www.gjhsr.org

Global Journal of Health Science and Research

Original Article

Impact of COVID-19 pandemic among healthcare professionals

Jessy Abraham[1], Maria Therese[2]

[1]Department of Nursing, Mercy College of Nursing, Kottayam, Kerala, [2]Department of Nursing, Mother Theresa Post Graduate and Research Institute of Health Sciences, Pudhuchery, India.

***Corresponding author:**
Maria Therese,
Department of Nursing, Mother Theresa Post Graduate and Research Institute of Health Sciences, Pudhuchery, India.

srjessymariya@gmail.com

Received: 08 June 2023
Accepted: 01 August 2023
EPub Ahead of Print: 16 December 2023
Published: 01 March 2024

DOI
10.25259/GJHSR_51_2023

Quick Response Code:

ABSTRACT

Objectives: The objectives of the study were to assess the impact of Covid-19 pandemic among healthcare professionals, to compare the level of impact of Covid-19 pandemic among different healthcare professionals, and to find the association of impact of Covid-19 pandemic with the selected demographic variables of the healthcare professionals with selected demographic variables.

Material and Methods: The research approach used was quantitative and research design adopted for the study was descriptive research design. A sample of 60 healthcare professionals was selected by stratified random sampling and the data were collected using questionnaire. The data collected were tabulated and analyzed using descriptive statistics.

Results: The result of our study showed that 5% of the healthcare professionals were mildly affected, 48.3% of healthcare professionals were moderately affected, and 46.7% of healthcare professionals were severely affected. There was no significant difference found between the levels of impact among different healthcare professionals. There is a significant association between the level of impact of Covid-19 and the type of family.

Conclusion: Study found that Covid-19 had an impact on healthcare professionals.

Keywords: Pandemic, Healthcare professional, Covid-19, Impact

INTRODUCTION

Background of the study

Coronavirus disease is an infectious disease caused by the Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) virus. It was originally identified in China in 2019 and became pandemic in 2020. The coronavirus is a large family of virus that cause illness that ranging from the common cold to more severe disease such as middle east respiratory syndrome and severe acute respiratory syndrome.[1] The name coronavirus is derived from the Latin word corona, meaning "Crown or Halo" which refers to the characteristics appearance of a crown or a solar corona around the visions due to the surface covering in club shaped protein spikes.[2]

Impact refers to an outcome or influence. The Covid-19 pandemic has an impact on medical workers on a variety of levels, including moral, educational, social, psychological, and emotional. An extraordinary burden on healthcare services has been caused by the Covid-19 pandemic, a health crisis. The medical community has a number of difficulties in treating people with Covid-19 following the epidemic.

Stress is one of several concerns that Covid-19 causes in the teaching profession. The community and society are affected by this stress in a variety of ways, both positively and negatively. Over the world, there is an increasing demand for and attention on safeguarding medical personnel by managing exhaustion and minimizing its negative effects on their physical, social, psychological, spiritual, moral, and professional lives.[3,4]

The literature on the health consequences of healthcare professionals providing care to Covid-19 victims is proliferating, and no review is available to guide practitioners and leaders on the efficacy of various interventions.[5-7] This scoping study aims to summarize the evidence of the physical, social, psychological, spiritual, moral, and professional impacts of Covid-19 pandemic on healthcare professionals.

The Covid-19 pandemic has significantly burdened the world. The Covid-19 pandemic is a healthcare emergency that has had hitherto unheard-of effects on medical personnel. Doctors treating patients with Covid-19 face a number of difficulties in the midst of the unprecedented crisis. It is crucial to evaluate the mental stress and general well-being of healthcare practitioners. Being a vulnerable population, this study aimed to assess the impacts of Covid-19 among healthcare professionals in terms of its physical, psychological, emotional, social, educational, and moral aspects.

Statement of the problem

A study to assess the impact of Covid-19 pandemic among healthcare professionals in a selected hospital at Kottayam District.

Objectives

The objectives of this study were as follows:

1. To assess the impacts of Covid-19 pandemic among healthcare professionals
2. To compare the level of impact of Covid-19 pandemic among different healthcare professionals
3. To find the association between the level of impact of Covid-19 pandemic with the selected demographic variables of the healthcare professionals.

Hypothesis

H0: There will be a significant level of impact of Covid-19 pandemic among healthcare professionals at 0.05 level of significance.

H1: There will be a significant level of difference between impacts of Covid-19 among different healthcare professionals at 0.05 level of significance.

Operational definitions

- Assess – Assess means make a judgment about the nature or quality of someone or something. In this study, "assess" refers to determining the physical, psychological, social, educational, spiritual, and moral impacts of Covid-19 pandemic.
- Impact – Impact means the powerful effect that something has on somebody or something. In this study, "impact" refers to the effects occurred among healthcare professionals in different aspects such as physical, psychological, social, educational, spiritual, and moral areas due to Covid-19.
- Healthcare professionals – In this study, "healthcare professionals" refers to doctors, paramedicals, nurses, nursing tutors, and nursing students in a selected hospital at Kottayam.
- Covid-19 pandemic – An infectious disease caused by SARS-CoV-2 virus.

Assumptions

Healthcare professionals might have an impact of Covid-19 in different levels of their life.

Delimitations

This study is limited to healthcare professionals in a selected hospital in Kottayam District.

MATERIAL AND METHODS

Research approach

A quantitative survey approach was considered as an appropriate research approach for this study.

Research design

Descriptive research design was used to assess and compare the level of impact of Covid-19 among different healthcare professionals.

Variables

In this study, demographic variables are age, gender, marital status, religion, profession, type of family, area of residence, affected with Covid-19, vaccination status, and comorbid condition.

Setting of the study

This study was selected at a hospital in Kottayam district, Kerala.

Population of the study

Sample: All healthcare professionals in selected hospitals in Kottayam district.

Sample and sampling technique

In this study, samples are healthcare professionals in a selected hospital in Kottayam district.

Sampling technique in the present study is stratified random sampling.

Sample size

The samples are selected by the method of stratified random sampling technique. The total sample size is 60. It includes:

- 5 Doctors
- 16 Nurses
- 6 Paramedical
- 5 Nursing tutors
- 28 Nursing students.

Sampling criteria

Inclusion criteria

The following criteria were included in the study:

1. Healthcare professionals who are working in selected hospital at Kottayam district.
2. Healthcare professionals who are willing to participate in the study.

Exclusion criteria

The following criteria were excluded from the study:

1. Healthcare professionals who are not present at the time of data collection.

Instruments used

Data collection instrument consists of two parts:

Section A: Structured questionnaire for assessing the demographic variables.

Section B: A structured rating scale for assessing the impacts of Covid-19 in healthcare professionals.

Data collection method

The permission was obtained from the legal authorities of Mercy College of Nursing and Mercy Hospital, Kottayam. The samples were selected by method of stratified random sampling technique. The method of study was explained and informed consent was obtained from the participants. The study was conducted on January 9, 2023. The participants were allowed with 20 min to answer.

RESULTS

Analysis and interpretation

The analysis of the data is organized and presented under the following sections:

Section A: Distribution of the demographic variables of healthcare professionals [Table 1].

Section B: Level of impact of Covid-19 pandemic among healthcare professionals.

Section C: Comparison of level of impact of Covid-19 pandemic among healthcare professionals [Table 3].

Section D: Association of the level of impact of Covid-19 pandemic with demographic variables of healthcare professionals [Table 4].

Section A: Distribution of the demographic variables of healthcare professionals

Table 1: Frequency and percentage distribution of demographic variables of healthcare professionals.

S. No.	Sample characteristics	Frequency	Percentage
1.	Age		
	16–25	31	51.6
	26–35	13	21.7
	36–45	13	21.7
	Above 45	3	5
2.	Gender		
	Male	6	10
	Female	54	90
	Others	0	0
3.	Marital status		
	Married	28	46.7
	Single	32	53.3
	Others	0	0
4.	Religion		
	Hindu	15	25
	Christian	42	70
	Muslim	3	5
	Others	0	0
5.	Profession		
	Medical	5	8.3
	Nursing	44	73.4
	Paramedical	6	10
	Others	5	8.3
6.	Type of family		
	Nuclear	46	76.7
	Joint	14	23.3
7.	Area of residence		
	Rural	47	78.3
	Urban	13	21.7
8.	Affected with Covid-19		
	Yes	54	90
	No	6	10
9.	Vaccination status		
	First dose	2	3.3
	Second dose	30	50
	Booster dose	28	46.7
	None	0	0
10.	Co-morbid condition		
	Yes	9	15
	No	51	85

Section B: Level of impact of Covid-19 pandemic among healthcare professionals

Figure 1 shows the percentage distribution of level of impact of Covid-19 pandemic among healthcare professionals. Among 60 samples, 5% of the participants had mild, 48.3% had moderate, and 46.7% had severe impact of Covid-19 pandemic [Table 2].

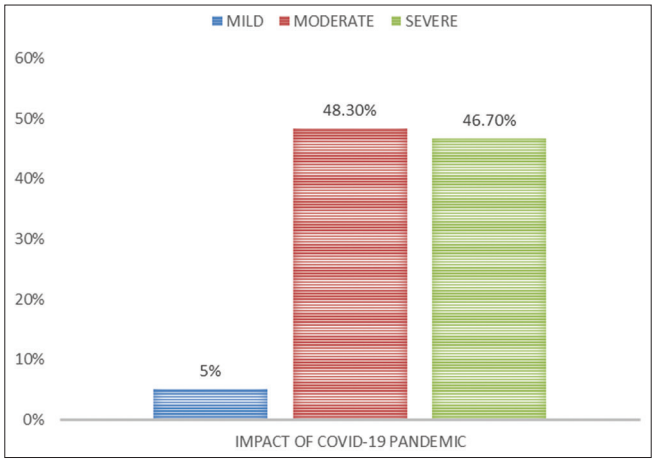

Figure 1: Percentage distribution of level of impact of Covid-19 pandemic among healthcare professionals.

Table 2: Mean, median, and standard deviation of level of impact of Covid-19 pandemic among healthcare professionals.

S. No.	Category	Mean	Median	Standard deviation
1.	Doctors	83.2	91	17.45
2.	Nurses	86.06	86	15.51
3.	Nursing students	84.5	81.5	22.21
4.	Paramedical	97.3	91	16.02
5.	Nursing tutors	92.8	92	34.82

Section C: Comparison of level of impact of Covid-19 pandemic among healthcare professionals

Table 3: Comparison of level of impact of Covid-19 pandemic.

Square of variance	df	Sum of squares	Mean of sum of squares	F-ratio	Table value	Significance
Between the groups	4	1067.31	266.82	0.6255	2.61	Not significant
Within the groups	55	23460.87	426.56			

df: Degree of freedom

Section D: Association of impact of Covid-19 pandemic among healthcare professionals with demographic variables

DISCUSSION

The study results are discussed based on objectives:

- To assess the impact of Covid-19 pandemic among healthcare professionals
- To compare the level of impact of Covid-19 pandemic among different healthcare professionals
- To find the association of the level of impact of Covid-19 pandemic with selected demographic variables of healthcare professionals

Assess the impact of Covid-19 pandemic among healthcare professionals

The research showed that out of 60 samples, 5% of the healthcare professionals had mild impact of Covid-19, 48.3% had moderate impact of Covid-19, and 46.7% had severe impact of Covid-19.

In the study, "Mental health impact on healthcare workers due to the Covid-19 pandemic" by Biber *et al.*, in China shows that approximately 50% of participants reported more than a minimal level of anxiety, including 22.5% who indicated moderate to severe levels of anxiety.[8]

Compare the level of impact of Covid-19 among different healthcare professionals

In the present study, the calculated F-ratio is 0.6255 and the tabulated value is 2.61 at 0.05 level of significance. The results show that there is no statistical difference in impact of Covid-19 pandemic among healthcare professionals.

In the study, "Psychological impact of healthcare workers in Spain due to Covid-19" by García-Fernández *et al.*, in Spain regarding anxiety symptoms shows (F [1, 1783] = 0.93, P = 0.34), the health care workers (HCW) group (M 18.2, S.D. 10.4) did not show significant higher symptoms of anxiety than non-HCW.[9]

Association of the level of impact of Covid-19 pandemic with selected demographic variables of healthcare professionals

The association between the impact of Covid-19 and type of family is 6.869. So there is a significant association found between the type of family and the impact of Covid-19.

In the study, "A cross-sectional to assess the prevalence of talogen effluvium hair loss in Covid-19 patients and the relationship with disease severity" by Seyfi *et al.*, in China shows a significant association between gender and age. This study included 198 patients who were admitted for

Table 4: Association between impacts of Covid-19 with demographic variables.

S. No.	Demographic variables	Level of impact			Chi-square value	Table value	Significance
		Mild	Moderate	Severe			
1.	Age						
	16–25	3	15	13	8.858	12.59	Not significant
	26–35	0	4	9			
	36–45	0	8	5			
	Above 45	0	2	1			
2.	Gender						
	Male	0	4	2	1.02	9.49	Not significant
	Female	3	25	26			
	Others	0	0	0			
3.	Marital status						
	Married	0	14	14	2.752	9.49	Not significant
	Single	3	15	14			
	Others	0	0	0			
4.	Religion						
	Hindu	0	7	8	6.25	12.59	Not significant
	Muslim	0	2	1			
	Christian	3	20	19			
	Others	0	0	0			
5.	Profession						
	Medical	0	2	3	1.773	12.59	Not significant
	Nursing	3	22	19			
	Paramedical	0	3	3			
	Others	0	2	3			
6.	Type of family						
	Nuclear	3	18	25	6.869	5.99	Significant
	Joint	0	11	3			
7.	Area of residence						
	Rural	2	26	19	4.241	5.99	Not significant
	Urban	1	3	9			
8.	Affected with Covid-19						
	Yes	2	26	26	2.070	5.99	Not significant
	No	1	3	2			
9.	Vaccination status						
	1st dose	0	1	1	2.768	12.59	Not significant
	2nd dose	1	12	17			
	Booster dose	2	16	10			
	None	0	0	0			
10.	Co-morbid condition						
	Yes	0	6	3	1.66	5.99	Not significant
	No	3	23	25			

Covid-19. The results shows, out of these patients, 79 were male (39.9%) and 119 were female (60.1%). The age ranged from 18 to 85 years old, 48 patients showed hair loss.[10]

CONCLUSION

Covid-19 is an acute respiratory illness in humans caused by coronavirus, capable of producing severe symptoms and in some cases death, especially in older people and in those with underlying health conditions. The main purpose of the present study was to assess the physiological, psychological, social, professional, moral, and spiritual impact of Covid-19 pandemic on healthcare professionals. Our study showed the impact of Covid-19 among healthcare professionals, that is, 5% of healthcare professionals had mild impact, 48.3% healthcare professionals had moderate impact, and 46.7% of healthcare professionals had severe impact of Covid-19 pandemic.

Ethical approval

Institutional Review Board approval is not required.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

Use of artificial intelligence (AI)-assisted technology for manuscript preparation

The authors confirm that there was no use of artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript and no images were manipulated using AI.

REFERENCES

1. Anthony P. Critical care nurses as a COVID warrior. Nurs Times 2013;111:48-9.
2. Available from: https://www.who.int/news-room/fact-sheets/detail/coronavirus-disease-(covid-19) [Last accessed on 2023 Jan 06].
3. Esmaelzadeh H, Dashti AS, Mortazavi A, Fatemian H, Vali M. Persistent cough and asthma-like symptoms post Covid-19 hospitalization in children. BMC Infect Dis 2022;22:244.
4. Munbilt D, Nicholson TR, Needham DM, Seylanova N, Parr C, Williamson PR, *et al*. Studying the post-covid-19 condition: Research challenges, strategies, and importance of core outcome set development. BMC Med 2022;20:50.
5. Vivek S, Varghese S, Ratheesh R, Raghu K. Nurses as warriors: Challenges and impacts among Kerala nurses during coronavirus disease-2019 pandemic. J Pharm Bioallied Sci 2022;14(Suppl 1):S439-43.
6. Shaukat N, Ali DM, Razzak J. Physical and mental health impacts of Covid-19 on healthcare workers: A scoping review. Int J Emerg Med 2020;13:40.
7. Tan YQ, Chew WS, Lee KH, Jing M, Goh Y, Yeo LL, *et al*. Psychological impact of the Covid-19 pandemic on health care workers in Singapore. Ann Inter Med 2022;173:317-20.
8. Biber J, Ranes B, Lawrence S, Malpani V, Trinh TT, Cyders A, *et al*. Mental health impact on healthcare workers due to the COVID-19 pandemic: A U.S. cross-sectional survey study. J Patient Rep Outcomes 2022;6:63.
9. García-Fernández L, Romero-Ferreiro V, López-Roldán PD, Padilla S, Calero-Sierra I, Monzó-García M, *et al*. Mental health impact of COVID-19 pandemic on Spanish healthcare workers. Psychol Med 2022;52:195-7.
10. Seyfi S, Alijanpour R, Aryanian Z, Ezoji K, Mahmoudi M. Prevalence of telogen effluvium hair loss in covid-19 patients and its relationship with disease severity. J Med life 2022;15:631-4.

How to cite this article: Abraham J, Therese M. Impact of COVID-19 pandemic among healthcare professionals. Glob J Health Sci Res. 2024;2:31-6. doi: 10.25259/GJHSR_51_2023