



## **Perceived Influence of Covid-19 Safety Measures on Teachers' Instructional Delivery in Public Secondary Schools in Port Harcourt Metropolis of Rivers State**

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### **ABSTRACT**

This study examined perceived influence of covid-19 safety measures on teachers' instructional delivery in public secondary schools in Port Harcourt Metropolis of Rivers State. Two objectives, two research questions and two null hypotheses guided the study. The research design adopted for the study was descriptive survey design. The population of the study comprised 1,950 teachers consisting of 579 males and 1,371 females from 36 public senior secondary schools in Port Harcourt Metropolis of Rivers State. The sample size was 542 teachers consisting of 232 males and 310 females gotten through Taro Yamane's formula. Stratified random sampling technique was used to select the teachers from their respective schools. The instrument used for the study was a self-structured questionnaire titled "Perceived Influence of Covid-19 Safety Measures on Teachers' Instructional Delivery Questionnaire", which was on a 4-point Likert rating scale Very High Extent, High Extent, Low Extent and Very Low Extent. It was validated by three experts in Departments of Measurement and Evaluation and Educational Management in Faculty of Education. The reliability was tested and Cronbach Alpha was used to obtain reliability indexes of 0.76 and 0.84 respectively. Mean and standard deviation were used to answer the research questions, while the z-test was used in testing the formulated null hypotheses at 0.05 level of significance. It was found that social distance and used of sanitizer as Covid-19 safety measures to a high extent influence teachers' instructional delivery in public senior secondary schools in Port Harcourt Metropolis of Rivers State. Based on the findings it was recommended among others that continued monitoring and evaluation on the use of sanitizer around the school would be a great help to enhance the system of instructional delivery in secondary schools in Rivers State.

**Keywords:** Covid-19, Instructional Delivery, Social distance, Hand Sanitizer

### **INTRODUCTION**

The global spread of coronavirus disease 2019 also known as COVID-19 triggered a range of public health responses to the nation's educational system. Education is a vital instrument that builds an individual to be self-reliant, egalitarian and productive for nation's development. Education is very important in any given society, it is a process of developing appropriate skills, mental, physical and social abilities and competencies to empower the individual to live in and contribute positively to the society (National Policy on Education, FRN, 2013). Secondary education is the education children receive after primary education and before tertiary level. This level of education is the foundation for inculcating social values, norms, ideas and personal habits which prepares a child for adolescence. A key element essential for inculcation of values into children at this level of education is teachers' instructional delivery.

In late 2019 the world at large woke up to the word Covid-19 which happen to be a fast spreading and mysterious viral infectious disease. The COVID-19 disease is highly infectious and transmitted through physical human contact. The disease broke out from a fish market in Wuhan, China where

untamed life was additionally exchanged illicitly. On February 7, 2020 Chinese analysts said the infection might have spread from a tainted creature species to people through illicitly dealt pangolins, which are valued in Asia for food and medication. On 30<sup>th</sup> January, 2020 World Health Organization (WHO) declared the virus a Public Health Emergency (WHO, 2020). This disease came into Nigeria on February 28 2020 when an Italian man working in Nigeria flew into the country with the infection. Covid-19 threw the academic calendar into disarray. Educational institutions being able to carry out academic work was made difficult causing schools from primary to universities to shut down all academic activities and students returned home. Classes, graduations, examinations, intra and extra-curricular activities in schools were cancelled.

The Covid-19 been transmitted through direct human contact made it difficult for teachers to perform their teaching duties in schools. It was noted by World Health Organization (WHO, 2020) that the virus could be transmitted by handshakes, hugging, touching of surfaces and saliva droplets from human mouth. The teacher is the sole manager of the teaching and learning process that goes on in the classroom. The best aid to teaching and learning in every institution and every level of education depends heavily on teachers who executes programmes such as; inculcation of knowledge and skills, strategies for learning, sufficient and helpful feedback on students' advancement and consultation on students' problems (Uriri, 2019). Thus, the need for Covid-19 safety measures for teachers to be able to deliver the curriculum effectively was been initiated by the Federal Government of Nigeria into the educational sector.

Instructional delivery is the action the teacher does in the classroom that advances learning by exhibiting precise substance information through an assortment of fitting informative procedures and advances that connect with students. According to Nwafor (2007), instructional delivery is regarded as a representation of a pattern in which a lesson is to be presented. Better learning happens in a dynamic setting in which teachers offer explicit active instruction than in situation in which teachers do not actively guide instruction and instead turn control over content and pace of instruction to students (Hattie, 2009). Instructional delivery is the actualization of the intricacies of education to the beneficiaries in such a way as to add value to their personalities by way of making them valuable in the labor market as well as competent in other walks of life.

Covid-19 safety measures are ways aimed at reducing the risk of transmission of the infectious disease to individuals through contact with infected subjects, with objects, equipment or contaminated environmental surfaces. Luigi, Fulvio, Caterina, Venerando, Daniela, Reluca, Kelly and Emanuele (2020), noted that general safety measures regarding the containment and management of Covid-19 have been imposed by the competent authorities for an adequate and proportionate management of covid-19. The safety measures aims at minimizing the probability of being exposed to covid-19. For this purpose Federal Government of Nigeria in collaboration with a regulatory disease control body known as National Centre for Disease and Control (NCDC) put in place covid-19 safety measure such as social distancing, washing of hands, wearing of facemask and use of hand sanitizer to aim teachers' instructional delivery in schools. The education sector in its capacity supported the implementation of these safety measures in schools through participation in school Covid-19 adhoc Task Force and through development of common tools and orientations to ensure classroom activities resume and teachers' instructional delivery is greatly influenced (Education in Emergency Working Group EIEWG, 2020).

Social distancing also called physical distancing is a covid-19 safety measure intended to prevent the spread of the disease by maintaining a physical distance between people and reducing the number of times people come into close contact with each other (Onyema & Deborah, 2019). As this sickness can be communicated both from suggestive and asymptomatic cases, the most generally received system to end the spread and influence teachers' instructional delivery is to diminish social collaborations between the teacher and students. Teachers and students are perceived to be closer to each other in class while instructional delivery is going on, this increases the chances of contaminating Covid-19. Authorities around the globe ordered a nation-wide social distancing which impose the separation and restriction of citizens to ensure that, if they become ill or carry the virus, they will not transmit it to others (Evangelia & Georgios, 2020). In addition, schools, had to impose this safety measure on students and teachers which influence teachers' instructional delivery during the pandemic.

Osuji (2021) who opined that classroom arrangement in which students are physically spaced out and not clustered enhances teachers' instructional delivery and encourages active students' participation during teaching. When a person is confined to social distancing, levels of social cohesion with family members and other social groups can decrease a wide range of problems. This measure has confined to some levels of social cohesion with students and their teachers which has influenced teachers' instructional delivery. This measure was effective in diminishing the spread of the virus, but it discouraged students from working with their teachers and also halted teaching and learning (Herman, 2020). Brooks, Webster, Smith, Woodland, Wessely, Greenberg, and Rubin (2020) elaborated that social distancing has many negative psychological impacts including confusion, anger, and post-traumatic stress symptoms. Reduced physical contact between students and teachers influence the instructional delivery.

By minimizing the likelihood that a given uninfected individual will come into actual contact with a contaminated individual, the illness transmission can be stifled, bringing about less passing. The actions might be utilized in mix with others, like great respiratory cleanliness, face veils and hand washing. During the COVID-19 pandemic, the World Health Organization (WHO, 2020) suggested favoring the term 'physical distancing' as opposed to 'social distancing', as it is a physical separation which prevents transmission. To hinder the spread of irresistible sicknesses and abstain from overburdening medical services frameworks, especially during a pandemic, a few social-separating measures are utilized, including the end of schools and working environments, seclusion, isolate, limiting the development of individuals and the retraction of mass get-togethers. Downsides of social separating can incorporate forlornness, decreased efficiency and the deficiency of different advantages related with human association.

Social separating measures are best when the irresistible infection spreads by means of at least one of the accompanying strategies, drop contact (hacking or wheezing), direct actual contact (counting sexual contact), aberrant actual contact, (for example, by contacting a polluted surface), and airborne transmission (if the microorganism can get by noticeable all around for significant stretches) (Onyema, 2019). The actions are less powerful when a disease is sent fundamentally by means of defiled water or food or by vectors like mosquitoes or different bugs. Specialists have empowered or commanded social separating during the COVID-19 pandemic as it is a significant technique for forestalling transmission of COVID-19 to help informative conveyance. The idea developed by the National Centre for Disease and Control (NCDC) to contain the spread of the virus proved effective as it played a significant role in improving the quality of instruction during the pandemic.

Use of hand sanitizer is another covid-19 safety measure impose on the education for effective instructional delivery. Hand sanitizer is a fluid, gel, or froth commonly used to diminish irresistible specialists on the hands. In most medical services settings alcohol based hand sanitizers are desirable over hand washing with cleanser and water, since it could be better endured and is more compelling at decreasing microbes. World Health Organization (WHO, 2020) opined that by minimizing the probability that a given uninfected person will come into physical contact with an infected person, the disease transmission can be suppressed by constant use of alcohol based sanitizer. The measures may be used in combination with others, such as good use of face masks and hand washing to influence teachers' delivery of instruction.

Use of hand sanitizer is a covid-19 safety measure proven to be effective in preventing the infectious disease. Following contact with patients and/or a contaminated environment, microorganisms can survive on hands for differing lengths of time (2–60 minutes) (WHO, 2020). In the absence of hand hygiene action, use of hand sanitizer to reduce the degree of hand contamination to give teachers protect and goodwill to deliver the curriculum effectively. Teachers should use hand sanitizer after touching the surface of facilities or equipment considering the persistence of covid-19 on surfaces and the potential risk of infection on work environment. Rowan and Laffey (2020) proposed the disinfection of equipment used for instructional delivery will help prevent a spread of the virus and allow teachers in schools deliver their lesson to their students.

Keeping hands clean is a fundamental and essential step to avoid getting sick while limiting the transmission of covid-19. Centre for Disease Control (2019) recommends use of hand sanitizer for teachers and students whenever possible as it remarkably reduces the amount of all types of microbes and dirt on the skin surface. Hand sanitizers work effectively by dissolving the lipid

membranes of microbes, thereby inactivating them. Teachers must be abreast of the important advances these Covid-19 safety measures provide to aid their instructional delivery. Although hand sanitizers may be less effective than soaps in some situations, it is undeniable that they are the preferred form of hand hygiene in Covid-19 pandemic. The use of alcohol-based sanitizer may improve the compliance of teachers to hand hygiene practices and influence their instructional delivery.

The purpose of development of Covid-19 safety measures is to identify the best practices to contain the virus and continue with academic activities which will bring about school success, academic achievement of its students and effective instructional delivery of teachers. In view of the above, this study examine perceived influence of Covid-19 safety measures on teachers' instructional delivery in Public Secondary Schools in Port Harcourt Metropolis of Rivers State.

### **Statement of the Problem**

The Covid-19 pandemic attacking the world has taken its consequences for some areas of the economy of many countries including Nigeria. It has forced different sectors to shut down thereby decreasing the economic earnings of the countries of the world. The sector in which the effect of the pandemic is evident in Nigeria is the educational sector. During the pandemic, academic activities of secondary schools in Nigeria was stopped by the Federal Ministry of Education to abridge the spread of the infection in instructive establishments. Albeit, this choice came as a shock to numerous instructive foundation as large numbers of these establishments were not ready for the abrupt interruption. The challenge then remains on how this pandemic affect teachers' instructional delivery in schools hence, the Covid-19 safety measures such as maintaining social distancing and carrying of hand sanitizer was employed.

However, it was observed that despite the immense benefits of these safety measures put in place to curtail the spread of Covid-19 and resume instructional delivery, schools found it difficult providing hand sanitizers in their school environment. Teachers were seen shaking hands with their fellow teachers and even students on returning back to school and not maintaining social distance. Concerns led to some pertinent questions thus: Why are schools no longer adhering to the safety measures put in place by the Federal Government in order to curtail Covid-19? These safety measures are perceived to have been set up as a Coronavirus preparedness to curtail the increasing spread of the virus and resume school academic activities which was halted because of the spread. These factors tend to have positive influence on teachers' instructional delivery, hence the study investigated perceived influence of Covid-19 safety measures on teachers' instructional delivery in Public Secondary Schools in Port Harcourt Metropolis of Rivers State.

Therefore the purpose of this paper was to investigate perceived influence of Covid-19 safety measures on teachers' instructional delivery in Public Secondary Schools in Port Harcourt Metropolis of Rivers State. The paper seeks to answer the following questions:

1. To what extent does social distancing as perceived by teachers influence teachers' instructional delivery in public secondary schools in Port Harcourt Metropolis of Rivers State?
2. To what extent does use of hand sanitizer as perceived by teachers influence teachers' instructional delivery in public secondary schools in Port Harcourt Metropolis of Rivers State?

### **Hypotheses**

Ho<sub>1</sub>: There is no significant difference between the mean perception scores of male and female teachers on the extent to which social distancing as perceived by teachers influence teachers' instructional delivery in public secondary schools in Port Harcourt Metropolis of Rivers State.

Ho<sub>2</sub>: There is no significant difference between the mean perception scores of male and female teachers on the extent to which use of hand sanitizer as perceived by teachers influence teachers' instructional delivery in public secondary schools in Port Harcourt Metropolis of Rivers State.

**METHODOLOGY**

The research design adopted for the study was descriptive survey design. The population of the study comprised 1,950 teachers consisting of 579 males and 1,371 females from 36 public senior secondary schools in Port Harcourt Metropolis of Rivers State. The sample size was 542 teachers consisting of 232 males and 310 females gotten through Taro Yamane's formula. Stratified random sampling technique was used to select the teachers from their respective schools. The instrument used for the study was a self-structured questionnaire titled "Perceived Influence of Covid-19 Safety Measures on Teachers' Instructional Delivery Questionnaire", which was on a 4-point likert rating scale Very High Extent (VHE); High Extent (HE); Low Extent (LE); and Very Low Extent (VLE) with values 4, 3, 2 and 1 respectively. It was validated by three experts in Departments of Measurement and Evaluation and Educational Management in Faculty of Education. The reliability was tested and Cronbach Alpha was used to obtain reliability indexes of 0.76 and 0.84 respectively. Mean and standard deviation were used to answer the research questions with a criterion mean of 2.50. Questionnaire items with ratings below 2.50 denoted 'Low Extent' while 2.50-2.99 denoted 'High Extent and 3.00 and above signified 'Very High Extent'. The hypotheses were tested using z-test statistics at 0.05 level of significance. Analyzed data therefore, with calculated z-value above the z-critical value of  $\pm 1.96$  was rejected and below  $\pm 1.96$  was accepted.

**RESULTS**

**Research Question 1:** *To what extent does social distancing as perceived by teachers influence teachers' instructional delivery in public secondary schools in Port Harcourt Metropolis of Rivers State?*

**Table 1: Mean Perception Scores of Male and Female Teachers on the Extent Social Distancing as Perceived by Teachers Influence Teachers' Instructional Delivery in Public Secondary Schools in Port Harcourt Metropolis of Rivers State**

S/N	Item	Male Teachers N=232		Female Teachers N=310			
		$\bar{X}$	SD	RMK	$\bar{X}$	SD	RMK
1	Distancing students and teachers to prevent the contamination of covid-19 in school influence effective implementation of curriculum	3.25	0.72	VHE	2.95	0.58	HE
2	The school's provision of the regulation and policies of 5ft distance to separate students and teachers during class contributes to effective teachers' instructional delivery	3.00	0.60	VHE	3.09	0.53	VHE
3	Arranging the desks in the classroom from 5ft distance from another influence teachers' instructional delivery	2.77	0.50	HE	3.04	0.62	VHE
4	"Maintaining a physical distance between people and reducing the number of times people come into close contact with each other to prevent the spread of a contagious disease improves teachers' instructional delivery"	3.19	0.69	VHE	3.30	0.76	VHE
5	Social distancing enable the teacher teach well influence the quality of instruction	2.69	0.52	HE	3.11	0.65	VHE
<b>Grand Mean/SD</b>		<b>2.98</b>	<b>0.61</b>	<b>HE</b>	<b>3.10</b>	<b>0.63</b>	<b>VHE</b>

**Source: Field Survey, 2021**

The result on table 1 above revealed that all the questionnaire items 1, 2, 3, 4 and 5 had grand mean scores of 2.98 and 3.10 with corresponding standard deviation 0.61 and 0.63 respectively as perceived by both male and female teachers. This infers social distancing as perceived by teachers to

a very high extent influence teachers' instructional delivery in public secondary schools in Port Harcourt Metropolis of Rivers State.

**Research Question 2:** *To what extent does use of hand sanitizer as perceived by teachers influence teachers' instructional delivery in public secondary schools in Port Harcourt Metropolis of Rivers State?*

**Table 2: Mean Perception Scores of Male and Female Teachers on the Extent Use of Hand Sanitizer as Perceived by Teachers Influence Teachers' Instructional Delivery in Public Secondary Schools in Port Harcourt Metropolis of Rivers State.**

S/N	Item	Male Teachers N=232			Female Teachers =310		
		$\bar{X}$	SD	RMK	$\bar{X}$	SD	RMK
1.	The use of sanitizer to prevent the contamination of Covid-19 improves instructional delivery	3.36	0.91	VHE	2.81	0.63	HE
2.	The school has provided the regulation and policies on the use of sanitizer which enhances instructional delivery	2.50	0.71	HE	3.22	0.80	VHE
3.	The school has provided compulsory sanitizer which contributes to effective instructional delivery	3.24	0.75	VHE	2.50	0.59	HE
4.	Sanitizer create good hygiene for improving instructional delivery	2.93	0.64	HE	2.58	0.81	HE
5.	The use sanitizer help in personnel hygiene which reduces the risk of contracting Covid-19 and enhances instructional delivery	3.00	0.60	VHE	2.71	0.61	HE
<b>Grand Mean/SD</b>		<b>3.01</b>	<b>0.72</b>	<b>VHE</b>	<b>2.76</b>	<b>0.69</b>	<b>HE</b>

**Source: Field Survey, 2021**

The result on table 2 above revealed that all the questionnaire items 1, 2, 3, 4 and 5 had grand mean scores of 3.01 and 2.76 with corresponding standard deviation 0.72 and 0.69 respectively as perceived by both male and female teachers. This infers use of hand sanitizer as perceived by teachers to a very high extent influence teachers' instructional delivery in public secondary schools in Port Harcourt Metropolis of Rivers State.

**Hypotheses**

Ho<sub>1</sub>: There is no significant difference between the mean perception scores of male and female teachers on the extent to which social distancing as perceived by teachers influence teachers' instructional delivery in public secondary schools in Port Harcourt Metropolis of Rivers State.

**Table 3: z-Test Analysis of Difference between the Mean Perception Scores of Male and Female Teachers on the Extent Social Distancing as Perceived by Teachers Influence Teachers' Instructional Delivery in Public Secondary Schools in Port Harcourt Metropolis of Rivers State**

Respondents	N	$\bar{X}$	SD	Df	SL	z-cal.	z-tab.	Decision
Male Teachers	232	2.98	0.61	540	0.05	-0.76	<b>±1.96</b>	Upheld
Female Teachers	310	3.10	0.63					

**Source: Field Survey, 2021**

Data on Table 3 above revealed z-test analysis of difference between the mean perception scores of male and female teachers on the extent to which social distancing as perceived by teachers influence teachers' instructional delivery in public secondary schools in Port Harcourt Metropolis of Rivers State. At 0.05 level of significance and 540 degree of freedom, the z-calculated value of -0.76 was less than the z-critical value of ±1.96, the null hypothesis was accepted, which states that there is no

significant difference between the mean perception scores of male and female teachers on the extent to which social distancing as perceived by teachers influence teachers' instructional delivery in public secondary schools in Port Harcourt Metropolis of Rivers State.

Ho<sub>2</sub>: There is no significant difference between the mean perception scores of male and female teachers on the extent to which use of hand sanitizer as perceived by teachers influence teachers' instructional delivery in public secondary schools in Port Harcourt Metropolis of Rivers State.

**Table 4: z-Test Analysis of Difference between the Mean Perception Scores of Male and Female Teachers on the Extent Use of Hand Sanitizer as Perceived by Teachers Influence Teachers' Instructional Delivery in Public Secondary Schools in Port Harcourt Metropolis of Rivers State.**

Respondents	N	$\bar{X}$	SD	Df	SL	z-cal.	z-tab.	Decision
Male Teachers	232	3.01	0.72					
				540	0.05	1.08	$\pm 1.96$	Upheld
Female Teachers	310	2.76	0.69					

**Source: Field Survey, 2021**

Table 4 above is the z-test analysis of difference between the mean perception scores of male and female teachers on the extent to which use of hand sanitizer as perceived by teachers influence teachers' instructional delivery in public secondary schools in Port Harcourt Metropolis of Rivers State. At 0.05 level of significance and 540 degree of freedom, the z-calculated value of 1.08 was less than the z-critical value of  $\pm 1.96$ , the null hypothesis was accepted, which states that there is no significant difference between the mean perception scores of male and female teachers on the extent to which use of hand sanitizer as perceived by teachers influence teachers' instructional delivery in public secondary schools in Port Harcourt Metropolis of Rivers State.

### DISCUSSION OF FINDINGS

Findings in table 1 revealed that to a very high extent social distancing as perceived by teachers influence teachers' instructional delivery in public secondary schools in Port Harcourt Metropolis of Rivers State with average mean score of 3.04. Data in table 3 revealed that there was no significant difference between the mean perception scores of male and female teachers on the extent to which social distancing as perceived by teachers influence teachers' instructional delivery in public secondary schools in Port Harcourt Metropolis of Rivers State with z-calculated value of -0.76 which was less than the z-critical value of  $\pm 1.96$ . This finding is in agreement with Evangelia and Georgios (2020) who noted that authorities around the globe ordered a nation-wide social distancing which impose the separation and restriction of citizens to ensure that, if they become ill or carry the virus, they will not transmit it to others. Also in support World Health Organization (WHO, 2020) suggested favoring the term 'physical distancing' as opposed to 'social distancing', as it is a physical separation which prevents transmission. This is also in agreement with Osuji (2021) who opined that classroom arrangement in which students are physically spaced out and not clustered enhances teachers' instructional delivery and encourages active students' participation during teaching.

Findings in table 2 showed that to a high extent use of hand sanitizer as perceived by teachers influence teachers' instructional delivery in public secondary schools in Port Harcourt Metropolis of Rivers State with average mean score of 2.89. Again information in table 4 further revealed that there was no significant difference between the mean perception scores of male and female teachers on the extent to which use of hand sanitizer as perceived by teachers influence teachers' instructional delivery in public secondary schools in Port Harcourt Metropolis of Rivers State with z-calculated value of 1.08 which was less than the z-critical value of  $\pm 1.96$ . This finding corroborates Centre for Disease Control (2019) recommends use of hand sanitizer for teachers and students whenever possible as it remarkably reduces the amount of all types of microbes and dirt on the skin surface. Supporting the above finding, Rowan and Laffey (2020) proposed the disinfection

of equipment used for instructional delivery will help prevent a spread of the virus and allow teachers in schools deliver their lesson to their students effectively.

## **CONCLUSION**

From the research, it was observed that in response to this pandemic, countries have applied different rules and methods to curtail the virus and resume academic activities. Within a few months, national educational systems turned to solutions like social distance, wearing of facemask, washing of hands, and hand sanitizer. Along with these changes, alterations have been necessary for instructional strategies. It was therefore concluded that social distance and used of sanitizer as covid-19 safety measures influence teachers' instructional delivery in public senior secondary schools in Port Harcourt Metropolis of Rivers State.

## **RECOMMENDATIONS**

Based on the findings of the study the following recommendations were made:

1. To prevent the second wave of the pandemic, it is recommended by this study that the schools should opt for distance learning for the coming school year along with providing teachers' capacity building for distance learning education." Likewise, investing in the facilities and equipment needed for distance learning is an excellent idea to enhance the institution's capability in delivering distance learning to the students.
2. Effective measures should put in place to continue monitoring and evaluation on the use of sanitizer around the school which would be a great help to enhance the system of instructional delivery in public senior secondary schools in Rivers State.

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