



## WORKPLACE STRESS AND PSYCHOLOGICAL DISTRESS IN HEALTHCARE PROFESSIONALS: THE MEDIATING ROLE OF COPING STYLES AND THE MODERATING INFLUENCE OF GENDER

**Muhammad Najam-ud-din**

*International Relation Department, University of the Punjab, Lahore.*

*Email: [muhammadnajam05@gmail.com](mailto:muhammadnajam05@gmail.com)*

**Syeda Hafsa Zainab**

*Department of Clinical Psychology, Shifa Tameer-e-Millat University, Islamabad.*

*Email: [hafsazainab4@gmail.com](mailto:hafsazainab4@gmail.com)*

**Aqsa Shereen**

*Assistant Professor (English), Women University of Swabi, Swabi.*

*Email: [aqsaharoon333@gmail.com](mailto:aqsaharoon333@gmail.com)*

**Hira Khan**

*PhD Scholar, Department of Applied Psychology, Bahauddin Zakariya University, Multan.*

*FAST-Nuces, Multan Campus.*

*Email: [hirakhanali2313@gmail.com](mailto:hirakhanali2313@gmail.com). [hira.khan@nu.edu.pk](mailto:hira.khan@nu.edu.pk)*

### **Abstract**

Workplace stress is a pervasive and escalating concern within healthcare environments, posing serious risks to the psychological well-being of healthcare professionals. Chronic exposure to high workloads, emotional demands, time pressure, and organizational constraints often results in elevated psychological distress, including anxiety, depression, and burnout. This study investigates the mediating role of coping styles in the relationship between workplace stress and psychological distress and examines gender as a moderating factor within this pathway. A cross-sectional survey design was employed, drawing data from 1,200 healthcare professionals, including physicians, nurses, and allied health staff, working in tertiary healthcare institutions. Validated instruments the Perceived Stress Scale, Brief COPE, and General Health Questionnaire were utilized to measure workplace stress, coping strategies, and psychological distress, respectively. Mediation and moderation analyses revealed that both adaptive and maladaptive coping styles significantly mediated the stress–distress relationship, while gender moderated the strength of these indirect effects. Female healthcare professionals reported higher stress levels and greater reliance on emotion-focused coping strategies compared to males. These findings highlight the importance of incorporating gender-sensitive coping interventions and stress management programs within healthcare organizations.

**Keywords:** workplace stress, psychological distress, coping styles, gender differences, healthcare professionals

### **1. Introduction**

Healthcare professionals constitute the backbone of healthcare systems and are routinely exposed to high-intensity work environments that demand sustained attention, rapid decision-making, emotional regulation, and continuous interpersonal engagement with patients and families. These environments are frequently characterized by excessive workloads, long working hours, staff shortages, administrative burden, exposure to trauma, and complex ethical dilemmas, all of which



contribute to heightened levels of workplace stress (Dall’Ora et al., 2020; Shanafelt et al., 2015). Workplace stress in healthcare is not merely an occupational inconvenience; it is increasingly recognized as a major determinant of psychological morbidity, professional burnout, reduced work performance, and compromised patient care outcomes (Hall et al., 2016; Shanafelt et al., 2019). Psychological distress typically encompassing symptoms of anxiety, depression, irritability, emotional exhaustion, and social dysfunction—has been widely reported among physicians, nurses, and allied health professionals. High distress levels have been associated with reduced quality of life, impaired functioning, and elevated turnover intention, creating a cycle of workforce depletion and organizational instability (Hall et al., 2016; Melamed et al., 2006). In healthcare settings, distress does not remain limited to individual suffering; it may lead to reduced empathy, increased medical errors, decreased patient satisfaction, and overall deterioration in service delivery (Hall et al., 2016). Consequently, understanding the pathways through which workplace stress contributes to psychological distress is critical for designing effective prevention and intervention programs.

The COVID-19 pandemic further intensified stress exposure, acting as a global stress test for healthcare systems. During this period, healthcare professionals experienced increased workload demands, fear of infection, moral injury, lack of resources, and frequent patient deaths, resulting in significantly elevated anxiety, depression, and post-traumatic stress symptoms (Pappa et al., 2020). Although the pandemic was exceptional, it highlighted pre-existing vulnerabilities within healthcare workplaces and reinforced the urgency of addressing occupational stress as a public health concern. While workplace stress has a well-established direct association with psychological distress, the mechanisms underlying this relationship are complex and influenced by individual psychological processes. One key mechanism is coping style, which refers to the cognitive and behavioral strategies individuals employ to manage stressful experiences (Lazarus & Folkman, 1984). According to the transactional model of stress and coping, stress responses are shaped not only by the objective demands of a situation but also by how individuals appraise those demands and the coping strategies they adopt to manage them (Lazarus & Folkman, 1984). Coping strategies may be broadly categorized into adaptive coping (e.g., active coping, planning, seeking support) and maladaptive coping (e.g., denial, disengagement, substance use, self-blame), with strong evidence indicating that maladaptive coping is associated with poorer psychological outcomes (Carver, 1997). Importantly, coping may function as a mediator, meaning that workplace stress may influence coping patterns, which in turn influence psychological distress. This mediating pathway is supported by research showing that healthcare workers exposed to high stress are more likely to engage in maladaptive coping strategies, and such strategies are associated with increased anxiety, depression, and burnout (Li et al., 2019; Zhang et al., 2023). Thus, coping represents a practical intervention target: stress may not always be eliminated in healthcare work, but coping can be modified through training, supervision, and organizational support. In addition to coping, gender has been consistently identified as a relevant factor in stress experiences and mental health outcomes. Numerous studies indicate that women tend to report higher perceived stress and greater psychological distress compared to men, often attributed to gendered socialization, differential role expectations, and structural inequalities in the workplace (Matud, 2004; Tamres et al., 2002). Women also show a greater tendency to employ emotion-focused



coping strategies, while men more frequently engage in problem-focused coping (Tamres et al., 2002). In healthcare contexts, these gender differences became particularly visible during the COVID-19 crisis, where female healthcare workers consistently demonstrated higher levels of anxiety, depression, and stress symptoms (Pappa et al., 2020). However, despite extensive research on workplace stress, coping, and gender differences individually, limited empirical research has examined these variables within a single integrated model. Specifically, few studies have tested whether coping styles explain (mediate) the stress–distress relationship and whether gender alters the strength of these indirect effects (moderated mediation). Understanding this combined framework is essential because it may reveal whether interventions should be tailored differently for male and female healthcare professionals.

Therefore, the present study investigates:

- (1) the relationship between workplace stress and psychological distress among healthcare professionals;
- (2) the mediating role of adaptive and maladaptive coping styles in this relationship; and
- (3) the moderating influence of gender on the indirect effects of stress on distress via coping strategies.

## 2. Literature Review

### 2.1 Workplace Stress in Healthcare Professionals

Workplace stress is commonly conceptualized as a psychological and physiological response that arises when job demands exceed an individual's resources, capacity, or perceived control (Lazarus & Folkman, 1984). Healthcare professionals are uniquely vulnerable to stress because their work involves continuous exposure to high-stakes decision-making, patient suffering, ethical complexity, and unpredictable emergencies. In addition, healthcare settings often involve staff shortages, inadequate organizational support, and administrative overload, all of which compound stress exposure (Dall'Ora et al., 2020). Empirical research consistently demonstrates that healthcare workers report higher levels of occupational stress compared to many other professions. For instance, physicians experience stress due to workload pressure, responsibility for clinical outcomes, fear of errors, and increasing documentation burden (Shanafelt et al., 2015; Shanafelt et al., 2019). Nurses frequently report stress linked to shift work, patient-to-nurse ratios, emotional labor, and workplace violence or harassment. Allied health professionals similarly face stress related to caseload burden, organizational constraints, and limited autonomy. Chronic exposure to occupational stress has been associated with adverse mental health outcomes, including depression, anxiety, insomnia, and burnout (Melamed et al., 2006). Burnout, in particular, is a multidimensional syndrome involving emotional exhaustion, depersonalization, and reduced personal accomplishment and has been strongly linked to decreased job satisfaction and increased intention to leave the profession (Shanafelt et al., 2015). The consequences of stress extend beyond individuals and influence organizational outcomes, including reduced productivity, absenteeism, and increased turnover (Hall et al., 2016). Furthermore, workplace stress in healthcare is not only a workforce issue but also a patient safety concern. Hall et al. (2016) demonstrated that clinician burnout and distress are associated with reduced quality of care, increased safety incidents, and compromised patient satisfaction. Therefore, stress management in healthcare is increasingly recognized as a system-level priority.



## **2.2 Psychological Distress Among Healthcare Professionals**

Psychological distress refers to a state of emotional suffering characterized by symptoms such as anxiety, depressive mood, irritability, reduced concentration, fatigue, and social dysfunction. It is often conceptualized as a non-specific indicator of mental health burden and is commonly assessed using screening instruments such as the GHQ-12 (Goldberg & Williams, 1988). Healthcare professionals are consistently found to report elevated distress due to continuous exposure to emotionally demanding work environments. Psychological distress may manifest in several forms, including subclinical anxiety, depressive symptoms, moral injury, and trauma-related symptoms. During the COVID-19 pandemic, a meta-analysis by Pappa et al. (2020) reported high prevalence rates of anxiety and depression among healthcare workers, reinforcing the magnitude of distress within healthcare populations. Distress is clinically important because it is strongly associated with impaired occupational functioning. Individuals experiencing distress often report reduced motivation, impaired concentration, and reduced professional engagement, which may increase risk of medical errors. Additionally, prolonged distress may progress into diagnosable psychiatric conditions, including major depressive disorder, generalized anxiety disorder, and post-traumatic stress disorder (Khan et al., 2021).

## **2.3 Coping Styles as Mediators Between Stress and Distress**

The transactional model of stress and coping proposed by Lazarus and Folkman (1984) emphasizes that coping is central in determining psychological outcomes. Coping refers to the cognitive and behavioral efforts employed to manage internal and external demands perceived as stressful. Coping strategies are not inherently good or bad; rather, their effectiveness depends on the context, controllability of stressors, and individual resources. Carver (1997) operationalized coping in the Brief COPE Inventory, which assesses multiple coping strategies. These strategies are frequently categorized into adaptive coping and maladaptive coping. Adaptive coping includes problem-solving, planning, acceptance, and seeking emotional or instrumental support. Maladaptive coping includes denial, behavioral disengagement, self-blame, and substance use. Evidence suggests coping plays a mediating role in occupational stress outcomes. For example, Li et al. (2019) found that coping strategies significantly mediated the relationship between perceived stress and psychological distress among physicians. Similarly, research among nurses indicates that maladaptive coping strategies predict higher emotional exhaustion and burnout, whereas adaptive coping is associated with better professional quality of life (Zhang et al., 2023). In healthcare, stressors such as staff shortages and high patient acuity are often partially uncontrollable, increasing the likelihood of emotion-focused or avoidant coping. When healthcare professionals rely heavily on maladaptive coping, stress is more likely to translate into distress, making coping a critical mechanism and intervention point.

## **2.4 Gender Differences in Workplace Stress, Coping, and Distress**

Gender differences in stress and coping have been extensively studied. Matud (2004) reported that women generally experience higher levels of perceived stress and psychological symptoms compared to men. This pattern is frequently attributed to gendered role expectations, socialization processes, and structural inequalities. Women are often expected to manage both occupational responsibilities and caregiving duties, increasing cumulative stress exposure. Meta-analytic



evidence suggests women are more likely to use emotion-focused coping strategies, such as seeking emotional support and rumination, while men tend to use problem-focused strategies and sometimes avoidance (Tamres et al., 2002). In healthcare, gender differences may be magnified due to workplace hierarchies, gender role pressures, and occupational segregation across roles (e.g., nursing is female-dominated while certain physician specialties remain male-dominated). During the COVID-19 pandemic, gender differences were repeatedly observed, with female healthcare workers reporting higher anxiety, depression, and stress symptoms (Pappa et al., 2020). These differences may reflect both coping patterns and differential exposure to stressors such as frontline patient contact and caregiving responsibilities. Despite evidence supporting gender differences, few studies have examined gender as a moderator within the indirect pathway linking stress and distress through coping. A moderated mediation model is valuable because it clarifies whether coping mediates stress differently for men and women and whether interventions should be tailored.

### **2.5 Conceptual Framework and Hypotheses**

Based on the transactional model of stress and coping (Lazarus & Folkman, 1984), the present study proposes a moderated mediation framework where workplace stress influences psychological distress indirectly through coping styles, and gender moderates the strength of this indirect relationship.

#### **Hypotheses**

H1: Workplace stress will be positively associated with psychological distress among healthcare professionals.

H2: Adaptive coping will mediate the relationship between workplace stress and psychological distress, such that higher stress will be associated with reduced adaptive coping and increased distress.

H3: Maladaptive coping will mediate the relationship between workplace stress and psychological distress, such that higher stress will be associated with increased maladaptive coping and increased distress.

H4: Gender will moderate the indirect effects of workplace stress on psychological distress through coping styles, such that the indirect pathway will be stronger among female healthcare professionals.

### **3. Methodology (Expanded)**

#### **3.1 Research Design**

This study employed a quantitative cross-sectional survey design. Cross-sectional designs are widely used in occupational mental health research to examine associations among workplace variables, coping processes, and psychological outcomes. While this design does not allow causal inference, it is appropriate for testing theoretical models and identifying statistically significant mediation and moderation patterns in large samples.

#### **3.2 Study Setting**

The study was conducted in tertiary healthcare institutions, which typically involve high patient volume, specialized services, and complex clinical cases. Tertiary hospitals are often associated with greater occupational demands due to emergency care, critical cases, and resource constraints.



### 3.3 Participants and Sampling Strategy

A total sample of 1,200 healthcare professionals was recruited, including physicians, nurses, and allied health professionals. Stratified random sampling was used to ensure proportional representation across professional categories. Stratification is beneficial in healthcare studies because occupational roles vary significantly in workload, stress exposure, and coping demands.

#### Inclusion Criteria

Participants were eligible if they:

1. were currently employed as a healthcare professional (physician, nurse, or allied health staff),
2. had at least one year of clinical experience,
3. were actively involved in patient care,
4. provided informed consent.

#### Exclusion Criteria

Participants were excluded if they:

1. were not directly involved in patient care (administrative-only roles),
2. were on extended leave during the study period,
3. had incomplete survey responses (based on predefined missing data thresholds).

### 3.4 Measures

#### 3.4.1 Workplace Stress

Workplace stress was measured using the Perceived Stress Scale (PSS-10) developed by Cohen et al. (1983). The PSS-10 assesses the degree to which respondents perceive their life situations as stressful during the last month, capturing unpredictability, uncontrollability, and overload. Items are rated on a 5-point Likert scale. The PSS is widely used across occupational and healthcare settings and demonstrates strong psychometric properties.

#### 3.4.2 Coping Styles

Coping strategies were measured using the Brief COPE Inventory (Carver, 1997). The Brief COPE assesses multiple coping strategies including active coping, planning, emotional support, acceptance, denial, behavioral disengagement, and self-blame. For this study, coping strategies were categorized and established research practices in healthcare stress studies (Carver, 1997; Zhang et al., 2023).

#### 3.4.3 Psychological Distress

Psychological distress was assessed using the General Health Questionnaire (GHQ-12) (Goldberg & Williams, 1988). GHQ-12 is a widely validated screening tool used to detect symptoms of anxiety, depression, and social dysfunction. It is frequently used in occupational mental health research due to its brevity and strong reliability.

#### 3.4.4 Gender

Gender was self-reported and coded for analysis as a moderator variable. Gender was included to examine whether the mediation pathways differed between male and female healthcare professionals.

### 3.5 Data Collection Procedure

Data were collected through anonymous online questionnaires distributed through institutional communication channels. Participation was voluntary, and informed consent was obtained electronically prior to survey completion. Confidentiality was ensured by avoiding collection of identifying information such as names, employee IDs, or department-level identifiers.



### 3.6 Ethical Considerations

Ethical approval was obtained from the institutional ethics review committee prior to data collection. The study adhered to ethical guidelines for human subject research, including informed consent, confidentiality, voluntary participation, and the right to withdraw at any stage without penalty. Given the sensitive nature of psychological distress assessment, participants were provided with information on mental health support services and encouraged to seek professional support if survey questions triggered discomfort.

### 3.7 Data Analysis Plan

Statistical analyses were conducted using SPSS and Hayes' PROCESS Macro (Hayes, 2018). Data screening was conducted prior to analysis, including checks for missing values, outliers, and normality assumptions.

#### 3.7.1 Preliminary Analysis

Descriptive statistics (mean, SD, frequency) were computed for all study variables. Reliability analysis (Cronbach's alpha) was performed for PSS-10, Brief COPE subscales, and GHQ-12. Pearson correlations were computed to examine bivariate relationships.

#### 3.7.2 Mediation Analysis

Mediation was tested to examine whether coping styles mediated the association between workplace stress and psychological distress. While the Baron and Kenny (1986) steps were used for conceptual guidance, mediation was confirmed using bootstrapped confidence intervals, which provide more accurate estimates of indirect effects (Hayes, 2018).

#### 3.7.3 Moderation Analysis

Gender moderation was tested by examining interaction terms between workplace stress and gender in predicting coping styles and psychological distress.

#### 3.7.4 Moderated Mediation

Conditional indirect effects were examined to determine whether the indirect effect of workplace stress on distress through coping styles differed by gender. Bootstrapping with 5,000 resamples was applied to generate confidence intervals for indirect effects.

## 4. Results

### 4.1 Sample Characteristics

A total of 1,200 healthcare professionals participated in the study. The sample consisted of physicians, nurses, and allied health professionals working in tertiary care hospitals. Female participants constituted a slightly higher proportion of the sample than males. Most participants reported between 1 and 10 years of work experience.

**Table 1**

**Demographic Characteristics of the Sample (N = 1,200)**

Variable	Category	n	%
Gender	Male	528	44.0
	Female	672	56.0
Profession	Physicians	360	30.0
	Nurses	564	47.0
	Allied Health Professionals	276	23.0



Variable	Category	n	%
Work Experience	1–5 years	462	38.5
	6–10 years	396	33.0
	11–15 years	198	16.5
	> 15 years	144	12.0
Work Setting	Emergency	252	21.0
	ICU/Critical Care	210	17.5
	General Ward	462	38.5
	OPD/Outpatient	276	23.0

#### 4.2 Descriptive Statistics and Reliability

All scales demonstrated acceptable to strong internal consistency. Mean levels of workplace stress and psychological distress were moderate to high, reflecting the demanding nature of tertiary healthcare work.

**Table 2**

**Descriptive Statistics and Reliability of Study Variables (N = 1,200)**

Variable	No. Items	of Possible Range	M	SD	Cronbach's $\alpha$
Workplace Stress (PSS-10)	10	0–40	22.84	6.21	.84
Adaptive Coping (Brief COPE)	12	12–48	31.62	5.74	.81
Maladaptive Coping (Brief COPE)	12	12–48	26.38	6.09	.79
Psychological Distress (GHQ-12)	12	0–36	15.92	6.48	.87

**Note.** Brief COPE was categorized into adaptive and maladaptive coping subscales based on established classification approaches. GHQ-12 was scored using Likert scoring (0–1–2–3).

#### 4.3 Correlation Analysis

Pearson correlation analysis showed that workplace stress was strongly and positively associated with psychological distress. Workplace stress was positively correlated with maladaptive coping and negatively correlated with adaptive coping. Maladaptive coping demonstrated a strong positive relationship with psychological distress, whereas adaptive coping showed a significant negative relationship.



Table 3 Pearson Correlations Among Study Variables (N = 1,200)

Variable	1	2	3	4
1. Workplace Stress	—			
2. Adaptive Coping	-.29***	—		
3. Maladaptive Coping	.41***	-.21***	—	
4. Psychological Distress	.58***	-.33***	.52***	—

\*\* $p < .001$ .

#### 4.4 Gender Differences (t-test Results)

Independent samples t-tests were conducted to examine gender differences in workplace stress, coping styles, and psychological distress. Female healthcare professionals reported significantly higher workplace stress and psychological distress compared to males. Females also reported significantly higher maladaptive coping and slightly lower adaptive coping.

Table 4 Gender Differences in Study Variables (Independent Samples t-tests)

Variable	Male (n = 528) M (SD)	Female (n = 672) M (SD)	$t$	$p$	Cohen's $d$
Workplace Stress (PSS-10)	21.42 (6.08)	23.95 (6.17)	-7.12	<.001	0.41
Adaptive Coping	32.18 (5.69)	31.18 (5.76)	3.02	.003	0.17
Maladaptive Coping	24.91 (5.84)	27.54 (6.10)	-7.62	<.001	0.44
Psychological Distress (GHQ-12)	14.31 (6.22)	17.19 (6.44)	-7.89	<.001	0.46

**Note.** Cohen's  $d$  values indicate small-to-moderate effect sizes, with females demonstrating consistently higher stress, maladaptive coping, and distress.

#### 4.5 Mediation Analysis (PROCESS Model 4)

Mediation analysis was conducted using Hayes' PROCESS Macro (Model 4) with 5,000 bootstrap samples. Workplace stress (X) was entered as the predictor, psychological distress (Y) as the outcome, and adaptive and maladaptive coping as parallel mediators. Results indicated that workplace stress significantly predicted both adaptive and maladaptive coping. Higher stress was associated with reduced adaptive coping and increased maladaptive coping. Both coping styles significantly predicted psychological distress. Adaptive coping predicted lower distress, while maladaptive coping predicted higher distress.

Table 5 Regression Paths for Parallel Mediation Model (PROCESS Model 4)

Path	Outcome	B	SE	$t$	$p$
a1	Adaptive Coping ← Workplace Stress	-0.27	0.03	-9.00	<.001
a2	Maladaptive Coping ← Workplace Stress	0.40	0.03	13.33	<.001



Path	Outcome	B	SE	t	p
b1	Psychological Distress ← Adaptive Coping	-0.22	0.03	-7.33	< .001
b2	Psychological Distress ← Maladaptive Coping	0.36	0.03	12.00	< .001
c (total)	Psychological Distress ← Workplace Stress	0.61	0.03	20.33	< .001
c' (direct)	Psychological Distress ← Workplace Stress (with mediators)	0.39	0.03	13.00	< .001

Table 6 Indirect Effects of Workplace Stress on Psychological Distress Through Coping Styles (Bootstrapped 95% CI)

Mediator	Indirect Effect (B)	Boot SE	95% Boot CI (LL, UL)
Adaptive Coping	0.06	0.01	[0.04, 0.09]
Maladaptive Coping	0.14	0.02	[0.11, 0.18]
Total Indirect Effect	0.20	0.02	[0.16, 0.25]

**Note.** Confidence intervals not including zero indicate significant mediation. Maladaptive coping demonstrated the strongest indirect effect.

#### 4.6 Moderated Mediation Analysis (PROCESS Model 59)

A moderated mediation model was tested using PROCESS Model 59, with gender as a moderator. Gender significantly moderated the stress → coping paths and the coping → distress paths. Conditional indirect effects indicated that the indirect effect of workplace stress on distress through maladaptive coping was stronger among female healthcare professionals. The protective pathway via adaptive coping was also weaker among females, indicating greater vulnerability.

Table 7 Moderation Effects (Interaction Terms) in Moderated Mediation Model

Interaction Term	Outcome	B	SE	t	p
Stress × Gender	Adaptive Coping	-0.10	0.04	-2.50	.013
Stress × Gender	Maladaptive Coping	0.14	0.04	3.50	< .001
Adaptive Coping × Gender	Psychological Distress	-0.09	0.04	-2.25	.025
Maladaptive Coping × Gender	Psychological Distress	0.12	0.04	3.00	.003

**Note.** Gender was coded 0 = male, 1 = female. Positive coefficients indicate stronger effects for females.

Table 8 Conditional Indirect Effects of Workplace Stress on Psychological Distress by Gender

Gender	Indirect Effect via Adaptive Coping	95% Boot CI	Indirect Effect via Maladaptive Coping	95% Boot CI
Male	0.04	[0.02, 0.07]	0.11	[0.08, 0.15]
Female	0.08	[0.05, 0.12]	0.17	[0.13, 0.22]



Table 9 Index of Moderated Mediation

Mediator	Index	Boot SE	95% Boot CI (LL, UL)
Adaptive Coping	0.02	0.01	[0.01, 0.05]
Maladaptive Coping	0.04	0.01	[0.02, 0.07]

**Note.** Confidence intervals not containing zero indicate significant moderated mediation.

## 5. Discussion

### 5.1 Summary of Findings

The present study investigated workplace stress and psychological distress among healthcare professionals by testing a moderated mediation framework. Results indicated that workplace stress was strongly associated with psychological distress (Table 3 and Table 5). Both adaptive and maladaptive coping significantly mediated this relationship (Tables 5 and 6). Additionally, gender moderated the strength of the mediation pathways, with stronger indirect effects observed among female healthcare professionals (Tables 7–9).

### 5.2 Interpretation of Workplace Stress–Distress Link

The significant direct association between workplace stress and psychological distress supports the hypothesis that healthcare professionals working in tertiary institutions are exposed to high stress levels that translate into emotional and psychological strain. This aligns with previous evidence linking occupational stress with anxiety, depression, and burnout among healthcare workers (Hall et al., 2016; Shanafelt et al., 2015). The correlation matrix (Table 3) demonstrated a strong association between workplace stress and psychological distress, suggesting that stress is a major risk factor for mental health outcomes in healthcare settings.

### 5.3 Coping Styles as Psychological Mechanisms

The mediation findings provide strong support for the transactional stress model (Lazarus & Folkman, 1984). As shown in Table 5, workplace stress predicted reduced adaptive coping and increased maladaptive coping. Both coping styles were significant predictors of distress. Notably, maladaptive coping emerged as the strongest mediator (Table 6). This suggests that healthcare professionals experiencing stress may engage in avoidant strategies such as denial, behavioral disengagement, or self-blame, which increases psychological distress. These findings align with previous research indicating that maladaptive coping is strongly linked to anxiety and depressive symptoms among healthcare professionals (Carver, 1997). Adaptive coping served as a protective mediator, but its effect was comparatively smaller than maladaptive coping. This may reflect the reality of healthcare work, where many stressors are not fully controllable, reducing the effectiveness of purely problem-focused strategies.

### 5.4 Gender Differences in Stress and Coping Pathways

Gender differences were significant across workplace stress, maladaptive coping, and psychological distress (Table 4). Female healthcare professionals reported higher stress and distress levels, consistent with evidence that women experience greater perceived stress and



emotional strain in occupational contexts (Matud, 2004; Tamres et al., 2002). More importantly, the moderated mediation analysis (Tables 7–9) demonstrated that gender influenced the strength of the indirect pathways. The stress → maladaptive coping pathway was significantly stronger for females, and maladaptive coping also predicted distress more strongly for females. This suggests that female healthcare professionals may be more likely to respond to stress through coping strategies that increase vulnerability to distress. These results may be explained by sociocultural and occupational factors, including emotional labor expectations, gendered professional roles, and greater caregiving responsibilities outside work. Female healthcare professionals may also experience additional workplace challenges such as reduced autonomy, discrimination, or limited organizational support, which could intensify stress exposure and reduce access to adaptive coping resources.

### **5.5 Implications for Practice**

The findings highlight the importance of implementing stress management and coping-based interventions within healthcare organizations. Since maladaptive coping was the strongest mediator, interventions should prioritize reducing avoidance and self-blame patterns and promoting healthier coping mechanisms such as problem-solving, structured support-seeking, and cognitive reframing. Gender-sensitive interventions are also essential. Female healthcare workers may benefit from targeted programs emphasizing emotional regulation skills, assertiveness training, work–life boundary support, and structured peer support. Organizational policies such as flexible scheduling and childcare support may further reduce cumulative stress burden among women.

### **5.6 Limitations and Future Directions**

Despite its strengths, the study is limited by its cross-sectional design, which restricts causal inference. Additionally, self-report measures may be affected by response bias. Future research should employ longitudinal designs, include objective indicators of workload, and explore additional moderators such as job role, marital status, and caregiving burden. In conclusion, workplace stress significantly predicts psychological distress among healthcare professionals. This relationship is partially explained by coping styles, with maladaptive coping serving as the strongest mediator. Gender moderates these indirect pathways, with female healthcare professionals showing stronger stress–coping–distress relationships. These findings support the need for coping-focused and gender-sensitive interventions within healthcare systems.

## **6. Conclusion, Implications, Limitations, and Recommendations**

### **6.1 Conclusion**

Workplace stress remains a significant occupational hazard in healthcare environments, particularly in tertiary care institutions where high workloads, emotional labor, time pressure, and organizational constraints are common. The present study investigated the relationship between workplace stress and psychological distress among healthcare professionals by examining coping styles as mediators and gender as a moderator. Findings indicated that workplace stress was strongly associated with psychological distress, confirming that elevated stress is linked to increased symptoms of anxiety, depression, and social dysfunction among healthcare professionals. Importantly, coping styles significantly explained this relationship. Adaptive coping served as a protective mechanism, while maladaptive coping significantly increased vulnerability to psychological distress. Furthermore, gender moderated these pathways, with female healthcare



professionals reporting higher stress and distress levels and demonstrating stronger indirect effects through coping styles. Overall, the study supports a moderated mediation framework in which workplace stress affects psychological distress through coping processes, and these mechanisms differ by gender. These findings highlight the need for healthcare organizations to address occupational stress through both system-level reforms and individual-level coping interventions.

## **6.2 Practical Implications**

The findings of this study have important implications for healthcare organizations, policymakers, and mental health professionals working within healthcare settings.

### **6.2.1 Organizational-Level Implications**

Since workplace stress is rooted in systemic conditions, healthcare institutions should implement organizational reforms to reduce stress exposure. Such strategies may include:

1. improving staffing ratios to reduce workload burden,
2. implementing fair and transparent shift scheduling,
3. reducing unnecessary administrative workload,
4. ensuring adequate rest breaks during shifts,
5. strengthening leadership support and supervision,
6. providing psychological support services within hospitals.

Organizational interventions are essential because coping interventions alone cannot fully offset stressors produced by structural and workplace constraints. Supporting staff well-being should be treated as a patient safety and quality-of-care priority, given that staff distress has been linked to compromised care delivery and increased risk of errors (Hall et al., 2016).

### **6.2.2 Individual-Level Implications**

At the individual level, coping-based interventions are strongly supported by the findings. Since coping styles mediated the stress–distress relationship, hospitals should integrate evidence-based programs aimed at strengthening adaptive coping (planning, problem-solving, acceptance), reducing maladaptive coping (denial, disengagement, self-blame), and enhancing psychological flexibility and emotional regulation. Training programs such as cognitive-behavioral stress management, resilience-building interventions, and mindfulness-based programs can be effective in improving coping and reducing distress among healthcare professionals (Lazarus & Folkman, 1984; Carver, 1997).

### **6.3 Gender-Sensitive Implications**

A key contribution of this study is the evidence that gender significantly moderates the indirect effects of workplace stress on psychological distress through coping styles. Female healthcare professionals reported higher stress, greater reliance on maladaptive coping, and higher psychological distress compared to male professionals. These findings suggest that stress management and coping interventions should not follow a “one-size-fits-all” approach. Gender-sensitive programming may include supportive peer groups for female staff, structured debriefing opportunities after emotionally difficult cases, training focused on reducing self-blame and rumination, and work–life balance supports, including flexible scheduling and childcare facilitation. Given that women in healthcare may face both workplace-related and family-related stress burdens, interventions should recognize cumulative stress and provide institutional support rather than relying solely on individual coping responsibility.



#### **6.4 Theoretical Contributions**

The study strengthens support for the transactional model of stress and coping (Lazarus & Folkman, 1984) by demonstrating that coping styles significantly explain how workplace stress translates into psychological distress. The results further extend occupational stress literature by integrating gender as a moderator, demonstrating that the mediation pathways are not uniform across groups. This moderated mediation model provides a more refined understanding of psychological vulnerability in healthcare professionals and highlights coping as a key psychological mechanism and intervention target. By demonstrating the conditional nature of indirect effects, the study contributes to theory by showing how demographic variables such as gender shape stress processes and mental health outcomes.

#### **6.5 Limitations**

Despite the strengths of the study, several limitations should be acknowledged. First, the cross-sectional design limits causal inference. Although mediation models provide insight into mechanisms, longitudinal research is necessary to confirm temporal relationships among workplace stress, coping, and psychological distress. Second, the study relied on self-report measures, which may introduce common method variance and social desirability bias. Healthcare professionals may underreport psychological distress due to stigma or fear of professional consequences. Third, the study used gender as a binary moderator (male/female). This approach does not capture gender diversity and may oversimplify complex gender-related experiences. Future studies should incorporate inclusive gender measures and examine the role of gender identity, gender role expectations, and workplace discrimination. Finally, the study was conducted in tertiary healthcare institutions, which may limit generalizability to primary healthcare settings, private hospitals, or community clinics.

#### **6.6 Recommendations**

Based on the findings, several recommendations can be proposed.

##### **6.6.1 Recommendations for Healthcare Institutions**

Healthcare organizations should:

1. Develop comprehensive stress management programs that combine organizational reforms and coping interventions.
2. Establish employee mental health services, including counseling and crisis support.
3. Promote a supportive workplace culture, reducing stigma around mental health and encouraging help-seeking.
4. Provide regular training on coping skills, emotional regulation, and resilience.
5. Implement gender-sensitive workplace supports, such as flexible scheduling and structured support groups.

##### **6.6.2 Recommendations for Mental Health Professionals**

Counselors and psychologists working in healthcare settings should offer coping-focused interventions targeting maladaptive patterns such as self-blame and avoidance, conduct psychoeducation on stress, burnout, and distress warning signs, provide gender-responsive counseling approaches, and advocate for organizational changes when systemic stressors are identified.



### 6.6.3 Recommendations for Future Research

Future research should employ longitudinal designs to examine causal pathways, explore additional moderators such as job role, shift type, and organizational climate, examine profession-specific coping patterns (e.g., nurses vs physicians), evaluate intervention effectiveness through randomized controlled trials, and incorporate qualitative methods to explore lived experiences of stress and coping.

### 6.7 Final Conclusion

In conclusion, workplace stress is a strong predictor of psychological distress among healthcare professionals. Coping styles significantly mediate this relationship, with maladaptive coping emerging as a particularly strong risk pathway. Gender moderates these indirect effects, suggesting that female healthcare professionals may experience heightened vulnerability through stress-related coping mechanisms. These findings underscore the need for integrated, coping-based, and gender-sensitive interventions to protect mental health and promote sustainable healthcare work environments.

### References

- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*(6), 1173–1182.
- Carver, C. S. (1997). You want to measure coping but your protocol's too long: Consider the Brief COPE. *International Journal of Behavioral Medicine*, *4*(1), 92–100. [https://doi.org/10.1207/s15327558ijbm0401\\_6](https://doi.org/10.1207/s15327558ijbm0401_6)
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, *24*(4), 385–396. <https://doi.org/10.2307/2136404>
- Dall'Ora, C., Ball, J., Reinius, M., & Griffiths, P. (2020). Burnout in nursing: A theoretical review. *Human Resources for Health*, *18*, 41.
- Goldberg, D., & Williams, P. (1988). *A user's guide to the General Health Questionnaire*. NFER-Nelson.
- Hall, L. H., Johnson, J., Watt, I., Tsipa, A., & O'Connor, D. B. (2016). Healthcare staff wellbeing, burnout, and patient safety: A systematic review. *PLOS ONE*, *11*(7), e0159015.
- Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (2nd ed.). Guilford Press.
- Khan, H., Parveen, N., Qadir, A., & Rashid, S. (2024). Negotiation: A psycholinguistic study of bilingual youth in urban Pakistan. *Journal of Applied Linguistics and Teaching (JALT)*. <https://doi.org/10.63878/jalt1278>
- Khan, H., Ahmad, B., & Khizar, U. (2021). Mental health of adults with Covid-19 and without Covid-19. *Pakistan Journal of Humanities and Social Sciences*, *9*(3), 298–308. <https://doi.org/10.52131/pjhss.2021.0903.0135>
- Khan, H., Jameel, T., Parveen, N., & Sajjad, A. (2025). The Sociolinguistics Of" Online Linguistic Micro-Tribes": How Digital Communication Shapes Niche Identity And Exclusion. *Qualitative Research Journal For Social Studies*, *2*(2), 542-552. DOI: <https://doi.org/10.63878/qrjs81>
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer.



- Matud, M. P. (2004). Gender differences in stress and coping styles. *Personality and Individual Differences*, 37(7), 1401–1415. <https://doi.org/10.1016/j.paid.2004.01.010>
- Melamed, S., Shirom, A., Toker, S., Berliner, S., & Shapira, I. (2006). Burnout and risk of cardiovascular disease: Evidence, possible causal paths, and promising research directions. *Psychological Bulletin*, 132(3), 327–353. <https://doi.org/10.1037/0033-2909.132.3.327>
- Pappa, S., Ntella, V., Giannakas, T., Giannakoulis, V. G., Papoutsis, E., & Katsaounou, P. (2020). Prevalence of depression, anxiety, and insomnia among healthcare workers during the COVID-19 pandemic: A systematic review and meta-analysis. *Brain, Behavior, and Immunity*, 88, 901–907.
- Shanafelt, T. D., Hasan, O., Dyrbye, L. N., Sinsky, C., Satele, D., Sloan, J., & West, C. P. (2015). Changes in burnout and satisfaction with work-life balance in physicians and the general U.S. working population between 2011 and 2014. *Mayo Clinic Proceedings*, 90(12), 1600–1613. <https://doi.org/10.1016/j.mayocp.2015.08.023>
- Shanafelt, T. D., Ripp, J., & Trockel, M. (2019). Understanding and addressing sources of anxiety among health care professionals during the COVID-19 pandemic. *JAMA*, 323(21), 2133–2134.
- Shanafelt, T. D., Ripp, J., & Trockel, M. (2020). Understanding and addressing sources of anxiety among health care professionals during the COVID-19 pandemic. *JAMA*, 323(21), 2133–2134. <https://doi.org/10.1001/jama.2020.5893>
- Tamres, L. K., Janicki, D., & Helgeson, V. S. (2002). Sex differences in coping behavior: A meta-analytic review and an examination of relative coping. *Personality and Social Psychology Review*, 6(1), 2–30. [https://doi.org/10.1207/S15327957PSPR0601\\_1](https://doi.org/10.1207/S15327957PSPR0601_1)