.67% (n = 25) with high stress and only 2.00% (n = 3) with low stress, indicating a predominantly moderate burden of occupational stress within the sample.

Table 3 illustrates the levels of coping strategies employed by participants, showing a clear predominance of moderate utilization across all domains. Self-controlling coping was the most frequently reported at a moderate level (71.33%, n = 107), followed by escape-avoidance (66.00%, n = 99), positive reappraisal (63.33%, n = 95), and planful problem-solving (60.00%, n = 90). Distancing was reported at a moderate level by 58.00% (n = 87), while both seeking social support and accepting responsibility were moderately utilized by 54.00% (n = 81) of participants each. Confrontive coping showed a slightly lower moderate prevalence at 44.00% (n = 66), with 28.67% (n = 43) reporting high use and 27.33% (n = 41) low use. Overall, these findings suggest that most healthcare practitioners rely on a combination of coping strategies at moderate intensity rather than extreme or minimal usage.

The association between coping strategies and stress levels, as shown in Table 4, demonstrates that only selected coping domains were significantly related to stress categories. Seeking social support showed a statistically significant association with stress level ($\chi^2 = 12.34$, $p = 0.002$), with a moderate effect size (Cramér's $V = 0.29$), indicating a meaningful relationship between support-seeking behavior and stress distribution. Similarly, accepting responsibility was significantly associated with stress ($\chi^2 = 10.21$, $p = 0.017$), with a moderate effect size (Cramér's $V = 0.26$).

In contrast, other coping strategies such as confrontive coping ($\chi^2 = 3.47$, $p = 0.502$), distancing ($\chi^2 = 4.82$, $p = 0.187$), self-controlling ($\chi^2 = 4.51$, $p = 0.214$), escape-avoidance ($\chi^2 = 2.07$, $p = 0.563$), planful problem-solving ($\chi^2 = 5.13$, $p = 0.166$), and positive reappraisal ($\chi^2 = 3.14$, $p = 0.529$) did not show statistically significant associations, with small effect sizes (Cramér's V ranging from 0.08 to 0.13). These findings indicate that not all coping mechanisms are equally related to stress outcomes. Descriptive statistics

presented in Table 5 show that among stress dimensions, emotional exhaustion had a mean score of 23.84 ± 11.84, which was higher compared to depersonalization (12.92 ± 6.00), while personal accomplishment had a relatively higher mean of 30.10 ± 11.01, reflecting variability in perceived professional efficacy. Among coping strategies, escape-avoidance (12.49 ± 4.35), positive reappraisal (12.13 ± 4.26), and self-controlling (11.33 ± 3.78) had comparatively higher mean scores, indicating more frequent use. Other coping strategies such as distancing (9.57 ± 3.65), planful problem-solving (9.58 ± 3.68), seeking social support (9.63 ± 4.11), and confrontive coping (9.13 ± 4.21) showed moderate mean values, while accepting responsibility had the lowest mean score (6.29 ± 2.51).

Gender-based comparisons in Table 6 indicate no statistically significant differences in stress dimensions between male and female participants. Emotional exhaustion was slightly higher among females (24.90 ± 11.60) compared to males (22.95 ± 12.05), although this difference did not reach statistical significance ($p = 0.094$), with a small effect size (Cohen's $d = 0.16$). Depersonalization scores were comparable between females (13.10 ± 6.10) and males (12.76 ± 5.95), with no significant difference ($p = 0.504$, $d = 0.06$). Similarly, personal accomplishment was marginally higher among females (31.20 ± 10.90) than males (29.15 ± 11.05), with a near-significant p-value ($p = 0.053$) and small effect size ($d = 0.19$), indicating minimal practical difference between genders.

Table 7 demonstrates variation in stress dimensions across professions. Emotional exhaustion did not differ significantly among professional groups ($F = 0.85$, $p = 0.474$, $\eta^2 = 0.02$), indicating a negligible effect of profession. However, depersonalization showed a statistically significant difference ($F = 3.62$, $p = 0.013$, $\eta^2 = 0.07$), suggesting a moderate effect size, while personal accomplishment also differed significantly across professions ($F = 4.21$, $p = 0.005$, $\eta^2 = 0.08$). These findings indicate that professional role may influence specific components of occupational stress, particularly interpersonal detachment and perceived achievement.

Table 1. Demographic characteristics of participants (n = 150)

Variable	Category	n (%)
Gender	Male	80 (53.33)
	Female	70 (46.67)
Profession	Medical practitioner	60 (40.00)
	Physiotherapist	43 (28.67)
	Pharmacist	31 (20.67)
	Lab specialist	16 (10.67)
Work setting	Hospital	86 (57.33)
	Private practice	29 (19.33)
	Academic institute	22 (14.67)
	Clinic	13 (8.67)
Education	Bachelor	60 (40.00)
	Master	52 (34.67)
	Doctorate	30 (20.00)
	Other	8 (5.33)

Table 2. Distribution of stress dimensions and overall stress level

Variable	Category	n (%)
Emotional Exhaustion	Low	48 (32.00)
	Moderate	42 (28.00)
	High	60 (40.00)
Depersonalization	Low	25 (16.67)
	Moderate	53 (35.33)
	High	72 (48.00)
Personal Accomplishment	Low	36 (24.00)
	Moderate	38 (25.33)
	High	76 (50.67)
Overall Stress	Low	3 (2.00)
	Moderate	122 (81.33)
	High	25 (16.67)

Table 3. Levels of coping strategies among participants

Coping Strategy	Low n (%)	Moderate n (%)	High n (%)
Confrontive coping	41 (27.33)	66 (44.00)	43 (28.67)
Distancing	26 (17.33)	87 (58.00)	37 (24.67)
Self-controlling	19 (12.67)	107 (71.33)	24 (16.00)
Seeking social support	27 (18.00)	81 (54.00)	42 (28.00)
Accepting responsibility	37 (24.67)	81 (54.00)	32 (21.33)
Escape-avoidance	23 (15.33)	99 (66.00)	28 (18.67)
Planful problem-solving	29 (19.33)	90 (60.00)	31 (20.67)
Positive reappraisal	15 (10.00)	95 (63.33)	40 (26.67)

Table 4. Association between coping strategies and stress levels

Coping Strategy	χ^2	p-value	Cramér's V
Confrontive coping	3.47	0.502	0.11
Distancing	4.82	0.187	0.13
Self-controlling	4.51	0.214	0.12
Seeking social support	12.34	0.002*	0.29
Accepting responsibility	10.21	0.017*	0.26
Escape-avoidance	2.07	0.563	0.08

Coping Strategy	χ^2	p-value	Cramér's V
Planful problem-solving	5.13	0.166	0.13
Positive reappraisal	3.14	0.529	0.10

Table 5. Descriptive statistics for stress and coping variables

Variable	Mean ± SD
Emotional Exhaustion	23.84 ± 11.84
Depersonalization	12.92 ± 6.00
Personal Accomplishment	30.10 ± 11.01
Confrontive coping	9.13 ± 4.21
Distancing	9.57 ± 3.65
Self-controlling	11.33 ± 3.78
Seeking social support	9.63 ± 4.11
Accepting responsibility	6.29 ± 2.51
Escape-avoidance	12.49 ± 4.35
Planful problem-solving	9.58 ± 3.68
Positive reappraisal	12.13 ± 4.26

Table 6. Comparison of stress dimensions by gender

Variable	Female Mean ± SD	Male Mean ± SD	p-value	Cohen's d
Emotional Exhaustion	24.90 ± 11.60	22.95 ± 12.05	0.094	0.16
Depersonalization	13.10 ± 6.10	12.76 ± 5.95	0.504	0.06
Personal Accomplishment	31.20 ± 10.90	29.15 ± 11.05	0.053	0.19

Table 7. Comparison of stress dimensions by profession

Variable	F-value	p-value	η^2
Emotional Exhaustion	0.85	0.474	0.02
Depersonalization	3.62	0.013*	0.07
Personal Accomplishment	4.21	0.005*	0.08

Table 8. Comparison of stress dimensions by work setting

Variable	F-value	p-value	η^2
Emotional Exhaustion	2.14	0.094	0.04
Depersonalization	0.82	0.504	0.02
Personal Accomplishment	2.56	0.053	0.05

Finally, Table 8 presents comparisons of stress dimensions across work settings. Emotional exhaustion showed a near-significant difference ($F = 2.14$, $p = 0.094$, $\eta^2 = 0.04$), suggesting a small effect of work setting, while personal accomplishment also approached significance ($F = 2.56$, $p = 0.053$, $\eta^2 = 0.05$). Depersonalization did not vary significantly across settings ($F = 0.82$, $p = 0.504$, $\eta^2 = 0.02$). Overall, these findings suggest that work setting had limited influence on stress dimensions within this sample, with only minor variations observed.

Overall, the results indicate that moderate occupational stress is highly prevalent among healthcare practitioners, with significant associations observed between specific coping strategies and stress levels, while demographic variables such as gender and work setting showed limited influence.

Figure 1 Distribution Of Occupational Stress Categories Across Coping Strategy Intensities

The figure illustrates the distribution of occupational stress categories across two coping strategies—seeking social support and accepting responsibility—using a density-based representation that reflects both central tendency and variability. In both coping domains, the highest concentration of responses is centered around the moderate stress category, consistent with the overall prevalence of moderate stress in the sample (81.33%). The median stress level for both coping strategies lies close to the moderate category (approximately level 2), indicating that individuals across all coping intensities predominantly experience moderate stress. However, the distribution tails extend toward both low and high stress levels, demonstrating variability within each coping group.

For seeking social support, the density appears more concentrated around moderate stress, with a narrower spread compared to accepting responsibility, suggesting relatively less variability in stress outcomes among individuals using this strategy. In contrast, accepting responsibility shows a slightly broader distribution, with a more pronounced extension toward high stress, reflecting that a notable proportion of individuals using this coping approach still report elevated stress levels. This aligns with the underlying data, where high stress is present in both low (24.3%) and high (31.3%) responsibility groups, compared to a lower proportion in the moderate group (7.4%).

DISCUSSION

The present study provides evidence that occupational stress is highly prevalent among healthcare practitioners, with 81.33% of participants experiencing moderate stress and 16.67% reporting high stress levels. The predominance of moderate stress aligns with existing literature indicating that healthcare environments consistently expose professionals to sustained psychological and emotional demands that do not always manifest as extreme burnout but remain clinically relevant (1,5,10). Notably, high levels

of emotional exhaustion (40.00%) and depersonalization (48.00%) observed in this study are consistent with prior findings that these two dimensions are the most sensitive indicators of burnout among healthcare workers, particularly in high-contact clinical roles (3,4,6). Despite this, more than half of participants (50.67%) reported high personal accomplishment, suggesting that professional fulfillment may coexist with stress exposure, reflecting a complex interplay between occupational demands and intrinsic motivation (3,17).

A central finding of this study is the differential association between coping strategies and stress levels. Specifically, seeking social support and accepting responsibility demonstrated statistically significant associations with stress categories ($p = 0.002$ and $p = 0.017$, respectively), with moderate effect sizes (Cramér's $V = 0.29$ and 0.26). However, the distribution patterns observed indicate that these relationships are not strictly linear. The proportion of high stress was lowest among participants using moderate levels of these strategies (7.4%), compared to both low and high utilization groups, suggesting a threshold or optimal-use effect rather than a simple dose-response relationship. This finding extends prior research emphasizing the protective role of adaptive coping while highlighting that excessive reliance or underutilization may be less effective (14–16). It also aligns with theoretical frameworks proposing that coping effectiveness depends on contextual appropriateness rather than frequency alone (13). The lack of significant associations for other coping strategies, including problem-focused and avoidance-based approaches, further underscores that not all coping mechanisms confer equivalent benefits, and their impact may vary depending on occupational context and stressor type (15,16,21).

The study also demonstrates that profession plays a more substantial role in influencing stress dimensions than gender or work setting. Significant differences in depersonalization ($p = 0.013$) and personal accomplishment ($p = 0.005$) across professions suggest that role-specific demands, patient interaction intensity, and organizational expectations contribute to variations in burnout profiles. This is consistent with prior studies showing that healthcare roles with greater patient interaction and decision-making responsibility are associated with higher emotional strain and variability in coping patterns (8,10). In contrast, gender differences were not statistically significant across stress dimensions or coping strategies, although females reported slightly higher emotional exhaustion and personal accomplishment. This finding supports earlier research indicating that while gender-based differences may exist, they are often small and context-dependent (12,15). Similarly, the absence of significant variation across work settings suggests that occupational stress is a pervasive issue across healthcare environments, reinforcing the notion that systemic factors, rather than specific workplace types, drive stress exposure (6,11).

From a clinical and organizational perspective, these findings highlight the importance of promoting balanced and context-appropriate coping strategies rather than simply increasing coping intensity. The observed non-linear relationship suggests that interventions should focus on optimizing coping skills, particularly in areas such as social support utilization and adaptive responsibility, rather than encouraging excessive reliance on any single strategy. Additionally, the persistence of moderate stress across the majority of participants indicates a need for system-level interventions, including workload management, institutional support, and structured mental health programs, as recommended in previous studies (6,16,20,22). The findings further support the integration of psychosocial support systems within healthcare institutions to enhance resilience and mitigate the progression from moderate stress to burnout.

Several limitations should be considered when interpreting these results. The cross-sectional design limits causal inference, and associations between coping strategies and stress cannot establish temporal directionality. The use of convenience sampling may reduce generalizability beyond the study population, and self-reported measures may introduce reporting bias despite efforts to ensure confidentiality. Additionally, the absence of multivariable adjustment means that residual confounding by unmeasured factors such as workload intensity, personal life stressors, or prior mental health status

cannot be excluded. Future research should employ longitudinal designs and multivariate modeling to clarify causal pathways and identify optimal coping thresholds across different healthcare professions.

CONCLUSION

Occupational stress is highly prevalent among healthcare practitioners, with the majority experiencing moderate levels characterized by substantial emotional exhaustion and depersonalization alongside preserved personal accomplishment. Coping strategies, particularly seeking social support and accepting responsibility, show significant but non-linear associations with stress, indicating that moderate utilization may be more effective than minimal or excessive use. Professional role influences specific dimensions of stress more than gender or work setting, highlighting the importance of role-specific interventions. These findings underscore the need for both individual-level coping optimization and system-level organizational support to mitigate occupational stress and enhance healthcare workforce well-being.

LIMITATIONS

1- Participants filled the questionnaire themselves, so some answers might not fully reflect their true stress or coping levels. 2- The study only looked at stress at one point in time. We can't say what caused the stress or how it changes over time. 3- The study was done in a limited number of healthcare settings, so it may not represent all healthcare workers. 4- Things like family pressure, personal health, or past mental health issues were not asked, even though they affect stress. 5- Due to lack of time we couldn't be able to cover the large area 6- Due to lack of resources we couldn't approach senior doctors and professors.

RECOMMENDATIONS

Provide stress management training for healthcare practitioners to help them develop effective coping skills. Encourage regular breaks and manageable work schedules to reduce burnout. Promote peer support groups where staff can share experiences and coping methods. Ensure access to mental health services, such as counseling or therapy. we advise next researcher to investigates different levels of stress time to time

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