

## EXAMINING THE PERCEPTION OF NURSES ABOUT MENTAL HEALTH CHALLENGES AND COPING STRATEGIES DURING AND AFTER CARE OF COVID-19 PATIENTS

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### ABSTRACT

**Background:** Examining nurses' perceptions of mental health challenges and coping strategies during and after caring for COVID-19 patients in Pakistan is crucial to understand the unique stressors and coping mechanisms within the local context, contributing valuable insights for tailored interventions and support systems in the health care settings.

**Objective:** To Examine the perception of Nurses about Mental Health Challenges and Coping Strategies during and after care of Covid-19 Patients

**Methodology:** During the pandemic, a cross-sectional study was undertaken, involving 116 nurses from a tertiary care hospital who worked with COVID-19 patients. Utilizing a structured questionnaire with categorical response options, information on mental health experiences, preventive strategies, and demographic characteristics was collected. Descriptive statistics, such as frequencies and percentages, were employed to characterize categorical variables. Statistical analyses, including chi-square tests, were used to discern significant associations among mental health challenges, reported symptoms, and prevention strategies.

**Results:** The study included 116 nurses with a mean age of 33.28±4.82 years, predominantly female (81.03%). Most nurses (37.24%) were aged 30-40 years, and over 47.41% had more than 6-months of experience with COVID-19 patients. Mental health challenges were categorized, revealing a high prevalence of physical violence (56.06%) among nurses with such issues. Significant associations ( $p < 0.001$ ) were found between mental health challenges and reported symptoms, as well as prevention strategies employed by nurses. Strategies included social distancing, adherence to SOPs, PPE use, with significant associations ( $p < 0.001$ ) observed between these measures and mental health challenges. Coping strategies involved meditation, religious activities, and social avoidance, showing significant associations with mental health challenges ( $p < 0.001$ ).

**Conclusion:** This study reveals nurses faces significant mental health challenges, notably physical violence, during and after caring for COVID-19 patients. Associations between mental health issues, symptoms, and preventive strategies underscore the complex relationship between nurses' well-being and their work environment. Coping strategies like meditation, religious activities, and social avoidance highlight diverse approaches to address mental health concerns. Recognizing and addressing nurses' mental health needs is crucial, emphasizing the importance of supportive interventions and tailored programs with in healthcare.

**Keywords:** Coping, Covid-19, Mental Health, Nurses

### INTRODUCTION

COVID-19 (coronavirus) is considered as one of the new strains of (SARS-CoV-2) which is consider as the acute respiratory syndrome. The world-wide prevalence of COVID-19 till date is

around 667 million cases and out of them 6.65 million death cases. The common symptoms of COVID-19 were common cold which leads to lungs damage or at times called as pneumonia COVID.

Initially the most vulnerable group were elderly people but later the death rate increased to many folds as it affects every age group. The main problem with the COVID is that it has different clinical manifestations. The confirm cases of COVID-19 patients showed the common symptoms of shortness of breath, fever and dry cough (Saddique et al., 2021). The study explores the mental health and emotional responses of nurses during the COVID-19 pandemic, focusing on their psychosocial system and coping mechanisms. It highlights the importance of these strategies in providing care and guiding the design of psychological interventions. (Maideen, A. A. & Abdul-Mumin, K. H. et al., 2022).

Pakistan health system is overburden and lack of resources. This is due to already overburden healthcare system resulting from various communicable diseases stacked against inadequate and inefficient response. A study finds that Moderate depression, anxiety, and stress were observed among nurses in Pakistan (Nadeem F. 2021).

In Pakistan, the latest updates showed that approximately 1.58 million cases were reported as COVID-19 positive cases while the total number of mortalities is around 30,638 (Saddique et al., 2021). Healthcare workers, including doctors, nurses, and other frontline workers, have been at the forefront of the response to the pandemic, putting their lives at risk to care for patients and support public health efforts. Being under developed country, Pakistan have faced a lot of challenges in terms of lack of infrastructure, lack of health care workers facilities regarding precautionary measures and awareness of common people in terms of how to keep themselves and other safe from pandemic. There has been not much data is present as literature where the role of nurses has been explained and their role in whole scenario have been appreciated. There is only one report from Karachi where they have observed the mental health of nurses in this whole pandemic have been observed (Alwaniet al., 2021). Nursing is considered as one of the biggest professions worldwide as approximately 20 million nurses are working all over the world and play pivotal role in health care setups in terms of infection control, patient care and their well-being (The Lancet, 2019). On the basis of their responsibilities they are the one who are facing a lot of occupational risks especially during the COVID-19 outbreak. In this

study, we will looking upon the (knowledge Attitude and Practices) KAP of the nurses, as there are very limited work done on it so far. There is a study designed in 2019 in which 159 nurses who have been assigned for the duties in Covid-19 ward have been selected to solve the questionnaire. The result showed that the regular nurses who have been assigned to work in pandemic situations have shown positive attitude towards the Covid-19 patients. This study concluded that the Indonesian nurses have positive attitude behavior towards the Covid-19 patients with the good professionalism (Marthoenis & Maskur, 2021).

The COVID-19 pandemic has significantly impacted the Pakistani healthcare system, particularly in Islamabad. As cases surged, general wards were transformed into isolation wards, requiring healthcare professionals with no COVID-19 expertise to provide care. (Chang et al., 2020).

#### MATERIAL AND METHODS:

**Study Design:** Descriptive exploratory design.

**Study Settings:** The study was conducted in Pakistan institute of Medical Sciences. It is largest public sector tertiary healthcare facility, treating patients referred from Punjab Khyber Pakhtoon Khawa and Kashmir.

**Duration of Study:** 9 months after approval of the Research Ethical Committee (REC).

**Sampling Technique:** Purposive sampling technique was used for data collection.

#### Inclusion Criteria:

- Registered Nurses of any gender and age working in selected healthcare facilities.
- Nurses who worked in Covid-19 wards during COVID-19 pandemic.
- Willing to participate in current study.

#### Exclusion Criteria:

- Nurses who have taken any training regarding challenges and stress coping methods in last six (06) months.
  - Nurses who dealt Covid-19 patients for less than a month.
  - Nurses currently enrolled in higher studies
- During the pandemic, a cross-sectional study was undertaken, involving 116 nurses from a tertiary care hospital who worked with COVID-19 patients. Utilizing a structured questionnaire with categorical response options, information on mental health

experiences, preventive strategies, and demographic characteristics was collected. Descriptive statistics, such as frequencies and percentages, were employed to characterize categorical variables. Statistical analyses, including chi-square tests, were used to discern significant associations among mental health challenges, reported symptoms, and prevention strategies.

**RESULTS**

**4.1 Demographics Profile of Study Participants.**

Table 1 presents the demographics, gender, age, and education level of nurses. The mean age of the study participants was 33.28±4.82 years. A total of n=94(81.03%) was female and remaining n=22(18.97%) were male nurses participated in the study. The majority (37.24%) of nurses were between 30-40 years (Figure 1a). Most of the nurses have more than >3years of experience in the field and with COVID-19 patients n=55(47.41%) having more than 6 months (Figure 1c&d). The of nurse’s qualification can be seen in table.1

Table 1	Description	Frequency	Percent	Valid %	Cumulative
Age	20-24	4	3.4	3.4	3.4
	25-29	21	18.1	18.1	21.6
	30-35	41	35.3	35.3	56.9
	35-40	37	31.9	31.9	88.8
	40 above	13	11.2	11.2	100
Gender	Female	94	81	81	81
	Male	22	19	19	100
General Experience	1 Month to 1 Year	1	0.9	0.9	0.9
	01-02 Year	9	7.8	7.8	8.6
	02-03 Year	27	23.3	23.3	31.9
	and above Year	79	68.1	68.1	100
Experience (COVID-19)	1-3 Months	32	27.6	27.6	27.6
	3-6 Months	55	47.4	47.4	75
	6- 1 Year and above	29	25	25	100
Professional Qualification	Diploma in General Nursing	115	99.1	99.1	99.1
	BS Nursing	1	0.9	0.9	100
	Post RN BSN	84	72.4	72.4	72.4
	MS Nursing	16	13.8	13.8	13.8
Specialization	Yes	70	60.3	60.3	60.3
	No	46	39.7	39.7	100

The table showed that 4(3.4%) subjects have age 20-24 years, 25-29 years Subjects have 21(18.1%), 30-35 years have age group were 41(35.3%), 35-40 years age group subjects were 37(31.9%) and remaining 13(11.2%) were above 40 years old age, female were 94(81.0%) and male were 22(19.0%).

Table showed that majority 79(68.1%) of the subjects in study were general experience greater than 3 years. that majority 55(47.4%) subjects in our study have 3-6 months COVID duty experience

and 29(25.0%) have COVID duty experience 6 months to 01 year. The above table showed that education qualification majority 115(99.1%) (Nursing) general nursing diploma education qualification majority diploma holders and only 1(0.9%) have BS Nursing 4 years degree. 84(72.4%) Post RN BSN (Nursing) and only 16(13.8%) have answer was Master of Nursing. The majority 70(60.3%) (Nursing) had Specialization in different discipline.

Table 2: Mental Health Challenges, symptom and Coping strategies during and after COVID -19 among Nurses

		Frequency	Percent	Valid Percent	Cumulative Percent
<b>If yes,please give brief detail during COVID-19 pandemic,what exactly was it</b>	None	11	9.5	9.5	9.5
	Phobia	7	6.0	6.0	15.5
	Stress	20	17.2	17.2	32.8
	Depression	32	27.6	27.6	60.3
	Anxiety	18	15.5	15.5	75.9
	Post Traumatic Disorder	28	24.1	24.1	100.0
<b>Total</b>		<b>116</b>	<b>99.9</b>	<b>99.9</b>	<b>294</b>
<b>If you suffered a mental health challenge, what caused it?</b>	None	11	9.5	9.5	9.5
	Sleep Disorder	18	15.5	15.5	25.0
	Physical Violence	68	58.6	58.6	83.6
	Post Traumatic Disorder	19	16.4	16.4	100.0
<b>Coping Strategies of Mental Health Challenges during COVID-19 Pandemic</b>					
<b>if you suffered a mental health challenge,how did you cope with it</b>	None	11	9.5	9.5	9.5
	Social Distance	7	6.0	6.0	15.5
	Adopted Lock Down SOPs	21	18.1	18.1	33.6
	PPEs at Workplace	16	13.8	13.8	47.4
	All Measures Taken	61	52.6	52.6	100.0
<b>Strategies Physically &amp; Psychologically of Mental Health Challenges post COVID-19 Pandemic</b>					
<b>If You Suffered Mental Health Challenges, How did you cope Physically/Psychologically</b>	None	11	9.5	9.5	9.5
	Increase Food Intake	21	18.1	18.1	27.6
	Reading and learning New Things	18	15.5	15.5	43.1
	Rest More	8	6.9	6.9	50.0
	Meditation	29	25.0	25.0	75.0
	Increased Religious Activities	29	25.0	25.0	100.0
<b>Social Strategies of Mental Health Challenges post COVID-19 Pandemic</b>					
<b>If You Suffered Mental Health Challenges, How did you cope Socially</b>	None	11	9.5	9.5	9.5
	Getting Family Support	14	12.1	12.1	21.6
	Watching Media	12	10.3	10.3	31.9
	Getting Peer Support	22	19.0	19.0	50.9
	Avoiding Gathering	57	49.1	49.1	100.0
<b>Work mate faced Mental Health Challenges during COVID-19 Pandemic</b>					
<b>Do you know any of your workmates who has suffered a mental health challenge</b>	Yes	105	90.5	90.5	90.5
	No	11	9.5	9.5	100.0
<b>If yes please brief detail during COVID-19 pandemic, what exactly was it</b>	None	10	8.6	8.6	8.6
	Phobia	11	9.5	9.5	18.1
	Stress	26	22.4	22.4	40.5
	Depression	29	25.0	25.0	65.5

	Anxiety	8	6.9	6.9	72.4
	Post Traumatic Disorder	32	27.6	27.6	100.0
	Total	116	100.0	100.0	
<b>If you know a workmate, who suffered a mental health challenge, what caused it</b>	None	10	8.6	8.6	8.6
	Getting Family Support	38	32.8	32.8	41.4
	Watching Media	53	45.7	45.7	87.1
	Getting Peer Support	15	12.9	12.9	100.0
	Total	116	100.0	100.0	
<b>Work mate Coping Strategies of Mental Health Challenges during COVID-19 Pandemic</b>					
<b>if you know a workmate suffered a mental health challenge, how did they cope with it</b>	None	10	8.6	8.6	8.6
	Social Distance	32	27.6	27.6	36.2
	Adopted Lock Down SOPs	48	41.4	41.4	77.6
	PPEs at Workplace	8	6.9	6.9	84.5
	All Measures Taken	18	15.5	15.5	100.0
	Total	116	100.0	100.0	

**Table 3: Psychosocial Factors Associated with the COVID -19 Pandemic among Nurses.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Generally, do you feel more stressed about the State of Emergency and State	Yes	84	72.4	72.4	72.4
	No	32	27.6	27.6	100.0
Do you get upset by thinking about COVID-19?	Yes	49	42.2	42.2	42.2
	No	67	57.8	57.8	100.0
Do you panic and overreact to news relating to COVID-19?	Yes	77	66.4	66.4	66.4
	No	39	33.6	33.6	100.0
Are you worried about losses/your job when the State of Emergency or State of lock down measures are imposed?	Yes	78	67.2	67.2	67.2
	No	38	32.8	32.8	100.0
Do you get worried about your family's health more than usual?	Yes	71	61.2	61.2	61.2
	No	45	38.8	38.8	100.0
Are you sleeping more / less than you normally do	I Sleep As Usual	40	34.5	34.5	34.5
	More Than Usual	34	29.3	29.3	63.8
	Less Than Usual	42	36.2	36.2	100.0

Table-2& 3 categorizes mental health challenges into various conditions and examines their prevalence along with these mental health issues among the participants. The physical violence was highly prevalent among n=60(56.06%) nurses with mental health issues.

The presented data also outlines the strategies employed to prevent the spread of COVID-19, alongside an examination of mental health challenges among nurses. The approaches encompass social distancing, adherence to lock down SOPs , utilization of PPEs in the work place, and the comprehensive implementation of

preventive measures by nurses. Most nurses (n=61) embraced all these measures to safeguard against COVID-19. The significance association ( $\chi^2=130.67$ ,  $\Phi=1.06$  &  $p<0.001$ ) between the prevention strategies and mental health challenges among nurses was also observed. The presented data showed the strategies employed by majority of nurses to cope with mental health challenges physically/ psychologically through meditation (n=29) and increased religious activities (n=29), while socially by avoiding the gathering (n=47) during and after caring for COVID-19 patients. The significance association between the prevention physically/psychologically as well as social strategies and mental health challenges among nurses was also observed.

The table illustrated that majority subjects 32(27.6%) workmate suffered a mental health challenge; how did they cope with it by social distancing. The table illustrated those majority subjects 84(72.4%) Generally, feel more stressed about the State of Emergency and secondly, majority subjects 67(57.8%) get upset by thinking about COVID-19. The table illustrated that majority subjects 77(66.4%) get panic and doing over react to news about COVID-19 and a huge number of subjects 78 (67.2%) worried about losses/ job when the State of Emergency or State of lock down measures are imposed.

The table illustrated that majority subjects 71 (61.2%) got worried about family's health more than usual. The table illustrated that majority subjects 42 (36.2%) sleeping more than you normally do.

## DISCUSSION:

Examining the perception of nurses regarding mental health challenges and coping strategies during and after the care of COVID-19 patients is a critical area of study, considering the unprecedent's train the pandemic has placed on health care professionals world wide. Here are some key points that could be discussed in such an examination: Nurses have been at the forefront of battling the COVID-19 pandemic, often working long hours in stressful and emotionally draining environments. This prolonged exposure to high-stress situations can lead to burnout and exhaustion. Witnessing the suffering and death of patients, along with the inability to provide adequate care

due to resource constraints, can result in trauma and emotional distress among nurses.

Nurses are also confronted with the fear of contracting the virus themselves or transmitting it to their loved ones, adding an additional layer of stress and anxiety. Many nurses rely on peer support networks to share experiences, frustrations, and seek advice from colleagues who can empathize with their situation. Providing nurses with access to mental health resources such as counseling services, support groups, and resilience training can help them cope with the emotional toll of their work.

Encouraging nurses to engage in self-care practices such as exercise, mindfulness, and hobbies outside of work can help alleviate stress and prevent burnout. Clear communication from hospital leadership regarding COVID-19 protocols, resources, and support initiatives can help nurses feel valued and supported in their roles. It's important to consider the long-term implications of nurses' experiences during the COVID-19 pandemic on their mental health and well-being. Post-traumatic stress disorder (PTSD), depression, and anxiety are potential long-term consequences that may require ongoing support and intervention.

Addressing mental health challenges among nurses is not only crucial for their own well-being but also for ensuring the continued delivery of quality patient care. Policymakers and healthcare organizations should prioritize the development and implementation of policies aimed at supporting the mental health needs of nurses. This may include allocating resources for mental health programs, providing training on coping strategies, and fostering a culture of psychological safety and support within healthcare settings.

Recognizing and addressing the unique challenges faced by nurses in different practice settings (e.g., hospitals, long-term care facilities, and community health centers) is essential for developing targeted interventions that meet their specific needs. This study was conducted following the COVID-19 pandemic in Pakistan. To the best of our knowledge, this is the first comprehensive and in-depth qualitative study investigating nurses' mental health and coping strategies throughout the COVID-19 outbreak. The pandemic outbreak period in Pakistan from pre-, during to post-COVID-19 has led to a natural transformation of nurses' psychological processes that are dynamic, initially

erratic, and gradually adaptive. Nurses in this study did not report any high-intensity emotional reactions when COVID-19 initially hit the world in late 2019. They started to feel a sense of apprehensiveness when the COVID-19 cases began to spread regionally and when they began to care for suspected COVID-19 cases.

The study findings concurred with the current evidence that nurses experience a high level of stress during the pandemic (Arnett et al., 2020; Park et al., 2018; Shorey & Chan, 2020) and are consistent with the qualitative study conducted by Zhanget al. (2020). Zhanget al. (2020).

Pointed out that nurses experienced three main stages of psychological changes when working during the COVID-19 pandemic. The stages are 1) Being ambivalent: the early stage, where nurses' mainly felt ambivalent when they were first informed, they were going to be deployed to Hubei province; 2) Emotional exhaustion: the middle stage, where the emotions they felt developed into stronger negative emotions such as anxiety, depression, and fear; and 3) Energy renewal: the later stage, where the psychological adaptation began to occur. Our findings further expanded these stages into seven and pinpointed that nurses experience psychological changes before, during, and after the COVID-19 outbreak. Unlike the linear process explained by Zhanget al. (2020), the current study highlighted the nurses' mental health and psychological experiences in providing care during the COVID-19 pandemic resembled a 'roller-coaster' ride. The stages are unpredictable, back and forth, and oscillating feelings experienced by the nurses, which impacted their mental health state and coping mechanisms at the time.

Nurses experience a gradual increase in positive emotions as the number of positive COVID-19 cases decreases. Still, their intense fear, anxiety, and stress persist, which is conflicting with the findings from a similar study in Taiwan (Chong et al., 2004). Their findings identified that the healthcare workers' fear and anxiety during the outbreak of SARS was sharp at the initial stage, but decreased after wards despite the number of cases continuing to surge. Interestingly, these healthcare workers had depression and post-traumatic stress disorder that lasted for a long time (Wu et al., 2009). Similarly, studies in Indonesia (Marathonist et al., 2021),

(Chew et al., 2020), and Croatia (Salopek-Ziha et al., 2020) also found a lower incidence of mental distress among nurses caring for COVID-19 cases in a long term, which are consistent with the current study findings. Perhaps the possible reasons for the differences are due to the nurses in previous studies having already experienced a recurrence of several pandemic/COVID-19 waves. Some other possible reasons that explain the discrepancy of findings on the yet high intensity of fear and anxiety among nurses in our study despite the absence of local cases are 1) awareness that in other countries, the COVID-19 pandemic has caused death among healthcare workers (Keles et al., 2021) the possible recurrence of yet several waves of COVID-19 pandemic and the unprecedented nature of COVID-19 pandemic.

**Conclusion:** This study reveals nurses face significant mental health challenges, notably physical violence, during and after caring for COVID-19 patients. Associations between mental health issues, symptoms, and preventive strategies underscore the complex relationship between nurses' well-being and their work environment. Coping strategies like meditation, religious activities, and social avoidance highlight diverse approaches to address mental health concerns. Recognizing and addressing nurses' mental health needs is crucial, emphasizing the importance of supportive interventions and tailored programs within healthcare.

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