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Original Research Article

Workplace barriers experienced by nurses in a tertiary level hospital during COVID-19 pandemic

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ABSTRACT

Background: Nurses as frontline workers are experiencing barriers while discharging their duties. So, identifying workplace barriers experienced by nurses during COVID-19 is important because they are the most vital component of medical care. The present study aimed to identify the workplace barriers experienced by nurses in a tertiary-level hospital during the COVID-19 pandemic.
Methods: This descriptive type of cross-sectional study was conducted among 200 nurses who were working in the non-COVID unit at Dhaka Medical College Hospital, Dhaka. Sampling was done by convenience sampling method. A semi-structured questionnaire was administered to the respondents to obtain information. Data were collected through a face-to-face interview.
Results: The study found that 83% of respondents were females, and the mean age was 31.8±5.5. 52.5% completed a diploma in nursing, 61.5% of their working experience was 1-5 years, and 53% were working in the inpatient department. The major barriers identified were lack of guidelines, shortage of PPE, inadequate training coverage, lack of area for doffing and donning, and inadequate social distancing. Statistical analysis showed that different departments of work had a significant association ($p<0.05$) with inadequate training coverage.
Conclusions: The barriers identified in this study should be overcome to improve nurses' experiences in the workplace and in turn the quality of patient care during the COVID-19 pandemic.

Keywords: Workplace, Barrier, Pandemic, COVID, Nurse, Knowledge

INTRODUCTION

Workplace barriers are the obstacles in a workplace that interfere with performing jobs and completing certain tasks. Nurses are the frontline workers and providing medical care at the highest risk of getting COVID-19 and are experiencing barriers while discharging their duties.[1,2]

Coronavirus disease 2019 was first reported in Wuhan, China in December 2019, then spread rapidly throughout the world. So, the World Health Organization (WHO) declared it a global pandemic on 11 March 2020.[3] Nurses as the frontline of the healthcare system responds to both epidemics and pandemics.[4] The rapid spread of the COVID-19 pandemic has become a major cause of concern for the healthcare profession, especially for nurses as most of the nurse's work involves direct contact with the patients. They are assisting with monitoring vitals, administering medications, ensuring hygiene, and constant nursing care while risking their lives.[5,6]

The novel SARS-CoV-2 pandemic has brought nursing to the forefront in unexpected ways and has shown the public in real-time nurses' valor and their core values as well as

their vulnerabilities. It has also exposed the fractures and inefficiencies within healthcare systems that have a responsibility to protect nurses.[7] At the time of this research, in healthcare settings treatment of the disease, is still uncertain, transmission is still widespread, and the mortality rate is not decreasing.[8] International Council of Nursing (ICN) stated that over 90000 healthcare workers have been infected with COVID-19 and only the death toll of nurses is estimated to be 360.[9]

The importance of nurses and nursing care during any pandemic is unquestionable.[10] In addition to their important role in the public health response to an epidemic event, nurses face barriers to fulfilling their duties.[11] Nurses are working while dealing with a lack of essential items including personal protective equipment (PPE). They are also facing inadequate social distancing and a burdensome workload, and a shortage of staff.[5] Indeed, we see reports that nurses in many countries of the world are grappling with shortages of much-needed supplies including personal protective equipment.[12] Nurses also reported that they are facing exceptional workloads in resource constraint health facilities, and also a shortage of nurses in the hospital due to quarantine.[10] However, when they respond to a pandemic such as COVID-19, they experience barriers that hinder them from caring for the patients.[13] As nurses have the closest contact with the patients and spend more time providing care to patients, therefore the nurses deserve much more attention.[5,6]

So identifying the barriers that nurses experience when caring for patients during COVID-19 will help increase nurse and hospital resilience in response to the pandemic, as well as enhance preparedness and recovery from the pandemic. Additionally, identifying these barriers will help nurses by informing leaders and policy-makers about these barriers and providing recommendations and implications. Therefore, the purpose of this study was to identify the barriers experienced by nurses in a tertiary-level hospital during the COVID-19 pandemic.

METHODS

This descriptive type of cross-sectional study was conducted at Dhaka Medical College Hospital, Dhaka from 01 March 2020 to 28 February 2021. Data were collected from 20 December 2020 to 11 January 2021. The convenient method of sampling was followed, which included defined inclusion and exclusion criteria for the enlistment of participants. Nurses working in non-COVID units regardless of gender were included in the study following their consent, while nurses working in COVID units or not currently employed at the hospital were excluded from the study. A sample size of 200 nurses was selected. Data collection instruments included a semi-structured questionnaire and a modified Likert scale. The technique used was face-to-face interviews. Before data collection, written informed consent was obtained from each participant. In accordance with ethical guidelines, face-to-face interviews were conducted separately to maintain privacy and confidentiality strictly. Likert scales, a non-comparative scaling technique and uni-dimensional in nature were used to identify barriers in the questionnaire (barrier, sometimes a barrier, not a barrier). Data were analyzed using statistical package for social science (SPSS) software version 20, following the objectives of the study. Ethical approval for the study was obtained from the Institutional Review Board of Dhaka Medical College Hospital, ensuring that the research was conducted in accordance with the ethical principles outlined in the Declaration of Helsinki.

RESULTS

Table 1 shows the distribution of the respondents by age group. Among the respondents, 39% were within the age group 25-29 years, followed by 35.5% within the age group 30-34 years, 14% were within the age group 35-39 years, 6% were within the age group 40-44 years and rest 5.5% of them were within the age group 45-49 years. The mean age of the respondents was 31.8 with a standard deviation of ±5.5 which ranged from 25-49 years. Most of the respondents 83% were female and the rest 17% of them were male. The majority of them were married 84%, followed by 15.5% were unmarried, and the rest 0.5% of them were divorced. More than half of the respondent's professional qualifications were up to a diploma in nursing 52.5%, followed by 24.5% who completed BSc in nursing, 13% who completed a master's in nursing, and the rest 10% of them completed a master's in public health. Among them, 61.5% of the respondent's working experience was within 1-5 years, followed by 24.5% of their working experience was above five years, and the rest 14% their working experience was below one year. Among them, 53% were working in the inpatient department, followed by 24.5% working in the outpatient department,12.5% of them working in the emergency and rest 10% of them were working in ICU. Most of their family member 80% were between 1-4 and the rest 20% of their family member were five and above. Among the respondents, 57.5% of their monthly income was between 30000-40000 taka, followed by 30.5% of them were below 30000 takas, and the rest 12% of their monthly income was above 40000 taka.

Of the 27 barriers listed in the questionnaire in this study as a barrier, sometimes a barrier and not a barrier. Figure 1 shows that among the respondents, the most commonly experienced organizational barriers in this study were lack of guidelines on COVID-19 prevention 82.50% and shortage of PPE 74.50%, inadequate training coverage 67%, lack of protocol for triage and isolation 62.5% and rest of the two barriers reported as sometimes a barrier that is lack of acknowledgment of nursing services and lack of incentives. Service-related barriers experienced, inadequate social distancing 74%, overcrowding 73%, lack of specific area for doffing and donning 56.5% and poor communication with physicians 53%. High workload, shortage of staff, increased patient flow, lack of support by other staff, shortage of disinfectant, and inadequate

environmental surface cleaning were reported as sometimes a barrier and not a barrier.

Table 1: Distribution of the respondents by socio-demographic characteristics (n=200).

Characteristics	Frequency	Percentage (%)
Age (years)		
25-29	78	39
30-34	71	35.5
35-39	28	14
40-44	12	6
45-49	11	5.5
Gender		
Male	34	17
Female	166	83
Marital status		
Married	168	84
Unmarried	31	15.5
Divorced	1	5.5
Professional qualification		
Diploma in nursing	105	52.5
BSc in nursing	49	24.5
Masters in nursing	26	13
Master's in public health	20	10
Working experience (years)		
<1	28	14
1-5	123	61.5
>5	49	24.5
Department of work		
Inpatient	106	53
Outpatient	49	24.5
Emergency	25	12.5
ICU	20	10
Family member		
1-4	160	80
5 and above	40	20
Monthly income		
<30000	61	30.5
30000-40000	115	57.5
>40000	24	12

Most commonly experienced nurse-related barriers were increased occupational hazard 81.50%, discomfort while wearing PPE 79% and nurses' insufficient knowledge 52.5%, and the rest of them experienced as sometimes a barrier that is stress related issues and lack of job satisfaction. Patient-related barriers were non-co-operative patients 70% and followed by patients' health illiteracy. The negative attitude of the patient was experienced as sometimes a barrier. The most commonly experienced caregivers related barrier was non-co-operative caregivers 77% and sometimes experienced barriers were unfair criticism of the nursing role and caregivers' ignorance.

Table 2 shows a statistically significant association found between the department of work and shortage of PPE (p=0.000). Analysis found the highest percentage of barrier on shortage of PPE among department of work-outpatient 91.8% followed by inpatient 79.2%, emergency 64% and rest ICU 20%. Data analysis found a statistically significant association between the department of work and inadequate training coverage (p=0.001). The analysis found the highest percentage of barriers to inadequate training coverage among department of work inpatients was 75.5%, followed by outpatient 71.4%, emergency 56%, and rest ICU 25%. A statistically significant association was found between the department of work and lack of a specific area for doffing and donning (p=0.000). The highest percentage of barriers to lack of specific area for doffing and donning among department of work outpatients was 91.8% followed by inpatients 56.6%, emergency 24%, and rest ICU 10%. A statistically significant association was found between the department of work and inadequate social distancing (p=0.000). The highest percentage of barriers regarding inadequate social distancing among department of work outpatient 93.9% followed by inpatient 86.8%, emergency 32% and rest ICU 10%. Data analysis found a statistically significant association between age group and inadequate training coverage (p=0.014).

The analysis found the highest percentage of barriers regarding inadequate training coverage among the age group 30-34 were 73.2% followed by 35-39 was 67.9%, 25-29 were 66.7%, 40-44 66.7% and the rest at 45-49 were 27.3%.

Table 2: Association between the status of respondents and barriers experienced by nurses.

Status of respondents	Barriers experienced by nurses	Barrier (%)	Sometimes a barrier (%)	Not a barrier (%)	P value
Department of work					
Inpatient	Shortage of PPE	84 (79.2)	19 (17.9)	3 (2.8)	0.000
Outpatient		45 (91.8)	4 (8.2)	0 (0.0)	
Emergency		16 (64)	4 (16)	5 (20)	
ICU		4 (20)	5 (25)	11 (55)	
Inpatient	Inadequate training coverage	80 (75.5)	18 (17)	8 (7.5)	0.001
Outpatient		35 (71.4)	9 (18.4)	5 (10.2)	
Emergency		14 (56)	7 (28)	4 (16)	
ICU		5 (25)	9 (45)	6 (30)	

Continued.

Status of respondents	Barriers experienced by nurses	Barrier (%)	Sometimes a barrier (%)	Not a barrier (%)	P value
Inpatient	Lack of specific area for doffing and donning	60 (56.6)	9 (8.5)	37 (34.9)	0.000
Outpatient		45 (91.8)	2 (4.1)	2 (4.1)	
Emergency		6 (24)	7 (28)	12 (48)	
ICU		2 (10)	0 (0)	18 (90)	
Inpatient	Inadequate social distancing	92 (86.8)	13 (12.3)	1 (0.9)	0.000
Outpatient		46 (93.9)	2 (4.1)	1 (2)	
Emergency		8 (32)	14 (56)	3 (12)	
ICU		2 (10)	13 (65)	5 (25)	
Age group (in years)					
25-29	Inadequate training coverage	52 (66.7)	21 (26.9)	5 (6.4)	0.014
30-34		52 (73.2)	13 (18.3)	6 (8.5)	
35-39		19 (67.9)	5 (17.9)	4 (14.3)	
40-44		8 (66.7)	1 (8.3)	3 (25)	
45-49		3 (27.3)	3 (27.3)	5 (45.5)	

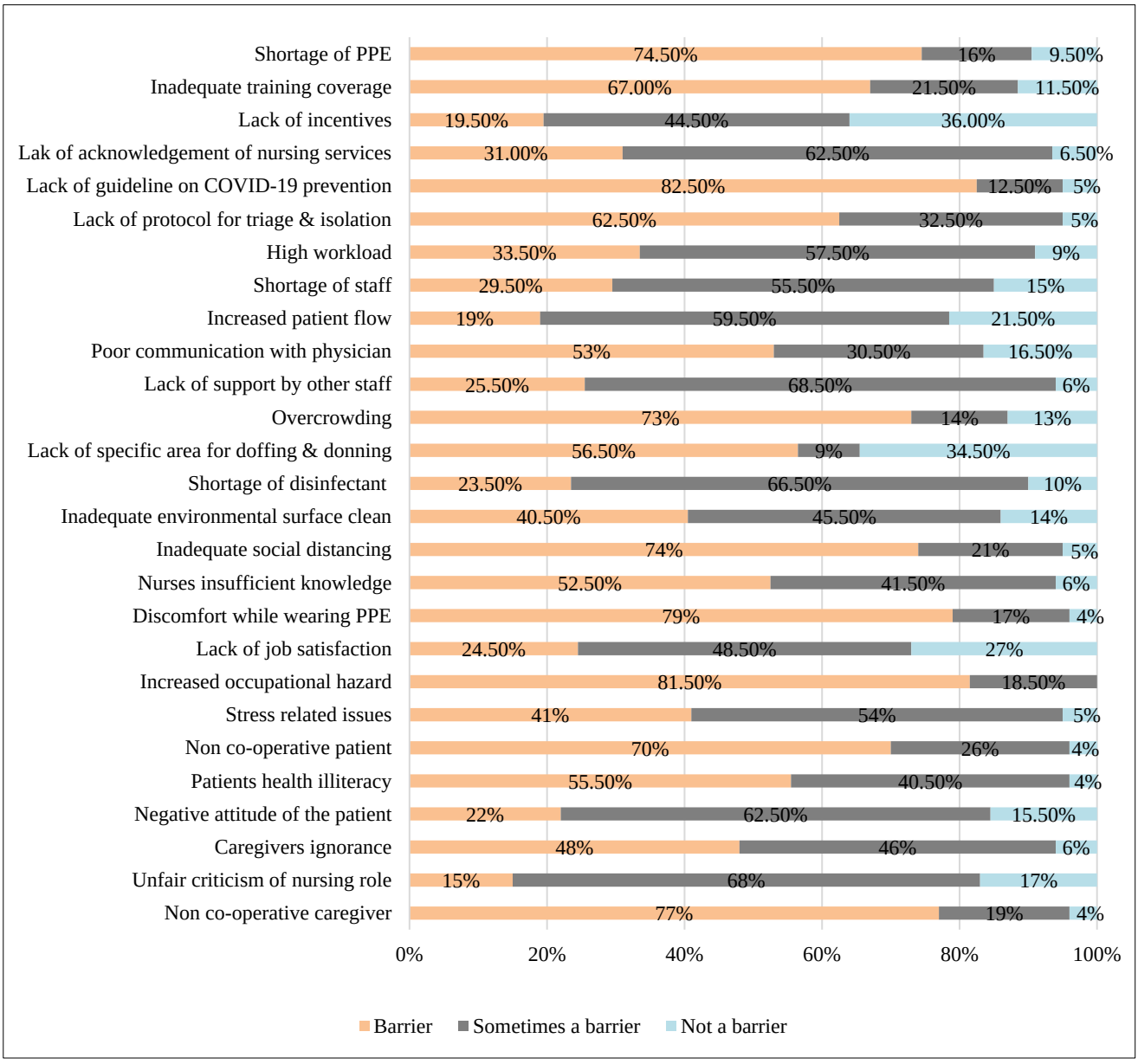

Figure 1: Frequencies of barriers experienced by nurses.

DISCUSSION

It was found that the highest percentage (39%) of the respondents were in the age group 25-29 years and the lowest in the age group 45-49 years (5.5%). The age of the respondents ranged from 25-49 years with a mean±SD age of 31.8±5.5. A study conducted in Addis Ababa, Ethiopia has a similarity with the result.[14] The result showed the total number of females (83%) was found higher than males (17%) which has a similarity to the study conducted in Wuhan.[15] The result found most of the respondents were married 84%, followed by unmarried 15.5% and divorced 0.5%. A study conducted in Asokwa Sub-Metro by Amoah showed similar findings.[16] This result revealed that most of the respondents' professional qualifications were up to a diploma in nursing (52.5%) and the lowest was a completed master's in public health 10%. A study conducted in Asokwa Sub-Metro revealed similar findings.[16] This study found the highest percentage of the respondent's working experiences were in between 1-5 years (61.5%), and the lowest of their working experiences were <1 year (14%). A study conducted in Panjab, Pakistan by Saqlain found highest percentage of the respondent's (n=414) experiences were 1-3 years (31.6%) and the lowest of their experiences were 3-5 years (13.5%).[17] This result showed the majority of the respondents were working inpatient department (53%) and the lowest of them were working in ICU (10%). A study conducted in Wuhan by Jin revealed most of the respondents were working in general words (27.7%) and the lowest of them were working in laboratory and imaging (1.6%).[15] In this study results showed a majority of the respondent's family members were between 1-4 (80%), followed by 5 and above (20%). A study conducted in the Amhara region, Ethiopia by Asemahagn showed most of the respondent's family members were in between ≤4 (72%), lowest of their family members were >4 (28%).[1]

Of the 27 barriers listed in the questionnaire in this study as a barrier, sometimes a barrier and not a barrier. To ensure equality of care evidence and research-based practical guidelines for frontline nurses must be developed, disseminated, and adopted. In this study results revealed most (82.5%) of the respondents experienced a lack of guidelines on COVID-19 prevention as a barrier. A study conducted in Addis Ababa, Ethiopia it was found 63.2%.[14] In this study, most of the respondents experienced increased occupational hazard (81.5%) as a barrier. A qualitative study conducted in Pakistan identified increased occupational hazards as challenges faced by nurses during COVID-19.[8]

In this study, the majority of the respondents experienced discomfort while wearing PPE (79%) as a barrier. A study conducted in the Amhara region, Ethiopia by Asemahagn showed most of the respondents 52% answered positively about discomfort while wearing PPE.[1] Most commonly reported organizational barriers in this study were a shortage of PPE 74.5% barrier. A study conducted in the English Midlands region by Nyashanu revealed 100% of the respondents reported a shortage of PPE as a barrier.[2] In this study, 74% of the respondents reported inadequate social distancing as a barrier. This study revealed 70% of the respondents reported non-cooperative patients as a barrier. A study conducted in Addis Ababa, Ethiopia by Etafa found uncooperative patients (39.3%) as perceived barriers.[14] In this study, overcrowding (73%) was found a barrier. A study (n=414) that was conducted in Panjab, Pakistan by Saqlain found overcrowding (52.9%) as a perceived barrier.[17] This study found 67% of the respondents experienced inadequate training coverage and 56.5% of the respondents experienced a lack of specific area for doffing and donning as a barrier which was close to the study conducted in Addis Ababa, Ethiopia by Etafa.[14]

This study found, 55.5% of the respondents experienced patients' health illiteracy, 53% experienced poor communication with physicians, and 52.5% nurses' insufficient knowledge as a barrier. A study conducted in Asokwa Sub-Metro by Amoah showed 50% of the respondents agreed with the patient's health illiteracy, 41.7% with the poor communication with the physician, and 30.6% of the respondents with the insufficient knowledge of nurses as perceived barrier.[16]

Limitations

The study was conducted in a single hospital with a small sample size. So, the results may not represent the whole community. Nurses working in the COVID ward were excluded, which further limited the sample size.

CONCLUSION

With the global threat posed by COVID-19, the study was conducted to identify the workplace barriers of nurses working in the non-COVID unit. For frontline nurses, the COVID-19 pandemic is overwhelming. Though their heroism, devotion, and selflessness offer reassurance in these difficult times they are experiencing barriers in their workplace. The study identified the major barriers: lack of guidelines, shortage of PPE, inadequate social distancing, overcrowding, inadequate training coverage, lack of doffing and dining areas, and nurses' insufficient knowledge. It is vital that improve nurses' knowledge through adequate training about COVID-19 as well as sufficient access to appropriate PPE, restricting visitors in the hospital, and arranging separate areas for doffing and donning to optimize their safety during the pandemic or epidemic. The findings from this study will help Governments, policymakers, nursing groups, and healthcare organizations to provide better support to nurses in the current or future pandemic.

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REFERENCES

1. Asemahagn MA. Factors determining the knowledge and prevention practice of healthcare workers towards COVID-19 in Amhara region, Ethiopia:a cross-sectional survey. Trop Med Health. 2020;48:72.
2. Nyashanu M, Pfende F, Ekpenyong M. Exploring the challenges faced by frontline workers in health and social care amid the COVID-19 pandemic: experiences of frontline workers in the English Midlands region, UK. J Interprof Care. 2020;34(5):655-61.
3. World Health Organization. WHO Director-General's opening remarks at the media briefing on COVID-19 11 March 2020. Available at: https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11march. Accessed on 10 February 2023.
4. Hope K, Massey PD, Osbourn M, Durrheim DN, Kewley CD, Turner C. Senior clinical nurses effectively contribute to the pandemic influenza public health response. Aust J Adv Nurs. 2011;28(3):47-53.
5. Liu Q, Luo D, Haase JE, Guo Q, Wang XQ, Liu S, et al. The experiences of health-care providers during the COVID-19 crisis in China: a qualitative study. The Lancet Global Health. 2020;8:790-8.
6. Huang L, rong Liu H. Emotional responses and coping strategies of nurses and nursing college students during COVID-19 outbreak. MedRxiv. 2020.
7. Ulrich CM, Rushton CH, Grady C. Nurses confronting the coronavirus: Challenges met and lessons learned to date. Nurs Outlook. 2020;68(6):838844.
8. Yin X, Zeng L. A study on the psychological needs of nurses caring for patients with coronavirus disease 2019 from the perspective of the existence, relatedness, and growth theory. Int Nurs Sci. 2020;7(2):157-60.
9. Mantovani C. Over 90,000 health workers infected with COVID-19 worldwide: nurses group. Reuters. 2020. Available at: https://www.reuters.com/article/us-health-coronavirus-nurses-idUSKBN22I1XH. Accessed on 10 February 2023.
10. Sethi A, Aamir HS, Sethi BA, Ghani N, Saboor S. Impact on Frontline Nurses in the Fight Against Coronavirus Disease.Annals KEMU. 2020;26:120-5.
11. Muller MP, Carter E, Siddiqui N, Larson E. Hand Hygiene Compliance in an Emergency Department: The Effect of Crowding. Acad Emerg Med. 2015;22(10):1218-21.
12. Jackson D, Bradbury-Jones C, Baptiste D, Gelling L, Morin K, Neville S, Smith GD. Life in the pandemic: Some reflections on nursing in the context of COVID-19. J Clin Nurs. 2020.
13. Thobaity A, Alshammari F. Nurses on the frontline against the COVID-19 Pandemic. Dubai Med J. 2020;3:87-92.
14. Etafa W, Argaw Z, Gemechu E, Melese B. Nurses' attitude and perceived barriers to pressure ulcer prevention. BMC Nursing. 2018;17(1):1-8.
15. Jin Z, Luo L, Lei X, Zhou W, Wang Z, Yi L, Liu N. Knowledge, Attitude, and Practice of Nurses Towards the Prevention and Control of COVID-19. Research Square. 2020.
16. Maame Kissiwaa Amoah V, Anokye R, Boakye DS, Gyamfi N. Perceived barriers to effective therapeutic communication among nurses and patients at Kumasi South Hospital. Cogent Medicine. 2018;5(1):1459341.
17. Saqlain M, Munir MM, Rehman SU, Gulzar A, Naz S, Ahmed Z, Tahir AH, Mashhood M. Knowledge, attitude, practice and perceived barriers among healthcare workers regarding COVID-19: a cross-sectional survey from Pakistan. J Hospital Infect. 2020;105(3):419-23.

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