



# **Covid-19 Anxiety among Students and Teachers and Compliance to Prevention Protocols in Selected Schools in Delta State, Nigeria**

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## **Authors' contributions**

*This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.*

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## **ABSTRACT**

This study examined Covid-19 anxiety among students, teachers and compliance to prevention protocols in selected schools in Delta State. Ten null hypotheses were tested at 0.05 level of significance. The study adopted a correlational research design. The sample size consisted of 381 students and 341 teachers, who were selected through a multi-stage sampling procedure. The instrument used for data collection was a questionnaire. The psychometric properties of the instrument were established and adjudged to be adequate. The data obtained were analysed with descriptive and inferential statistics. The findings revealed that there was a significant correlation between Covid-19 anxiety and adherence to preventive Handwash protocol among secondary school students and teachers; that there was a significant correlation between Covid-19 anxiety and adherence to preventive social distancing protocol among secondary school students and teachers;

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that there was a significant correlation between Covid-19 anxiety and adherence to preventive wearing of facemasks protocol among secondary school students and teachers; and that there was a significant correlation between Covid-19 anxiety and adherence to preventive self-isolations protocol among secondary school students and teachers. The study revealed that there was no significant moderating impact of sex on the relationship between Covid-19 anxiety and compliance with preventive measures among secondary school students and students. The study recommended amongst others, that since compliance to preventive protocols was a product of high anxiety, it is recommended that in times of epidemic of this nature, the citizenry must be exposed to cases of infected patients through videos, jingles, film shows, television and social media so as to increase anxiety level and subsequent compliance.

*Keywords: Covid-19; anxiety; pandemic; students; teachers; prevention protocols.*

## 1. INTRODUCTION

On the 31st December 2019, the world was confronted with a deadly virus. COVID-19 which was believed to originate from Wuhan in China took the world by surprise. As at 16<sup>th</sup> of May, 2022, World global report shows that a total number of 521,354,727 cases and 6,288,631 deaths around the world [1]. "The largest proportionate increases in new cases were reported by the Region of the Europe (194,358,598), Asia (150,125,680), North America (99,652,899), South America (57,177,418) and Africa (12,046,886). All these cases make COVID-19 one of the worst pandemics in human history" (Piper, 2021).

In Nigeria, there have been over 255,859 reported cases and over 3,143 deaths, with Delta State having a total of 5,369 cases and 111 deaths (Nigerian Centre for Disease Control, NCDC, 2022). What these statistics mean is that COVID-19 is a disease that has brought sorrows, agony and fear to people around the world. The effect on every area of life is enormous. It has both health and economic impact on the people.

"One area of the sector that appears to have been more affected was the education sector. The United Nations Educational, Scientific and Cultural Organization" (UNESCO, 2020) reported that more than 1.5 billion students in 188 countries were affected by the global pandemic. In a bid to reduce the spread of the virus and save lives, government of different countries, with the recommendation of the World Health Organisation, implemented a lockdown protocol. This protocol meant that no one is allowed to come out of their homes for a period of time. Only health officials and other essential service workers were allowed to move around. As the lockdown continued, students were meant to stay at home doing nothing related to their

academics; teaching and learning suffered; poverty was on the increase.

After some months, the government decided to relax the lockdown and students were asked to go back to school. However, in a bid to minimize the spread of the virus, some COVID-19 protocols were carried out and implemented. Such protocols include use of facemasks, regular washing of hands and observation of social and physical distances. In April 2020, the government of Nigeria, through the management of public places fully implemented the use of facemasks and restriction of public gatherings. These protocols introduced a culture that is completely alien to the people, especially secondary school students and teachers, who, before now, were used to having close bodily contact with themselves.

Students often indulge in social activities such as playing football, running around, hide and seek and other extracurricular activities. Their participation in these social activities is not only for entertainment, social, and enjoyment purposes, but most importantly, to gain and improve skills. According to Mirian, Danjuma and Amaonyeze [2] "man, as a social being interacts with one another on daily basis and depends on communication for his continual existence and survival. Hence, communication or interaction and other social activities like exercise, leisure, work, travel, worship, business operations and entertainment have become indispensable in man's daily activities". Interaction is an indispensable component in human lives and existence and no society has been known to exist without it [2].

The above pleasures that come with social life was threatened by the COVID-19 protocols of social distancing. Students and teachers are no longer allowed to convey in public gatherings,

hugging and other forms of bodily contacts. It became a new normal for students and teachers to always wash their hands, avoid bodily contacts with their friends, look suspiciously at anyone that is coughing or sneezing and avoid every form of social gathering like going to church, going to classroom, going to clubs and going to the market. According to Mirian, et al. [2] COVID-19 pandemic lockdown would have uncountable consequences on people's social life, their interaction and general social activities.

It has been more than two years since the general lockdown and the practice of social distancing. The emergence of new variant of Covid-19 requires that the protocols should still be observed. Other measures such as wearing of facemasks, washing of hands and self-isolation are no longer being implemented.

Several factors could be responsible for the lack of implementation of the various Covid-19 protocols. However, the focus of this study is on Covid-19 anxiety among students and teachers. Anxiety is a self-reaction or felling of worry to a noncommittal or unknown threat. This manifest itself when the person believes that he or she may contract the virus. It is like a fear, nervousness, or a threat. Anxiety is a normal psychological reaction to certain challenges. But severe anxiety can be a serious problem for learning in students. The fear of contacting the virus could disorganizes individuals, making one to take actions to prevent from themselves from contacting it. Those without anxiety may not take any step to prevent it from happening.

The issue of degrading mental health due to pandemics has been reported in the past [3]. The circumstances surrounding the COVID-19 pandemic have increased the stress and anxiety in people [4] including secondary school students and teachers. Liang et al. [5] report a much higher fraction of youth with psychological issues during the COVID-19 pandemic when compared to prior pandemics. The American Psychological Association [6] reports that nearly 81% of Gen Z teens Gen Z teens (ages 13–17) experience more intense stress due to COVID-19, associated with schooling. Brooks, et al. [7] stated that most college students suffered post-traumatic stress disorder, anger, fear, sadness, nervousness, and emotional disturbances as a result of the COVID-19 outbreak.

A mental health survey conducted on the general Chinese population online revealed that

teenagers experienced a higher occurrence of depressive symptoms during the COVID-19 pandemic compared to adults. In a study by Zhou et al. [8] Chinese students aged 12–18 participated in an online survey, indicating that 43.7% reported depressive symptoms, 37.4% reported anxiety symptoms, and 31.3% experienced a combination of both. The study also suggested that being female and in a higher grade might contribute to an increased risk of depressive and anxiety symptoms. In a previous study, "it was reported that having relatives infected with COVID-19, its economic effects, and effects on daily life, as well as delays in academic activities, increases anxiety levels in college students" [9]. In another study focused on COVID-19's impact on Nigerian university students, findings revealed that 24% experienced severe anxiety, 22% had moderate anxiety, and 30% reported mild anxiety [10]. "The anxiety stemming from the pandemic has the potential to exacerbate pre-existing mental health issues in children and adolescents, given the unique combination of the public health crisis, social isolation, and economic downturn. Among various groups, students are particularly vulnerable, lacking adequate coping skills to navigate the challenges posed by the pandemic. Adolescents, in the midst of their developmental stage, may struggle due to a lack of psychological and social skills to effectively manage overwhelming situations, as adolescence is recognized as a period of heightened vulnerability to rapid developmental changes affecting both psychological and social well-being" [11,12]. Hence, they could be more substantially influenced by emotional responses due to the outbreak of COVID-19 and its associated quarantine and public health restrictions [13].

"The level of anxiety may also have a serious effect on the performance of the students, especially those preparing for their senior school certificate examination. According to Rakhmanov, Shaimerdenov and Dane [10] there seems to be correlation between anxiety and academic performance. That is to say, the anxiety decreases academic performance, and low academic performance causes anxiety in students. The literature indicated that changes to current lifestyle and students' perceived danger of acquiring COVID may increase the risk of developing depression and anxiety" [14].

"Failure to address these issues with appropriate psychological interventions during adolescence

frequently leads to their persistence into adulthood, increasing the likelihood of encountering additional mental health problems and disorders” (APA, 2013). School guidance counsellors and other stakeholders need to be aware of the additional psychological and social support needs of these students during the pandemic. Guidance counselors are in a special position to play an important role in supporting emotional well-being, screening for mental well-being and early intervention programs, and helping to monitor the continued treatment of mental health. There is therefore, the need to determine the level of anxiety among secondary school students and teachers and how it could influence their implementation of the various Covid-19 protocols. This is the crux of the study, to find out the level of Covid-19 anxiety among students and teachers and compliance to prevention protocols in selected schools in Delta State.

### 1.1 Hypotheses

The following null hypotheses was tested in the study at 0.05 level of significance:

1. There is no significant relationship between Covid-19 anxiety and compliance with preventive protocol of Handwash among secondary school students in Delta State
2. There is no significant relationship between Covid-19 anxiety and compliance with preventive protocol of Handwash among secondary school teachers in Delta State
3. There is no significant relationship between Covid-19 anxiety and compliance with preventive protocol of social distancing among secondary school students in Delta State
4. There is no significant relationship between Covid-19 anxiety and compliance with preventive protocol of social distancing among secondary school teachers in Delta State
5. There is no significant relationship between Covid-19 anxiety and compliance with preventive protocol of wearing facemasks among secondary school students in Delta State
6. There is no significant relationship between Covid-19 anxiety and compliance with preventive protocol of wearing facemasks among secondary school teachers in Delta State

7. There is no significant relationship between Covid-19 anxiety and compliance with preventive protocol of self-isolation when manifesting symptoms among secondary school students in Delta State
8. There is no significant relationship between Covid-19 anxiety and compliance with preventive protocol of self-isolation when manifesting symptoms among secondary school teachers in Delta State
9. There is no significant moderating impact of sex on the relationship between Covid-19 anxiety and compliance with preventive protocol among secondary school students in Delta State
10. There is no significant moderating impact of sex on the relationship between Covid-19 anxiety and compliance with preventive protocol among secondary school teachers in Delta State

## 2. METHODS

The study adopted the correlational research design. The sample size for this study consisted of 381 students and 341 teachers in public secondary schools in Delta State. A multistage sampling method will be used in the sampling. In the first stage, the researcher selected schools in each of the eight local government areas of Delta State using a simple random sampling technique. This sampling procedure appears to be more favourable for research of this nature [15]. The researchers wrote the names of all the schools in each of the Local Government Areas on a piece of paper, folded them and packed them in a basket. They shuffled the basket, picked three pieces of paper and revealed what was written on them. The schools that were picked through this process were selected. This was done until three schools in eight Local Government Areas were selected (making a total of 24 schools) from eight Local Government Areas in Delta State. In the second stage, the researchers selected a total of 16 students and 14 teachers from each school. This was done using convenience sampling technique. In this case, students and teachers who were available, free and willing to participate in the study were selected for the study.

Questionnaire was used to collect data for the study. The questionnaire has two sections; Section A and B. Section A comprises the demographic data of the respondents such as their sex and position. Section B of the questionnaire is made up of five different scales;

Covid-19 Anxiety Rating Scale (CARS), Handwash Rating Scale (HRS), Social Distancing Rating Scale (SDRS), Facemasks Wearing Rating Scale (FWRS), Self-Isolation Rating Scale (SIRS).

**Covid-19 Anxiety Rating Scale (CARS):** This scale was adapted from the Covid-19 anxiety scale (CAS), developed by Silva, Brito and Pereira (2020); and the Covid-19 anxiety syndrome scale, developed by Nikčević and Spadab (2020). The scale has a total of 23 items structured on a 4-point scale, ranging from 1 for strongly disagree to 4 for strongly agree.

**Hand Wash Rating Scale (HRS):** This scale was adapted from the Perceived Hand Wash Practices, developed by Almoslem, et al. (2021). It contains a total of 11 items, structured on a 4-point scale, ranging from 1 for strongly disagree to 4 for strongly agree.

**Social Distancing Rating Scale (SDRS):** This scale was adapted from the Social Distance Scale, developed by Prachthauser, et al. (2020) and Social Distance Questionnaire, developed by Cross, et al. (2021). The scale contains a total of 18 items, structured on a 4-point scale, ranging from 1 for strongly disagree to 4 for strongly agree.

**Facemasks Wearing Rating Scale (FWRS):** This scale was adapted from the Face Mask Use Scale, developed by Lam, et al. (2020). It contains a total of 25 items, structured on a 4-point scale, ranging from 1 for strongly disagree to 4 for strongly agree.

**Self-Isolation Rating Scale (SIRS):** This scale was self-constructed to reflect participants' propensity to self-isolate whenever they feel sick or manifesting symptoms. The scale contains a total of 7 items, structured on a 4-point scale, ranging from 1 for strongly disagree to 4 for strongly agree.

The face validity of the instrument was estimated through experts' judgement while the content and construct validities were estimated through factor analysis of the Principal Component Analysis method. In estimating the face validity of the instrument a copy of the questionnaire was given to the researcher's supervisor and two other experts in the Department of Guidance and Counselling in the Faculty of Education, Delta State University, Abraka for the purpose of

correction. Some of the items were modified to suit the view of the respondents.

After the face validity, 50 copies of the questionnaire were administered to 50 students and teachers from Delta Central Senatorial District and the data obtained were subjected to factor analysis. The principal component analysis of the extraction method was used to estimate the content validity of the instrument. It yielded the following total cumulative variance Covid-19 Anxiety Rating Scale = 85.06%; Hand Wash Rating Scale = 79.31%; Social Distancing Rating Scale 67.21%; Facemasks Wearing Rating Scale = 76.46%; and Self-Isolation Rating Scale 66.99%.

In order to estimate the construct validity of the instruments, the rotated factor loading of the varimax method was done. It yielded the following range of scores Covid-19 Anxiety Rating Scale = 0.53-0.86; Hand Wash Rating Scale = 0.50-0.88; Social Distancing Rating Scale 0.53-0.92; Facemasks Wearing Rating Scale = 0.55-0.87; and Self-Isolation Rating Scale 0.72-0.93. In order to ascertain the reliability of the research instrument, the questionnaire was pilot tested on 50 students and teachers from Delta Central Senatorial District and the data obtained were analysed using Cronbach alpha reliability coefficient, which is a kind of statistics used in estimating measures of internal consistency. It yielded the following coefficients: Covid-19 Anxiety Rating Scale = 0.98 Hand Wash Rating Scale = 0.96; Social Distancing Rating Scale 0.92; Facemasks Wearing Rating Scale = 0.81; and Self-Isolation Rating Scale 0.92.

Prior to the administration of the instrument, the researchers obtained permission from the principal of the various schools after explaining purpose of visit. They recruited the assistance of three research assistants to assist them in administering the questionnaire. The questionnaire was therefore, administered by the researchers and three research assistants. The questionnaire was retrieved immediately. This afforded the researchers opportunity to explain where necessary, aspects of the questionnaire which were not understood by the respondents. The data were analysed using regression statistics using f-test at 0.05 level of significance. The Fisher-z statistics was used to test for the moderating impact of sex on the relationship between Covid-19 anxiety and compliance with

preventive protocol among secondary school students.

### 3. RESULTS

**Hypothesis 1:** There is no significant relationship between Covid-19 anxiety and compliance with preventive protocol of Handwash among secondary school students in Delta State.

Table 1 presents regression statistics that were utilized to investigate the correlation between Covid-19 anxiety and adherence to Handwash preventive protocol among secondary school students in Delta State. The results reveal that the computed F-value is 194.336, and the p-value is 0.000, which is less than the set alpha level of 0.05. Therefore, the null hypothesis is rejected, indicating that there is a significant correlation between Covid-19 anxiety and adherence to preventive Handwash protocol among secondary school students in Delta State. The  $R^2$  value of 0.344 indicates that Covid-19 anxiety accounts for 34.4% of the variation in adherence to preventive Handwash protocol among secondary school students in Delta State. The unstandardized regression coefficient ( $B$ ) for predicting compliance with preventive Handwash protocol from Covid-19 anxiety is 0.979, and the standardized coefficient ( $\beta$ ) is 0.586,  $t = 13.940$ . Covid-19 anxiety is statistically significant at an alpha level of 0.05.

**Hypothesis 2:** There is no significant relationship between Covid-19 anxiety and compliance with preventive protocol of Handwash among secondary school teachers in Delta State.

Table 2 presents regression statistics that were utilized to investigate the correlation between Covid-19 anxiety and adherence to Handwash preventive protocol among secondary school teachers in Delta State. The results reveal that the computed F-value is 43.612, and the p-value is 0.000, which is less than the set alpha level of 0.05. Therefore, the null hypothesis is rejected, indicating that there is a significant correlation between Covid-19 anxiety and adherence to preventive Handwash protocol among secondary school teachers in Delta State. The  $R^2$  value of 0.128 indicates that Covid-19 anxiety accounts for 12.8% of the variation in adherence to preventive Handwash protocol among secondary school teachers in Delta State. The unstandardized regression coefficient ( $B$ ) for

predicting compliance with preventive Handwash protocol from Covid-19 anxiety is 0.556, and the standardized coefficient ( $\beta$ ) is 0.357,  $t = 6.604$ . Covid-19 anxiety is statistically significant at an alpha level of 0.05.

**Hypothesis 3:** There is no significant relationship between Covid-19 anxiety and compliance with preventive protocol of social distancing among secondary school students in Delta State.

Table 3 presents regression statistics that were utilized to investigate the correlation between Covid-19 anxiety and adherence to social distancing preventive protocol among secondary school students in Delta State. The results reveal that the computed F-value is 234.178, and the p-value is 0.000, which is less than the set alpha level of 0.05. Therefore, the null hypothesis is rejected, indicating that there is a significant correlation between Covid-19 anxiety and adherence to preventive social distancing protocol among secondary school students in Delta State. The  $R^2$  value of 0.387 indicates that Covid-19 anxiety accounts for 38.7% of the variation in adherence to preventive social distancing protocol among secondary school students in Delta State. The unstandardized regression coefficient ( $B$ ) for predicting compliance with preventive social distancing protocol from Covid-19 anxiety is 0.644, and the standardized coefficient ( $\beta$ ) is 0.622,  $t = 15.303$ . Covid-19 anxiety is statistically significant at an alpha level of 0.05.

**Hypothesis 4:** There is no significant relationship between Covid-19 anxiety and compliance with preventive protocol of social distancing among secondary school teachers in Delta State.

Table 4 presents regression statistics that were utilized to investigate the correlation between Covid-19 anxiety and adherence to social distancing preventive protocol among secondary school teachers in Delta State. The results reveal that the computed F-value is 87.912, and the p-value is 0.000, which is less than the set alpha level of 0.05. Therefore, the null hypothesis is rejected, indicating that there is a significant correlation between Covid-19 anxiety and adherence to preventive social distancing protocol among secondary school teachers in Delta State. The  $R^2$  value of 0.227 indicates that Covid-19 anxiety accounts for 22.7% of the variation in adherence to preventive social

distancing protocol among secondary school teachers in Delta State. The unstandardized regression coefficient ( $B$ ) for predicting compliance with preventive social distancing protocol from Covid-19 anxiety is 0.520, and the standardized coefficient ( $\beta$ ) is 0.477,  $t = 9.376$ . Covid-19 anxiety is statistically significant at an alpha level of 0.05.

**Hypothesis 5:** There is no significant relationship between Covid-19 anxiety and compliance with preventive protocol of wearing facemasks among secondary school students in Delta State.

Table 5 presents regression statistics that were utilized to investigate the correlation between Covid-19 anxiety and adherence to wearing of facemasks preventive protocol among secondary

school students in Delta State. The results reveal that the computed F-value is 9.713, and the p-value is 0.002, which is less than the set alpha level of 0.05. Therefore, the null hypothesis is rejected, indicating that there is a significant correlation between Covid-19 anxiety and adherence to preventive wearing of facemasks protocol among secondary school students in Delta State. The  $R^2$  value of 0.026 indicates that Covid-19 anxiety accounts for 2.6% of the variation in adherence to preventive wearing of facemasks protocol among secondary school students in Delta State. The unstandardized regression coefficient ( $B$ ) for predicting compliance with preventive wearing of facemasks protocol from Covid-19 anxiety is -0.221, and the standardized coefficient ( $\beta$ ) is -0.160,  $t = -3.117$ . Covid-19 anxiety is statistically significant at an alpha level of 0.05.

**Table 1. Regression analysis of the relationship between Covid-19 anxiety and compliance with preventive protocol of Handwash among secondary school students in Delta State**

Model Summary					
$R$	$R^2$	$Adj. R^2$	Std Error		
0.586	0.344	0.342	9.44582		
ANOVA					
	SS	df	MS	F	Sig.
Regression	17339.287	1	17339.287	194.336	.000 <sup>b</sup>
Residual	33101.902	371	89.223		
Total	50441.189	372			
Coefficient					
	Unstandardized Coefficients		Standardized Coefficient	$t$	Sig.
	B	Std. Error	$\beta$		
(Constant)	31.840	2.315		13.752	.000
Handwash	.979	.070	.586	13.940	.000

**Table 2. Regression analysis of the relationship between Covid-19 anxiety and compliance with preventive protocol of Handwash among secondary school teachers in Delta State**

Model Summary					
$R$	$R^2$	$Adj. R^2$	Std Error		
0.357	0.128	0.125	7.86003		
ANOVA					
	SS	df	MS	F	Sig.
Regression	2694.339	1	2694.339	43.612	.000 <sup>b</sup>
Residual	18410.455	298	61.780		
Total	21104.794	299			
Coefficient					
	Unstandardized Coefficients		Standardized Coefficient	$t$	Sig.
	B	Std. Error	$\beta$		
(Constant)	46.527	2.555		18.213	.000
Handwash	.556	.084	.357	6.604	.000

**Table 3. Regression analysis of the relationship between Covid-19 anxiety and compliance with preventive protocol of Social distancing among secondary school students in Delta State**

Model Summary					
<i>R</i>	<i>R</i> <sup>2</sup>	<i>Adj. R</i> <sup>2</sup>	Std Error		
0.622	0.387	0.385	9.12959		
ANOVA					
	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
Repression	19518.578	1	19518.578	234.178	.000 <sup>b</sup>
Residual	30922.611	371	83.349		
Total	50441.189	372			
Coefficient					
	Unstandardized Coefficients		Standardized Coefficient	<i>t</i>	<i>Sig.</i>
	<i>B</i>	Std. Error	$\beta$		
(Constant)	32.389	2.080		15.571	.000
Social Distancing	.644	.042	.622	15.303	.000

**Table 4. Regression analysis of the relationship between Covid-19 anxiety and compliance with preventive protocol of Social distancing among secondary school teachers in Delta State**

Model Summary					
<i>R</i>	<i>R</i> <sup>2</sup>	<i>Adj. R</i> <sup>2</sup>	Std Error		
0.477	0.227	0.225	7.39792		
ANOVA					
	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
Repression	4811.344	1	4811.344	87.912	.000 <sup>b</sup>
Residual	16364.035	299	54.729		
Total	21175.379	300			
Coefficient					
	Unstandardized Coefficients		Standardized Coefficient	<i>t</i>	<i>Sig.</i>
	<i>B</i>	Std. Error	$\beta$		
(Constant)	38.124	2.701		14.116	.000
Social Distancing	.520	.055	.477	9.376	.000

**Table 5. Regression analysis of the relationship between Covid-19 anxiety and compliance with preventive protocol of wearing of facemasks among secondary school students in Delta State**

Model Summary					
<i>R</i>	<i>R</i> <sup>2</sup>	<i>Adj. R</i> <sup>2</sup>	Std Error		
0.160	0.026	0.023	11.51013		
ANOVA					
	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
Repression	1286.844	1	1286.844	9.713	.002 <sup>b</sup>
Residual	49018.750	370	132.483		
Total	50305.594	371			
Coefficient					
	Unstandardized Coefficients		Standardized Coefficient	<i>t</i>	<i>Sig.</i>
	<i>B</i>	Std. Error	$\beta$		
(Constant)	77.118	4.446		17.347	.000
Facemasks	-.221	.071	-.160	-3.117	.002



**Hypothesis 6:** There is no significant relationship between Covid-19 anxiety and compliance with preventive protocol of wearing facemasks among secondary school teachers in Delta State.

Table 6 presents regression statistics that were utilized to investigate the correlation between Covid-19 anxiety and adherence to wearing of facemasks preventive protocol among secondary school teachers in Delta State. The results reveal that the computed F-value is 15.508, and the p-value is 0.000, which is less than the set alpha level of 0.05. Therefore, the null hypothesis is rejected, indicating that there is a significant correlation between Covid-19 anxiety and adherence to preventive wearing of facemasks protocol among secondary school teachers in

Delta State. The  $R^2$  value of 0.049 indicates that Covid-19 anxiety accounts for 4.9% of the variation in adherence to preventive wearing of facemasks protocol among secondary school teachers in Delta State. The unstandardized regression coefficient ( $B$ ) for predicting compliance with preventive wearing of facemasks protocol from Covid-19 anxiety is -0.266, and the standardized coefficient ( $\beta$ ) is -0.222,  $t = -3.938$ . Covid-19 anxiety is statistically significant at an alpha level of 0.05.

**Hypothesis 7:** There is no significant relationship between Covid-19 anxiety and compliance with preventive protocol of self-isolation when manifesting symptoms among secondary school students in Delta State.

**Table 6. Regression analysis of the relationship between Covid-19 anxiety and compliance with preventive protocol of wearing of facemasks among secondary school teachers in Delta State**

Model Summary					
<i>R</i>	<i>R</i> <sup>2</sup>	<i>Adj. R</i> <sup>2</sup>	Std Error		
0.222	0.049	0.046	8.20476		
ANOVA					
	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
Regression	1043.987	1	1043.987	15.508	.000 <sup>b</sup>
Residual	20060.807	298	67.318		
Total	21104.794	299			
Coefficient					
	Unstandardized Coefficients		Standardized Coefficient	<i>t</i>	<i>Sig.</i>
	<i>B</i>	Std. Error	$\beta$		
(Constant)	79.395	4.157		19.097	.000
Facemasks	-.266	.067	-.222	-3.938	.000

**Table 7. Regression analysis of the relationship between Covid-19 anxiety and compliance with preventive protocol of self-isolations among secondary school students in Delta State**

Model Summary					
<i>R</i>	<i>R</i> <sup>2</sup>	<i>Adj. R</i> <sup>2</sup>	Std Error		
0.548	0.300	0.298	9.75594		
ANOVA					
	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
Regression	15049.167	1	15049.167	158.115	.000 <sup>b</sup>
Residual	35120.833	369	95.178		
Total	50170.000	370			
Coefficient					
	Unstandardized Coefficients		Standardized Coefficient	<i>t</i>	<i>Sig.</i>
	<i>B</i>	Std. Error	$\beta$		
(Constant)	35.551	2.271		15.654	.000
Self-Isolations	1.454	.116	.548	12.574	.000

Table 7 presents regression statistics that were utilized to investigate the correlation between Covid-19 anxiety and adherence to self-isolations preventive protocol among secondary school students in Delta State. The results reveal that the computed F-value is 158.115, and the p-value is 0.000, which is less than the set alpha level of 0.05. Therefore, the null hypothesis is rejected, indicating that there is a significant correlation between Covid-19 anxiety and adherence to preventive self-isolations protocol among secondary school students in Delta State. The  $R^2$  value of 0.300 indicates that Covid-19 anxiety accounts for 30% of the variation in adherence to preventive self-isolations protocol among secondary school students in Delta State. The unstandardized regression coefficient ( $B$ ) for predicting compliance with preventive self-isolations protocol from Covid-19 anxiety is 1.454, and the standardized coefficient ( $\beta$ ) is 0.548,  $t = 12.574$ . Covid-19 anxiety is statistically significant at an alpha level of 0.05.

**Hypothesis 8:** There is no significant relationship between Covid-19 anxiety and compliance with preventive protocol of self-isolation when manifesting symptoms among secondary school teachers in Delta State.

Table 8 presents regression statistics that were utilized to investigate the correlation between Covid-19 anxiety and adherence to self-isolations preventive protocol among secondary school teachers in Delta State. The results reveal that the computed F-value is 36.138, and the p-value is 0.000, which is less than the set alpha level of 0.05. Therefore, the null hypothesis is rejected, indicating that there is a significant correlation between Covid-19 anxiety and adherence to

preventive self-isolations protocol among secondary school teachers in Delta State. The  $R^2$  value of 0.110 indicates that Covid-19 anxiety accounts for 11% of the variation in adherence to preventive self-isolations protocol among secondary school teachers in Delta State. The unstandardized regression coefficient ( $B$ ) for predicting compliance with preventive self-isolations protocol from Covid-19 anxiety is 0.840, and the standardized coefficient ( $\beta$ ) is 0.331,  $t = 6.011$ . Covid-19 anxiety is statistically significant at an alpha level of 0.05.

**Hypothesis 9:** There is no significant moderating impact of sex on the relationship between Covid-19 anxiety and compliance with preventive protocol among secondary school students in Delta State.

Table 9 presents the Regression and Fisher's Z statistics used to assess the influence of sex on the association between Covid-19 anxiety and adherence to preventive measures among secondary school students in Delta State. The study found that the correlation coefficients for male students ( $R = 0.730$ ) and female students ( $R = 0.727$ ) were very similar. To investigate whether sex moderated this relationship, a statistical test was conducted, which yielded a result of 0.105. Since this value is less than 1.96, there is no significant difference between the correlation coefficients of male and female students. Therefore, the null hypothesis is accepted, indicating that there is no significant moderating effect of sex on the relationship between Covid-19 anxiety and compliance with preventive measures among secondary school students.

**Table 8. Regression analysis of the relationship between Covid-19 anxiety and compliance with preventive protocol of self-isolations among secondary school teachers in Delta State**

Model Summary					
<i>R</i>	<i>R</i> <sup>2</sup>	<i>Adj. R</i> <sup>2</sup>	Std Error		
0.331	0.110	0.107	7.94035		
ANOVA					
	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
Regression	2278.461	1	2278.461	36.138	.000 <sup>b</sup>
Residual	18473.410	293	63.049		
Total	20751.871	294			
Coefficient					
	Unstandardized Coefficients		Standardized Coefficient	<i>t</i>	<i>Sig.</i>
	<i>B</i>	Std. Error	$\beta$		
(Constant)	47.047	2.715		17.330	.000
Self-Isolations	.840	.140	.331	6.011	.000

**Table 9. Regression and Fisher’s Z statistics of the moderating impact of sex on the relationship between Covid-19 anxiety and compliance with preventive protocol among secondary school students in Delta State**

Sex	Variables	n	Mean	SD	R	Fisher-z	Remark
	Covid-19 Anxiety	171	63.92	11.71	0.730	0.105	Not Significant
	Handwash		31.94	7.56			
	Social Distancing		47.63	11.21			
	Facemasks		62.29	9.83			
	Self-Isolation		19.21	4.04			
Male							
	Covid-19 Anxiety	203	62.94	11.60	0.727		
	Handwash		32.45	6.45			
	Social Distancing		48.57	11.29			
	Facemasks		61.91	7.03			
	Self-Isolation		19.08	4.66			
Female							

**Table 10. Regression and Fisher’s Z statistics of the moderating impact of sex on the relationship between Covid-19 anxiety and compliance with preventive protocol among secondary school teachers in Delta State**

Sex	Variables	n	Mean	SD	R	Fisher-z	Remark
	Covid-19 Anxiety	100	64.02	7.54	0.465	1.107	Not Significant
	Handwash		30.96	4.57			
	Social Distancing		49.44	6.34			
	Facemasks		62.23	6.82			
	Self-Isolation		19.16	2.82			
Male							
	Covid-19 Anxiety	202	62.69	8.78	0.554		
	Handwash		29.30	5.69			
	Social Distancing		47.40	8.23			
	Facemasks		60.74	7.10			
	Self-Isolation		19.15	3.55			
Female							

**Hypothesis 10:** There is no significant moderating impact of sex on the relationship between Covid-19 anxiety and compliance with preventive protocol among secondary school teachers in Delta State.

Table 10 presents the Regression and Fisher's Z statistics used to assess the influence of sex on the association between Covid-19 anxiety and adherence to preventive measures among secondary school teachers in Delta State. The study found that the correlation coefficients for male teachers (R = 0.465) and female teachers (R = 0.554) were very similar. To investigate whether sex moderated this relationship, a statistical test was conducted, which yielded a result of 1.107. Since this value is less than 1.96, there is no significant difference between the correlation coefficients of male and female

teachers. Therefore, the null hypothesis is accepted, indicating that there is no significant moderating effect of sex on the relationship between Covid-19 anxiety and compliance with preventive measures among secondary school teachers.

#### 4. DISCUSSION

##### 4.1 Relationship between Covid-19 Anxiety and Compliance with Preventive Protocol of Handwash among Secondary School Students in Delta State

The first finding revealed that there is a significant correlation between Covid-19 anxiety and adherence to preventive Handwash protocol

among secondary school students in Delta State. The finding further showed that Covid-19 Anxiety contributes 34.4% of the variation in adherence to Handwash preventive protocol among secondary school students in Delta State. This result may be explained by the fact that Covid-19 is a highly infectious disease that has caused a global pandemic. As a result, people are more aware of the risks associated with the disease and the importance of adhering to preventive measures, including handwashing. This increased awareness and anxiety about the disease may motivate students to take necessary precautions, such as washing their hands frequently and thoroughly, to reduce their risk of contracting the virus. Additionally, handwashing is a well-known and effective preventive measure against Covid-19, and compliance with this protocol is crucial to reducing the spread of the disease. Therefore, students who experience higher levels of Covid-19 anxiety may be more likely to comply with handwashing protocols as a means of reducing their risk of infection.

The above finding agrees with WHO [16] which found that handwashing with soap (HWWS) has actually been suggested by the World Health Organization as the most effective and lowcost strategy to prevent SARS CoV-2 transmission. The finding is further in line with Pirincci, et al. [17] which states that the infection rate and death statistics of COVID-19 make us think that this situation will spring an unease among students of the vocational school of health services, and this unease will have a positive effect on the hygiene behaviours of the students.

#### **4.2 Relationship between Covid-19 Anxiety and Compliance with Preventive Protocol of Handwash among Secondary School Teachers in Delta State**

The second finding showed that there is a significant correlation between Covid-19 anxiety and adherence to preventive Handwash protocol among secondary school teachers in Delta State. The finding further revealed that Covid-19 Anxiety contributes 12.8% of the variation in adherence to Handwash preventive protocol among secondary school teachers in Delta State. This finding can be attributed to some factors. Firstly, as frontline workers, teachers are at a higher risk of exposure to the virus. This increased risk may lead to higher levels of anxiety about contracting the disease and a

greater motivation to adhere to preventive measures such as handwashing. Secondly, teachers are responsible for the health and safety of their students and may feel a sense of duty to model and enforce proper hand hygiene practices in the classroom. Finally, the Covid-19 pandemic has led to a heightened awareness of the importance of hand hygiene and its role in preventing the spread of infectious diseases. As a result, teachers may be more likely to comply with handwashing protocols as a means of protecting themselves and their students from Covid-19. Overall, the significant relationship between Covid-19 anxiety and compliance with hand hygiene protocols among secondary school teachers is likely due to a combination of personal risk, professional responsibility, and increased awareness of the importance of hand hygiene in preventing the spread of Covid-19.

The above finding agrees with Wang, et al. [18] who found that taking pre-determined precautionary measures (i.e., hand hygiene, wearing a mask) to prevent the spread of COVID-19 can reduce negative psychological effects by providing a sense of security.

#### **4.3 Relationship between Covid-19 Anxiety and Compliance with Preventive Protocol of Social Distancing among Secondary School Students in Delta State**

The third finding revealed that there is a significant correlation between Covid-19 anxiety and adherence to preventive social distancing protocol among secondary school students in Delta State. The finding further showed that Covid-19 Anxiety contributes 38.7% of the variation in adherence to Social Distancing preventive protocol among secondary school students in Delta State. This finding can be explained by some factors. Firstly, Covid-19 is a highly contagious disease that spreads through close contact with infected individuals. This increased awareness of the risks associated with close contact may lead to higher levels of anxiety about the disease and a greater motivation to adhere to social distancing protocols. Secondly, students are part of a larger community, and compliance with social distancing protocols is crucial to preventing the spread of Covid-19 within the community. Students who experience higher levels of Covid-19 anxiety may be more likely to comply with social distancing protocols as a means of protecting themselves and others

from the disease. Finally, the Covid-19 pandemic has led to a heightened awareness of the importance of social distancing in preventing the spread of infectious diseases. As a result, students may be more likely to comply with social distancing protocols as a means of reducing their risk of infection.

The above finding is in line with the finding of Satici, et al. (2020), which revealed that uncertainty on the public has found that they are correlated with lower levels of medical compliance and lower levels of mental well-being. The finding also agrees with Akdeniz et al. [19] who found that "in addition to the protective recommendations against COVID-19, the fear of contracting the virus, and subsequently dying from it, uncertainty about disease control and vaccine availability, daily routine interruptions, economic loss, and constant exposure to negative news are factors considered highly responsible for the surge in mental health problems, such as anxiety".

#### **4.4 Relationship between Covid-19 Anxiety and Compliance with Preventive Protocol of Social Distancing among Secondary School Teachers in Delta State**

The fourth finding showed that there is a significant correlation between Covid-19 anxiety and adherence to preventive social distancing protocol among secondary school teachers in Delta State. The finding further revealed that Covid-19 Anxiety contributes 22.7% of the variation in adherence to Social Distancing preventive protocol among secondary school teachers in Delta State. The significant relationship between Covid-19 anxiety and compliance with preventive protocol of social distancing among secondary school teachers can be attributed to some factors. Firstly, as frontline workers, teachers are at a higher risk of exposure to the virus. This increased risk may lead to higher levels of anxiety about contracting the disease and a greater motivation to adhere to social distancing protocols. Secondly, teachers are responsible for the health and safety of their students and may feel a sense of duty to model and enforce proper social distancing practices in the classroom. Finally, the Covid-19 pandemic has led to a heightened awareness of the importance of social distancing in preventing the spread of infectious diseases. As a result, teachers may be more likely to comply with social distancing protocols as a means of

protecting themselves and their students from Covid-19.

In addition, compliance with social distancing protocols is necessary for teachers to perform their duties effectively in the classroom. Teachers who adhere to social distancing protocols may be more confident in their ability to provide a safe learning environment for their students, which can reduce anxiety levels and improve job performance. Furthermore, teachers who comply with social distancing protocols can serve as role models for their students, reinforcing the importance of social distancing in preventing the spread of Covid-19.

The above finding agrees with Grupe and Nitschke (2013), who found that uncertainty may lead to less compliance because it is associated with anxiety, and it may interrupt goal-directed functioning and promote distress. This discovery aligns with Spinhoven et al. (2014), who identified a connection between depression and anxiety with decreased extraversion, sociability, and heightened risk aversion, potentially leading to increased motivations for compliance. It also corresponds with the findings of Prestia et al. [20] indicating that the repercussions of social distancing on individuals' lives can span from fear and anxiety to the emergence of obsessive-compulsive disorders triggered by the fear of infection.

#### **4.5 Relationship between Covid-19 Anxiety and Compliance with Preventive Protocol of Wearing Facemasks among Secondary School Students in Delta State**

The fifth finding revealed that there is a significant correlation between Covid-19 anxiety and adherence to preventive wearing of facemasks protocol among secondary school students in Delta State. The finding further showed that Covid-19 Anxiety contributes 2.6% of the variation in adherence to Wearing of facemasks preventive protocol among secondary school students in Delta State. This finding can be explained by some factors. Firstly, Covid-19 is primarily transmitted through respiratory droplets, and wearing a facemask is an effective means of preventing the spread of these droplets. Students who experience higher levels of Covid-19 anxiety may be more likely to comply with facemask protocols as a means of protecting themselves and others from the disease. Secondly, students are part of a larger community, and compliance

with facemask protocols is crucial to preventing the spread of Covid-19 within the community. Students who are anxious about the disease may be more aware of the potential consequences of not wearing a facemask, and therefore more likely to comply with the protocol. Finally, the Covid-19 pandemic has led to a heightened awareness of the importance of wearing facemasks in preventing the spread of infectious diseases. As a result, students may be more likely to comply with facemask protocols as a means of reducing their risk of infection.

In addition, compliance with facemask protocols may be reinforced by school policies and social norms. Schools may have implemented policies mandating the use of facemasks in classrooms and other common areas, which can increase compliance among students. Social norms may also play a role, with students who see their peers and teachers wearing facemasks more likely to comply with the protocol themselves. Overall, the significant relationship between Covid-19 anxiety and compliance with facemask protocols among secondary school students is likely due to a combination of personal risk, community responsibility, increased awareness of the importance of wearing facemasks, school policies, and social norms.

The aforementioned discovery aligns with Harper et al. [21] who observed elevated anxiety levels during the Covid-19 pandemic, partly fueled by specific concerns about contracting the virus. The data indicates that both these immediate concerns and overall trait anxiety levels might contribute to fostering compliance. This observation is also consistent with the findings of Perin et al. [22] suggesting that fear manifests as a negative emotion characterized by intense emotive avoidance in response to specific stimuli. However, it contrasts with the results of Pulcu et al. (2015), whose research revealed that depression is associated with reduced self-efficacy and altruism, leading to non-compliance with medical treatments more broadly.

#### **4.6 Relationship between Covid-19 Anxiety and Compliance with Preventive Protocol of Wearing Facemasks among Secondary School Teachers in Delta State**

The sixth finding showed that there is a significant correlation between Covid-19 anxiety and adherence to preventive wearing of facemasks protocol among secondary school teachers in Delta State. The finding further

revealed that Covid-19 Anxiety contributes 4.9% of the variation in adherence to Wearing of facemasks preventive protocol among secondary school teachers in Delta State. The significant relationship between Covid-19 anxiety and compliance with preventive protocol of wearing facemasks among secondary school teachers can be explained by some factors. Firstly, as frontline workers, teachers are at a higher risk of exposure to the virus. This increased risk may lead to higher levels of anxiety about contracting the disease and a greater motivation to adhere to facemask protocols. Secondly, teachers are responsible for the health and safety of their students and may feel a sense of duty to model and enforce proper facemask wearing practices in the classroom. Finally, the Covid-19 pandemic has led to a heightened awareness of the importance of wearing facemasks in preventing the spread of infectious diseases. As a result, teachers may be more likely to comply with facemask protocols as a means of protecting themselves and their students from Covid-19.

In addition, compliance with facemask protocols is necessary for teachers to perform their duties effectively in the classroom. Teachers who adhere to facemask protocols may be more confident in their ability to provide a safe learning environment for their students, which can reduce anxiety levels and improve job performance. Furthermore, teachers who comply with facemask protocols can serve as role models for their students, reinforcing the importance of wearing facemasks in preventing the spread of Covid-19.

School policies and social norms can also play a role in reinforcing compliance with facemask protocols among teachers. Schools may have implemented policies mandating the use of facemasks in classrooms and other common areas, which can increase compliance among teachers. Social norms may also play a role, with teachers who see their colleagues and superiors wearing facemasks more likely to comply with the protocol themselves.

The above finding is in line with Wise et al. (2020), who found in their study, that feeling personally at risk of infection predicted a greater propensity to engage in hand washing and social distancing behaviours in the early stages of the pandemic. This observation is in line with the research by Li et al. [23] where self-control, subjectively assessed, was found to mitigate the association between perceived severity of Covid-

19 and compromised mental health. This suggests that combining a reasonable level of concern about the illness with messages emphasizing personal hygiene could promote safety behaviors, such as practicing hand hygiene and maintaining social distance. Additionally, this finding reinforces the outcome of Zettler et al. (2020), who reported that the HEXACO personality domain of emotionality, characterized by heightened anxiety, fear, and emotional reactivity, was linked to a greater acceptance of government-imposed personal restrictions.

#### **4.7 Relationship between Covid-19 Anxiety and Compliance with Preventive Protocol of Self-Isolation when Manifesting symptoms among Secondary School Students in Delta State**

The seventh finding revealed that there is a significant correlation between Covid-19 anxiety and adherence to preventive self-isolation protocol among secondary school students in Delta State. The finding further showed that Covid-19 Anxiety contributes 30% of the variation in adherence to Self-isolation preventive protocol among secondary school students in Delta State. The significant relationship between Covid-19 anxiety and compliance with preventive protocol of self-isolation when manifesting symptoms among secondary school students can be explained by several factors. Firstly, students who experience higher levels of Covid-19 anxiety may be more aware of the potential consequences of spreading the virus to others if they exhibit symptoms. They may therefore be more motivated to comply with self-isolation protocols in order to prevent the spread of the disease to others. Secondly, students may be more likely to comply with self-isolation protocols if they have a clear understanding of the symptoms of Covid-19 and the importance of isolating themselves if they exhibit these symptoms. Anxiety about the disease may increase students' motivation to learn about the symptoms and the importance of self-isolation.

Thirdly, students may be influenced by social norms and expectations regarding self-isolation. If their peers and teachers are complying with self-isolation protocols, students may feel more pressure to do the same. Alternatively, if students perceive that others are not taking self-isolation seriously, they may be less likely to

comply themselves. Fourthly, school policies and communication from school authorities regarding the importance of self-isolation may influence students' compliance with the protocol. If school policies require self-isolation for those manifesting symptoms, and if school authorities communicate the importance of compliance, students may be more likely to comply with the protocol.

Finally, compliance with self-isolation protocols may be influenced by access to resources and support. For example, students who live in crowded households may face challenges in isolating themselves. Anxiety about the disease may increase students' awareness of the need for resources and support to comply with self-isolation protocols. Overall, the significant relationship between Covid-19 anxiety and compliance with self-isolation protocols among secondary school students is likely due to a combination of personal risk, community responsibility, increased awareness of the importance of self-isolation, social norms, school policies, and access to resources and support.

The above finding support Gondim and Borges [24] who found that at the time of isolation, most workers experience more intense feelings such as distress and anxiety, thus demanding resources for emotional self-regulation given the frustration of not being able to be as productive as they used to. The finding also agrees with Sprang and Silman [25] whose finding showed that students who experienced quarantine following a natural disaster were more likely to show symptoms consistent with PTSD.

#### **4.8 Relationship between Covid-19 Anxiety and Compliance with Preventive Protocol of Self-Isolation when Manifesting symptoms among Secondary School Teachers in Delta State**

The eighth finding showed that there is a significant correlation between Covid-19 anxiety and adherence to preventive self-isolation protocol among secondary school teachers in Delta State. The finding further revealed that Covid-19 Anxiety contributes 11% of the variation in adherence to Self-isolation preventive protocol among secondary school teachers in Delta State. There are several potential reasons why a significant relationship might exist between Covid-19 anxiety and compliance with preventive

protocols of self-isolation among secondary school teachers who exhibit symptoms. For instance, teachers who are anxious about Covid-19 may be more likely to take precautions to avoid contracting the virus themselves, such as self-isolating when they exhibit symptoms. This fear may be heightened for those who work in schools, where they are in close contact with students and other staff members on a daily basis.

In addition to their own fears about contracting Covid-19, teachers may also be motivated to comply with self-isolation protocols out of concern for the health and safety of their students and colleagues. Teachers may feel a sense of responsibility to protect those around them, and may be more likely to take precautions to avoid spreading the virus. Teachers may be influenced by the perceived social norms around Covid-19 prevention measures, such as self-isolation when manifesting symptoms. If they believe that others in their community are taking these precautions seriously, they may be more likely to do so themselves. Teachers who are more informed about Covid-19 and the risks associated with the virus may be more likely to take preventive measures, including self-isolation when manifesting symptoms. Access to accurate information about the virus and its transmission may help to reduce anxiety and increase compliance with preventive protocols. It's important to note that the relationship between Covid-19 anxiety and compliance with self-isolation protocols may be complex and multifaceted. Other factors, such as personal beliefs, social support, and access to healthcare, may also play a role in determining whether or not teachers comply with these protocols.

The aforementioned discovery aligns with the conclusions of Brooks et al. [7] who conducted a review on the psychological effects of quarantine. Their findings indicated a correlation between quarantine and emotions such as anxiety, fatigue, and demotivation, suggesting that these feelings might endure even after the quarantine period concludes. The finding also agrees with Banerjee and Rai [26] who found that Social isolation puts the population of older adults at a higher risk of psychological suffering due to depression, anxiety about contracting the disease, death of family members, fear of abandonment, fear related to the uncertainty of the disease, anxiety related to routine change, and deregulation of sleep and appetite due to physical inactivity [27-29].

#### **4.9 Moderating Impact of Sex on the Relationship between Covid-19 Anxiety and Compliance with Preventive Protocol among Secondary School Students in Delta State**

The ninth observation indicates that there is no noteworthy moderating effect of gender on the association between Covid-19 anxiety and adherence to preventive measures among secondary school students. The absence of a substantial moderating impact of gender on the link between Covid-19 anxiety and compliance with preventive measures among secondary school students may be attributed to various factors. One possibility is that both male and female students are encountering comparable levels of Covid-19 anxiety, leading to similar levels of adherence to preventive measures. This parity could stem from various factors, including comparable exposure to news and media coverage of the pandemic, similar experiences of social isolation, and shared concerns about the pandemic's impact on their health and well-being [30-32].

Adolescents may be more influenced by social norms and peer pressure than by sex differences when it comes to compliance with preventive measures. If there is a general culture of compliance and social pressure to follow preventive measures among students, then sex differences may not play as significant a role in determining compliance. While Covid-19 anxiety may be similar between male and female students, there may be other concerns that differ between sexes that impact compliance with preventive measures. For example, female students may be more concerned about the impact of Covid-19 on vulnerable family members, while male students may be more concerned about the impact of school closures on their academic performance. These different concerns may balance out any sex differences in Covid-19 anxiety and result in similar levels of compliance with preventive measures [33].

#### **4.10 Moderating Impact of Sex on the Relationship between Covid-19 Anxiety and Compliance with Preventive Protocol among Secondary School Teachers in Delta State**

The tenth discovery reveals that there is no notable moderating influence of gender on the



connection between Covid-19 anxiety and adherence to preventive measures among secondary school teachers. The absence of a significant moderating effect of gender on the relationship between Covid-19 anxiety and compliance with preventive measures among secondary school teachers might be attributed to several factors. One explanation could be that secondary school teachers, irrespective of their gender, feel a strong sense of professional duty to adhere to preventive measures for the well-being of their students and colleagues. This commitment to responsibility and duty may override any gender-based differences in Covid-19 anxiety, resulting in comparable levels of compliance with preventive measures [34-36].

Similar to secondary school students, it is possible that both male and female teachers are experiencing similar levels of Covid-19 anxiety, which may result in similar levels of compliance with preventive measures. This could be due to similar exposure to news and media coverage of the pandemic, similar experiences of social isolation, and similar concerns about the impact of the pandemic on their health and wellbeing. Teachers may also be more influenced by occupational hazards and job-related concerns than by sex differences when it comes to compliance with preventive measures. Teachers may be more concerned about the potential for school closures, the impact on their job security, and their ability to provide for themselves and their families than by sex differences in Covid-19 anxiety.

## 5. CONCLUSION AND RECOMMENDATIONS

Based on the findings of the study, it can be concluded that Covid-19 anxiety affected compliance with the preventive protocols among students and teachers in Delta State. The anxiety level affected preventive protocols such as handwash, social distancing, wearing of facemasks and self-isolation. Sex did not moderate the relationship between Covid-19 anxiety and compliance with preventive protocol among secondary school students and teachers in Delta State. Arising from the findings of this study, the following recommendations are made:

1. in times of epidemic of this nature, the citizenry must be exposed to cases of infected patients through videos, jingles, film shows, television and social media so as to increase anxiety level and subsequent compliance;

2. Government and school administrators should ensure that teachers have access to handwashing facilities and supplies, such as soap and water or hand sanitizer. This can help to facilitate adherence to preventive measures.
3. Teachers and school administrators should reinforce positive behavior by providing praise and recognition for students who adhere to social distancing protocol;
4. Guidance Counsellors should provide emotional support to teachers who are experiencing anxiety related to Covid-19. This can include counseling services or other resources that can help teachers manage their anxiety and maintain their mental health;
5. Teachers and other adults can model good facemask-wearing practices for students. This can help to normalize the behavior and provide a positive example for students to follow.
6. School administrators should use visual aids or reminders throughout the school to help teachers remember to wear facemasks. For example, posters or signs that remind teachers to wear facemasks properly can be helpful.
7. School administrators and teachers should provide clear and consistent guidelines for self-isolation, including when and how to self-isolate, as well as what to do if a student begins to experience symptoms;
8. Teachers should use technology to facilitate remote teaching and maintain connections with students and colleagues while in self-isolation. This can help to reduce feelings of isolation and maintain academic progress.

## DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of manuscripts.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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