

# Awareness and COVID-19 Preventive Practices among Inpatients' Caregivers at a Mixed COVID -19 Treatment Hospital in Southwest Nigeria

Abiodun I. Okunlola\*, Olakunle F. Babalola<sup>1</sup>, Cecilia K. Okunlola<sup>2</sup>, Ajayi A. Ibijola<sup>3</sup>, Makanjuola D. Ayokunle<sup>1</sup>, Adedayo I. Salawu<sup>1</sup>

<sup>1</sup>Department of Surgery, Federal Teaching Hospital, Ido-Ekiti/ Afe Babalola University, Ado-Ekiti, <sup>2</sup>Department of Medicine, Federal Teaching Hospital, Ido-Ekiti,

<sup>3</sup>Department of Haematology and Blood Transfusion, Federal Teaching Hospital, Ido-Ekiti/ Afe Babalola University, Ado-Ekiti, Nigeria

## Abstract

**Background:** The severe acute respiratory syndrome coronavirus-2 was first reported by the World Health Organization in December 2019 and thereafter declared a pandemic. Its emergence affected all spheres of daily life including widespread lockdowns at the peak of the first wave of the pandemic. Several nonpharmacological preventive practices were adopted to curb the spread of the novel coronavirus amid the initial paucity of supporting scientific data. **Aim:** The study aimed to evaluate the level of awareness and preventive practices among the family caregivers of the patients admitted to a mixed hospital during the first wave of the COVID-19 pandemic in Nigeria. **Methods to Materials:** This study was a self-administered questionnaire-based cross-sectional survey carried out in June 2020 during the lockdown for the first wave of the COVID-19 pandemic. The study participants were selected by the convenience sampling method. Participants consisted of one hundred family caregivers of the inpatients admitted for various ailments other than COVID-19 in our hospital. Data on demography, awareness of COVID-19, and preventive practices were obtained and analysed using IBM SPSS version 20. The results were presented using tables. Categorical data were summarised by frequencies and percentages, whereas continuous data were summarised using means and standard deviations (SDs). **Results:** The respondents were mainly married young adults (74%) with an age range between 15 and 66 years. The mean age was  $37.7 \pm 13.9$  SD. Sixty-four percent of the respondents were female, 92% were of the Yoruba ethnic group, and 60% were university graduate. Most family caregivers were first-degree relatives (86%), and 14% were acquaintances or friend. The findings showed that 98% of the respondents were aware of the COVID-19 pandemic, and 56% never experienced fear of contracting the disease. Fifty-eight percent of the respondents observed physical distancing, whereas the remaining 42% practiced normal physical interaction despite the pandemic. Regular handwashing and the use of face masks were the most common nonpharmacological preventive practices. Cloth face masks were the most commonly used. Only 38% of the respondents were aware of the inhospital COVID-19-positive patients, and a majority of them got the information through the radio and from discussions among the patients' relatives. **Conclusion:** Family caregivers are an integral part of the health-care system, and females are more involved than males. Regular handwashing and the use of cloth face masks were the most common COVID-19 nonpharmacological preventive practices among the family caregivers.

**Keywords:** Family caregivers, pandemic, prevention practices, severe acute respiratory syndrome coronavirus

## INTRODUCTION

The severe acute respiratory syndrome coronavirus-2 was first reported by the World Health Organization in December 2019 and confirmed as a global pandemic thereafter.<sup>[1,2]</sup> It is a novel coronavirus that causes a severe respiratory disease known as coronavirus disease (COVID-19).<sup>[2]</sup> The virus is highly contagious, first documented in Wuhan, Hubei Province in China, but immediately spread across the globe.<sup>[1]</sup> There was a lockdown of public places in many countries all over the world to limit the spread.<sup>[3]</sup> The virus spreads from person to

person through respiratory droplets or through contact with contaminated surfaces.<sup>[1]</sup> Therefore, part of effective measures to control the spread includes nonpharmacological actions such

**Address for correspondence:** Dr. Abiodun Idowu Okunlola, Department of Surgery, Federal Teaching Hospital, Ido-Ekiti, Nigeria. Afe Babalola University, Ado-Ekiti, Nigeria. E-mail: okunlolaai@abuad.edu.ng

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

**For reprints contact:** WKHLRPMedknow\_reprints@wolterskluwer.com

**How to cite this article:** Okunlola AI, Babalola OF, Okunlola CK, Ibijola AA, Ayokunle MD, Salawu AI. Awareness and COVID-19 preventive practices among inpatients' caregivers at a mixed COVID -19 treatment hospital in Southwest Nigeria. *Niger J Med* 2022;31:315-8.

**Submitted:** 17-Sep-2021

**Revised:** 19-Apr-2022

**Accepted:** 07-May-2022

**Published:** 24-Jun-2022

### Access this article online

Quick Response Code:



**Website:**  
www.njmonline.org

**DOI:**  
10.4103/NJM.NJM\_166\_21

**Table 1: Sociodemographic characteristics of the respondents (n=100)**

	Caregivers, frequency (n=100), n (%)
Age of caregiver (years)	
<20	7 (7.0)
21-30	29 (29.0)
31-40	28 (28.0)
41-50	16 (16.0)
51-60	14 (14.0)
61-70	6 (6.0)
Mean±SD (range)	37.7±13.4 (15-66)
Marital status	
Single	24 (24.0)
Married	74 (74.0)
Widow	2 (2.0)
Gender	
Male	36 (36.0)
Female	64 (64.0)
Ethnicity	
Yoruba	92 (92.0)
Others	8 (8.0)
Religion	
Christian	91 (91.0)
Muslim	9 (9.0)
Highest educational level	
Primary	11 (11.0)
Secondary	7 (7.0)
Diploma	22 (22.0)
Degree	60 (60.0)

SD: Standard deviation

as social/physical distancing, wearing of face masks, regular handwashing, and the use of alcohol-based hand sanitisers.<sup>[3-6]</sup> It took a toll on the health-care delivery system during the first wave of the pandemic with various hospitals closing their facilities; with various hospitals closing their facilities. However, some hospitals were converted to COVID-19 isolation centres while many adopted mixed hospital setting in which part of the existing facilities was converted to COVID-19 treatment centres with uninterrupted continuation of routine patient care in other parts of the hospital. Our hospital adopted the latter model because of the paucity of health-care facilities in the suburban community.

Family caregivers are an integral part of the health-care delivery system, most especially in low-income countries.<sup>[7-10]</sup> It is a common practice to show love to family members, and the COVID-19 pandemic did not stop this practice. The objective of this study was to document the awareness of the COVID-19 pandemic and the preventive practices among the family caregivers of the patients admitted to a mixed hospital during the first wave of the COVID-19 pandemic.

## MATERIALS AND METHODS

### Study design

This was a descriptive cross-sectional study. The data were collected using a self-administered questionnaire. It was carried

out in June 2020 during the lockdown during the first wave of the COVID-19 pandemic in Nigeria.

### Study population

The study was conducted among 100 relatives functioning as caregivers of the inpatients admitted for various ailments other than COVID-19 in our hospital. The participants were selected using a convenience sampling technique.

### Study location

The study was carried out in our 300-bed capacity hospital located in a suburban community in Southwest Nigeria. A COVID-19 treatment centre was situated within the hospital by conversion of parts of the existing facility. There was a holding ward for suspected COVID-19 patients and a COVID-19 treatment ward for confirmed cases of COVID-19. The hospital provided routine patient care including clinics, emergency, and elective surgeries.

### Data collection tool and technique

A self-administered questionnaire was used to collect the data on sociodemographic profiles of the family caregivers, awareness of the COVID-19 pandemic, and preventive practices.

### Data analysis

The data were analysed using the IBM SPSS Statistics 20. The results were presented using tables. Categorical data were summarised by frequencies and percentages, whereas continuous data were summarised using means and standard deviations (SDs).

### Ethical considerations

Institutional ethical approval was obtained for this study.

## RESULTS

The respondents were mainly married young adults (74%) with an age range between 15 and 66 years. The mean age was  $37.7 \pm 13.9$  SD. Sixty-four percent of the respondents were female, 92% were of the Yoruba ethnic group, and 60% were university graduate [Table 1].

Most of the caregivers were first-degree relatives, which include spouses, siblings, parents, and children [Table 2], and only 14% were acquaintances or friend.

The findings showed that 98% of the respondents were aware of the COVID-19 pandemic [Table 3], and 56% never experienced fear of contracting COVID-19.

Fifty-eight percent of the respondents observed physical distancing, whereas the remaining 42% did not. Regular handwashing and the use of face masks were the most common nonpharmacological preventive practices. Cloth face masks were the most common, whereas N95 face masks were the least used.

## DISCUSSION

Family caregivers play an important role in the health-care delivery system, most especially in low-income countries and

**Table 2: Respondents relationship with the patients**

Variables	Frequency (%)
Relationship with patient	
Spouses	28 (28.0)
Parents	20 (20.0)
Siblings	12 (12.0)
Sons	11 (11.0)
Daughters	15 (15.0)
Friends	1 (1.0)
Others	13 (13.0)
Total	100 (100)
Length of time spent caring for the patient in the hospital	
<one week	48 (48.0)
One–two weeks	19 (19.0)
Two–four weeks	15 (15.0)
One–three months	13 (13.0)
Four–six months	5 (5.0)

**Table 3: Awareness of the coronavirus disease-19 pandemic and preventive practices among the family caregivers**

Variables	Frequency (%)
Being aware of COVID-19	
Yes	98 (98.0)
No	2 (2.0)
Fear of contracting COVID-19	
Always	16 (16.0)
Sometimes	28 (28.0)
Never	56 (56.0)
Social/physical distancing	
Yes	58 (58.0)
No	42 (42.0)
Regular handwashing	
Yes	79 (79.0)
No	21 (21.0)
Use of alcohol-based hand sanitiser	
Yes	48 (48.0)
No	52 (52.0)
Cloth face mask	
Yes	87 (87.0)
No	13 (13.0)
Surgical face mask	
Yes	29 (29.0)
No	71 (71.0)
N95	
Yes	21 (21.0)
No	79 (79.0)
Aware of any patient with COVID-19 infection	
Yes	38 (38.0)
No	62 (62.0)

COVID-19: Coronavirus disease-19

in public hospitals where they are needed to provide additional patients' support that will ease the burden on the strained

healthcare workers.<sup>[8,11]</sup> Some of their duties include assisting in nursing care, rehabilitation and physical therapy, psychological and emotional support, and running errands when necessary.<sup>[8]</sup> It is a cultural practice in Southwest Nigeria for family members and close associates to be around their loved ones during illness whether at home or in the hospital, and the emergence of the COVID-19 pandemic did not affect this practice.<sup>[11]</sup> This finding is similarly reported by other authors.<sup>[11,12]</sup> Family caregivers were readily available during the first wave of the COVID-19 pandemic despite the challenges of movement imposed by the phased lockdown. However, the burden of isolation borne by them during the pandemic lockdown has been associated with cognitive, emotional, financial, and physical stressors.<sup>[11-13]</sup> Most of the family caregivers were female, and the majority were close relatives of the patients.<sup>[8,14]</sup> Only two out of the 100 respondents were not aware of the COVID-19 pandemic. Family caregivers, though important, are an often forgotten component of the health-care delivery system with little or no attention given to them in the health-care delivery process.<sup>[14,15]</sup> There are various literature on the COVID-19 pandemic and health workers, but little is known about the preventive practices adopted by the family caregivers of inpatient patients, most especially in hospitals that served as COVID-19 treatment centres while routine patient care continued unabated.<sup>[16-19]</sup>

The female gender is known for their self-sacrificing attitude, and they would readily prioritise the care of ailing family members over any other assignment.<sup>[8,14]</sup> In a recently conducted cross-sectional survey of the adverse effects of the COVID-19 pandemic on caregivers compared to noncaregivers among a predominantly non-Hispanic population, 75.5% of the caregivers' population were female.<sup>[13]</sup> This corroborates the finding of our study, which showed that the ravaging pandemic had no negative impact on the well-documented caregiving attribute of the female gender.

Regular handwashing and the use of cloth face masks were the most common nonpharmacological preventive practice among the family caregivers in this study.<sup>[14]</sup> Many studies have documented the efficacy of these two nonpharmacological measures in breaking the chain of the spread of the pandemic.<sup>[6,17,20-22]</sup> The relative ease of provision and accessibility of handwashing facilities in the hospitals, as well as affordability of cloth face masks to the suburban community at the peak of the pandemic, facilitated compliance with the COVID-19 preventive practices.

## CONCLUSION

Family caregivers play an important role in health-care system, and females are more involved than males. Regular handwashing and the use of cloth face masks were the most common COVID-19 nonpharmacological preventive practices among the family caregivers.

## Financial support and sponsorship

Nil.

## Conflicts of interest

There are no conflicts of interest.

## REFERENCES

- Shereen MA, Khan S, Kazmi A, Bashir N, Siddique R. COVID-19 infection: Origin, transmission, and characteristics of human coronaviruses. *J Adv Res* 2020;24:91-8.
- Khan S, Siddique R, Shereen A, Ali A, Liu J, Bai Q, *et al.* Emergence of a novel coronavirus, severe acute respiratory syndrome coronavirus 2: Biology and therapeutic options. *J Clin Microbiol* 2020;58:1-11.
- Pedrosa AL, Bitencourt L, Fróes AC, Cazumbá ML, Campos RG, de Brito SB, *et al.* Emotional, behavioral, and psychological impact of the COVID-19 pandemic. *Front Psychol* 2020;11:566212.
- Lee M, Kang BA, You M. Knowledge, attitudes, and practices (KAP) toward COVID-19: A cross-sectional study in South Korea. *BMC Public Health* 2021;21:295.
- Masoud AT, Zaaouee MS, Elsayed SM, Ragab KM, Kamal EM, Alnasser YT, *et al.* KAP-COVID<sub>GLOBAL</sub>: A multinational survey of the levels and determinants of public knowledge, attitudes and practices towards COVID-19. *BMJ Open* 2021;11:e043971.
- Proverbio D, Kemp F, Magni S, Husch A, Aalto A, Mombaerts L, *et al.* Dynamical SPQEUR model assesses the effectiveness of non-pharmaceutical interventions against COVID-19 epidemic outbreaks. *PLoS One* 2021;16:e0252019.
- Pérez-Cruz M, Parra-Anguita L, López-Martínez C, Moreno-Cámara S, Del-Pino-Casado R. Burden and anxiety in family caregivers in the hospital that debut in caregiving. *Int J Environ Res Public Health* 2019;16:E3977.
- Akpan-Idiok PA, Anarado AN. Perceptions of burden of caregiving by informal caregivers of cancer patients attending University of Calabar Teaching Hospital, Calabar, Nigeria. *Pan Afr Med J* 2014;18:159.
- Tajudeen Nuhu F, Jika Yusuf A, Akinbiyi A, Oluyinka Fawole J, Joseph Babalola O, Titilope Sulaiman Z, *et al.* The burden experienced by family caregivers of patients with epilepsy attending the government psychiatric hospital, Kaduna, Nigeria. *Pan Afr Med J* 2010;5:16.
- Jite IE, Adetunji AA, Folasire AM, Akinyemi JO, Bello S. Caregiver burden and associated factors amongst carers of women with advanced breast cancer attending a radiation oncology clinic in Nigeria. *Afr J Prim Health Care Fam Med* 2021;13:e1-8.
- Mirzaei A, Raesi R, Saghari S, Raei M. Evaluation of family caregiver burden among COVID-19 patients. *Open Public Health J* 2021;13:808-14.
- Robinson JV, James AL. Some observations on the effects produced in white mice following the injection of certain suspensions of corroding bacilli. *Br J Exp Pathol* 1975;56:14-6.
- Beach SR, Schulz R, Donovan H, Rosland AM. Family caregiving during the COVID-19 pandemic. *Gerontologist* 2021;61:650-60.
- Slaboda JC, Nelson SH, Agha Z, Norman GJ. A national survey of caregiver's own experiences and perceptions of U.S. health care system when addressing their health and caring for an older adult. *BMC Health Serv Res* 2021;21:101.
- Rahimi T, Dastyar N, Rafati F. Experiences of family caregivers of patients with COVID-19. *BMC Fam Pract* 2021;22:137.
- Limbu DK, Piryani RM, Sunny AK. Healthcare workers' knowledge, attitude and practices during the COVID-19 pandemic response in a tertiary care hospital of Nepal. *PLoS One* 2020;15:e0242126.
- Bo Y, Guo C, Lin C, Zeng Y, Li HB, Zhang Y, *et al.* Effectiveness of non-pharmaceutical interventions on COVID-19 transmission in 190 countries from 23 January to 13 April 2020. *Int J Infect Dis* 2021;102:247-53.
- Al-Dossary R, Alamri M, Albaqawi H, Al Hosis K, Aljeldah M, Aljohan M, *et al.* Awareness, attitudes, prevention, and perceptions of COVID-19 outbreak among nurses in Saudi Arabia. *Int J Environ Res Public Health* 2020;17:E8269.
- Ramaci T, Barattucci M, Ledda C, Rapisarda V. Social stigma during COVID-19 and its Impact on HCWs Outcomes. *Sustainability* 2020;12:3834. <https://doi.org/10.3390/su12093834>.
- Lai S, Ruktanonchai NW, Zhou L, Prosper O, Luo W, Floyd JR, *et al.* Effect of non-pharmaceutical interventions to contain COVID-19 in China. *Nature* 2020;585:410-3.
- Yang W, Shaff J, Shaman J. Effectiveness of non-pharmaceutical interventions to contain COVID-19: A case study of the 2020 spring pandemic wave in New York City. *J R Soc Interface* 2021;18:20200822.
- Iezadi S, Azami-Aghdash S, Ghiasi A, Rezapour A, Poursaghari H, Pashazadeh F, *et al.* Effectiveness of the non-pharmaceutical public health interventions against COVID-19; a protocol of a systematic review and realist review. *PLoS One* 2020;15:e0239554.