PATIENT'S PERCEPTION 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 evidenced-based and appropriate public health planning strategies. **Materials and Method:** A prospective cross-sectional survey was conducted among 155 patients using 22 items structured and self-completion questionnaire to determine (A) Socio-demographic variables, (B) Knowledge and perception of the disease and (C) The participants' behaviors towards covid-19. 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 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 Covid-19 pandemic, which impacted negatively on the patient's population as they avoided hospitalization for fear of inadequate care. Furthermore, appropriate public health strategies can improve patients' perception and health-seeking behavior in a pandemic period.

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 attendant deaths as well as downturn of the economy instills fear in people and government worldwide. Covid-19 was first detected in December 2019 in Wuhan city, China. Following 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 continuous spread of covid-19 would largely depends on people's behavior as regards understanding and adherence to preventive measures [2], as well as response to recent vaccination. Patient's perception of care in our environment and consequent health-seeking behavior in Covid-19 pandemic has 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 pattern and affect health-seeking behavior [3]. Studies conducted in India, USA and UK on knowledge and practice towards covid-19 noted misconceptions about covid-19 with concomitant gap in right perception.[1, 4] In contrast, a study conducted in Nigeria among the 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 among the populace.

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

To facilitate effective management of the covid-19 outbreak, there is need to understand patients' perceptions regarding hospital care during covid-19 vis-à-vis hospital attendance. We hypothesized that inappropriate perception of hospital care by patients during the pandemic can influence their health seeking behavior. 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 strategies.

Comment [H1]: Hypothesis????

MATERIALS AND METHOD:

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

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

$(0.0787)^2$ 0.006194

n = 155

The Institutional ethical clearance and permission for this study was obtained and participant's consent was properly sought and obtained appropriately. The patients participation in our study was entirely voluntary as their refusal to participate in the study does 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 validity 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 was divided into three sections: A) Socio-demographic variables, B) Knowledge and perception of the disease and C) The participants 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 data generated in this study was analyzed using the Statistical Package for Social Sciences (SPSS) version 21.0 (SPSS Inc, ILL, USA, 2003). The data were analyzed using descriptive statistical tools such as frequencies and percentages and presented in tables.

Comment [H2]: No, you have to remove this partie as it has no link with your study

Comment [H3]: No, the simple descriptive analysis you performed there, does not need statistical software; but you need to use the software to perform cross-analyses in order to test your hypothesis.

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 qualification (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**

Comment [H4]: A decimal is enough in a scientific article like this.

The respondent's knowledge of Covid-19

The majority 148 (95.49%) of the respondents were aware of covid-19. A greater proportion 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 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 84 (54.19%) of the respondents were afraid of being infected during their stay in the hospital. A large number 43(27.74%) perceived 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**
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 authority if they have minor symptoms such as 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).

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 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 centres	55	35.48
	Do not believe govt.	25	16.13
	Not sure of the drugs	34	11.94
	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 centres	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 covid-19 pandemic

The majority 98 (63.23%) of the respondents said they did not go the hospital during 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 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 was the reason for the low hospital attendance during the pandemic (Table 4).

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 these days		
	Yes	57	36.77
	No	98	63.23
	Total	**155**	**100**
b.	What is your assessment of hospital care in recent time?		
	Optimal	69	4452
	Suboptimal	86	55.48
	Total	**155**	**100**
c.	If suboptimal, why do you think so? Because not all workers come to work these days		
	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
	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 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		

DISCUSSION

In our study, the majority of the respondents was aware of covid-19 and knew about the cause of the disease. The major source of information was through public announcement usually done over television. Despite the differences in our sample sizes, this finding is in consonant 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 on how inadequate knowledge can lead to poor infection control measures [12].

Despite the fact that 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 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 for 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 minor symptom such as sore throat. This may be attributed to the fact that sore throat, is a common symptom even before the outbreak of 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 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 was 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.

CONCLUSION

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

Comment [H5]: I think you want to say behavior and not population.
But study shortcoming as you don't test your hypothesis. You don't measure people behavior but you content yourself to their intention declaration; Your must explore their behaviour (have you gone to hospital in the past 3 month were you have a sickness? Why if not? Have you take a immunisation for Covid-19? Have you accompanied someone to hospital for care reason in the past 3 month? And so on.)
To test the hypothesis, you must crossed this dependent variable (behavior) with the perceptions (independant variables).

COMPETING INTERESTS 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.

REFERENCES

1. Bhatt N, Bhatt B, Gurung S, et al. Perceptions and experiences of the public regarding the COVID-19 pandemic in Nepal: a qualitative study using phenomenological analysis. BMJ Open. 2020, 10:e043312.
2. Geldsetzer, P. Knowledge and perceptions of COVID-19 among the general public in the United States and the United Kingdom: a cross-sectional online survey. Ann Intern Med . 2020, 173:157–60.
3. Mbaba, AN., Ogolodom, MP., Abam, R., Akram, M, Alazigha N, et al. Willingness of Health Care Workers to Respond to Covid-19 Pandemic in Port Harcourt, Nigeria. Health Sci J. 2021, 15 (1): 802.
4. Narayana, G., Pradeepkumar, B., Ramaiah, JD., *et al*. Knowledge, perception, and practices towards COVID-19 pandemic among general public of India: a cross-sectional online survey. Curr Med Res Prac. 2020, 10:153–9.

5. Ogolodom MP, Mbaba AN, Alazigha N, Erondu OF, Egbe NO, et al. Knowledge, Attitudes and Fears of HealthCare Workers towards the Corona Virus Disease (COVID-19) Pandemic in South-South, Nigeria. Health Sci J. 2020; Sp. Iss 1: 002.
6. Birkmeyer, J D., Barnato, A., Birkmeyer, N., Bessler, R, Skinner, J .The impact of Covid-19 pandemic on hospital admissions in the united states; Health Affairs . 2020, 39(11).
7. Turner, RC& Carlson, L. Indexes of item-objective congruence for multidimensional items. Int J Test, 2003; 3: 163-171.
8. Alami AY, Abdeen G, Sabbagh RE, Dabor A. Perceptions and knowledge of oncology patients ofcovid-19 infection in a developing country. Research Square. 2020, DOI: https://doi.org/10.21203/rs.3.rs-34530/v1 .
9. Chen S, Qiu Z, Xu L, Chen J, Lin Y, Yang Y, et al. People groups' responses to SARS in the community. Chin Rural Health Serv Adm. 2003; 23:15–8.
10. Pawlowski B, Atwal R, Dunbar RI . Sex differences in everyday risk-taking behavior in humans. Evol Psychol. 2008; 6(1):147470490800600104.
11. Zhong B, Luo W, Li H, Zhang Q, Liu X, Li W 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. Int J Biol Sci.2020; 16:1745–52 pmid: 32226294
12. Jammal H M. Alqudah N M, Khader Y . Awareness, Perceptions, and Attitude Regarding Coronavirus Disease (COVID-19) Among Ophthalmologists in Jordan: Cross-Sectional Online Survey. 2019.

.