

## Assessing the Coping Strategies of Healthcare Workers During COVID-19 in Jaipur, Rajasthan: An Empirical Analysis

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**Abstract:** This study explores the coping strategies adopted by healthcare workers (HCWs) during the COVID-19 pandemic and their relationship with stress levels. A balanced representation of doctors and nurses participated, with a slightly higher proportion of males (60%) and most respondents aged 25–44, reflecting a workforce likely to experience significant occupational stress. Among coping strategies, problem-focused approaches, such as planning and addressing stressors, were the most commonly utilized (54% occasionally), though only 9% of HCWs employed them daily due to the high-pressure environment. Emotion-focused strategies, including seeking emotional support, were moderately used (39%) and played a key role in stress management, but only 28% used them daily. Avoidant-focused coping strategies, such as denial and self-distraction, emerged as the most frequently employed daily mechanism (30%), offering short-term relief but raising concerns about long-term stress implications.

Regression analysis revealed significant relationships between stress levels and coping mechanisms. Avoidant-focused strategies exhibited the strongest association ( $R^2 = 0.812$ ), followed by emotion-focused ( $R^2 = 0.765$ ) and problem-focused coping ( $R^2 = 0.681$ ). The findings highlight the critical need for interventions promoting sustainable stress management strategies. Enhancing problem-solving behaviors, emotional regulation, and providing organizational support are essential to improve HCWs' well-being and healthcare system resilience during crises.

**Keywords:** *Level of Stress, Healthcare Workers, COVID-19 Coping Strategies etc.*

### 1. Introduction

COVID-19 emerged in December 2019 in Wuhan, China, and quickly became a global health concern, posing a massive challenge to healthcare systems and HCWs. On March 11, 2020, the outbreak was declared a pandemic by the World Health Organization; it is regarded as a public health emergency. HCWs were exposed to long work hours, high workloads, a shortage of PPEs, and the constant threat of being infected. These challenges caused much stress, anxiety, depression, and sleeping disorders among them ((Golechha et al., 2021).

The definition of coping mechanisms is stated as “constantly evolving cognitive and behavioral strategies with reference to concrete outside and inner stimuli that are perceived as burdensome or beyond the capabilities of an individual” (Main et al., 2011). All these mechanisms act as key tools of buffering stress and sustaining personal psychological well-being in the time of distress. Coping strategies are typically categorized into three types: The description follows problem-focused, emotion-focused, and avoidant coping. The problem-solving approach implies purposeful engagement with stressors like using safety measures and enhancing operations. Emotion-focused coping is an effort made towards managing one's feelings in an attempt to reduce stress or seek assistance. Thus, avoidant coping—coping by denial or by withdrawal—is usually regarded as pathological since it tends to deepen the subject's psychological suffering (Duhachek, 2005).

Consequently, it is crucial to identify the coping strategies HCWs used to create interventions that will help them emotionally. This paper intends to assess the correlation between coping styles—problem-focused, emotion-focused, and avoidant—to stress in HCWs in Jaipur, Rajasthan state, India, during the COVID-19 pandemic and emphasizes the importance of implementing adequate strategies to improve caregivers' psychological well-being and general health.

**Background:** The World Health Organization (WHO) declared the novel coronavirus disease, COVID-19, a serious global health concern in January 2020. They cautioned that the virus had a high probability of spreading to multiple nations. By March 2020, the WHO will have declared COVID-19 a pandemic. Around the world, people are feeling anxious, worried, and depressed due to the crisis' rapid emergence. Healthcare professionals are under a lot of stress due to the COVID-19 virus, which is seriously affecting their physical and mental well-being.

## **2. Aim and Objective of the Study**

This study aims to evaluate a cross-sectional association with an objective to determine the coping mechanisms like emotional, problem-focused, and avoidant coping styles with stressors among the healthcare workers during COVID-19 outbreak in Jaipur, Rajasthan.

### **Objectives of the Study**

- To evaluate the impact of emotional coping strategies on stress levels among healthcare workers.
- To analyze the association between problem-focused coping strategies and lower stress levels in healthcare workers.
- To examine the relationship between avoidant coping strategies and increased stress levels in healthcare workers.

## **3. Hypotheses of Study**

**H<sub>1</sub>:** There is a significant positive relationship between emotional coping strategies and stress levels among healthcare workers during the COVID-19 pandemic.

**H<sub>2</sub>:** There is a significant negative relationship between problem-focused coping strategies and stress levels among healthcare workers during the COVID-19 pandemic.

**H<sub>3</sub>:** There is a significant positive relationship between avoidant coping strategies and stress levels among healthcare workers during the COVID-19 pandemic.

## **4. Materials and Methods**

### **Data Collection Instrument**

In this study, we utilized two questionnaires: Brief Cope Questionnaire in English and a demographic questionnaire. Personal data like age, sex, education level, job position, and marital status were collected using the demographic questionnaire. Carver's COPE made up the second section. The inventory was used to study three types of coping strategies on the Likert scale: namely, emotion-focused, problem focused, and Avoidant-focused strategies. The coping styles were measured using statements on a four-point Likert scale (Carver CS, 1989).

The scale categorizes coping into three overarching styles with 28 components: **Problem-Focused Coping** (8 items) characterized by active coping, planning, and positive reframing to address stressors; **Emotion-Focused Coping** (12 items) involving emotional support, venting, humor, and self-blame to regulate emotions; and **Avoidant Coping** (8 items) defined by denial, substance use, and behavioural disengagement to evade stressors. Each item is rated on a Likert scale, providing insights into coping patterns. (Carver CS, 1989). High scores in Problem-Focused and Emotion-Focused indicate adaptive strategies, while high scores in Avoidant Coping suggest maladaptive tendencies.

### **Study Participants and Sample**

Doctors and nurses among other healthcare workers (HCWs) were all qualified for sample. Originally meant to be a sample of 120, data collecting got answers from just 100 medical practitioners via the questionnaire. Every person got a unique number as part of the simple random sampling method that was used to choose the participants. Participants were then put into a list, from which names were chosen at random.

### **Data analysis**

The data collected for this study was analyzed using SPSS software. To examine the relationship between coping strategies and stress levels among healthcare workers, **Descriptive Analysis** and **Regression analysis** was conducted. This method assessed the relationship between different coping strategies—problem-focused, emotion-focused, and avoidant—and stress levels. A significance level of 0.05 was applied, with p-values less than 0.05 indicating statistical significance. The analysis provided insights into the role of coping strategies in influencing the level of stress of healthcare workers during the COVID-19 pandemic.

## 5. Results

### Demographic Profile

Data from 100 healthcare workers (HCWs) in all were evaluated in this study; 20 incomplete questionnaires were not included. See Table 1 for the demographic information.

**Table 1: Demographic Characteristics**

Demographic Characteristic	Category	Frequency/Percentage
Gender	Female	40
	Male	60
Age Group	20–24 years	2
	25–44 years	72
	45–64 years	26
Marital Status	Married	48
	Single	36
	Divorced	16
Healthcare workers	Doctors	50
	Nurses	50

According to the table, 60% of participants were men and 40% were women. This means that there is a little masculine bias in the group. Seventy-two percent of the responses fall within the age group of 25 to 44. Only 2% of people are aged between 20 and 24, while 26% are between the ages of 45 and 64. This means that the majority of the answers in the poll come from those in their prime working years. In the group under study, 48% are married, 36% are single, and 16% are separated. Given that the most are married, family ties and obligations may play a big part in this group. The group consists of 50 responders each, doctors and nurses split equally. With involvement from both fields guaranteed by this balance, the healthcare business may gain knowledge of the viewpoints of both groups.

### Coping Strategies by HCW

**Table 2: Summary of Coping Strategies by HCW**

Coping Style	Frequency: Used a Little Bit (%)	Frequency: Used Moderately (%)	Frequency: Used Most Days (%)
Emotion-focused coping	33 (33%)	39 (39%)	28 (28%)
Problem-focused coping	54 (54%)	37 (37%)	9 (9%)
Avoidant-focused coping	25 (25%)	45 (45%)	30 (30%)

The following frequency data can be used to assess the coping mechanisms used by healthcare professionals during the COVID-19 pandemic:

**Emotion-focused coping:** During the pandemic, almost one-third of the individuals (39%) reported using emotionally-focused coping techniques at a moderate level. Small-scale stress management using these measures, which could include relaxation methods, venting, or seeking emotional support, proved to be reasonably successful. However, 33% of respondents only utilized the tactics occasionally, suggesting that this strategy is not employed as frequently. It's noteworthy to note that some healthcare workers employed emotion-focused coping mechanisms to deal with the challenges they faced during the pandemic, since 28% of participants cited emotional control and support as being essential on most days (Stanislawski K 2019).

**Problem-focused coping:** Of the participants, about half (54%) reported using problem-focused coping techniques to some extent, while a sizable portion (37%) reported using them moderately. By directly addressing stressors (e.g., by improving work procedures) or obtaining further information, problem-oriented coping, the most popular method, is used to address stressors, particularly work-related stresses. However, just 9% of participants were able to successfully apply these techniques on most days, indicating that they did not consider problem-focused tactics to be as important as other methods of managing stress on a daily basis throughout the epidemic (George et al., 2020).

**Avoidant-focused coping:** 45 percent of the participants used the avoidant-focused coping strategy consisting of disengaging or avoiding stressors (e.g., denial or self-distraction). However, this suggests that many healthcare workers used avoidance as a coping mechanism, possibly as a temporary way to distance themselves from stress. However, 25% used this tactic less frequently, and 30% did so every day, indicating that avoidance was a common coping mechanism used by certain employees to cope with the stress of the pandemic (Fenn et al. 2021).

### Hypotheses Testing

**H<sub>1</sub>:** There is a significant positive relationship between emotional coping strategies and stress levels among healthcare workers during the COVID-19 pandemic.

**H<sub>2</sub>:** There is a significant negative relationship between problem-focused coping strategies and stress levels among healthcare workers during the COVID-19 pandemic.

**H<sub>3</sub>:** There is a significant positive relationship between avoidant coping strategies and stress levels among healthcare workers during the COVID-19 pandemic.

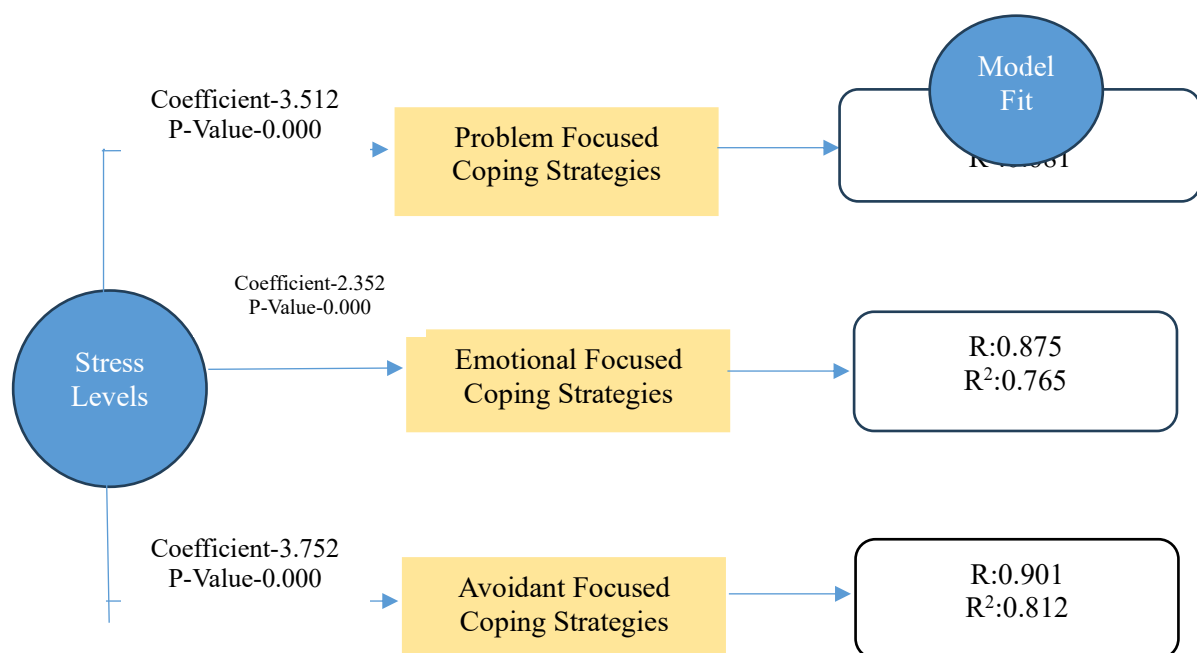


Figure explain of the regression model and hypotheses to show the connections between predictor variables (Problem, Emotional and Avoidant Focused Strategies) and the outcome variable (Stress Levels). Therefore the result as follows:

### **1. Problem-Focused Coping Strategies (Hypothesis 1):**

The model indicates that **problem-focused coping strategies** explain **68.1% of the variance** in stress levels ( $R^2 = 0.681$ ), reflecting a strong predictive relationship. The coefficient for stress levels ( $B = 3.512$ ) is statistically significant ( $p = 0.000$ ), meaning that higher stress levels are strongly associated with increased use of problem-focused coping strategies. This suggests that individuals experiencing higher stress are likely to engage in problem-solving behaviors, such as planning and seeking solutions, to manage their stress effectively.

### **2. Emotional-Focused Coping Strategies (Hypothesis 2):**

The model explains **76.5% of the variance** in stress levels ( $R^2 = 0.765$ ), showing a very strong relationship between stress levels and emotional-focused coping strategies. The coefficient for stress levels ( $B = 2.352$ ) is statistically significant ( $p = 0.000$ ), indicating that higher stress levels lead to greater reliance on emotional-focused strategies, such as seeking emotional support or managing feelings. This suggests that emotional regulation becomes a key coping mechanism for individuals under high stress.

### **3. Avoidant-Focused Coping Strategies (Hypothesis 3):**

The model reveals that **avoidant-focused coping strategies** account for **81.2% of the variance** in stress levels ( $R^2 = 0.812$ ), indicating the strongest relationship among the three strategies. The coefficient for stress levels ( $B = 3.752$ ) is statistically significant ( $p = 0.000$ ), demonstrating that individuals with higher stress levels are significantly more likely to engage in avoidance behaviors, such as ignoring the problem or distancing themselves from the stressor. This suggests that avoidant behaviors are a predominant coping strategy in response to heightened stress.

These findings emphasize that stress triggers different coping mechanisms, with avoidant behaviors being the most prominent response.

## **6. Conclusion**

This study provides valuable insights into the coping strategies employed by healthcare workers (HCWs) during the COVID-19 pandemic and their relationship with stress levels. The demographic analysis highlighted a balanced representation of doctors and nurses and a slightly higher proportion of male participants (60%), with most respondents aged 25–44, reflecting an experienced workforce likely to face significant occupational stress. The findings revealed varying reliance on coping strategies, with problem-focused coping being the most frequently used (54% occasionally), followed by emotion-focused and avoidant-focused coping strategies. While problem-focused coping—characterized by planning and addressing stressors—was the most preferred, only 9% of HCWs used it daily, indicating its limited practicality in the high-pressure healthcare environment. Emotion-focused strategies, such as seeking emotional support, were moderately employed (39%) and played a critical role in stress management, though only 28% relied on these mechanisms daily. Avoidant-focused coping, including behaviors like denial and self-distraction, was the most prominent daily strategy (30%), offering short-term relief but raising concerns about its potential to exacerbate long-term stress.

The regression analysis underscored significant relationships between stress levels and the three coping strategies. Avoidant-focused strategies showed the strongest association with stress ( $R^2 = 0.812$ ), indicating their prevalence as a primary response to heightened stress levels. Emotion-focused coping also exhibited a strong relationship ( $R^2 = 0.765$ ), highlighting the importance of emotional regulation in managing stress. Problem-focused coping, while effective in addressing stressors directly, explained a slightly lower variance in stress levels ( $R^2 = 0.681$ ), suggesting that it may not fully address the emotional and psychological demands faced by HCWs. Overall, the findings emphasize that heightened stress triggers diverse coping mechanisms, with avoidance being the most dominant response during crises.

In conclusion, the study highlights the critical need for interventions to improve stress management among HCWs. While avoidant-focused coping provides temporary relief, promoting problem-solving behaviors and emotional regulation strategies can offer more sustainable stress management solutions. Organizations should focus on providing psychological

support, stress management training, and structural changes to reduce work-related stressors. Equipping healthcare workers with effective coping mechanisms is essential not only for their well-being but also for maintaining the resilience of the healthcare system during public health emergencies.

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