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Research Article

A Descriptive Study to Assess the Psychological Impact of Covid-19 Pandemic on Staff Nurses Working in Selected Tertiary Care Hospital of Ludhiana, Punjab

Aaqib Rashid[1], Batula Rashid[2], Tabindah Mukhtar[3], Syed Misbah[4]

[1,3,4]Nursing Tutor at RCON, India
[2]Assistant Professor at RCON, India
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I N F O

Corresponding Author:
Aaqib Rashid, Nursing Tutor at RCON, India
E-mail Id:
aaqibakkie786@gmail.com
Orcid Id:
https://orcid.org/0009-0000-9315-425X
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A B S T R A C T

Background: COVID-19, declared a pandemic by WHO in March 2020, is caused by SARS-CoV-2, affecting the respiratory and digestive systems. Symptoms range from mild to severe, with asymptomatic individuals also spreading the virus. Vulnerable groups include the elderly, those with underlying conditions, and children. Healthcare workers face physical, emotional, and mental health challenges.

Aim: To evaluate the psychological effects of the COVID-19 pandemic on staff nurses employed by a few Ludhiana, Punjab, tertiary care hospitals.

Materials and Methods: A descriptive research design assessed the psychological effects of COVID-19 on staff nurses in Ludhiana, Punjab. The pilot study included eight nurses, and 80 nurses from Nurses Hostel Malakpur, working at Dayanand Medical College & Hospital, were selected via convenience sampling. Data were collected electronically using online forms and analyzed using descriptive and inferential statistics.

Results: The study's findings showed that the majority of nurses (62%) knew nothing about the coronavirus prior to the COVID-19 pandemic and that 70% of them did not know of any significant others who had the virus. Additionally, some nurses reported that their coworkers (21%) had tested positive for the virus. Seventy percent of nurses looked for information about COVID-19 on the Internet or social media.

Conclusion: During the COVID-19 pandemic, 67.5% of nurses reported a positive public perception of healthcare workers. While 20% experienced moderate depression, 65% had normal depression scores. Moderate anxiety was present in 31.3%, and 75% had varying anxiety levels. Stress was subclinical in 76.3%, with mild stress (11.3%) linked to COVID-19. Factors like limited prior knowledge, exposure to infected individuals, media usage, and societal attitudes were associated with nurses' depression, anxiety, and stress. Overall, nurses reported low stress, moderate anxiety, and depression levels.

Keywords: Psychological Impact, Covid-19, Staff Nurses

Introduction

Outbreaks of infectious diseases are rather frequent and frequently result in a global response that involves thousands of healthcare workers (HCWs). Infectious diseases including Zika, SARS, Ebola, and H1N1 have become common in recent years, posing major risks to human development and health. Infectious diseases that have been identified in human hosts for the first time are referred to as newly emerging infectious diseases.[1] They typically start in a nation and have a negative impact on the populations they are affiliated with. Globalization and transportation advancements have led to a sharp rise in international travel, increasing the risk of newly developing infectious illnesses spreading globally. The Middle East respiratory syndrome (MERS) in Saudi Arabia in 2012, the novel swine-origin influenza A (H1N1) in Mexico in 2009, the severe acute respiratory syndrome (SARS) in China in 2002, and Ebola in Guinea in 2013 were all newly emerging infectious diseases of the twenty-first century that affected people all over the world.[2,3]

A new infectious illness outbreak known as Corona Virus illness 2019 (COVID-19) was first identified in Wuhan, Hubei province, China, in December 2019. The sickness swiftly spread over the entire nation. As the number of infected cases increased quickly, COVID-19 quickly attracted international attention.[4] On January 30, 2020, WHO formally designated the COVID-19 outbreak as a Public Health Emergency of International Concern (PHEIC).[5] On February 11, 2020, the new virus was named "severe acute respiratory syndrome corona virus 2 (SARS-CoV-2)" by the International Committee on Taxonomy of Viruses (ICTV). The illness was known as 2019-nCoV (2019 novel corona virus) prior to its renaming by the International Committee of Viral Classification on February 12, 2020. By March 11th, 2020, the World Health Organization (WHO) classified COVID-19 to be a pandemic. SARS-CoV-2 spreads easily. Its symptoms, which range from mild self-limited sickness to severe pneumonia, acute respiratory distress syndrome, septic shock, and even systemic multiple organ failure syndrome, are primarily related to the respiratory and digestive tract. Patients with SARS-CoV-2 infections are the primary source of infection for COVID-19.[6] Asymptomatic sick individuals can also spread the infection, primarily through direct touch but also by respiratory tract aerosols. Children and newborns are also at danger, as are elderly individuals with underlying medical conditions who are more prone to contract the virus and experience severe illness. There are currently no particular medications for this illness. Antivirals, isolation, symptomatic support, and careful observation of the disease's course are the mainstays of nursing and therapy.[7,8]

Previous research has demonstrated that nurses make unselfish contributions out of moral and professional obligation amid unexpected natural disasters and infectious diseases, putting aside their personal needs to actively participate in the anti-epidemic effort. The high-intensity job brought on by such public health emergency would also put nurses under physical and mental stress, making them feel alone and powerless in the face of health risks. According to earlier research, nurses who have intimate contact with patients who have emerging infectious diseases like SARS, MERS, Ebola, or H1N1 experience a variety of physical and mental health issues, including exhaustion, worry, fear, loneliness, and sleep disturbances.[9] Since COVID-19 is a new disease and different nations have diverse medical systems and cultures, more research is required to determine the psychological effects of the pandemic on staff nurses.

Need of The Study

Nurses, as frontline workers in the COVID-19 pandemic, face immense strain due to frequent exposure to suspected patients, risking both physical and mental health. The increased workload, fear of infecting their families, and constant stress lead to anxiety, PTSD, burnout, and physical illness. The risk of infection, lack of support, and high expectations add to the psychological burden. Many healthcare workers, especially nurses, have experienced mental health issues during infectious outbreaks. The death and illness of front-line workers further exacerbate this strain, highlighting the need to assess their psychological well-being during this crisis.

Methodology

Quantitative information on the psychological effects of COVID-19 on staff nurses was gathered using a quantitative study methodology. To investigate the psychological effects of COVID-19 on staff nurses, a descriptive research design was employed. The current study, which focused on medical unit staff nurses, was carried out at Dayanand Medical College & Hospital in Ludhiana. Eighty staff nurses made up the entire sample. The following inclusion and exclusion criteria were taken into consideration when the convenience sampling approach, a non-probability sampling method, was used to draw the sample. The instrument was created using A thorough analysis of the literature, as well as the opinions and recommendations of professionals in the fields of research, psychiatry, and nursing There were two components to the tool: Age, gender, marital status, occupation, religion, family structure, employment history, socioeconomic standing, prior awareness of the corona virus, and any notable known individuals affected with the virus were all included in the sociodemographic profile. COVID-19, communication channels used to get information about the pandemic, how many hours of sleep a person gets each day, how much time they spend relaxing, how long they spend on

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social media during the pandemic, and how society views healthcare professionals during the pandemic. The 21-item DASS-21 (DEPRESSION, ANXIETY, AND STRESS SCALE) rating scale was used to evaluate the psychological effects of the COVID-19 epidemic. The tool consisted of two parts: the sociodemographic profile comprised age, gender, marital status, occupation, religion, family structure, job history, socioeconomic status, prior awareness of the corona virus, and any significant known individuals infected by the virus. How much sleep a person gets each day, how much time they spend resting, how much time they spend on social media during the epidemic, how society perceives healthcare professionals during the pandemic, COVID-19, and the communication channels utilized to obtain information about the pandemic. The COVID-19 epidemic's psychological consequences were assessed using the 21-item DASS-21 (DEPRESSION, ANXIETY, AND STRESS SCALE) rating scale. Table 1

Criterion Measure

Table I.Scoring criteria for depression, anxiety and stress

Symptoms	Depression	Anxiety	Stress
Normal	0-9	0-7	0-14
Mild	10-13	8-9	15-18
Moderate	14-20	10-14	19-25
Severe	21-27	15-19	26-33
Extremely Severe	28+	20+	34+

Results And Discussion

Table II presents the sociodemographic characteristics of 80 staff nurses, detailing factors such as age, gender, education, marital status, religion, work experience, socioeconomic status, and their engagement with COVID-19-related information. The majority (81.25%) were aged 21–25, with all participants being female. Most nurses held a B.Sc. in nursing (97.5%) and were unmarried (87.5%). Sikhs (66.25%) represented the largest religious group, followed by Hindus (31.25%). Most nurses came from rural areas (60%) and nuclear families (78%). Experience varied, with 53.75% having less than one year of experience. Socioeconomically, 43.75% were from the upper middle class. Prior to COVID-19, 62.5% had no knowledge of the virus, and 21.25% knew someone affected. A large portion (72%) used social media to gather COVID-19 information, with 76.25% searching for less than an hour daily. Sleep patterns varied, with 53.75% sleeping 6–8 hours. Many engaged in leisure activities for 1–30 minutes daily (45%) and interacted with family via social media (48.5%). During the pandemic, 67.5% of nurses reported a positive public view of healthcare workers.

Table 2.Frequency and percentage distribution of staff nurses as per the socio- demographic characteristics

N=80

Variables	f(%)
Age(in years)	
21-25	65(81.25)
26-30	11(13.75)
>31	04(5)
Qualification	
GNM	02(2.5)
B.Sc.	78(97.5)
Marital status	
Unmarried	70(87.5)
Married	10(12.5)
Religion	
Sikh	53(66.25)
Hindu	25(31.25)
Christian	01(1.25)
Other	01(1.25)
Habitat	
Rural	48(60)
Urban	32(40)
Type of family	
Nuclear	63(78.75)
Joint	17(21.25)
Experience (in years)	
<1	43(53.75)
1-5	33(41.25)
6-10	01(1.25)
>10	03(3.75)
Socio-economic status (as per Modified Kuppuswamy Scale, 2019)	
Upper	09(11.25)
Upper middle	35(43.75)
Lower middle	25(31.25)
Upper lower	09(11.25)
Lower	02(2.5)
Any previous knowledge about Corona virus before onset of COVID-19 pandemic?	
Yes	30(37.5)
No	50(62.5)

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Any significant person infected with COVID-19?	
None	56(78)
Sibling	01(1.25)
Friend	04(5)
Coworker	17(21.25)
Other	02(2.5)
Communication media used to obtain COVID-19 related information:-	
Print media	09(9.6)
Electronic media	19(20.2)
Internet/ social media	66(70.2)
Number of hours spent per day to search COVID-19 related information:-	
≤1	61(76.25)
1-2	15(18.75)
2-3	01(1.25)
>3	02(2.5)
Not fixed	01(1.25)
Duration of sleep per day (in hours) during COVID-19 pandemic:-	
≤4	03(3.75)
4-6	26(32.5)
6-8	43(53.75)
>8	08(10)
Duration of recreational activity during COVID-19 pandemic:-	
0 minutes	16(20)
1-30minutes	36(45)
30minutes-1hour	20(25)
>1hour	08(10)
Duration of contact with family through social media during COVID-19 Pandemic:-	
0 minutes	08(10)
1-30minutes	39(48.75)
30minutes-1 hour	22(27.5)
>1hour	13(16.25)
Attitude of society towards health care workers during COVID-19 pandemic:-	
Positive	54(67.5)
Negative	26(32.5)

Table III shows the percentage distribution of staff nurses according to the psychological impact of COVID-19. For example, 35% of staff nurses have depression, 75% have anxiety, and only 23.7% have stress as a result of the COVID-19 pandemic.

Table IV shows the frequency distribution of COVID-19-related depression among staff nurses by level. Thirty-five percent of staff nurses suffer from mild to severely severe depression, while 65 percent are depressed. In relation to the COVID-19 pandemic, 6.3% of people have mild depression, 20% have moderate depression, 3.8% have severe depression, and 5% have extremely severe depression.

Table V shows the frequency distribution of staff nurses according to their COVID-19 pandemic anxiety level. In relation to the COVID-19 pandemic, 12.5% of people experience light anxiety, 31.3% have moderate anxiety, 11.3% have severe anxiety, and 20% have extremely severe anxiety. Because of the COVID-19 pandemic, just 25% of all staff nurses are anxiety-free.

Table VI shows the percentage distribution of staff nurses according to the COVID-19 pandemic stress level. 76.3% of staff nurses, a sizable portion, report minimal stress from the COVID-19 pandemic. 11.3% of all staff nurses experience mild stress. Staff nurses experience moderate, severe, and extremely severe levels of stress at rates of 5%, 6.3%, and 1.3%, respectively.

Table 3.Percentage distribution of staff nurses as per psychological Impact of COVID-19 pandemic

N=80

Components of psychological impact	Psychological impact		
	Cut-off scores	Yes f(%)	No f(%)
Depression	≥10	28(35)	52(65)
Anxiety	≥8	60(75)	20(25)
Stress	≥15	19(23.7)	61(76.3)

Maximum scores=42

Minimum scores=0

Table 4.Frequency distribution of staff nurses as per level of depression related to COVID-19 pandemic

N=80

Depression	Criteria	f(%)
Normal	0-9	52 (65)
Mild	10-13	05 (6.3)
Moderate	14-20	16 (20)
Severe	21-27	03 (3.8)
Extremely severe	28+	04 (5)

Mean Score ±SD=8.83±8.6 Maximum depression score=42 Minimum depression score=0

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Table 5.Frequency distribution of staff nurses as per level of anxiety related to COVID-19 pandemic

N=80

Anxiety	Criteria	f(%)
Normal	0-7	20 (25)
Mild	8-9	10 (12.5)
Moderate	10-14	25 (31.3)
Severe	15-19	09 (11.3)
Extremely severe	20+	16 (20)

Mean Score ±SD=13.45±8.9 Maximum anxiety score= 42 Minimum anxiety score=0

Table 6.Frequency distribution of staff nurses as per level of stress related to COVID-19 pandemic

N=80

Stress	Criteria	f(%)
Normal	0-14	61 (76.3)
Mild	15-18	09 (11.3)
Moderate	19-25	04 (5)
Severe	26-33	05 (6.3)
Extremely severe	34+	01 (1.3)

Mean Score ±SD=9.83±8.4 Maximum stress score= 42 Minimum stress score=0

Results

According to the results of this study, 65% of staff nurses have depression scores that are within normal limits, while the remaining 35% have mild to extremely severe depression levels (mild depression = 6.25%, moderate depression = 20%, severe depression = 3.75%, and extremely severe depression = 5%). Additionally, 25% of staff nurses have anxiety scores that are within normal limits, while the remaining 75% have mild to extremely severe anxiety levels (mild anxiety = 12.5%, moderate anxiety = 31.3%, severe anxiety = 11.3%, and extremely severe anxiety = 20%). While 24.7% of staff nurses had light to extremely severe stress during the COVID-19 pandemic, 76.3% of them reported subclinical stress, with mild stress accounting for 11.3%, moderate stress for 5%, severe stress for 6.3%, and extremely severe stress for 1.3%.

According to the current study's findings, there is a significant correlation between depression and sociodemographic variables, including habitat, socioeconomic status, a significant known COVID-19 infection, communication media used to search for COVID-19 information, and societal attitudes toward health workers (p≤0.05). Sociodemographic characteristics and anxiety were shown to be significantly correlated with communication medium utilized to look for COVID-19 information and societal attitudes toward health personnel ($p < 0.05$). Habitat, socioeconomic status, prior knowledge of COVID-19, communication media used to search for COVID-19 information, a significant known person infected with COVID-19, and societal attitudes toward health workers were found to be significantly associated with stress ($p \leq 0.05$).

Discussion

Most staff nurses suffered mild melancholy, moderate anxiety, and mild stress related to the COVID-19 epidemic, according to the study's findings. Staff nurses' depression was linked to urban living, affluent socioeconomic position, a COVID-19-infected coworker, using communication media to look for information about the virus, and an unfavorable societal perception of health professionals (p≤0.05).[10] Anxiety was linked to negative societal attitudes toward health workers and communication medium used to look for COVID-19 material (p≤0.05).[11] Urban living, upper-class socioeconomic position, lack of prior awareness about COVID-19, using communication media to look up information about the virus, having a coworker infected with COVID-19, and a bad societal perception of health professionals were all linked to stress (p≤0.05).[12,13]

Conclusion

Stress was subclinical in 76.3%, with mild stress (11.3%) linked to COVID-19. Factors like limited prior knowledge, exposure to infected individuals, media usage, and societal attitudes were associated with nurses' depression, anxiety, and stress. Overall, nurses reported low stress, moderate anxiety, and depression levels.

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