



Fear, Psychosomatic Symptoms and Satisfaction of Primary Healthcare Workers during the First Wave of COVID-19 Pandemic in Rivers State Nigeria: A Descriptive Cross-sectional Study

Clement Kevin Edet^{1,2}, Agiriye M. Harry^{2,3}, Anthony Ike Wegbom^{1*} and Benjamin O. Osaro¹

¹Department of Community Medicine, College of Medical Sciences, Rivers State University, Port Harcourt, Nigeria.

²Rivers State Primary Health Care Management Board, Port Harcourt, Nigeria.

³Department of Surgery, College of Medical Sciences, Rivers State University, Port Harcourt, Nigeria.

Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Introduction: Since the onset of COVID-19 pandemic there has been concerns about the imminent collapse of the health system if healthcare workers are physically, mentally, and socially affected to the point where service delivery is compromised. Therefore, this study investigated the fear, psychosomatic symptoms, and satisfaction of the Primary Healthcare Workers (PHCWs) during the first wave of the COVID-19 pandemic in Rivers State Nigeria.

*Corresponding author: E-mail: wegbomanthony@gmail.com;

Methods: A facility cross-sectional survey was conducted involving the primary healthcare workers. Descriptive analysis of mean with standard deviation were reported for continuous variables, frequency and percentage were used to report categorical variables.

Results: A total of 412 PHCWs participated in the study (mean age: 39.5±7.5). 223 (54.4%) were sure of going to work, while 260 (63.4%) were afraid of contracting the COVID-19 virus. However, 294 (71.7%) were not stigmatized and 256 (62.4%) were satisfied with their capacity for work. Also, 333 (81.2%), 357(87.3%), and 271(66.6%) were not satisfied with, transportation, money to meet their daily needs, and work environment, respectively. Perceived psychosomatic symptoms by respondents were chest pain (50.0%), stomach upset (38.0%), lump in the throat (40.0%), no feeling of hunger (52.0%), and shortness of breath (32.0%). Anxiety and stress symptoms experienced were inability to concentrate (38.2%), got angry easily (24.9%), worried (48.5%), low mood, anxiety, or depression (24.1%) and afraid of encountering security personnel on their way to work (67.6%).

Conclusions: We observed perceived fears, psychosomatic, anxiety, and stress symptoms, as well as low satisfaction among the primary healthcare workers. We suggest that the government and health care agencies should put in place measures that will improve the psychological well-being and mental health of the PHCWs during the pandemic.

Keywords: Fear; psychosomatic; anxiety and stress; COVID-19; healthcare workers.

ABBREVIATIONS

M&E : *Monitoring and Evaluation*
MOH : *Medical Officers of Health*
NCDC : *Nigeria Center for Disease Control*
PHCW : *Primary Health Care Workers*
PPE : *Personal Protective Equipment*
WHO : *World Health Organization*

1. INTRODUCTION

The number of confirmed cases and deaths from COVID-19 disease has been on the increase since it was first reported in Lagos, Nigeria [1], following its outbreak in Wuhan, China [2]. Its spread across the country has also been rapid. Despite the efforts of Nigerian government to contain the spread and to mitigate the adverse impact on the health system and the well-being of the population, over 114,691 COVID-19 cases were confirmed in Nigeria with a total of 1,478 deaths prior to the onset of the second wave of the pandemic [3].

With the rapid spread of SARS-CoV2 infection in the second wave of the pandemic and its impact on the populace generally, healthcare workers (HCWs) previously overwhelmed by high patient load in the first wave were likely to develop stress, anxiety and other psychological problems following exposure to patients during routine medical care in COVID-19 isolation and treatment centers. This stress and anxiety may be attributed to the abruptness of the first wave of the COVID-19 pandemic, increased workload, a substantial risk of occupational exposure and

violence, a high risk of infection for themselves and their family members, and insufficient supply of personal protective equipment [4].

An assessment of the psychological status of HCWs given the second wave of COVID-19 pandemic in order to determine their resilience has expedient. Therefore, this study investigated the fear, psychosomatic symptoms, and satisfaction of the Primary Healthcare Workers (PHCWs) in the first wave of the COVID-19 pandemic in Rivers State Nigeria.

2. METHODS

2.1 Study Design and Population of the Study

The primary healthcare workers in primary health facilities (PHFs) across the 23 local governments areas (LGAs) of Rivers State were investigated using a cross-sectional survey study design.

2.2 Sample Size and Sampling Techniques

The minimum sample size for this study was 363 based on the following assumptions (study population of 6500, 95% confidence level, and 5% level of precision) using an online sample size calculator [5]. The number was increased to 460 to accommodate for non-response and invalid responses. Twenty sets of questionnaires were distributed to each of the 23 Local government areas (LGAs). Four health facilities

were selected by simple random sampling from a list of facilities in each LGA, totaling 92 PHFs. Similarly, five PHCWs were randomly selected from each of the four facilities. This procedure was adopted from Edet et al. [6].

2.3 Data Collection

Data was collected between 20th and 29th June 2020 using self-administrated questionnaire. The Cronbach's Alpha (CA) of testing validity was 0.70, which suggested the validity of the questionnaire. The respondents provided information on their socio-demographic and psychological status. The socio-demographic characteristics were gender, age, marital status, occupation, educational level, and years of experience while the psychological were satisfaction, anxiety, stress and psychosomatic symptoms.

2.4 Statistical Analysis

The data were analyzed using the IBM Statistical Package for Social Sciences version 25 (IBMSPPSS 25), while Excel programme was used to draw the figures. Descriptive analysis of mean with standard deviation were reported for continuous variables, frequencies and percentages was used to report categorical variables.

3. RESULTS

A total of 412 PHCWs participated in the study. Response rate was 89.6%. More than half of the respondents were female (n=287; 69.7%). Majority (n= 172; 45.4%) were between 40-49 years old (mean age: 39.5±7.5 years) and are married (n= 305; 74.0%). Respondents who are

graduate were 231 (56.1%). Professional distributions were, Physicians 30 (7.7%), Nurses 39 (10%), Medical Laboratory 47 (12.1%), Community health workers 159 (40.8%). Nearly half of them have worked for 11-20 years (n= 167; 49.1%). Mean years of work experience was 13.9 years (with 6.8 standard deviation). This is shown in Table 1.

Table 2 revealed that the majority of the participants were sure of going to work (n=223; 54.4%), while (n=260; 63.4%) were afraid of contracting the COVID-19 virus. Also, (n= 294; 71.7%) were not stigmatized. Regarding satisfaction, Table 2 also showed that (n=256; 64%) were satisfied with their capacity for work, while (n=333; 81.2%), (n=357; 87.3%) and (n=271; 66.6%) were not satisfied with transportation, money to meet their daily needs, and work environment respectively.

The psychosomatic symptoms due to COVID-19 virus shown in Fig. 1, revealed that 50.0% experienced chest pain, 38.0% felt stomach upset, 40.0% felt a lump in the throat, 52.0% had no feeling of being hungry, while 32.0% experienced shortness of breath.

Fig. 2 shows some anxiety and stress symptoms due to COVID-19 virus experienced by the respondents; 38.2% were unable to concentrate, 24.9% got angry easily, 23.2% couldn't sit still, 18.3% both had difficulty in sleeping, and felt sad or guilty, 48.5% were worried, 14.9% cried, 29.5% felt tired or insufficient energy for work, 24.1% experienced low mood, anxiety or depression, while most of the respondents 67.6% were afraid of encountering security personnel on their way to work. Both Fig. 1 and Fig. 2 are multiple responses data.

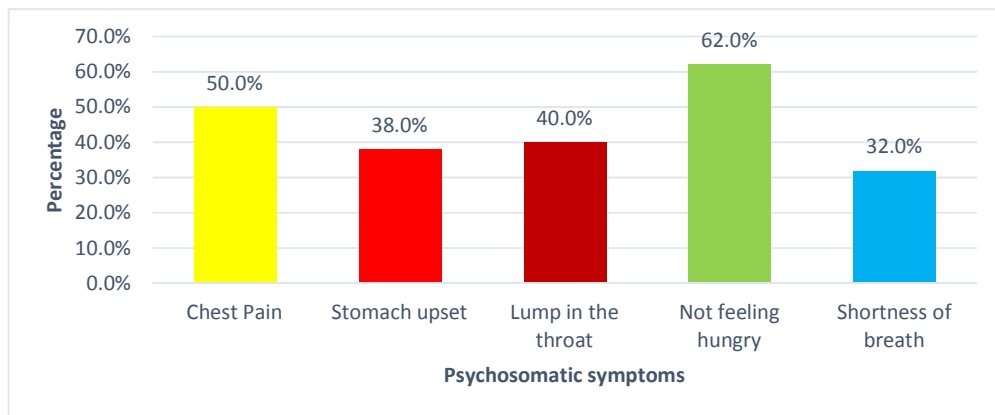


Fig. 1. Psychosomatic symptoms due to COVID-19 in the first wave of the pandemic

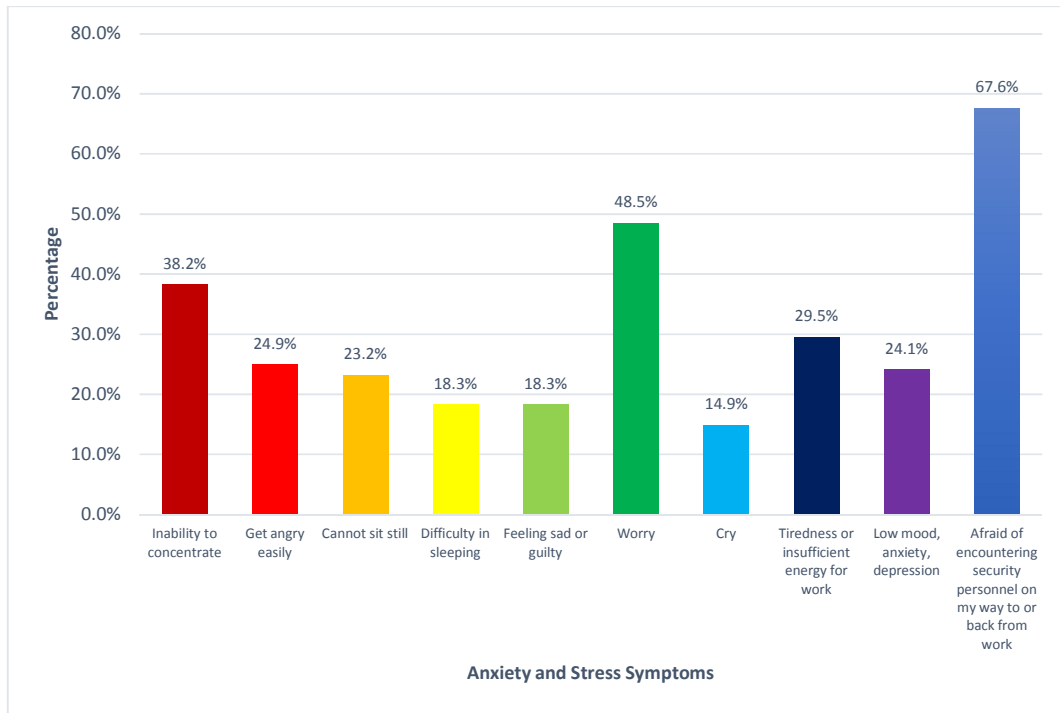


Fig. 2. Anxiety and stress symptoms due to COVID-19 in the first wave of the pandemic

Table 1. Socio-demographic characteristics of the respondents

Characteristics	Number	Percentage
Gender		
Male	125	30.3
Female	287	69.7
Age as at last birthday		
<30	37	9.8
30-39	138	36.4
40-49	172	45.4
≥50	32	8.4
Mean ± SD	39.5±7.5	
Occupation		
Physician	30	7.7
Nurse	39	10.0
Medical Laboratory	47	12.1
Community health	159	40.8
Others	115	29.5
Educational level		
Diploma	181	43.9
Graduate	231	56.1
Marital status		
Single	107	26.0
Married	305	74.0
Years of experience		
<10	122	35.9
11-20	167	49.1
>20	51	15.0
Mean ± SD	13.9±6.8	

Table 2. Psychological and satisfactions experienced in the first wave of COVID-19 pandemic

S/N	Questions	Yes	No	I don't know
		N (%)	N (%)	N (%)
1	Are you feeling unsure whether you should go to work	159(38.8)	223(54.4)	28(6.8)
2	Are you afraid you can contract the virus	260(63.4)	131(32.0)	19(4.6)
3	Are people stigmatizing you	74(18.0)	294(71.7)	42(10.2)
4	Are you satisfied with your capacity for work	256(62.4)	122(29.8)	32(7.8)
5	Are you satisfied with your transport	61(14.9)	333(81.2)	16(3.9)
6	Are you satisfied with money to meet your daily needs	37(9.0)	357(87.3)	15(3.7)
7	Are you satisfied with your work environment	119(29.2)	271(66.6)	17(4.2)

4. DISCUSSION

Psychological disorders such as anxiety, stress, and depression are prevalent worldwide during the lockdown period caused by the COVID 19 pandemic [7]. The aim of this study was to investigate the fear, psychosomatic symptoms and satisfaction of the Primary Healthcare Workers (PHCWs) exposed to in the first wave of the COVID-19 pandemic in Rivers State Nigeria.

The study revealed that more than half of the PHCWs were sure of going to work, but were afraid of contracting the virus. The optimism of going to work during this period might be attributed to the deliberate effort and direction of the government that healthcare workers and other essential workers are free to go to work without restrictions and molestations by the security agencies. The fear of contracting the virus revealed in this study was in agreement with previous studies [8,9]. The reasons for their fears were identified as family care in the event of self-isolation or quarantine, risk of infecting loved ones, lack of specific treatment and vaccine for COVID-19 [8,9], and lack of personal protective equipment (PPE) [10,11]. There are documented pieces of evidence that lack of protective equipment puts healthcare workers at risk of getting infected as well as their families [9,12]. Our findings showed no stigmatization on the part of the PHCWs. This is contrary to other studies in Nigeria and abroad which revealed that healthcare workers were highly stigmatized by people around them [13-18]. The possible explanation for this could be that the people believed that these are PHCWs who are not frontline workers who are in direct contact with the COVID-19 patients.

Regarding the satisfaction of PHCWs during the first wave of COVID-19, most of the respondents were not satisfied with their capacity for work,

means of transport and money to meet their daily needs. Our findings agreed with studies in the past on satisfaction of healthcare workers which revealed there was a low level of satisfaction among these workers [19,20]. This could be as a result of the lockdown and the harassment of the people including the healthcare workers though to a lesser extent by the security operatives. In this study over sixty percent of the PHCWs were afraid of encountering security agencies on their way to work. During this period, health workers found it very difficult to go to work, especially those without a vehicle as commuters were not available due to government restrictions on vehicular movements. As a result, the work environment became uncondusive and unsafe due to absenteeism as some of the healthcare workers and patients stayed away from the Primary healthcare facilities.

Our studies also identified some psychosomatic symptoms due COVID-19 on the PHCWs. We found that over fifty percent of the respondents had no feeling to eat, while others perceived chest pain, lump in the throat, stomach upset and shortness of breath. Furthermore, lack of concentration, worry, and tiredness were some of the prevalent anxiety and stress symptoms among the respondents. The psychosomatic, anxiety and stress symptoms due to COVID-19 among HCWs were earlier reported in Pakistan [21], Spain [22] and China [23]. Stress can compromise a professional's ability to provide high quality care to his/her patients, and can negatively affect both persons and workplace [24]. Work-related stress can also impact the family of the professional by decreasing their overall quality of life [24]. The results of this study showed that PHCWS experienced the fears, satisfaction, and psychosomatic, anxiety and stress symptoms during the first wave of COVID-19. This work has also shown the impact of these disorders on the individual and family lives of the

workers as well as their patients' care. Therefore, in this second wave of the pandemic, interventions are necessary to improve HCWs lifestyle and satisfaction level, by putting in place measures that will improve their psychological well-being and mental health. There should also be regular monitoring and counseling of healthcare workers for potential anxiety, stress and depression symptoms, so as to mitigate them.

The major limitation was that the study used a facility survey in the form of a questionnaire method where the data obtained relied on the memory and honesty of the respondents. Regardless of these limitations, we hope our finding may help in alleviating fear, stress and anxiety faced by PHCWs as well as their well-being during the second wave of the pandemic and beyond.

5. CONCLUSIONS

In our study, we found fear, psychosomatic, anxiety and stress symptoms among primary healthcare workers exposed to in the first wave of the COVID-19 pandemic. We also found low satisfaction levels among them. Bearing in mind the consequences of these disorders, we suggest that both the government and health care agencies should put in place measures that will improve the psychological well-being and mental health of the PHCWs during the COVID-19 pandemic. Constant monitoring and counseling of healthcare workers for potential anxiety, stress and depression symptoms should also be maintained.

CONSENT

As per international standard or university standard, Participants' written consent has been collected and preserved by the authors.

ETHICAL APPROVAL

The study was approved by the Rivers State Health Research Ethics Committee with registration number- RSHMB/RSHREC/11.20/VOL.8/063.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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