

# Distress, Anxiety, and mental health status among frontliners after coronavirus prevention and control policy was relaxed in chengdu,china

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**Abstract:** As COVID-19 prevention and control measures are relaxed, there are few studies on the impact on frontline medical workers and few specific health intervention plans. The purpose of this study is to investigate the demographic characteristics of front-line medical personnel, distress, anxiety and the sleep situation, and then to propose a health plan.

**Keywords:** Anxiety; Descriptive; Correlational Design; Distress; Medical Frontliners; Sleep Quality

## 1 Introduction

The new coronavirus pandemic began in 2020 (Bai et al., 2020). Scientists, healthcare providers, government workers, and ordinary citizens lacked awareness of this new virus. A population of 69 percent experienced above-moderate psychological distress (Rahman et al., 2021). Psychological distress (PD) is a heterogeneous condition that includes anxiety, distress, depression, and low morale (Ridner, 2004), with varying degrees of impairment to mental health. Ma et al. (2020) found that psychological distress increased for Medical personnel closer to the outbreak of epidemic or assigned to patients affected by COVID-19. Medical frontliners of preventing the COVID19 had been facing more enormous pressure, including a high risk of infection and inadequate protection from contamination, overwork, frustration, discrimination, isolation, patients with negative emotions, a lack of contact with their families, and exhaustion (Li et al., 2020). To understand the personal characteristics, distress, anxiety and sleep quality of frontline medical staff after the relaxation of the prevention and control policy in 2022. To provide reference for the management system of the hospital, the national epidemic prevention and control policy, and the response to future public health emergencies.

## 2 Research object

A descriptive design was used in this study. Descriptive research design involves observing and collecting data on a given topic without attempting to infer causation. The goal of descriptive research is to provide a comprehensive and accurate picture of the population or phenomenon being studied and to describe the relationships, patterns, and trends present in the data (Sirisilla, 2023). Descriptive design was used to identify the personal characteristics, psychological distress, anxiety symptoms, and sleep quality problems of front-line medical personnel. This survey was conducted through the online survey tool "Questionstar", using The Kessler Psychological Distress Scale (K10), Self-Rating Anxiety Scale (SAS), and Pittsburgh Sleep Quality Index (PSQI).

## 3 Result

**Table 1: Personal Characteristics of the Medical Frontliners**

Personal Characteristics	F	%
<b>Age</b>		
18 – 35 years old	200	53.30
36 – 55 years old	173	46.10
56 years old and above	2	0.50
<b>Gender</b>		
Male	70	18.70
Female	305	81.30
<b>Marital Status</b>		
Single	54	14.40
Married	308	82.10
Divorced	10	2.70
Widowed	3	0.80
<b>Department</b>		
Nursing	229	61.10
Medical	106	28.30
Ancillary	24	6.40
Administrative	16	4.30
<b>Highest Educational Attainment</b>		
Technical Secondary School	6	1.60
Junior College	101	26.90
College graduate	252	67.20
Graduate Studies	16	4.30
<b>Whether Infected with COVID-19 or not</b>		
Yes	368	98.10
No	7	1.90
<b>Seriousness of the COVID-19 infection</b>		
Not Serious	16	4.30
A little serious	160	42.70
Serious	139	37.10
Very Serious	60	16.00
<b>Risk of Contracting COVID-19 infection</b>		
Not Dangerous at all	7	1.90
A Little Dangerous	129	34.40
More Dangerous	159	42.40
Very Dangerous	80	21.30

Note: n=375.

The table shows that just over half of the respondents were belonging to the 18 to 35 years old or were young adults. Majority of the respondents were females while few were males. This implies that medical frontliners are mostly females. Majority of the respondents were married, and very few were distributed to either being single, divorced or widowed. Majority of the respondents were belonging to the nursing department followed by over a quarter coming from the medical department. Majority of the respondents were college graduates while over a quarter were junior college graduates. Very few are in the graduate studies as well as on technical secondary school. Almost all of the respondents were infected with COVID-19 only very few were not. Almost half of the respondent viewed COVID-19 infection as a little serious while over one third viewed it as serious.

**Table 2: Level of Distress among Medical Frontliners**

Level of Distress	Average Score	f	%
Good mental health	12.39	75	20.00
Average mental health	18.99	115	30.67
Poor mental health	25.19	102	27.20
Very poor mental health	34.48	83	22.13
Average Score	22.78	Poor mental health	

Legend: 10 to 15 were classified as having good mental health, 16 to 21 as having average mental health, 22 to 29 as having poor mental health, and 30 to 50 as having very poor mental health.

The table shows that one third of the respondents had an average mental health considering the distress they experienced as at the average level as well. Over a quarter had poor mental health while almost a quarter had very poor and good mental health. Overall, the respondents had poor mental health on the basis of the experienced distress. This implies that most of the time they often feel tired for no reason and feel nervous. Also, most of the time they often feel stressed that there is nothing to calm their mind and often feel helpless. However, most of the time they often feel rested. Further, most of the time they often feel restless and depressed. Furthermore, most of the time they often find it difficult to do everything and often feel that nothing intrigues them. Lastly, most of the time they often feel bored. Also, more than 50 percent of people in our sample reported anxiety and distress about the COVID-19 pandemic.

**Table 3: Level of Anxiety among Medical Frontliners**

Level of Anxiety	Average Score	f	%
No Anxiety	42.45	44	11.73
Mild Anxiety	55.41	106	28.27
Moderate Anxiety	64.30	153	40.80
Severe Anxiety	73.98	72	19.20
Average Score	60.91	Moderate Anxiety	

Legend: Below 50 – no anxiety, 50-59 is mild anxiety, 60-69 is moderate anxiety, and greater than 69 is severe anxiety.

The table shows that for most of the respondents, they had a moderate anxiety while over a quarter of them had mild anxiety. Few had severe and very few had no anxiety at all. Overall, the respondents had a moderate anxiety.

**Table 4: Sleep Quality of the Medical Frontliners**

Sleep Quality	Average Score	f	%
<b>Subjective Sleep Quality</b>			
No Difficulty	0.00	37	9.87
Slight Difficulty	1.00	179	47.73
Having Difficulty	2.00	135	36.00
Severe Difficulty	3.00	24	6.40
Average Score	1.39	Having Difficulty	
<b>Sleep Latency</b>			
No Difficulty	0.00	43	11.47
Slight Difficulty	1.00	160	42.67
Having Difficulty	2.00	130	34.67
Severe Difficulty	3.00	42	11.20
Average Score	1.46	Having Difficulty	
<b>Sleep Duration</b>			
No Difficulty	0.00	100	26.67
Slight Difficulty	1.00	227	60.53
Having Difficulty	2.00	30	8.00
Severe Difficulty	3.00	18	4.80
Average Score	0.909	Slight difficulty	
<b>Sleep Efficiency</b>			
No Difficulty	0.00	3	0.80
Slight Difficulty	1.00	2	0.53
Having Difficulty	2.00	4	1.07
Severe Difficulty	3.00	366	97.60
Average Score	2.95	Severe Difficulty	
<b>Sleep Disturbance</b>			
No Difficulty	0.00	14	3.73
Slight Difficulty	1.00	200	53.33
Having Difficulty	2.00	137	36.53
Severe Difficulty	3.00	24	6.40
Average Score	1.45	Having Difficulty	
<b>Use of Sleep Medication</b>			
No Difficulty	0.00	304	81.07
Slight Difficulty	1.00	37	9.87
Having Difficulty	2.00	16	4.27
Severe Difficulty	3.00	18	4.80
Average Score	0.328	Slight Difficulty	
<b>Daytime Dysfunction</b>			
No Difficulty	0.00	44	11.73
Slight Difficulty	1.00	169	45.07
Having Difficulty	2.00	129	34.40
Severe Difficulty	3.00	33	8.80
Average Score	1.40	Having Difficulty	
<b>Overall Sleep Quality</b>			
No Difficulty	4.52	21	5.60
Slight Difficulty	8.19	211	56.27
Having Difficulty	12.46	123	32.80
Severe Difficulty	17.60	20	5.33
Average Score	9.89	Slight Difficulty	

Legend: from 0 (no difficulty), 0.01 – 1.00 is slight difficulty, 1.01 - 2.00 having difficulty, 2.01 – 3 (severe difficulty). The scores of the seven components are added together to produce an overall score ranging from 0 to 21, with higher scores representing poorer subjective sleep quality. 0 – 5 is no difficulty, 6 – 10 is slight difficulty, 11 – 16 is having difficulty, and 16 – 21 is severe difficulty.

The table shows that in terms of subjective sleep quality the respondents had difficulty achieving this. This is supported by the findings that most of them had a slight difficulty sleeping, followed by few having difficulty, and very few having no difficulty and having severe difficulty sleeping. This means that the respondents mentioned that during the past month, they had a fairly good rating of their overall sleep quality.

## 4 Conclusion

Just over half of the the front-line medical personnel were belonging to the 18 to 35 years old or were young adults. Almost all of the respondents were infected with COVID-19 only very few were not. Almost half of the respondent viewed COVID-19 infection as a little serious while over one third viewed it as serious. The front-line medical personnel had poor mental health on the basis of the experienced distress. The front-line medical personnel had a moderate anxiety while over a quarter of them had mild anxiety. Few had severe and very few had no anxiety at all. Most

of the front-line medical personnel had a slight difficulty sleeping, followed by few having difficulty, and very few having no difficulty and having severe difficulty sleeping. Based on the investigation, the following health plans can be proposed. Hospitals can consider allowing front-line medical staff to take vacations and travel to relax. Pay increases for frontline medical staff. Front-line medical staff can form self-help groups to learn relevant knowledge and get out of cognitive misunderstandings. Psychological counselling was provided to a small number of front-line medical staff with more serious psychological problems.

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