DOI: https://doi.org/10.54393/pjhs.v4i10.1123

PAKISTAN JOURNAL OF HEALTH SCIENCES

https://thejas.com.pk/index.php/pjhs

Volume 4, Issue 10 (October 2023)

Original Article

Knowledge, Attitude and Practice of COVID-19 among Nurses at Mayo Hospital Lahore

Masooma Batool[1], Ambar Afzal[1], Sarah Naveed[1], Shamim Sattar[1] and Nargis Abdul Rehman[1]

[1]SACON Institute of Allied Health Sciences, Lahore, Pakistan

ARTICLE INFO

Key Words:

Knowledge, Attitude, Practice, COVID-19, Nurses

How to Cite:

Batool, M., Afzal, A., Naveed, S., Sattar, S., & Rehman, N. A. (2023). Knowledge, Attitude and Practice of COVID-19 among Nurses at Mayo Hospital Lahore: Knowledge, Attitude and Practice of COVID-19 among Nurses. Pakistan Journal of Health Sciences, 4(10). https://doi.org/10.54393/pjhs.v4i10.1123

***Corresponding Author:**

Masooma Batool

SACON Institute of Allied Health Sciences, Lahore, Pakistan

batoolmasooma422@gmail.com

Received Date: 9th October, 2023

Acceptance Date: 28th October, 2023

Published Date: 31st October, 2023

ABSTRACT

COVID-19 is an unparalleled global challenge, necessitating unprecedented interventions. It emerged as a new and highly contagious virus (SARS-CoV-2), causing high mortality rates and overwhelming healthcare systems. Nevertheless, prior experience with coronaviruses and recent epidemics has provided a foundation for effective infection control and the rapid development of vaccines and treatments. **Objective:** To assess knowledge attitude and practices regarding COVID-19 among nurses of Mayo Hospital Lahore. **Methods:** COVID-19 is a unique global dilemma that requires unheard-of remedies. It was a brand new, extremely contagious virus called SARS-CoV-2 that had a devastating impact on health systems and caused high mortality rates. But recent epidemics and past experience with coronaviruses have laid the groundwork for rapid development of vaccines and treatments, as well as effective infection control. **Results:** The response rate was 100%. The mean age was 3.26±1.474. Among 90 study participants 11(11.2%) were 18-20years, 31(31.6%) were between 21-25years, 3 (3.1%) between 26-30 years, 35 (35.7%) between 31-35years and 11(11.2%) between 36-40years. Further, out of 90 study participant the overall proportion of knowledge attitude and practice were 72.2%, 36.2%, and 63.3% respectively. **Conclusions:** The overall level of knowledge and practice among nurses was good. However, the attitude was relatively low. National and regional ministry of health should continue efforts and battling of this pandemic disease since it's still spreading all over the world.

INTRODUCTION

A recently identified coronavirus is the source of the infectious disease known as coronavirus disease (COVID -19)[1]. Coronavirus has become one of the most important viruses worldwide because of the current mortality rate. Currently, there are 13,123,607 cases worldwide, with most cases coming from the United States (343,7109 cases), while Yemen has the most cases. Of those infected, 1,465 are in a mild state, while 93% are in a severe or critical state. Regarding the death report of COVID-19 there are around 573,179 deaths globally while 76, 400, 04 has been recovery fully [2]. According to the COVID -19 fatality report, there have been approximately 573,179 deaths worldwide, while 76,400,04 people have fully recovered.2 The COVID -19 virus poses a serious threat to the population of any nation, but public education can mitigate the severity of its impact [3]. Compared to poor countries, the findings suggest that just 24.6% of respondents in industrialized nations like the USA express a high level of concern about contracting COVID-19 [4]. This variation may be brought on by the different levels of COVID-19 awareness among the research participants. In this study, 20.5% of the individuals thought their risk of infection was extremely low. Therefore, it is impossible to dispute the importance of nurses in especially in educating people about the Corona Crisis [5]. Corona virus The COVID-19 pandemic is the most significant global health emergency of our time and the biggest obstacle since World War II. Eight million people worldwide have been impacted by the Corona Virus in the first six months of 2020. The COVID-19 crisis' regional and local effects are quite diverse, with a strong territorial

DOI: https://doi.org/10.54393/pjhs.v4i10.1123

component that has significant ramifications for crisis management and policy solutions [6]. For improved nursing care delivery, nurses stay in constant contact with the patient. Nurses played the role of front-line soldiers around the world during the COVID-19 epidemic, adopting various advanced procedures based on studies completed in the modern era of advanced technology [7]. Regarding knowledge, a cross-sectional survey of nurses at a community hospital in Iraq revealed that their level of familiarity with COVID-19 prevention and control was low [8]. Additionally, a similar study was conducted at Addis Semen Hospital in Ethiopia with the aim of evaluating experienced nurses' knowledge, attitudes, and behaviors. The findings revealed that the nurses had low knowledge, attitudes, and practices [9]. This has been shown in developing countries with limited resources. There are only a handful of studies on this topic; more research is needed in this difficult area. Because of the magnitude of the problem, the current study was conducted to assess the knowledge, attitude, and practice of COVID -19 among nurses at Mayo Hospital Lahore.

METHODS

A descriptive cross-sectional study was carried out at Mayo Hospital in Lahore between April and June 2022. Data collection employed purposive sampling, with a sample size of 90, determined using the WHO sample size calculator 1.1. The study involved nurses who were available during the data collection period, excluding those with severe illnesses and individuals providing free services at that time. Study participants were informed of the research's purpose and objectives. To minimize potential biases resulting from interactions among the nurses, questionnaires were completed independently by each nurse and submitted directly to the researcher. The questionnaire consisted of four sections, covering participant demographics and the assessment of nursing processes. The entire process took a maximum of 20 minutes per participant. Data collected were analyzed using SPSS version 25.0. Socio-demographic characteristics were presented in terms of frequencies and percentages, while mean and standard deviation were utilized to evaluate knowledge, attitude, and practices.

RESULTS

Table 1 shows that there were 38 (42.2%) nurses aged 20 to 25 years, followed by, 46 (51.1%) nurses age group was 26 to 30 years and only 6 (6.7%) nurses ages were above 31 years. There were 83(92.2%) female nurses and only 07 (7.8%) nurses were male. Results reveal that majority of participants (64.5%) were single, 29 (32.2%) were married and only 03(3.3%) participants were divorced / widowed. Most of the participant's professional 78 (86.7%) was BSN nursing, 07 (7.8%) participant's professional was Diploma nursing, 04 (4.4%) participant's professional was MSN nursing only 01 (1.1%) participant's professional was nursing specialty. There were 61(67.8%) participants had "1 to 5 years" of work experience, 23 (25.6%) participants had 5 to 10 years of work experience and only 06 (6.6%) participants had 10 to 15 years of work experience.

Table 1: Demographic Information of the Participants

Variables	Frequency (%)
Age	
(20-25 years)	38 (42.2)
(26-30 years)	46 (51.1)
(31-35 years)	5 (5.6)
(36-40 years)	1 (1.1)
Gender	
Male	7 (7.8)
Female	83 (92.2)
Marital Status	
Single	58 (64.4)
Married	29 (32.2)
Divorced	1 (1.1)
Widowed	2 (2.2)
Professional status	
Diploma nursing	7 (7.8)
BSN nursing	78 (86.7)
MSN nursing	4 (4.4)
Nursing specialty	1 (1.1)
Work Experience	
(1-5 years)	61 (67.8)
(5-10 years)	23 (25.6)
(10-15 years)	6 (6.6)

Table 2 summarizes the knowledge, attitude, and practice of nurses regarding COVID-19. Knowledge shows that 86.7% of participants correctly identified that the first COVID-19 cases were reported in Wuhan, Hubei province. 96.7% agreed that respiratory droplets are the primary mode of transmission. 71.1% understood that close contact meant being around 6 feet (2 meters) from a COVID-19 patient. 87.8% believed that individuals transporting patients should wear personal protective equipment (PPE). 74.4% supported clinical management and infection prevention measures. The Attitude of nurses reported that 33.3% enforced PPE use for family members in crowded places.45.6% assessed patient awareness of COVID-19 during care. 28.9% agreed that hand washing should last at least 20 seconds. 42.2% provided family members with health education about COVID-19 precautions. The Practice showed that the 60% always washed their hands before starting work, while 36.7% did so sometimes, and only 3.3% didn't. 67.8% always washed their hands before touching objects, with 22.2% doing so sometimes, and 10% not at all. 82.2% always used separate wards for suspected or confirmed COVID-19 patients. 78.9% always wore PPE

DOI: https://doi.org/10.54393/pjhs.v4i10.1123

when in contact with patients. 38.9% received formal hand hygiene training in the last two weeks. 62.2% always recommended the isolation of COVID-19 patients in airborne infection isolation rooms(AIR). These findings offer insights into the knowledge, attitude, and practices of nurses in relation to COVID-19, highlighting areas where education and training may be beneficial.

Table 2: Knowledge, Attitude and Practice regarding COVID-19 among Study Participants

Knowledge, Attitude and Practice regarding COVID-19		
Knowledge	**Categories**	**Frequency (Percentage)**
First report of cases was from Wuhan city in Hubei province	T	78 (86.7)
	F	12 (13.3)
The main mode of transmission of virus from person to person is via respiratory droplets.	T	87 (96.7)
	F	03 (3.3)
Touching, Overcrowding is considered as close contact Being approximately 6 feet (2meters) of patient with COVID-19 for prolonged period of time	T	64 (71.1)
	F	26 (28.9)
The personal protection equipment (PPE) should be worn by individual transporting patient who are confirmed with or under investigation for a COVID-19 with a health care workers should wear glove, grown, eye protection respiratory –N95 mask	T	79 (87.8)
	F	11 (12.2)
Clinical management includes prompt implementation of recommended infection prevention and control measures and supportive management of complications. No specific treatment for COVID-19 is currently available.	T	67 (74.4)
	F	23 (25.6)
Preferred method for hand hygiene for visibly soiled hand is:	Hand rub with soap and . water for 10 sec	79 (87.8)
	Use of sanitizer	11 (12.2)
Knowledge, Attitude and Practice regarding COVID-19		
Did you enforce your family members to wear PPE when they are going to crowded places?	SA	07 (7.8)
	D	13 (14.4)
	N	14 (15.6)
	A	30 (33.3)
	SA	26 (28.9)
Did you assess the awareness of the patient about COVID-19 during care provision?	SA	13 (14.4)
	D	04 (4.4)
	N	11 (12.2)
	A	41 (45.6)
	SA	21 (23.3)
Hand should be washed with water and soap or using sanitizer for at least 20 seconds.	SA	05 (5.6)
	D	14 (15.6)
	N	12 (13.3)
	A	26 (28.9)
	SA	33 (36.7)
Did you give health education about COVID-19 precautions and prevention methods to your family?	SA	04 (4.4)
	D	03 (3.3)
	N	12 (13.3)
	A	38 (42.2)
	SA	33 (36.7)
Practice		
Do you wash your hands before starting Work?	Always	54 (60.0)
	Sometimes	33 (36.7)
	Never	03 (3.3)
Do you wash your hands before touching objects? Contact patient?	Always	61 (67.8)
	Sometimes	20 (22.2)
	Never	09 (10.0)
Do you use separate ward for patients suspected of COVID-19 or pts positive COVID-19?	Always	74 (82.2)
	Sometimes	13 (14.4)
	Never	03 (3.3)
	Always	71 (78.9)

DOI: https://doi.org/10.54393/pjhs.v4i10.1123

Do you wear PPE when you contact patients?	Sometimes	17 (18.9)
	Never	02 (2.2)
Did you receive formal training in hand hygiene in last two weeks as applicable?	Always	35 (38.9)
	Sometimes	34 (37.8)
	Never	21 (23.3)
The recommended for isolation of patients with confirmed COVID-19 investigation Airborne infection isolation room (AIIR) with exhausted	Always	56 (62.2)
	Sometimes	28 (31.1)
	Never	06 (6.7)

DISCUSSION

This study assessed the knowledge, attitude, and practices related to COVID-19 among nurses working at Mayo Hospital, Lahore. The findings indicated that nurses displayed a high level of awareness in certain areas, maintained a moderately optimistic attitude, and demonstrated adequate practices in response to COVID-19. The study also identified factors associated with high knowledge, positive attitude, and appropriate practice measures in dealing with COVID-19. In our study, we found majority of the participants were female because nursing is considered a female oriented professional. The age groups of nurses in our study mostly were youngest and their marital status was single. Most of the participant's professional was BSN nursing and their source of information was social media. Largely, participants work experienced was 1 to 5 years and few participants' experience was with 5 to 15 years. This study found a correlation between lower knowledge levels and less adherence to ethical behavior and a reduction in monthly income. On the other hand, a Chinese study found that a higher income was associated with more understanding and the adoption of effective COVID-19 preventive measures [10]. While it's challenging to precisely define what constitutes sufficient knowledge regarding COVID-19, it's noteworthy that over two-thirds (66.7%) of the nurses achieved a knowledge test score of 70% or higher. These study findings suggest that a majority of the nurses possessed knowledge levels well above what might be considered optimal. The sources of information on COVID-19 for the nurses in this study varied, with the internet/social media and TV/radio being prominent sources [11-14]. Prior research has indicated that healthcare providers, including nurses, are frequent users of various social media platforms [15]. Furthermore, it's worth noting that increasing age was associated with poorer knowledge in this study, which aligns with previous research indicating that older individuals tend to have less knowledge about COVID-19 [16]. According to the results of the current study, nurses who had COVID-19 infections had fewer positive views than those who did not. The majority of the nurses in this study had scores on attitude-related categories of 50% or higher. Notably, healthcare professionals in Pakistan, China, and Jordan frequently showed positive opinions regarding initiatives targeted at containing the pandemic [17]. Another study's results revealed significant disparities in knowledge scores among nurses based on various demographic characteristics. Findings emphasize the importance of considering demographic factors when assessing nurses' knowledge levels. Such insights can be valuable for tailoring targeted educational programs and interventions to specific groups, ultimately enhancing the overall competence and performance of nursing professionals within healthcare contexts [18]. The results from a study conducted in Jordan revealed that Jordanian nurses' comprehension of the COVID-19 disease falls within the "average" category, with the majority of their responses falling in the range of 56% to 86% [19]. The level of knowledge among the nurses was found to be associated with their years of experience in the healthcare field, while their perceptions were influenced by the manner in which they had received training for the care of COVID-19 patients [20].

CONCLUSIONS

The study found that Mayo Hospital nurses had good knowledge, a positive attitude, and followed appropriate COVID-19 prevention measures. Given the evolving nature of the pandemic, it's crucial to regularly update and reinforce their understanding, attitudes, and practices. Although these findings are positive, ongoing efforts are essential to safeguard nurses from COVID-19 transmission.

Authors Contribution

Conceptualization: MB
Methodology: AA
Formal analysis: SN
Writing-review and editing: SS, NAR

All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest

The authors declare no conflict of interest.

Source of Funding

All authors have read and agreed to the published version of the manuscript.

REFERENCES

[1] Ciotti M, Ciccozzi M, Terrinoni A, Jiang WC, Wang CB,

DOI: https://doi.org/10.54393/pjhs.v4i10.1123

Bernardini S. The COVID-19 pandemic. Critical Reviews in Clinical Laboratory Sciences. 2020 Aug; 57(6): 365-88. doi: 10.1080/10408363.2020.1783198.

[2] Akalu Y, Ayelign B, Molla MD. Knowledge, attitude and practice towards COVID-19 among chronic disease patients at Addis Zemen Hospital, Northwest Ethiopia. Infection and Drug Resistance. 2020 Jun; 13: 1949-60. doi: 10.2147/IDR.S258736.

[3] Wang J and Wang Z. Strengths, weaknesses, opportunities and threats (SWOT) analysis of China's prevention and control strategy for the COVID-19 epidemic. International Journal of Environmental Research and Public Health. 2020 Apr; 17(7): 2235. doi: 10.3390/ijerph17072235.

[4] Sarria-Guzmán Y, Fusaro C, Bernal JE, Mosso-González C, González-Jiménez FE, Serrano-Silva N. Knowledge, Attitude and Practices (KAP) towards COVID-19 pandemic in America: A preliminary systematic review. The Journal of Infection in Developing Countries. 2021 Jan; 15(01): 9-21. doi: 10.3855/jidc.14388.

[5] Braveman PA, Cubbin C, Egerter S, Williams DR, Pamuk E. Socioeconomic disparities in health in the United States: what the patterns tell us. American Journal of Public Health. 2010 Apr; 100(S1): S186-96. doi: 10.2105/AJPH.2009.166082.

[6] Vlasschaert C, Topf JM, Hiremath S. Proliferation of papers and preprints during the coronavirus disease 2019 pandemic: progress or problems with peer review? Advances in Chronic Kidney Disease. 2020 Sep; 27(5): 418-26. doi: 10.1053/j.ackd.2020.08.003.

[7] Yousaf S, Parveen K, Hussain M, Afzal M. Determinants of Implementation of Nursing Process by Nurses of Private Sector Hospital. Journal of Global Biosciences. 2021; 10(6): 8759-79.

[8] Erfani A, Shahriarirad R, Ranjbar K, Mirahmadizadeh A, Moghadami M. Knowledge, attitude and practice toward the novel coronavirus (COVID-19) outbreak: a population-based survey in Iran. Bulletin of World Health Organization. 2020 Mar; 1-22. doi: 10.2471/BLT.20.256651.

[9] Bhagavathula AS, Aldhaleei WA, Rahmani J, Mahabadi MA, Bandari DK. Knowledge and perceptions of COVID-19 among health care workers: cross-sectional study. JMIR Public Health and Surveillance. 2020 Apr; 6(2): e19160. doi: 10.2196/19160.

[10] Zhong BL, Luo W, Li HM, Zhang QQ, Liu XG, Li WT, *et al.* Knowledge, attitudes, and practices towards COVID-19 among Chinese residents during the rapid rise period of the COVID-19 outbreak: a quick online cross-sectional survey. International Journal of Biological Sciences. 2020 Mar; 16(10): 1745. doi: 10.7150/ijbs.4522132226294.

[11] Shimotake Y, Mbelambela EP, Muchanga SM, Villanueva AF, Siburian MD, Shimomoto R, *et al.* Knowledge, attitude, perception, and factors associated with the risk perception of COVID-19 among nursing college students in Japanese universities: A cross-sectional study. Health Science Reports. 2022 Nov; 5(6): e922. doi: 10.1002/hsr2.922.

[12] Alnasser AH, Al-Tawfiq JA, Al-Kalif MS, Shahadah RF, Almuqati KS, Al-Sulaiman BS, *et al.* Public knowledge, attitudes, and practice towards COVID-19 pandemic in Saudi Arabia: a web-based cross-sectional survey. Medical Sciences. 2021 Feb; 9(1): 11. doi: 10.3390/medsci9010011.

[13] Shawahna R. Knowledge, attitude, and use of protective measures against COVID-19 among nurses: a questionnaire-based multicenter cross-sectional study. BMC Nursing. 2021 Dec; 20: 1-3. doi: 10.1186/s12912-021-00689-x.

[14] Pahrol MA, Ismail R, Mohamad N, Lim YC, Muhamad Robat R, Rajendiran S, *et al.* Concerns, perceived impact, practices, preventive measures, and stress among healthcare workers during COVID-19 pandemic in Malaysia. Frontiers in Public Health. 2023 Mar; 11: 1028443. doi: 10.3389/fpubh.2023.1028443.

[15] Shawahna R. Use and preference of information technology and social media networks in medical sciences education in the West Bank of Palestine. 8th International Conference on Information Technology (ICIT). 2017 May: 230-235. doi: 10.1109/ICITECH.2017.8080005.

[16] Wolf MS, Serper M, Opsasnick L, O'Conor RM, Curtis L, Benavente JY, *et al.* Awareness, attitudes, and actions related to COVID-19 among adults with chronic conditions at the onset of the US outbreak: a cross-sectional survey. Annals of Internal Medicine. 2020 Jul; 173(2): 100-9. doi: 10.7326/M20-1239.

[17] Hu Z, Song C, Xu C, Jin G, Chen Y, Xu X, *et al.* Clinical characteristics of 24 asymptomatic infections with COVID-19 screened among close contacts in Nanjing, China. Science China Life Sciences. 2020 May; 63: 706-11. doi: 10.1007/s11427-020-1661-4.

[18] Saqlain M, Munir MM, Rehman SU, Gulzar A, Naz S, Ahmed Z, *et al.* Knowledge, attitude, practice and perceived barriers among healthcare workers regarding COVID-19: a cross-sectional survey from Pakistan. Journal of Hospital Infection. 2020 Jul; 105(3): 419-23. doi: 10.1016/j.jhin.2020.05.007.

[19] Aryan F and Ahmad M. Nursing knowledge and perceptions of COVID-19 pandemic in Jordanian intensive care units. Applied Nursing Research. 2022

DOI: https://doi.org/10.54393/pjhs.v4i10.1123

Oct; 67: 151628. doi: 10.1016/j.apnr.2022.151628.

[20] Hua F, Qin D, Yan J, Zhao T, He H. COVID-19 related experience, knowledge, attitude, and behaviors among 2,669 orthodontists, orthodontic residents, and nurses in China: a cross-sectional survey. Frontiers in Medicine. 2020 Aug; 7: 481. doi: 10.3389/fmed.2020.00481.