



THE ASSESSMENT OF PSYCHOLOGICAL DISTRESS AND ACTIVITIES OF DAILY LIVES AMONG RECOVERED NURSES FROM COVID-19 IN PUNJAB, PAKISTAN

Tanzeel Ul Rahman^{1*}, Ali Hamza², Sahahrukh Khan³, Maryam⁴, Shamsheer Bhatti⁵

^{1*}Vice Principal, Pakistan Kidney and Liver Institute & Research Center, Institute of Nursing and Allied Health Sciences, Lahore, Pakistan

²Charge Nurse, Mayo Hospital, Lahore, Pakistan

³Charge Nurse, Mayo Hospital, Lahore, Pakistan

⁴Charge Nurse, Mayo Hospital, Lahore, Pakistan

⁵Nursing Officer, Shalamar Nursing College, Lahore, Pakistan

***Corresponding Author:** Tanzeel Ul Rahman

*Vice Principal, Pakistan Kidney and Liver Institute & Research Center, Institute of Nursing and Allied Health Sciences, Lahore, Pakistan

Email: mr.tanxeel@gmail.com

Abstract

Objective: To determine the relationship between psychological consequences and daily living activities among recovered nurses from COVID-19 in the Jinnah Hospital of Lahore, the study aimed to assess psychological consequences, including depression (disorder and generalized anxiety disorder), and daily living activities among these nurses.

Methods: The current study's descriptive correlation design revealed that, between October 10, 2022, and March 20, 2023. A suitable sample of 143 nurses who recovered from COVID-19 was utilized in the study. The study's instruments were chosen and adjusted specifically for this investigation.

Results: The study found that among recovered nurses from COVID-19, over half (53.1%) had moderate depression disorders, roughly one-third (30.9%) complained of generalized anxiety disorders, and the majority (93%) of recovered nurses from COVID-19 reported being able to perform their daily activities well.

Conclusion: The findings can be concluded that among recovered COVID-19 nurses, there was a negative, highly significant correlation between generalized anxiety disorder and daily living activities at P-value ≤ 0.05 and between depression disorder and daily living activities at P-value ≤ 0.05 .

Keywords: Nurses, COVID-19, Psychological Distress, Activities of Daily Lives

Introduction

Nurses play an important part of the healthcare system. Studies have not yet been concluded, nevertheless, on the effects of years spent on nursing and mental health on low work potential in

nurses during the COVID-19 crisis. Compared to other healthcare professionals, nurses were among the first responders with the biggest psychological impact during the COVID-19 pandemic. A direct influence was present. There was a somewhat favorable correlation between anxiety, depression, and job impairment (Razon, S. & Tokac, U., 2021).

Rehabilitation measures are necessary for COVID-19-affected recovered nurses. Even after receiving physical therapy, nurses may experience poor physical performance. COVID-19 puts a strain on the healthcare professional, the patient's family, and friends in addition to having negative effects on the patient's independence and engagement. After being admitted to the hospital, multi-ill nurses affected by COVID-19 would either recover slowly or not at all (Belli, S. et al.2020). Many clinical staff members who were able to contain the virus and remove their ventilators may face long-term physical, emotional, and psychological issues, such as depression, anxiety disorders, job loss, difficulty performing daily tasks like eating and bathing, and cognitive deficits akin to Alzheimer's disease, a year after leaving the intensive care unit, according to multiple studies (Johnson, C.Y., & Cha, A.E.2020).

Research Objective

The study aimed to assess psychological consequences, including depression (disorder and generalized anxiety disorder), and daily living activities among recovered nurses from COVID-19 in the Jinnah Hospital and to find out the relationship between psychological consequences and daily living activities among recovered nurses from COVID-19 in the Public Hospitals of Lahore

Method

To determine the prevalence of psychological consequences, such as depression and anxiety disorders, and daily living activities among recovered nurses from COVID-19, a descriptive correlation design study was conducted between October 28, 2022, and May 15, 2023, in educational within the Jinnah Hospital of Lahore, Punjab. Additionally, the study sought to determine any relationships that may exist between psychological consequences and daily living activities among these recovered nurses.

Activities of Daily Living (ADLs), Generalized Anxiety Disorder Scale (GAD-7), and Patient's Health Questionnaire (PHQ-9). Through the use of statistical techniques, both inferential and descriptive, SPSS version 25.0 was utilized to evaluate the data. Using the mean of the score law, the researcher divided the cut-off points for the scales utilized.

This is the most important portion of the research, and it started the sample collection process on December 14, 2022, with ethical considerations in mind. The researchers received the first approval from the Ethical Committee of the concerned Public Hospital.

Lastly, the nurses' informed agreement to participate in this study was obtained before data collection and questionnaire completion. The subject is informed by the researcher that their information will be kept completely private and used just for study. Written and completed informed consent forms were provided. To concur or differ before the nurse completes the survey.

Results

Table 1. Descriptive analysis of Depression disorder items among recovered nurses from COVID-19 (PHQ-9)

Items	Responses	F	%	M	SD	Asses
Little interest or pleasure in doing things	Not at all	53	37.1	2.59	1.35	Mode rate
	Nearly every day	12	8.4			
	More than half the days	18	12.6			
	Several days	60	42.0			
	Total	143	100.0			

Feeling down, depressed, or hopeless	Not at all	42	29.4	2.67	1.26	Mode rate
	Nearly every day	18	12.6			
	More than half the days	28	19.6			
	Several days	-	-			
	Total	55	38.5			
Trouble falling or staying a sleep, or sleeping too much	Not at all	54	37.8	2.36	1.27	Mode rate
	Nearly every day	28	19.6			
	More than half the days	16	11.2			
	Several days	45	31.5			
	Total	143	100.0			
Felling tired or having little energy	Not at all	31	21.7	2.76	1.15	Mode rate
	Nearly every day	23	16.1			
	More than half the days	38	26.6			
	Several days	51	35.7			
	Total	143	100.0			
Poor appetite or overeating	Not at all	47	32.9	2.52	1.26	Mode rate
	Nearly every day	23	16.1			
	More than half the days	25	17.5			
	Several days	48	33.6			
	Total	143	100.0			
Feeling bad about yourself or that you are a failure or have let yourself or your family down	Not at all	110	76.9	1.55	1.06	Low
	Nearly every day	4	2.8			
	More than half the days	12	8.4			
	Several days	17	11.9			
	Total	143	100.0			
Trouble concentrating on things such as reading the newspaper or watching television	Not at all	75	52.4	2.09	1.27	Mode rate
	Nearly every day	14	9.8			
	More than half the days	20	14.0			
	Several days	34	23.8			
	Total	143	100.0			
Moving or speaking so slowly that other people could have noticed ? or the opposite being so fidgety or restless that you have been moving around a lot more than usual	Not at all	81	56.6	1.98	1.23	Low
	Nearly every day	13	9.1			
	More than half the days	20	14.0			
	Several days	29	20.3			
	Total	143	100.0			
Thoughts that you would be better off dead or of hurting yourself in some way	Not at all	120	83.9	1.34	.84	Low
	Nearly every day	6	4.2			
	More than half the days	8	5.6			
	Several days	9	6.3			
	Total	143	100.0			

Cut of points value(1): low = (1-2), Moderate = (2.1 - 3), High = (3.1 - 4). M = Mean, SD=standard deviation, F=frequency, % =percentage.

The item "feeling tired or having little energy" had a maximum mean of 2.76 in Table 1, while the item "feeling bad about yourself or that you are a failure or have let yourself or your family down" had a minimum mean of 1.55.

Table 2: Descriptive analysis of overall depression disorder among recovered nurses from COVID-19 (PHQ-9)

Ranking	F	%	M	SD	Overall assessment
Low	57	39.9	2.2	.633	Moderate
Moderate	76	53.1			
High	10	7.0			
Total	143	100.0			

Cut of points value(1): low = (1-2), Moderate = (2.1 - 3), High = (3.1 - 4). M = Mean, SD=standard deviation, F=frequency, % =percentage.

Table 1.2 Show that more than half 76 (53.1%) of recovered nurses from COVID- 19 were having moderate depression disorder.

Table 3: Descriptive analysis of items of generalized anxiety disorder among recovered nurses from COVID-19. (GAD-7)

Items	F	%	M	SD	Asses.	
Feeling nervous, anxious or on edge	Not at all	43	2.73	1.311	Moderate	
	Nearly every day	17				11.9
	More than half the days	18				12.6
	Several days	65				45.5
	Total	143				100.0
Not being able to stop or control worrying	Not at all	64	2.31	1.334	Moderate	
	Nearly every day	17				11.9
	More than half the days	15				10.5
	Several days	47				32.9
	Total	143				100.0
Worrying too much about different things	Not at all	54	2.45	1.293	Moderate	
	Nearly every day	18				12.6
	More than half the days	24				16.8

	Several days	47	32.9			
	Total	143	100.0			
Trouble relaxing	Not at all	52	36.4	2.53	1.315	Moderate
	Nearly every day	16	11.2			
	More than half the days	22	15.4			
	Several days	53	37.1			
	Total	143	100.0			
Being so restless that it is hard to sit still	Not at all	75	52.4	2.15	1.316	Moderate
	Nearly every day	11	7.7			
	More than half the days	18	12.6			
	Several days	39	27.3			
	Total	143	100.0			
Becoming easily annoyed or irritable	Not at all	37	25.9	2.69	1.217	Moderate
	Nearly every day	23	16.1			
	More than half the days	30	21.0			
	Several days	53	37.1			
	Total	143	100.0			
Feeling afraid as if something awful might happen	Not at all	69	48.3	2.10	1.212	Moderate
	Nearly every day	20	14.0			
	More than half the days	25	17.5			
	Several days	29	20.3			
	Total	143	100.0			

Cut of points value (1): low = (1-2), Moderate = (2.1 - 3), High = (3.1 - 4). M = Mean, SD=standard deviation, F=frequency, % =percentage.

Table 3: Indicates that the item "Feeling nervous, anxious, or on edge" had a maximum mean of 2.73 and a minimum mean of 2.10 (Feeling terrified as if something dreadful might happen).

Table 4: Descriptive analysis of overall generalized anxiety disorder among recovered nurses from COVID-19 (GAD-7)

Ranking	Frequency	Percent	M	SD	Overall assessment
Low	51	35.7	2.42	.807	Moderate
Moderate	57	39.9			
High	35	24.5			
Total	143	100.0			

Cut of points value(1): low = (1-2), Moderate = (2.1 - 3), High = (3.1 - 4). M = Mean, SD=standard deviation, F=frequency, % =percentage.

Table 4 Show that about third 57 (39.9%) of recovered nurses from COVID-19 were complaining of general anxiety disorder.

Table 5: Descriptive analysis of overall daily living activities among recovered Nurses from COVID-19

Ranking	Frequency	Percent	M	SD	Overall assessment
Poor	0	0	2.79	.240	Good
Fair	10	7.0			
Good	133	93.00			
Total	143	100.0			

Cut of points value (0.66): Poor = (1-1.66), Fair = (1.67-2.33), Good = (2.34-3). M = mean, SD=standard deviation, F=frequency, % = percentage.

Table 5 Shows that 133(93%) of the daily living activities of Nurses who recovered from COVID-19 were good.

Table 6: Correlation between depression disorder and daily living activities among recovered Nurses from COVID-19

Daily living activities among Recovered Nurses from COVID-19.				Total	Correlation	
Depression disorder among recovered nurses from COVID-19.		Fair	Good		Spearman n's rho	P-value
	Low	1	56	57		
	Moderate	8	68	76		
	High	1	9	10		
Total		10	133	143		
**Correlation is significant at the 0.01 level.						
*Correlation is significant at the 0.05 level.						

Table 6 shows a negative highly significant correlation between depression disorder and daily living activities among recovered Nurses from COVID-19 at P- value ≤ 0.05 .

Table 7: Correlation between generalized anxiety disorder and daily living activities among recovered Nurses from COVID-19

Daily Living Activities among Recovered Nurses from COVID-19				Total	Correlation	
Generalized anxiety disorder among recovered nurses from COVID-19.	Moderate		Good		Spearman's rho	P-value
	Low	1	50	51		
	Moderate	7	50	57		
	High	2	33	35		
Total		10	133	143		
**Correlation is significant at the 0.01 level.						
*Correlation is significant at the 0.05 level.						

Table 7 shows a negative highly significant correlation between generalized anxiety disorder and daily living activities among recovered Nurses from COVID-19 at P-value ≤ 0.05 .

Discussion

Depression disorder items among recovered nurses from COVID-19

According to the results of the data analysis for Table (1), 53,1% of the nurses who recovered from COVID-19 had a moderate depression problem. This finding was consistent with a study that evaluated the impact of depression on quality of life among frontline nurses working in emergency rooms during the COVID-19 pandemic. Out of the total number of participating nurses (1103), the study's results indicated that the prevalence of depression among nurses was 43.61%. This included (27.7%) cases of mild depression, (8.6%) cases of moderate depression, (5.3%) cases of moderate to severe depression, and (2.1%) cases of severe depression (An, Y., et al., 2020).

To evaluate clinical personnel in Jordan during the COVID-19 pandemic for anxiety, sadness, stress, dread, and social support, Alnazly, E., et al. (2021) conducted research. The study's findings demonstrated that women made up the bulk of its 365 participants and that 40% of them were nurses who suffered from severe depression—of the total number of participating nurses (1103), depression and (2.1%) had severe depression (An, Y., et al., 2020).

During the COVID-19 pandemic, Côté, J. et al. (2022) performed a cross-sectional study to evaluate psychological distress, depression symptoms, and weariness among nursing personnel in Quebec. The study's conclusions demonstrated that 27% of all nurses (1708) had moderate to severe depression and that 87% of participants were female.

Generalized anxiety disorder among recovered nurses from COVID-19

According to table (3) data analysis results, approximately one-third (39.9%) of the COVID-19-recovered nurses reported having a general anxiety problem. This finding was consistent with research done to evaluate stressors associated with COVID-19 and anxiety in nursing personnel working shifts at four COVID-19-focused hospitals in Korea. The study's findings revealed that 122 (32%) of the participating nurses had generalized anxiety disorder, with the majority of them being female and under the age of fifty (Park, S., et al., 2021).

A Research by Feingold, J.H., et al. (2021) evaluated the psychological effects of the COVID-19 pandemic on frontline nursing workers in New York City during the pandemic surge. Based on the study's findings, 642 participants, or 25% of the entire sample of 1005 participants, had generalized anxiety disorder. To evaluate the experiences of front-line nursing workers in Egypt and Saudi Arabia regarding depression, anxiety, and stress during the COVID-19 epidemic, Arafa, A., et al. (2021) carried out a cross-sectional study. The findings demonstrated that, out of the 426 participants, the proportion of healthcare workers with generalized anxiety disorder (55.9%) was the highest globally.

Activities of daily living among recovered nurses from COVID-19

According to table (5) data analysis results, 133 (93%) of the recovered nurses from COVID-19 had good daily living activities. Numerous research investigations examining daily life activities from the start of the pandemic to the present day have demonstrated a continuous improvement in the daily activities of those recuperating with COVID-19.

A study was carried out by Taboada, M. et al. (2021) to evaluate functional status six months after hospitalization due to COVID-19. According to the findings of a study conducted in a Spanish hospital, out of the 242 participants, 87 (47.5%) had a reduction in functional status. The scientists suggested additional, long-term studies to track the functional state of COVID-19 survivors.

To evaluate the physical, cognitive, and psychological health outcomes of COVID-19-linked acute respiratory distress syndrome survivors after a year, Latronico, N. et al. (2021) carried out a study in Italy. According to the study's findings, 98% of participants were independent in their everyday activities at three months. Among the 114 patients, cognitive impairment (28% at three months) gradually improved.

A global study led by Peñas, C. et al. (2022) examined the possible relationship between symptoms experienced during the acute phase of SARS-CoV-2 infection and hospitalization to an intensive care unit following COVID-19. The study's findings At least 20% of COVID-19 survivors reported limitations on their everyday activities eight months after the virus was contracted. Additionally, the researchers offered suggestions for further long-term studies to monitor the day-to-day activities of COVID-19 survivors.

Correlation between depression disorder and daily living activities among recovered Nurses from COVID-19

The findings of the data analysis regarding table (6) show a negative, highly significant correlation between depression disorder and daily living activities among recovered nurses from COVID-19 at a P-value ≤ 0.05 . De Mello, M. T., et al. (2013) conducted a population study to find out the relationship between physical activity, depression, and anxiety symptoms. The results of the study showed that patients who do not engage in physical activities are twice as likely to show symptoms of depression, as the rate of depression in individuals without physical activity (63.2%) is much higher than the rate of depression in individuals who engage in physical activity (10.9%).

Gustrayanti, K., et al., (2017) conducted a study to assess depression among disabled individuals living in Cimahi, West Java Province, Indonesia. Age, marital status, family history of depression, perceived health status, and daily living activities were found to have a negative significant relationship with depression among disabled individuals ($p < .01$; $p < .05$). The researcher's opinion is that nurses recovering from COVID-19 who have depressive disorders suffer from reduced physical activity, and this affects the course of the nursing process and the care of patients within health institutions as well as their family life patterns.

Correlation between generalized anxiety disorder and daily living activities among recovered Nurses from COVID-19

Table (7) presents the results of data analysis indicating a highly significant connection (P-value ≤ 0.05) between daily living activities and generalized anxiety disorder in nurses who have recovered from COVID-19. This finding was consistent with a cross-sectional study that looked at the association between daily life activities and anxiety disorders in a sample of the population in Sao Paulo, Brazil. According to the study's findings, people who don't exercise regularly have a twice as high likelihood of exhibiting anxiety symptoms as people who regularly exercise (De Mello, M. T., 2013).

A cross-sectional study was conducted in Spain via an online survey to find the relationship between anxiety symptoms and daily activities during the final phase of Covid 19 on 2,250 participants, 54% of the females were about 35 years old. Anxiety and daily activities, and the association was stronger

in females under the age of 30 years, and these results support the results of our study (Bueno, R.L., et al. 2020).

According to the researcher, higher levels of tension and anxiety are associated with higher levels of thinking and fear of the things that are causing the tension. This imbalance in brain functions can result in a variety of problems, such as trouble regulating sleep, staying up late to sleep, difficulty waking up early, lack of focus, low productivity, and an ongoing sense of anxiety and excessive nervousness. This has an impact on general health and makes it harder to carry out regular tasks.

Conclusion

Approximately 53% of COVID-19-affected nurses who recovered experienced moderate depression. Approximately 40% of COVID-19-affected nurses who recovered had moderate generalized anxiety disorder. Among COVID-19-affected nurses who had recovered, 93% of their daily activities were good. The everyday activities of nurses who have recovered from COVID-19 are negatively correlated with their depression problem. There is an inverse association between the recovered COVID-19 nurses' generalized anxiety disorder and their activities of daily living.

References

1. Razon, R. & Tokac, U. (2021). Nursing professionals' mental well-being and workplace adjustment during the COVID-19 crisis: A Network Wiley Online Library;29(6), pp(1653-1659).
2. Belli, S., Balbi, B., Prince, I., Cattaneo, D., Masocco, F., Zaccaria, S., Bertalli, L., Cattini, F., Lomazzo, A., Negro, F., Giardini, M., Franssen, F.M., Janssen, D.J. & Spruit, M.A. (2020). Low physical functioning and impaired performance of activities of daily life in COVID-19 patients who survived hospitalization. *The European Respiratory Journal*. Johnson, C.Y. & Cha, A.E. (2020). The dark side of ventilators: Those hooked up for long periods face difficult recoveries. *The Washington Post*.
3. An, Y., Yang, Y., Wang, A., Li, Y., Zhang, Q., Cheung, T., Ungvari, G.S., Qin, M.Z., An, F.R. & Xiang, Y. (2020). Prevalence of depression and its impact on quality of life among frontline nurses in emergency departments during the COVID-19 outbreak. *Journal of Affective Disorders*.1(276), pp(312– 315)
4. Alnazly, E., Khraisat, O., AlBashaireh, A. & Bryant, C. (2021). Anxiety, depression, stress, fear and social support during COVID-19 pandemic among Jordanian healthcare workers. *Plos one*. 16(3).
5. Côté, J., Aita, M., Chouinard, M., Houle, J., Tremblay, M., Lessard, L., Rouleau, G. & Gélinas, C. (2022). Psychological distress, depression symptoms and fatigue among Quebec nursing staff during the COVID-19 pandemic: A cross-sectional study. *Wiley Online Library*.
6. Arafa, A., Mohammed, Z., Mahmoud, O., Elshazley, M., & Ewis, A. (2021). Depressed, anxious, and stressed: What have healthcare workers on the frontlines in Egypt and Saudi Arabia experienced during the COVID-19 pandemic?. *Journal of affective disorders*, 278, pp(365– 371).
7. Park, S., Lee, Y., Kim, T. & Jung, S. (2021). Anxiety and COVID-19 Related Stressors Among Healthcare Workers Who Performed Shift Work at Four COVID-19 Dedicated Hospitals in Korea. *Journal of Occupational and Environmental Medicine*; 63(10),pp(875–880).
8. Feingold, J., Peccoralo, L., Chan, C., Kaplan, C., Kauderer, H., Charney, D., Verity, J., Hurtado, A., Burka, L., Syed, S., Murrough, J., Feder, A., Pietrzak, R. & Ripp, J. (2021). Psychological Impact of the COVID-19 Pandemic on Frontline Health Care Workers During the Pandemic Surge in New York City. *Chronic Stress*.
9. Taboada, M., Cariñena, A., Moreno, E., Rodríguez, N., Domínguez, M., Casal, A., Riveiro, V., Vieito, M., Valdés, L., Álvarez, J. & Pillado, T. (2021). Post- COVID-19 functional status six months after hospitalization. *The Journal of Infection*.82(4), pp (31-33).

10. Latronico, N., Peli, E., Calza, S., Rodella, F., Novelli, M., Cella, A., Marshall, J., Needham, D., Rasulo, F. & Piva, S. (2022). Physical, cognitive and mental health outcomes in 1-year survivors of COVID-19-associated ARDS. *Thorax*.77(3).
11. Peñas, C., Guerrero, J., Pardon, E., Jiménez, J. & Valero, O. (2022). Post- COVID functional limitations on daily living activities are associated with symptoms experienced at the acute phase of SARS-CoV-2 infection and internal care unit admission: A multicenter study. *The Journal of Infection*.84(2), pp(248–288).
12. De Mello, M.T., Lemos, V., Antunes, H.K., Bittencourt, L., Silva, R.S. & Tufik, S. (2013). Relationship between physical activity and depression and anxiety symptoms: a population study. *Journal of affective disorders*, 149(1-3), pp(241–246).
13. Gustryanti, K., Thongpat, S. & Maneerat, S. (2017). Factors Related to Depression among Older People Living In Cimahi, West Java Province, Indonesia. *Belitung Nursing Journal*, 3(1), 14–22.
14. 1Bueno, R.L., Calatayud, J., Ezzatvar, Y., Casajús, J.A., Smith, L., Andersen, L. & Sánchez, G. (2020). Association Between Current Physical Activity and Current Perceived Anxiety and Mood in the Initial Phase of COVID-19 Confinement. *Front*.