

Effects of Corona Virus (COVID-19) on seafarers in Port Harcourt, Rivers State, Nigeria

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Abstract

The study evaluates the effects of COVID-19 on seafarers in Port Harcourt. The study administered questionnaire to seafarers at Port Harcourt Tourism Beach, Nigerian Port Authority and those found at the Nigerian Maritime Administration and Safety Agency (NIMASA) offices. The data obtained were presented with statistical diagram and analysed with multiple linear regression. The findings showed that COVID-19 had an adverse effect on seafarers. It has led to social deprivation, psychological and mental disorder, drastic reduction in immune system of individual seafarers, and a general economic quagmire. In order to manage these effects, the following measures were advanced: NPA suspend fees, medical fitness certificates' expiration dates extended, and suspension of terminal storage charges among others.

Keywords: COVID-19, seafarers, Port Harcourt, Nigeria

Introduction

Seafarer is someone who works aboard on ship, vessel or boat. Or a person who is engaged in sailing. This includes those involved in the ship's operation, maintenance, and provisioning of those on board. Ratings, engineers, deck officers, and those working in the catering section are just a few examples of seafarers. Seafarers oversee operations on a variety of different ships and handle various cargo types to ensure their safe arrival at their respective destinations.

The first coronavirus disease case in Nigeria was confirmed by the Federal Ministry of Health the in Lagos on 27th February 2020. However, the outbreak began in December 8, 2019 in Wuhan China, World Health Organization, (WHO, 2020). Since then, the prevalence of COVID-19 incidence in Nigeria has steadily increased, shifting from an imported case with an elitist distribution to community transmission. The fatality rate in this case was 2.8 percent (Amzat *et al.*, 2020). During the brief period when the lockdown was lifted, the country saw a spike in COVID-19 transmission (52 percent of total cases), and over seven

million global cases as of 7th June 2020. The break down are: United States (over 2 million cases), Brazil (over 700,000 cases), Russia (over 500,000 cases), and in Africa, South Africa (over 54,000 cases) and Egypt (over 38,000 cases) bear the greater brunt. (Amzat, *et al.*, 2020, & Marbo, 2020).

Globally, millions of businesses are facing extinction. Almost half of the world's 3.3 billion workforce faces the possibility of job loss. The majority of workers in the informal economy are less protected, making them more vulnerable. Nigeria is also extremely vulnerable to the global economic disruption caused by COVID-19, owing to a sharp drop in oil prices and a surge in risk aversion in global capital markets. This has pushed over 53 million vulnerable people into poverty in Nigeria because of COVID-19. Upon this premise, studies have been concentrated on the socioeconomic, health workers, and health facilities/ distribution impacts of COVID-19 to the neglect of COVID-19's effects on seafarers (see Ajibo 2020 and Ocheni, Agba, Agba and Eteng, 2020). From Ajibo (2020) findings, the pandemic has wreaked havoc on Nigerians' socioeconomic well-being,

and overstretched the health facilities and the health workers as well. Unfortunately, the health system in Nigeria is ill-equipped to handle this havoc, and call for studies in other aspect of the economy. According to Ocheni, Agba, Agba and Eteng, (2020) the continue lockdown has paralysed all the spectrum of transportation and tourism industries in various countries of the world. Okeleke and Aponjolosun (2020) on the other hand did a review of COVID-19 pandemic and seafarers in Nigeria without empirically evaluating its effect on seafarers and that of vaccines on seafarers already vaccinated.

However, the pandemic of COVID-19 put mariners in unstable circumstances all over the world, and Nigeria in particular. Travel restrictions mean that some people can't leave their ships, get home or even receive urgent medical help. Other seamen unilaterally saw their contracts terminated or for more than fourteen days they were quarantined in ships without any payment. Due to the travel restrictions, an estimated 400,000 seafarers are presently stuck at the moment after unable to be brought back as of December 2020. Also, a comparable percentage of seafarers are stuck at home, being unable to join ships and support their families (International Maritime Organization, IMO, 2020).

Upon this effect, there are aggressive campaign by the Nigeria Centre for Disease Control (NCDC) for people to be vaccinated even in the reality of many outright rejection of the COVID-19 vaccines because of it side effects. While some asserted that the vaccines effects are severe and last for months, others said they are mild. Upon this controversy, the questions that agitates Seafarers' mind is that are there side effect

of COVID vaccines amongst seafarers? What is the scale of the effect among seafarers? What is the scale of the vaccines effect on them (if any)? And how do they manage it. Arising from the above calls, problems and questions this study evaluates the effects of corona virus (COVID-19) on seafarers in Port Harcourt.

Study area

Port Harcourt is situated between the latitudes of 6⁰ 58 N and 7⁰ 6 N, and the longitudes of 4⁰ 40 E and 4⁰ 55 E. it is within the swamp forest and bordered by mangrove (see Fig. 1), and an area of 369Km². With 3,171,000 residents, it serves as Rivers State's administrative center. It is the nerves centre of oil industries in the country. The Port in Port Harcourt, is also called PH Port. It is managed and run by the Nigerian Port Authority (NPA). This sea port started operation in 1913 to handle almost any type of cargo, and has a capacity of 187,000 m³ (6,603,843 cu ft) per day. And most of the ships that house the seafarers operates through this port.

In Nigeria, out of the 266, 283 corona virus cases, 259, 643 recovered cases and 3, 155 deaths from COVID-19 pandemic since inception, 18, 105 cases, 17, 923 recovered and 155 deaths were recorded in Rivers State (Nigeria Centre for Disease Control (NCDC, 2022), indicating that 6.7% of the total confirmed cases in Nigeria is from Rivers State. In Nigeria and Port Harcourt in particular, the pandemic put mariners in precarious situations, in form of travel restrictions that deprive them access out of their ship, getting home or even receive urgent medical help. Also, many seafarers were stuck in their homes, unable to join and support ships.



Fig. 1: Port Harcourt Metropolis

Methods of study

The study adopted a field survey to Port Harcourt Tourism Beach, Nigerian Port Authority and NIMASA eastern zonal office with the aid of questionnaire. A total of 100 questionnaire were administered to seafarers as they disembark the ships at NPA and tourism Beach, and staff of Nigerian

Maritime Administration and Safety Agency (NIMASA). The data obtained were presented with statistical diagram and analysed with multiple regression. The study adopted the Presidential Task Force (PTF) on COVID-19 response framework (see Fig 2). This presents the various response options that will enhance the containment of coronavirus.

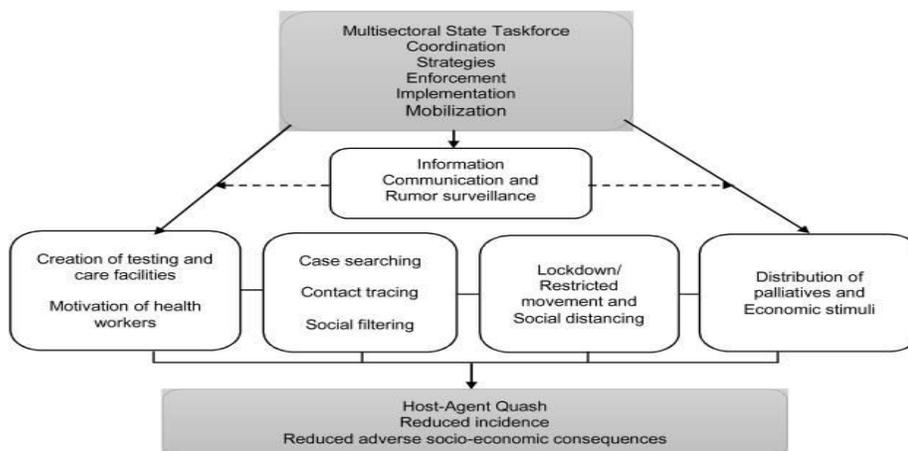


Fig. 2 PTF Response framework

Results and discussion

The data obtained are presented in table 1- 9, statistical diagram and discussed below. The results showed that COVID-19 has strong

avouchment on seafarers, and it manifested in strong economic quagmire.

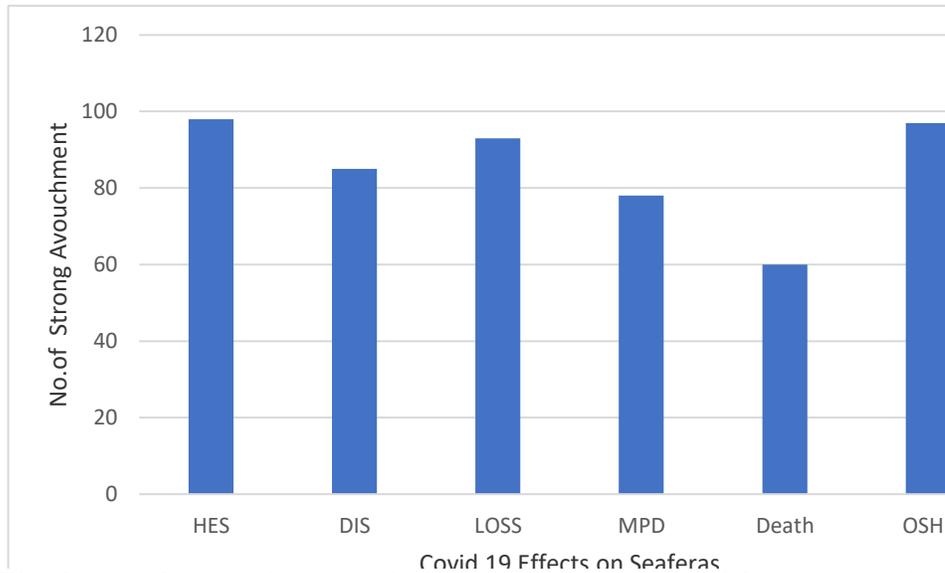


Fig. 3: No of respondents that indicate strong effects of COVID-19 on Seafarers

NB: HES= Harsh economic situation/quagmire; OSHF= Overstretched Heath Facilities; LOSS= Lack of Social Support; DIS= Decrease in Immune Response/System; MPD=Mental and Psychological Disorder

strong effect on them. Specifically, it has manifested in economic quagmire, overstretched heath facilities, little or no social support, decrease in immune response/system, psychological and mental disorder. This view point is in tandem with the results of the regression analysis in tables 1-3

Fig.3 showed that over 60% of the seafarers indicated that COVID-19 had

Table 1: Correlation coefficient between COVID-19 and Seafarers

	COVI D	HES	OSHF	LOSS	DIS	MPD
Pearson Correlation	1.000	.940	.889	.773	.691	.807
	HES	1.000	.834	.724	.646	.755
	OS HF	.889	.834	1.000	.682	.710
	LOS S	.773	.724	.682	1.000	.613
	DIS	.691	.646	.608	.821	1.000
	MP D	.807	.755	.710	.545	1.000

NB: HES: Harsh economic situation/quagmire; OSHF= Overstretched Heath Facilities; LOSS= Lack of Social Support; DIS= Decrease in Immune Response/System; MPD=Mental and Psychological Disorder

Table 1, showed the individual correlation values of 0.94, 0.89, 0.81, 0.77 and 0.69 for economic quagmire, overstretched heath

facilities, lack of social Support, decrease in immune response/System, and mental and psychological disorder respectively. These

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correlation values signify positive relationship and revealed that corona virus contributed 88%, 79%, 66%, 59%, and 48% on economic quagmire, overstretched health facilities, lack of social Support, decrease in

immune response/System, and psychological and mental disorder respectively of the seafarers. However, COVID-19 contributed 94% to the above problems of seafarers in Port Harcourt (see table 2).

Table 2: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.970 ^a	.940	.937	.06982	1.791

a. Dependent: COVID-19

b. Predictors: (Constant), MPD, DIS, OSHF, LOSS, HES

From table 2, it indicates 0.97 correlation value, and show that COVID-19 correlate positively with the operation of Seafarers. This showed 94% contributory effects on

Seafarers activities, and table 3 clearly showed that COVID-19 had significant effects on Seafarers. This is evident because the F value of 294.6 is significant at P<0.05.

Table 3: Analysis of variance

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	7.182	5	1.436	294.614	.000 ^b
Residual	.458	94	.005		
Total	7.640	99			

The detail effects on each of the above, is enunciated in table 4-8

Table 4: Decrease in immune response (individual stress level among seafarers):

S/N	EFFECTS OF COVID-19	STRONGLY AGREE	AGREE	NOT AGREE	REMARKS
1	Barely gone ashore	92	8	0	100% affirmed, this showed 92% strong affirmation
2	Pressure of work	83	15	2	98% affirmation and it indicate 83% strong affirmation
3	Separation from family	100	0	0	Revealed 100% strong affirmation
4	Refusal crew change	100	0	0	100% strong affirmation
5	Long working days	97	3	0	100% affirmation, and showed 97% strong affirmation
6	Heat in place of work	57	38	0	It showed 57% strong affirmation, and 95% affirmation
7	Stoppage of mid sea release	100	0	0	100% strong affirmation
8	No crew change	100	0	0	100% strong affirmation

Generally, from table 4, the seafarers opined that COVID-19 had 57%-100% strong effect on their individual stress level and decrease in their immune response in the following areas in order of severity: separation from family, refusal of crew change, stoppage of mid sea release, no crew change, spent long

working hours, pressure of work and heat in place of work. On LOSS for them, 30-89% of the seafarers asserted that they have being stranded marooned, socially withdrawn, irritated, emotionally unstable, panics disorder, and inability to concentrate (see table5).

Table 5: Lack of social support (LOSS)

S/N	EFFECTS OF COVID-19	STRONGLY AGREE	AGREE	NOT AGREE	REMARKS
1	Become irritated	68	22	10	90% avouchment
2	Socially withdrawn	88	12	00	100% avouchment
3	Difficulty in concentration	52	23	25	75 avouchment
4	Emotionally unstable	60	10	30	70% avouchment
5	Panic disorder	56	13	31	69% avouchment
6	Experienced high-level stress	50	11	39	61% avouchment
7	Anxiety disorder, Phobias	53	25	32	78% avouchment
8	Extreme anxiety, depression	35	13	52	52% not depressed, but 48% had extreme anxiety
9	Obsessive disorder-compulsive disorder	30	32	38	62% obsessed and 38% not
10	Stranded Marooned	89	11	00	100% cut off, and 89% strongly marooned

Others are high level stress, phobias and anxiety disorder, extreme anxiety depression

and obsessive disorder. These are in tandem with Okeleke and Aponjolosun (2020).

Table 6: Mental and psychological disorder

S/N	EFFECTS OF COVID-19	STRONGLY AGREE	AGREE	DISAGREE	REMARKS
1	Working in fear on board	45	25	30	70% avouchment
2	Sanitizing and living in fear of infections	67	23	10	90% avouchment
3	Paranoia creep in	65	14	21	79% avouchment
4	low safety measure against the virus	70	12	18	82% avouchment
5	Lack of normal moral in cargo operation	87	13	0	100% avouchment

Tables 6-7 showed the psychological and global effect of corona virus. While the mental and psychological effect, showed 79% to 100 % avouchment from paranoia

creep in to lack of normal moral in cargo operation, the impact on the economy showed 100% avouchment in the economic indicators enunciated in table 7.

Table 7: COVID-19 on global economy effects

S/N	EFFECTS OF COVID-19	STRONGLY AGREE	AGREE	DISAGREE	REMARKS
1	Increase in price of food items	93	7	0	100% avouchment
2	Crashed in oil prices	87	13	0	100% avouchment
3	Collapse of stock market	89	11	0	100% avouchment
4	Collapse of economic activities	94	4	0	100% avouchment
5	Total Shut down of educational systems	100	0	0	100% strongly Avouchment
6	Closure of airport and seaports	99	1	0	100% avouchment
7	Restriction of movement	98	2	0	100% avouchment
9	Collapse of the transport sector	197	3	0	100% avouchment
10	Overstretched of health facilities	96	4	0	100% avouchment
12	Technological upheaval	65	12	23	77% avouchment
13	Increase in price of landing goods	87	10	3	97% avouchment

Table 8 indicate the role played by NPA and IMO to cushion COVID-19 effects. NPA roles showed 89% strongly agreed to 11% avouchment, and IMO played 100% role in

the reduction of disease on seafarers. Other details measures of NPA and IMO's roles are enunciated in table 8.

Table 8: Measure taken to cushion Corona Virus Effect

S/N	MEASURES	STRONGLY AGREE	AGREE
A	Role of NPA	89	11
1	Extension of the validity of training certification / watch keeping	98	2
2	Extension of Safety certificate	100	0
3	Extension of medical fitness	100	0
4	Trading certificates related to SOLAS 74 as amended 73/78	97	3
5	Certificate of ship registration and maintaining labour convention 2006 as amended extension	98	2
6	NPA suspends fees	100	0
7	NPA directed all terminal operators to suspend all terminal storage fees on consignments (demurrage for initial period of 21 days)	100	0
B	IMO form Seafarers Crisis Action Team (SCAT) to:	100	0
1	Protect seafarers' mental health	100	0
2	Secure Urgent Medical Evacuation	100	0
3	Repatriated after 100 days to help Vulnerable Families	97	3
4	Ensure safe working environment in the midst of the pandemic	100	0
5	Seafarers and families can contact SCAT at info@imo.org	100	0

From table 9, the respondents asserted that the vaccines for COVID-19 have the following effects that are short live, and span mild to moderate (see table 9). All the respondents have been vaccinated, and it was observed by the respondent that the probability of these effects manifesting after vaccination, depend on that particular vaccine. Though vaccines are being

monitored to detect adverse effect. The chances of any of these side effects following vaccination differ according to the specific COVID-19 vaccine. More serious or long-lasting side effects to vaccines are possible but extremely rare, but vaccines are continually monitored to detect rare adverse events

Table 9: Side effects of COVID-19 vaccine

SIDE EFFECT	SEVERE	MODERATE	MILD
FATIGUE	02	51	47
HEADACHE	00	67	33
FEVER	00	85	15
MUSCLE PAIN	05	65	30
CHILL	08	42	50
DIARRHEA	09	49	42
PAIN AT THE INJECTION SPOT	00	78	22
REDNESS AT INJECTION SPOT	00	92	08
SWELLING AT INJECTION SPOT	00	52	48

The effect of SARS-CoV-2 vaccines are typically alarming, yet they could simply be the result of transitory synthesis of type interferons, which is a usual physiological reaction to invading pathogens. Pfizer and Moderna's mRNA-based vaccines have gotten the most attention in terms of vaccination adverse effects due to their quick development and production. These effects, might be the result of delayed-onset, local allergic reactions. Also, the side effects may impair your ability to perform daily tasks. However, they should subside in few days. To reduce the adverse effects, doctor prescribed, counter pain relievers acetaminophen, ibuprofen, antihistamines, aspirin, and malaria drugs, provided you don't have any other medical conditions that exempt you from these drugs ordinarily, you can take them to treat post-vaccination adverse effects.

It is worthy of note that both the Pfizer-BioNTech COVID-19 Vaccine and the Moderna COVID-19 Vaccine require two shots to provide the best protection. Even if there side effects from the first shot, you should take the second one unless a vaccination provider or your doctor tells you not to.

To get the most protection, you only need one shot of the Johnson & Johnson's Janssen (J&J/Janssen) COVID-19 Vaccine. Find out more about the various COVID-19 vaccines.

It takes time for your body to develop immunity following any vaccination. People are care regarded to be fully vaccinated two weeks after receiving their second shot of the Pfizer-developed vaccine.

The time interval between your first and second vaccinations is determined on the vaccine you received. These in line with the NCDC are enunciated as followings:

If you took the shot of the Pfizer-BioNTech vaccine, you have to wait for 3 weeks (or 21 days) before getting your

second shot. And if you took the Moderna vaccine, your next shot will be 4 weeks (or 28 days) following the first. The second shot should be given as close as feasible to the specified three week or four-week interval. The second dose can be taken 6 weeks (42 days) following the first. The second shot should not be taken before the first. There is currently limited evidence on the effectiveness of taken the second shot sooner or later than recommended.

Similarly, for a day or two, you may experience flu-like symptoms, including shivering and shaking. These common effects are far less serious than contracting coronavirus or the complications that come with it, and they usually go away after some days.

You can rest and take paracetamol if you're feeling uneasy. Make sure to follow the instructions on the leaflet when taking paracetamol.

Swollen glands in the armpit or neck, on the same side as the arm where the vaccine was administered, is an unusual side effect. This should last about 10 days, but if it lasts longer, consult your doctor. if you are scheduled for a mammogram, you should make sure that you have had the vaccine when you arrive.

These health effects usually last not more than a week. If your side effects worsen or you are concerned, call 111 on NHS 24 free toll. If you do seek advice from a doctor or nurse, make sure to inform them of your vaccination for your proper examination.

Conclusion

The study opined that coronavirus has significant negative impact on seafarers' operation, though no reported COVID-19 cases among seafarers in Port Harcourt. It has led to lack of social deprivation, psychological and mental disorder, drastic reduction in immune system by the individual seafarers, and general economic quagmire. It also showed mild - moderate

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negative effect of the following chill, fatigue, diarrhoea, muscle pain headache, fever, and swelling/pain at injection spot among others on those vaccinated against COVID-19. In order to manage these effects, the following measures were taken: NPA suspended fees, extension of the validity of: safety and medical fitness certificates, suspension of terminal storage charges among others. To reduce the adverse effect of COVID-19, it is recommended that affected persons should take counter pain relieve such as, acetaminophen, ibuprofen, antihistamines, aspirin, and malaria drugs, provided you don't have any other medical conditions that exempt you from these drugs ordinarily, otherwise they can be taken to treat post-vaccination adverse effects.

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