

# Determinants of Mental Health Status of Youths during COVID-19 in Andoni Local Government Area of Rivers State

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## Authors' contributions

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

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## ABSTRACT

This study investigated the determinants of mental health status of youths during COVID-19 in Andoni Local Government Area. The design for this study was descriptive cross sectional survey design. The population for the study consisted one hundred and sixteen thousand, eight hundred and twenty six youths (116, 826). The sample size of the study was 600 youths which was estimated using Taro Yamane's method for a large population. Multistage sampling procedure was adopted for the study to select the sample. The instrument used for data collection was the questionnaire titled: "Determinants of Mental Health Status Questionnaire (DMHSQ). The validated instrument had a reliability coefficient of 0.74. which was high enough and was used for this study. The data was analysed using the Statistical Products for Service Solution (SPSS) version 25.0. The result of this study indicated that the determinants of mental health among youths during COVID-19 pandemic in Andoni Local Government Area. The result of this study showed that there was a very high positive relationship between age and mental health of youths during COVID-19 pandemic ( $r = 0.922$ ). The result of this study also indicated that there was a very high positive relationship between gender and mental health of youths during COVID-19 pandemic ( $r = 0.931$ ). The result of this study illustrated that there was a high positive relationship between religion and mental health of youths during COVID-19 pandemic ( $r = 0.887$ ), and that there was a very high positive relationship between socioeconomic status and mental health of youths during COVID-19 pandemic

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( $r = 0.949$ ). The findings further revealed that there was a very high positive relationship between age and mental health of youths during COVID-19 pandemic ( $r = 0.943$ ). The study concluded that the upsurge of COVID 19 to a large extent affected the mental and social health status of youths in Andoni Local Government Area of Rivers State, the following recommendations were made; government should implement mental health promotion/education efforts and keep adequate information about the content and benefits of evidence-based treatments and encourage males to participate in other potentially beneficial actions.

*Keywords: COVID 19; mental health; youth; Andoni; Rivers State.*

## 1. INTRODUCTION

From early childhood to old age, mental health concerns are a worry for people of all ages. Race and ethnicity, gender, age, economic level, education level, sexual orientation, and geographic location have all been connected to mental health. Other social factors, such as interpersonal, familial, and community dynamics, housing quality, social support, job prospects, and work and school circumstances, can all have a favourable or negative impact on mental health risk and results. Parks and churches, for example, can promote better mental health by providing safe public spaces for individuals to engage. The emergence of COVID 19 brought tension and anxiety to the government and the population. It affected the physical, mental and social well-being [1]. Our mental health includes our emotional, psychological, and social well-being. It affects the way we think, feel, and behave. It also has an impact on how we deal with stress, social interactions, and decision-making. Mental health is important at any age, including childhood, adolescence, and adulthood. The COVID-19 epidemic has resulted in temporary and even long-term mental health involvement, particularly during the lockdown [1,2]. Children with particular needs had difficulties during the lockout. Young adults have difficulty following instructions, comprehending the pandemic's overall concept, and even completing assigned individual tasks [3,4]. With the impact of closed activities during COVID 19 several factors affected the psychological status of most people, many were unable to get the resources and peer interaction that they were getting before, [2]. This is because of the upsurge of COVID 19 brought confusion that no one was able to adopt preventive measures except the prescription from the government such as physical and social distancing, use of face mask, face shield and regular use of alcohol-based sanitizer when touching objects among others. The way youth think and act were influenced by the emergence of COVID 19 of the

extreme limitation of movement even among friends.

The COVID-19 pandemic may have long-term implications, particularly for the population's mental health, including youngsters (Inter-Agency Standing Committee Guidelines on Mental Health and Psychosocial Support) (IASC) [5]. Deterioration of social networks and economies, stigma attached to COVID-19 survivors, possible increased anger and aggression directed at frontline workers and the government, possible anger, anxiety, and aggression directed at young adults, and possible mistrust of information were all signs of mental illness. Most aspects of mental disease and psychological well-being, according to David et al. (2002), are influenced by social factors (such as gender, socioeconomic class, race and ethnicity, and household patterns) and social institutions (such as disability and social security systems, labour markets, and health care organizations). The capacity to cope effectively with growing numbers of persons with mental illness and/or dementia depend substantially on the social arrangements affecting family, work, income support and medical care. The epidemiology of mental illness in later life is complicated by the relationships among symptom occurrence, drug use, and physical illness and the varying ways individuals and families define illness, evaluate its significance and take remedial action [6,7]. Evidently, Hertel [8] revealed that the use of protective material during COVID 19 was earlier ignored because of poor facial expression. Age groups and ethnic groups differ in their ability to recognise psychological symptoms, stigma beliefs, and willingness to seek help. In most civilizations, the cumulative burdens of mental disease are increasing as the population ages [9,10]. The magnitude of dementia, depression, schizophrenia, and other mental illnesses, as well as the types of social supports and institutional arrangements that help to insulate individuals, families, and communities from the

most disruptive stresses and facilitate functioning, all contribute to such burdens. The way in which male react to the menace of COVID 19 during the emergence could not be the same way the female do. Xiong et al, [11] carried out a study to determine factors influencing mental health revealed that the effects of COVID 19 on the mental health of the population differs relatively among male and female. The mental distress could be much among youth because of their involvement in productive activities such as jobs or businesses, sports, schools and recreational events. Mental health issues may also be due to self-isolating or being in quarantine [12]. This was poised to the fact that youth in Andoni Local Government Area relate poorly to the environment leading psychological distress. Hence this study seeks to investigate the determinants of mental health status among youth in Andoni Local Government Area of Rivers State.

### 1.1 Purpose of the Study

The purpose of the study was to investigate the determinants of mental health status of youths during COVID-19 in Andoni Local Government Area. Specifically this study seek to achieve the following objectives:

1. ascertain the determinants of mental health among youths during covid19 in Andoni Local Government Area of Rivers State;
2. determine the relationship between age and mental health of youths during COVID-19 pandemic in Andoni Local Government Area of Rivers State;
3. determine the relationship between gender and mental health of youths during COVID-19 pandemic in Andoni Local Government Area of Rivers State;
4. determine the relationship between religion and mental health of youths during COVID-19 pandemic in Andoni Local Government Area of Rivers State;
5. determine the relationship between socioeconomic status and mental health of youths during COVID-19 pandemic in Andoni Local Government Area of Rivers State.

### 1.2 Research Questions

The following research questions were postulated to guide the study;

1. What are the determinants of mental health among youths during COVID-19 pandemic in Andoni Local Government Area of Rivers State?
2. What's the relationship between age and mental health of youths during Covid-19 pandemic in Andoni Local Government Area of Rivers State?
3. What's the relationship between gender and mental health of youths during Covid-19 pandemic in Andoni Local Government Area of Rivers State?
4. What's the relationship between religion and mental health of youths during Covid-19 pandemic in Andoni Local Government Area of Rivers State?
5. What's the relationship between socioeconomic status and mental health of youths during Covid-19 pandemic in Andoni Local Government Area of Rivers State?

### 1.3 Hypotheses

The null hypotheses of this study were formulated and tested at 0.05 alpha level.

- 1 There is no significant relationship between age and mental health of youths during COVID-19 pandemic in Andoni Local Government Area of Rivers State;
- 2 There is no significant relationship between gender and mental health of youths during COVID-19 pandemic in Andoni Local Government Area of Rivers State;
- 3 There is no significant relationship between religion and mental health of youths during COVID-19 pandemic in Andoni Local Government Area of Rivers State;
- 4 There is no significant relationship between socioeconomic status and mental health of youths during COVID-19 pandemic in Andoni Local Government Area of Rivers State;

## 2. METHODS AND MATERIALS

The design for this study was descriptive cross sectional survey design. Descriptive survey was chosen because it is concerned with condition that exist in a natural setting, the practices that prevail, and the attitudes that are developing during the era COVID 19. The population of this study was one hundred and sixteen thousand, eight hundred and twenty six youths used for the

study (116, 826) (Population Projection Census, 2016). The sample size of the study was estimated using Yaro Yamane’s method for a quite population. The sample size was 600.

Taro Yamene formula

$$n = \frac{N}{1 + N(e)^2}$$

Multistage sampling techniques were adopted for the study. The instrument used for data collection was the questionnaire, titled: “Determinants of Mental Health Status Questionnaire (DMHSQ). Cronbach Alpha was used to determine the reliability index which was (r=0.74) at the p-value 0.05. The data was analysed using the Statistical Products for Service Solution (SPSS) version 25.0.

### 3. RESULTS

The result showed that the determinants included: being educated (2.71±0.98), physical threat of COVID-19 (2.52±1.03), social distancing of COVID-19 (2.75±0.98) and emotional instability (2.71±1.06).

The result showed that there was a very high positive relationship between age and mental health of youths during COVID-19 pandemic (r = 0.922). The result further showed that age contributed 85.0% of the variance in the mental health status of the youths (R<sup>2</sup> = 0.850). Thus, the relationship between age and mental health of youths during COVID-19 pandemic in Andoni LGA was very high.

**Table 1. Determinants of mental health among youths during COVID-19 pandemic in Andoni Local Government Area**

SN	Items	Mean	S.D.
1	Younger adults are likely to have anxiety during the COVID-19 pandemic era	3.36	.75
2	Younger adults are more likely to show symptoms of depression during the COVID-19 pandemic	3.11	.81
3	Younger adults who are education could show no symptoms of anxiety during COVID-19 pandemic	2.71	.98
4	Younger adults are mentally worried due to physical threat of COVID-19	2.52	1.03
5	Anxiety due to low income level during COVID-19	3.02	.86
6	Younger adults may likely have aggression with peers due to social distancing of COVID-19	2.75	.98
7	Emotional instability among youths because of social distancing during COVID-19	2.71	1.06
<b>Grand mean</b>		<b>2.88</b>	<b>0.92</b>

*Criterion mean =2.50*

**Table 2. Regression analysis on relationship between age and mental health of youths during COVID-19 pandemic**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	Decision
1	.922	.850	.849	1.128	1.369	Very high relationship

**Table 3. Regression analysis on relationship between gender and mental health of youths during COVID-19 pandemic**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	Decision
1	.931	.866	.865	1.0652	2.063	Very high relationship

The result showed that there was a very high positive relationship between gender and mental health of youths during COVID-19 pandemic ( $r = 0.931$ ). The result further showed that gender contributed 86.6% of the variance in the mental health status of the youths ( $R^2 = 0.866$ ). Thus, the relationship between gender and mental health of youths during COVID-19 pandemic in Andoni was very high.

The result showed that there was a high positive relationship between religion and mental health of youths during COVID-19 pandemic ( $r = 0.887$ ). The result further showed that religion contributed 78.7% of the variance in the mental health status of the youths ( $R^2 = 0.787$ ). Thus, the relationship between religion and mental health of youths during COVID-19 pandemic in Andoni was high.

The result showed that there was a very high positive relationship between socioeconomic status and mental health of youths during

COVID-19 pandemic ( $r = 0.949$ ). The result further showed that socioeconomic status contributed 90.0% of the variance in the mental health status of the youths ( $R^2 = 0.900$ ). Thus, the relationship between socioeconomic status and mental health of youths during COVID-19 pandemic in Andoni was very high.

The result showed that there was a very high positive relationship between age and mental health of youths during COVID-19 pandemic ( $r = 0.943$ ). The null hypothesis was thus rejected.

The findings of the study showed that there was a significant relationship between gender and mental health of youths during COVID-19 pandemic [ $F(1,309) = 1995.06, p < 0.05$ ]. The null hypothesis which stated that there is no significant relationship between gender and mental health of youths during COVID-19 pandemic in Andoni Local Government Area of Rivers State was thus rejected.

**Table 4. Regression analysis on relationship between religion and mental health of youths during COVID-19 pandemic**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	Decision
1	.887	.787	.787	1.34175	1.443	High relationship

**Table 5. Regression analysis on relationship between socioeconomic status and mental health of youths during COVID-19 pandemic**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	Decision
1	.949	.900	.899	0.9209	1.434	Very High relationship

**Table 6. Regression analysis on relationship between age and mental health of youths during COVID-19 pandemic in Andoni Local Government Area of Rivers State**

Model		Sum of Squares	df	Mean Square	F	Sig.	Decision
1	Regression	2221.322	1	2221.322	1744.7	.000*	Rejected
	Residual	393.401	309	1.273			
	Total	2614.723 <sup>d</sup>	310				

\*Significant  $P < 0.05$

**Table 7. Regression analysis on relationship between gender and mental health of youths during COVID-19 pandemic in Andoni Local Government Area of Rivers State**

Model		Sum of Squares	Df	Mean Square	F	Sig.	Decision
1	Regression	2264.061	1	2264.061	1995.0	.000*	Rejected
	Residual	350.662	309	1.135			
	Total	2614.723 <sup>d</sup>	310				

\*Significant  $P < 0.05$

**Table 8. Regression analysis on relationship between religion and mental health of youths during COVID-19 pandemic in Andoni Local Government Area of Rivers State**

Model		Sum of Squares	df	Mean Square	F	Sig.	Decision
1	Regression	2058.433	1	2058.433	1143.3	.000*	Rejected
	Residual	556.290	309	1.800			
	Total	2614.723 <sup>d</sup>	310				

\*Significant  $P < 0.05$

**Table 9. Regression analysis on relationship between socioeconomic status and mental health of youths during COVID-19 pandemic in Andoni Local Government Area of Rivers State**

Model		Sum of Squares	df	Mean Square	F	Sig.	Decision
1	Regression	2352.671	1	2352.671	2774.1	.000*	Rejected
	Residual	262.052	309	.848			
	Total	2614.723 <sup>d</sup>	310				

\*Significant  $P < 0.05$

**Hypothesis 3:** There is no significant relationship between religion and mental health of youths during COVID-19 pandemic in Andoni Local Government Area of Rivers State.

The study's findings revealed a significant link between religion and mental health of youths during COVID-19 pandemic [ $F(1,309) = 1143.38, p < 0.05$ ]. The null hypothesis was thus, rejected.

**Hypothesis 4:** There is no significant relationship between socioeconomic status and mental health of youths during COVID-19 pandemic in Andoni Local Government Area of Rivers State.

The findings of the study showed that there was a significant relationship between socioeconomic status and mental health of youths during COVID-19 pandemic [ $F(1,309) = 2774.16, p < 0.05$ ]. The null hypothesis was thus, rejected.

#### 4. DISCUSSION OF FINDINGS

##### 4.1 Determinants of Mental Health during COVID-19

The result of this study revealed that determinants of mental health among youths during COVID-19 pandemic in Andoni Local Government Area at (2.88+/-092). The result of this study was expected because the upsurge of COVID-19 limits the activities of people especially youth affecting the way they think and relate with others mostly during physical distancing. The result of this study is in credence with studies of Harandi, et al, [13] that the era of COVID-19 pandemic have caused anxiety on the

lives of youth and populace of the affected regions. Abdul et al, [14] affirmed that disease pandemic is over 3times more significantly to cause depression among the population (AOR = 3.27). Xiong et al, [11] added that people had moderate to severe levels of depression, anxiety, and stress symptoms, respectively during the era of COVID-19. It is pertinent to note that the outbreak of disease like COVID-19 pandemic can cause confusion and mental health problem due to inability to meet the up living and well-being. There is no prior studies that contradict with the outcome of the current findings.

##### 4.2 Age and Mental Health during COVID-19

The study's findings revealed that there was a connection between age and mental health of youths during COVID-19 pandemic ( $p < 0.05$ ). The result of this study is not surprising because mental development of youth can be determined by their age which is closely linked with maturity. As one grows older in age he/she also advances in mental health. The result of this study is in keepings with findings of Xiong et al, [11] that mental distress of students during the early stage of COVID 19 pandemic was high in regard with their age. The result of this study is also in line with studies of Harandi, et al. [13] age showed a significant correlation with the prevalence of mental health problems among the populace. Travasso, et al, [15] added that the mental health status of individual differ in the chronological age especially during disease pandemic. Jokela et al, [16] buttressed that the occurrence of mental health problem are likely to be high as one

increases with age. Previously, Alexander et al. [17] affirmed that one of the individual characteristics that is associated with prognostic expectation, management and improvement of mental health is age. It is plausible because the mental development of individual may be affected when he/she are at risk of contracting pandemic disease such as COVID 19 and others especially in regard with their age advancement. However, as of the time of this study, there was no prior findings that contradicts with the outcome of this study.

#### **4.3 Gender and Mental Health during COVID 19**

The result of this study illustrated that the relationship between gender and mental health of youths during COVID-19 pandemic in Andoni LGA was very high ( $r = 0.931$ ). The result of this study is in required because mental health status of youth varies among male and female. The upsurge of COVID 19 pandemic resulted in different ways of reasoning among population such the way they conceived about the disease are likely to differ in respect with male and female. The result of this study is in line with studies of Xiong et al, [11] that there was difference in the reaction of male and female's mental health during the early stages of COVID 19, such as; depression, anxiety, stress among others due to limitation of movement and relation with others. Studies of Bacigalupe et al, [18] revealed that there was gender inequalities on the mental health problems especially in the process of medicalization. Harandi, et al, [13] added that relatively high effect size of the correlation between social support and mental health in regard with gender of the population, Abdul et al, [14] revealed that the prevalence of mental health problems among residents differ significantly based on the gender disposition. Studies of Seedat et al, [19] buttressed that gender differences in most lifetime mental disorders were fairly stable. In the contrary, studies of Ehsan et al, [20] showed that there was numerous non-significant and negative relationship with the mental health and physical health status of the population based on gender. The disparity between the present study and previous findings were due to location and duration of the study, sample of the study.

#### **4.4 Religion and Mental Health Status**

The result of this study depicted that the relationship between religion and mental health

of youths during COVID-19 pandemic in Andoni LGA was high ( $r = 0.887$ ). This result is expected because every individual holds unto the belief they profess which affects the way they reason and understand situation or condition even during the era of COVID 19. The result of this study is in keeping with studies by Travasso, et al, [15] that cultural belief of a population significantly determine the mental well-being of the individual. Denning et al, [21] buttressed that the ethnic background of the population showed a significant impact on the mental ill-health and use of health service especially when there is global public health issues such as COVID 19. The result of this study are also in keeping with studies of Bacigalupe et al, [18] who reported that there was a strong relationship between cultural and health care level especially in the containment of public health issues. Kim et al, [22] affirmed that the present of COVID-19 brought about high level of religious and ethnic isolation following the behavioural changes in the population. Walker et al, [23] revealed that religiosity was independently associated with the increase in public health problems in a population. Lahelma et al, [24] added that certain religions are likely to encourage gender isolation and loneliness among population. As at the time of this study, there was no prior studies that contradicted the findings of the current study.

#### **4.5 Socio-economic Status and Mental Health during COVID 19 Pandemic**

The result of this study illustrated that there was a very high positive relationship between socioeconomic status and mental health of youths during COVID-19 pandemic ( $r = 0.949$ ). The result of this study is expected because socioeconomic status which includes the income status, employment status, standard of living, family type and social support which determine the level of reasoning and understanding of situation and condition that affects health. Those with low SES may encounter mental health problems when facing global or public health problem like COVID-19. The result of this study is in credence with studies of Walker et al, [23] that cost of medication and financial hardship of the family was high during the era of COVID-19 which in turn affects their mental health. The result of this study is in credence with studies of Abdul et al, [14] that living with the family was over 4 times more likely to contribute to mental ill-health among the populace (AOR = 4.98). Lahelma et al, [24] previously added that there was high association between financial

imbalance, employment status and perceived health problem in a given population. Alexander et al. [17] affirmed that individual characteristics significantly associated with prognostic expectations was occupation. Lahelma et al. [24], on the other hand, discovered that education and household income attenuated the link between family type and bad health. The difference between the result of the prior study and current findings were due to duration and location of the study including the sample representation.

## 5. CONCLUSION

The study concluded that upsurge of COVID 19 to a large extent determine the mental health status of youths in Andoni Local Government Area of Rivers State. However, the factors that determine the mental health status of youth during the era of COVID-19 pandemic were significantly high based on age, gender, religion, socioeconomic status respectively.

## 6. RECOMMENDATIONS

In regards to the findings of this study, the following recommendations were made;

1. Government should implement mental health promotion/education efforts that would incorporate information about the content and benefits of evidence-based treatments and encourage males to participate in other potentially beneficial actions.
2. Government should provide social support among young people which may serve as a protective buffer to mental health problems especially during the emergence of disease outbreak.
3. Religious bodies should introduce counselling service to their members so as to improve and promote mental well-being targeted at curbing the effect of wrong perception accompanying with COVID-19.
4. The school should provide should ensure mental health literacy across the various ages with appropriate messages about mental health as required for younger and older age groups.
5. Government should introduce empowerment programmes to reduce the aftermath of COVID-19 among the population especially productive youth so that their mental health will be improved on.

## CONSENT

As per international standard or university standard, Participants' written consent has been collected and preserved by the author(s).

## ETHICAL APPROVAL

It is not applicable.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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