# PATIENTS' PERCEPTIONS OF HOSPITAL CARE IN A COVID-19 PANDEMIC POPULATION

**ABSTRACT**

**Background:** COVID-19 pandemic was associated with pandemonium and misinformation, affecting patients' health-seeking behavior. This study was designed to explore patients' perceptions of hospital care during this period and to provide evidence-based and appropriate public health planning strategies. **Materials and Method:** A cross-sectional survey was conducted among 155 patients using 22 items structured and self-completion questionnaires to determine (A) Socio-demographic variables, (B) Knowledge and perception of the disease, and (C) The participants' behaviors towards COVID-19. A Hardcopy version of the questionnaire was administered to the respondents by direct issuance. **Results**: 103(66.45%) of the respondents knew the cause of COVID-19, while 104 (67.09%) agreed that people can be infected with COVID-19 in the hospital. 84 (54.19%) were afraid of a hospital visit and 66 (42.58%) are unwilling to self-report if they have minor symptoms. A large number 43(27.74%) perceived a clean environment as the impetus to make them comfortable in the hospital. **Conclusion:** Our study illuminates gaps in the patients' perceptions of hospital care during the COVID-19 pandemic, which impacted negatively on the patient population as they avoided hospitalization for fear of contracting COVID-19 in the hospital. Furthermore, appropriate public health strategies can improve patients' perceptions and health-seeking behavior in a pandemic period.

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**Keywords**: COVID-19, patients' perception of hospital care, pandemic

## INTRODUCTION

The recent outbreak of coronavirus disease (COVID-19) and consequent pandemic proportions is of global public health concern. The rapid spread of this infection, its high transmission rate, and attendees' deaths as well as the downturn of the economy instills fear in people and governments worldwide. COVID-19 was first detected in December 2019 in Wuhan city, China. Following the declaration of the pandemic, different measures were undertaken by various countries worldwide which included stay-at-home,, quarantines and travel restrictions, to prevent the spread of the virus [1]. It is understood that the continuous spread of COVID-19 would largely depend on people's behavior as regards understanding and adherence to preventive measures [2], as well as response to recent vaccination. Patients' perceptions of care in this study environment and consequent health-seeking behavior in the COVID-19 pandemic have not been explored.

It is a fact that wrong information could worsen any pandemic situation. It is also known that risk perception may greatly predict human behavioral patterns and affect health-seeking behavior [3]. Studies conducted in India, the USA, and the UK on knowledge and practice towards COVID-19 noted misconceptions about covid-19 with a concomitant gap in right perception [1, 4]. In contrast, a study conducted in Nigeria among health care workers revealed that the overall knowledge of COVID-19 was high with positive perceptions of preventive measures [5]. Following the state of pandemonium created by misinformation and rumors from unorthodox sources about COVID-19, patients avoided the hospitals and preferred to manage their ill-health at home. This was aggravated by fear of deliberate contagion by hospital staff as speculated

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among the populace. The resultant effect was a sharp drop in hospital attendance, which portends harm to public health as patients defer care for life-threatening conditions. Falling hospitalization rates were also noted in the US during the covid-19 pandemic out of fear of the contagion or access at COVID-19 overrun hospitals [6].

To facilitate effective management of the COVID-19outbreak, there is a need to understand patients' perceptions regarding hospital care during COVID-19 vis-à-vis hospital attendance. This study was therefore designed to explore patients' perceptions of hospital care during COVID-19 and to help the government in planning appropriate public health interventions.

**MATERIALS AND METHOD:**

This was a cross-sectional survey, which was conducted among 155 patients referred for various diagnostic investigations at a renounced private Imaging Diagnostic Centre in Port Harcourt, Rivers State. The sample size was determined using the formula for the unknown population below and was selected using the convenience sampling technique.

$$n = \frac{Z\alpha^2 pq}{d^2}$$

Where,

n = Expected sample size

Zα = significant level usually set at 95% confidence level, Zα is 1.96 (two sided).

p = proportion of the population with similar attributes under study = 50% (0.5).

d = Margin of error tolerated or absolute error = 7.87% (0.0787)

q = 1-p = 1-0.5 = 0.5

$$n = \frac{(1.96)^2 \times 0.5\,(1 - 0.5)}{(0.0787)^2} = \frac{0.9604}{0.006194}$$

n = 155

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The institutional ethical clearance and permission for this study were obtained and the participant's consent was duly sought and obtained accordingly. The participation by patients in our study was entirely voluntary as their refusal to participate in the study would not affect the healthcare services received from the facility.

A validated 22-items structured and self-completion questionnaire designed by the authors in line with the aim of the study was used for data collection. The validation of the questionnaire was done using the Index of Item Objective Congruence (IOC) method used by previous authors [5,7]. The content validity of the questionnaire was assessed by calculating the IOC. Based on the index parameters, an IOC score >0.6 was assumed to show excellent content validity. All the scores obtained in this study for all the items of the questionnaire after IOC interpretation were >0.6. The questionnaire was found to have a Cronbach alpha reliability value of 0.86 for internal consistency. The survey instrument comprised of 30 questions, which were divided into three sections: A) Socio-demographic variables, B) Knowledge and perception of the disease and C) The participant's behaviors towards COVID-19. Hardcopy version was administered to the respondents by direct issuance. The completed copy of the questionnaire was retrieved immediately after being filled out by the respondents. The generated data were analyzed using descriptive statistical tools such as frequencies and percentages and presented in tables.

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## RESULTS

### Respondents' socio-demographic description

Out of 155 respondents, males were 61 (39.35%) when compared to their female counterparts of 94 (60.65%). The majority of respondents were within the age group of 19-25 years of age. Those that lived in the urban areas accounted for 118 (76.13%). A greater proportion 109 (70.32%) of the respondent had post-secondary educational qualifications (Table 1).

**Table 1. Socio-demographic variables of the respondents**

| S/N | Socio-demographic Variables | Frequency (n) | Percentage (%) |
|---|---|---|---|
| 1. | **Gender** | | |
| | Male | 61 | 39.35 |
| | Female | 94 | 60.65 |
| | **Total** | **155** | **100** |
| 2. | **Age** | | |
| | 10 – 18 | 29 | 18.71 |
| | 19 – 25 | 41 | 26.45 |
| | 26 – 30 | 38 | 24.52 |
| | 31 – 40 | 28 | 18.06 |
| | 41 – 50 | 10 | 6.45 |
| | 51 – 60 | 4 | 2.58 |
| | 61 – 70 | 5 | 3.22 |
| | **Total** | **155** | **100** |
| 3. | **Where do you live** | | |
| | Urban | 118 | 76.13 |
| | Rural | 37 | 23.87 |
| | **Total** | **155** | **100** |
| 4. | **Education / Qualification** | | |
| | Primary | 1 | 0.65 |
| | Secondary | 45 | 29.03 |
| | Post-Secondary | 109 | 70.32 |
| | **Total** | **155** | **100** |

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**The respondent's knowledge of COVID-19**

The majority 148 (95.49%) of the respondents were aware of COVID-19. A greater proportion of 103 (66.45%) of the respondents knew about the cause of the disease. The highest number of 88 (56.77%) heard about COVID-19 through the television. Out of 155 respondents, 42 (27.09%) agreed with the National Centre for Disease Control (NCDC) figures of dead persons due to the disease, and 75 (48.39%) disagreed with the NCDC figures. The majority 104 (67.09%) agreed that people can be infected with COVID-19 in the hospital. A significant proportion of 84 (54.19%) of the respondents were afraid of being infected during their stay in the hospital. A large number 43(27.74%) perceived a clean environment as the major step to make them comfortable in the hospital (Table 2).

**Table 2: Knowledge of the disease**

| S/N | Questions on Knowledge of COVID-19 | Frequency (n) | Percentage (%) |
|---|---|---|---|
| a. | Are you aware of COVID-19? | | |
| | Unsure | 1 | 0.64 |
| | No | 6 | 3.87 |
| | Yes | 148 | 95.49 |
| | **Total** | **155** | **100** |
| b. | Are aware of the cause? | | |
| | Yes | 103 | 66.45 |
| | No | 31 | 20 |
| | Unsure | 21 | 13.55 |
| c. | What is the source of information | **155** | **100** |
| | TV | 88 | 56.77 |
| | Radio | 29 | 18.71 |
| | Newspaper | 17 | 10.97 |
| | Friends | 10 | 6.45 |
| | Others | 11 | 7.09 |
| | **Total** | **155** | **100** |
| d. | **Do you believe that people die due of COVID-19?** | | |
| | Yes | 118 | 76.13 |
| | No | 20 | 12.90 |
| | Unsure | 17 | 10.97 |
| | **Total** | **155** | **100** |
| e. | **Do you agree with the NCDC figures?** | | |
| | Yes | 42 | 27.09 |
| | No | 75 | 48.39 |
| | Unsure | 38 | 24.52 |
| | **Total** | **155** | **100** |

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| | | | |
|---|---|---|---|
| f. | Do you agree that people can be infected in a hospital? | | |
| | Yes | 104 | 67.09 |
| | No | 11 | 7.09 |
| | Unsure | 40 | 25.82 |
| | **Total** | **155** | **100** |
| g. | Do you agree that infection control will prevent spread in the hospital? | | |
| | Yes | 120 | 77.42 |
| | No | 18 | 11.61 |
| | Unsure | 17 | 10.97 |
| | **Total** | **155** | **100** |
| h. | Are you afraid of infection during your stay in the hospital? | | |
| | Yes | 84 | 54.19 |
| | No | 40 | 25.81 |
| | Unsure | 31 | 20 |
| | **Total** | **155** | **100** |
| i. | Which of the steps will make you comfortable in the hospital? | | |
| | Staff wearing PPE | 34 | 21.94 |
| | Presence of infection control procedures | 33 | 21.29 |
| | Good attitude of workers | 27 | 17.42 |
| | Clean Environment | 43 | 27.74 |
| | Short stay | 20 | 12.90 |
| | Staff training | 8 | 5.16 |
| | **Total** | **155** | **100** |

**The respondent's behavior towards COVID-19**

Out of 155 respondents, 94 (60.64%) said they will willingly submit themselves for the COVID-19 test. The majority 93 (60%) of the respondents were willing to know their COVID-19 status. Sixty-six (42.58%) of the respondents said they will not report themselves to health authorities if they have minor symptoms such as a sore throat. Out of 155 respondents, 123 (79.35%) agreed that they will test or self-isolate themselves if they had contact with an infected person. A greater proportion of the respondents 55 (35.48%) were unsure of the treatment centers that was why they could not wait for the test (Table 3).

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**Table 3: Behavior of the respondents towards COVID-19 infection**

| S/N | Questions on Behaviors | Frequency (n) | Percentage (%) |
|---|---|---|---|
| a.. | Will you willingly submit to Covid -19 test? | | |
| | Yes | 94 | 60.64 |
| | No | 33 | 21.29 |
| | Unsure | 28 | 18.07 |
| | **Total** | **155** | **100** |
| b. | Will you agree to be tested if you have no symptoms | | |
| | Yes | 67 | 43.22 |
| | No | 62 | 40.00 |
| | Unsure | 26 | 16.77 |
| | **Total** | 155 | 100 |
| c. | Would you ordinarily like to know your Covid 19 status? | | |
| | Yes | 93 | 60.00 |
| | No | 50 | 32.26 |
| | Unsure | 12 | 7.74 |
| | **Total** | **155** | **100** |
| d. | If you have minor symptoms like sour throat or loss of taste, will you report to health authorities? | | |
| | Yes | 59 | 38.06 |
| | No | 66 | 42.58 |
| | Unsure | 30 | 19.36 |
| | **Total** | **155** | **100** |
| e. | If you have contact with an infected person, will you test or be self-isolated? | | |
| | Yes | 123 | 79.35 |
| | No | 9 | 5.81 |
| | Unsure | 23 | 14.84 |
| | **Total** | **155** | **100** |
| f. | If you have severe symptoms, will you report to NCDC? | | |
| | Yes | 86 | 55.48 |
| | No | 40 | 25.81 |
| | Unsure | 29 | 18.71 |
| | **Total** | **155** | **100** |
| g. | What is the reason for not waiting to be tested? | | |
| | Quarantine stigmatization | 41 | 26.45 |
| | Not sure of treatment centers | 55 | 35.48 |
| | Do not believe govt. | 25 | 16.13 |
| | Not sure of the drugs | 34 | 11.94 |

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| | | | |
|---|---|---|---|
| | **Total** | **155** | **100** |
| h. | What would you recommend for positive patients with minor symptoms? | | |
| | Govt should tell everybody the exact drugs for Rx | 54 | 34.84 |
| | Patients should be treated in their homes | 35 | 22.58 |
| | Patients should be treated in isolation centers | 60 | 38.71 |
| | Patients should be left alone to manage themselves | 6 | 3.87 |
| | **Total** | **155** | **100** |

**The respondent's perception of hospital care during the COVID-19 pandemic**

The majority 98 (63.23%) of the respondents said they did not go to the hospital during the COVID-19 pandemic. A greater proportion 86 (55.48%) of the respondents, perceived hospital care to be suboptimal. Out of 86 (55.48%) respondents that perceived hospital care to be suboptimal during the COVID-19 pandemic, 64(74.42%) attributed it to the fact that all workers do not go to work during the pandemic. Out of 155 respondents, 89 (57.42%) perceived hospital staff to be unfriendly during the pandemic. The majority 81(52.26%) of the respondents said that their waiting time to see the doctor was short and those that attributed this to the fact that many patients don't come to the hospital were highest 53(65.43%). A good number 98 (63.23%) of the respondents said that speculations that one can get infected with COVID-19 in the hospital were the reason for the low hospital attendance during the pandemic (Table 4).

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**Table 4: Respondents' perception of hospital care during COVID-19 pandemic**

| S/N | Questions and responses | Frequency (n) | Percentage (%) |
|---|---|---|---|
| a. | Did you go to the hospital for any reason during this COVID-19 pandemic? | | |
| | Yes | 57 | 36.77 |
| | No | 98 | 63.23 |
| | | | |
| | **Total** | **155** | **100** |
| b. | What is your assessment of hospital care in recent times? | | |
| | Optimal | 69 | 44.52 |
| | | | |
| | Suboptimal | 86 | 55.48 |
| | **Total** | **155** | **100** |
| c. | If suboptimal, why do you think so? Because not all workers come to work reason during this COVID-19 pandemic? | | |
| | Yes | 64 | 74.42 |
| | No | 22 | 25.58 |
| | | | |
| | **Total** | **86** | **100** |
| d. | Hospital staff are not friendly as before because they are afraid of patients | | |
| | Yes | 89 | 57.42 |
| | No | | |
| | | 66 | 42.58 |
| | **Total** | **155** | **100** |
| e. | Did you have to wait for long before seeing a doctor? | | |
| | Yes | 74 | 47.74 |
| | No | 81 | 52.26 |
| | | | |
| | **Total** | **155** | **100** |
| f. | If NO, what do you think is responsible | | |
| | Patients were not many like before | 53 | 65.43 |

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| | | | |
|---|---|---|---|
| | Patients were many but doctors were fast | 28 | 34.57 |
| | | | |
| | **Total** | **81** | **100** |
| g. | What do you think is responsible for low hospital attendance? | | |
| | Speculations that one can get infected with COVID-19 in the hospital | 98 | 63.23 |
| | Patients take treatment at home in preference to the hospital these days | 57 | 36.77 |
| | **Total** | **155** | **100** |
| | | | |
| | | | |
| h. | To avoid adverse outcomes, efforts should be geared towards ensuring that people with acute medical illnesses can obtain hospital care as needed without fear | | |
| | Yes | **155** | **100** |
| | No | | |

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**DISCUSSION**

In our study, the majority of the respondents were aware of COVID-19 and knew about the cause of the disease. The major source of information was through public announcements usually done over television. Despite the differences in our sample sizes, this finding is inconsonant with the finding of the study conducted by Alami *et al.* [8], which also reported similar findings among oncology patients. Studies have demonstrated excellent knowledge to be an important predictor of correct practices in infection control [9, 10] while stressing how inadequate knowledge can lead to poor infection control measures [12].

Despite the fact that the majority of the respondents, disagreed with the NCDC figures on the number of persons that died due to COVID-19, a greater number of them also agreed that people can be infected with COVID-19 in the hospitals. This is also in keeping with the study by Alami

*et al.* [8], which reported that the majority of their participants believed that hospital visits will increase the risk of being infected with COVID-19.

A greater proportion of the respondents were afraid of being infected during their stay in the hospital; while a large number indicated that a clean environment is a major step to make them comfortable in the hospital. This finding is in agreement with the finding documented by Jammal *et al.* [12], in which they reported that patients attending eye clinic appointments were at higher risk of contracting COVID-19.

Even though many of our respondents were afraid of being infected by the disease, the majority said they will willingly submit themselves for the COVID-19 test, to determine their COVID-19 status. Although, due to fear, some of them said they will not report themselves to the health authority especially if they have a minor symptom such as a sore throat. This may be attributed to the fact that sore throat, is a common symptom even before the outbreak of the COVID-19 pandemic. Furthermore, the stigmatization of Covid-infected patients may discourage hospital visits, when minor symptoms present.

In our study, the majority of the participants agreed that they will test or self-isolate themselves, if they had contact with an infected person, despite the fact a greater proportion of the respondents were not sure of the treatment centers, which discouraged self-reporting and testing.

We also found in our study that there was a low hospital attendance during the COVID-19, which could be attributed to the high speculations that individuals can get infected with COVID-19 in the hospital. Falling hospitalization rates were also noted in the US during the COVID-19 pandemic out of fear of contagion or access at COVID-19 overrun hospitals [6]. The hospital care was suboptimal, which was attributed to the fact that all the hospital staff do not go to work during the pandemic and those at work were unfriendly to the patients.

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## CONCLUSION

Our study illuminates gaps in the patients' perceptions of hospital care during the COVID-19 pandemic, which impacted negatively on the patient population in the hospital, as they avoided hospitalization for fear of contracting COVID-19 in the hospital. The resultant effect would be increased morbidity and mortality. Consequently, the government should design appropriate public health strategies aimed at correcting patients' perceptions and ensuring that appropriate hospital care is given to the patients during the course of a pandemic to mitigate negative consequences.

## Ethical Approval:

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

**Consent**

As per international standard or university standard, Participants' written consent has been collected and preserved by the author(s).

DISCLAIMER:

Authors have declared that no competing interests exist. The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

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