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**The Impact of the Mitigation of Coronavirus Pandemic on School Children Aged 5 to 12 Years in Nigeria: An Assessment of Urban and Rural Areas in Akwa Ibom State**

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BY

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**ABSTRACT**

*This study examined the impact of mitigation of coronavirus pandemic on school children aged 5 to 12 years in Akwa Ibom State. The study adopted a survey design. A total of 180 primary school teachers were used as respondents, randomly selected from 18 communities in Akwa Ibom State, comprising 9 urban communities and 9 rural communities. A 15-item structured questionnaire arranged in a Likert form of strongly agree, agree, disagree and strongly disagree was formulated for the study. The researcher made use of test-retest reliability index to ascertain the reliability of the questionnaire. Three research questions were formulated to guide the study. Responses were analysed using chi-square. Findings revealed that children in rural communities indulge in high consumption of local herbs and concoctions which create high immunity and body resistance against infections like coronavirus and its likes. Based on the result, it was revealed also that the urban communities are highly exposed to environmental hazards, thereby viruses easily transmitted in high populated environments, eroding system immunity, and aiding easy spread of the disease among people. It was recommended that Governments, NGOs and other stakeholders create enough avenues and support for harnessing local herbal medicinal practices, which prove to be effective in curdling the spread and survival of coronavirus. Parents, teachers and administrators were also admonished to assist in the propagation of positive advocacy towards sensitization of the children on the dangers and hazards involved in the transmission and infection of coronavirus. Curriculum planners were also asked to include the introduction of the uses and importance of traditional herbs and fruits to man, realizing that the benefits of traditional African herbs to man are enormous.*

**KEYWORDS: Coronavirus, school, children, mitigation, herbs.**

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**Introduction**

Coronavirus is a very disastrous disease that has claimed a lot of lives and infected millions of people in the world. Otherwise known as Covid-19, the disease was declared a pandemic on the 12<sup>th</sup> March, 2020 in a mission briefing by the Director General of World Health Organisation (WHO, 2020), on the devastating nature of the outbreak of the disease. Since the outbreak of covid-19 in February/March, 2020, more than 862 million children and young people have been infected (NCDC, 2020). Due to the nature of the disease and the fear it has exerted on the general human environment, the United Nations Educational, Scientific and Cultural Organisation (UNESCO, 2020) implemented national school closures on the 18<sup>th</sup> of March, 2020. Today, more than 200 countries are estimated to have been grievously affected by the covid-19 outbreak (UNESCO, 2020). To curb the spread and transmission of the disease, the Nigerian government introduced certain mitigations, beginning with a declaration of total lockdown against all movements (NCDC, 2020). Consequent upon this declaration, a policy on school closures was initiated based on evidence and assumptions from covid-19 outbreaks, that it will reduce social contacts and interrupt the transmission of the virus (Jackson, 2016).

According to Eames (2010), the approximate distance between young people and children is half that of school terms days. This goes to say that the daily contacts between children and other young people increase during holidays (Hens, 2009) and as such, if the spread and transmission of covid-19 virus is most likely to be driven by children, then the policy on school closure and social distancing measures would be most counter-productive. As anyone would acknowledge, movement of children increases among children, and between adults especially when traditions, customs as well as superstitions are kept sanctimoniously within communities that share common habitats in all traditional African Societies (Nketia, 2016). Within the traditional communities where traditional trends are very functional, beehives of activities are unavoidably carried out by all strata of age groups and gender. Such trends include spontaneous performances, often executed by the low-class people, the poor as well as the vulnerable in community relaxation (Nketia, 2016). Other activities evolve round folk tales, family gatherings, moon light activities, as well as customs unavoidably maintained for the sanctity of the community or for appeasing the land. These include relationship services between families, age grade entertainments, chieftaincy rites, innovations and regular community rites e.g. the rite to harvesting, the rite to community farming, the rite to group initiations. All these falls within the traditional calendar of the community (Akpan, 2019). As emphasized by Nketia (2016), these traditions are highly functional and heterogeneous. Within these activities, lots of concoctions are consumed, traditional foods and fruits are shared, and local herbal water of sorts is taken. (Akpan, 2019). These natural foods and drinks as acknowledged by every inhabitant, and those who share common beliefs and maintain common traditions, build high system immunity in the people and keep the body ever resistant to any attack by environmental diseases (Inyang, 2020). Some of the fruits include bitter cola, lemon, lime, garlic, ginger, bitter leave, unripe pawpaw, elephant grass, lemon grass, wonderful cola, pawpaw leaves, water from the umbrella tree, fluid from the plantain tree, spring water flowing from the rocks, natural palm oil, palm wine, fresh vegetables of sorts, palm kernel oil, coconut oil, alligator pepper, to mention but a few. According to Chief Sixtus Akpan Inyang, a 91-years-old great grandfather and a retired teacher from Akwa Ibom State, in a live interview with the researcher, only in remote villages and communities these traditions function. Chief Inyang also emphasized that very rarely would the people face any ruin traceable to any pandemic, influenza or outbreak of any sort. With a personal experience by the researcher, after encounters with about 12 remote communities in Akwa Ibom Sate, confirmed that the local herbs, foods and traditional dishes and concocted drinks are highly medicinal. These

traditional constituents of human consumption fight bacteria, build body immunity and detoxify the entire human body system without any doubt (Akpan, 2019).

Incidentally, within the urban cities of Akwa Ibom State, there is a strict policy implementation on social distancing, school closures, total lockdown of all spheres of endeavours and worship, ordered by the State government in order to control the spread and transmission of coronavirus among the young and the elderly. But as observed by Brooks (2017) in his four systematic reviews of effects of school closure on influenza outbreaks or pandemics, school closure can be a useful control measure, although the effectiveness of mass school closures is often low. Jackson (2014) opined that school closure strategies, whether national, regional, local or reactive, are often in response to children's infection rates. A UK Department of Health (2014) in a systemic review stated that school closures can reduce transmission of pandemic influenza if instituted early in outbreaks. It was stressed therein that school closures result in greater reductions in peak than in cumulative attack rates. According to Jackson (2014) in his modeling studies, school closure has the greatest effect if the virus has low transmissibility, and if attack rates are higher in children than in adults. In Akwa Ibom State, based on the report on transmission and spread of Covid-19 virus across the State by Nigeria Centre for Disease Control (NCDC, 2020), the lockdown proved effective as there had been low transmissibility and very few cases across the State.

School closure and social distancing is considered one major antidote to spread and transmission of Corona virus in the society (NDCD). Compelling evidence were found that the virus spread and transmission reduced, particularly among school aged children (5-12 years) (Cowling, 2008). When schools reopened a substantial evidence was established that transmission of the virus surged again. To make school closure effective, and reducing spread of coronavirus among children in schools, parents must be forced to work at home, thereby reducing walk-related contacts (Cowling, 2008).

Unfortunately, lockdowns and school closures pose serious adverse effects on parents, children and the environment. The lockdown order which is meant to save lives and stop the spread and transmission of the virus now generate untold hardship on parents due to loss of productivity. This results in parental inability provide for the children and also hamper parents from meeting up with children's school needs, nutritional care and general wellbeing. On the part of the children, suspension of their liberty to move around and enacting the order of social distancing result in social isolation among the children which on its own, create a range of psychological harm on the generality of pupils population (Rashid, 2015). Emphasized by Nafisah et al (2018), the evidence to support national closure of schools to combat Covid-19 is very weak and data from the outbreak and transmission impact suggests that school closures have relatively small effect on the spread within the Nigerian community. As observed in the remote rural communities of Akwa Ibom State like Ika, Etim Ekpo, Okoita, Utit-Uruan, Eman Uruan, Oku-Iboku, Ikot Ayan Itam, Esit Ikono and others, little or nothing is mentioned about Covid-19 and its mitigations and interventions. Though these are great farmers and traditionalists, little is known for observed about social distancing, lockdown, wearing of face masks, cleaning or washing of hands with sanitizers, or keeping to the rules in terms of monitoring the infected. After direct interviews with the researcher, it was clearly evident that the existence of coronavirus is alien to their traditions, just as the people believed that the herbs, concoctions, traditional foods and drinks which are regularly and constantly consumed as part of the people's customs demand, keep them immune to virus attacks or otherwise. They believe in the Director General's message from World Health Organisation (WHO), that "all countries must strike a fine balance between

protecting health, preventing economic and social disruption, and respecting human rights (WHO, 2020).

### **Statement of Problem**

Traceable to the outbreak of Covid-19 pandemic which has drastically affected more than 200 countries of the world, and has killed millions of people across races and colour, Akwa Ibom State government implemented some mitigation strategies to curb the spread and transmission of the virus in the State. Among the mitigation strategies were, total lockdowns, school closures, social distancing, application of sanitizers on the hands, wearing of face masks, as well as fumigation of the environments among others. Despite all the mitigations by government, a lot of people are infected especially in the urban areas of the State. In view of the fact that the spread and transmission of the virus among children and the young is still ongoing, one wonders if the mitigation strategies can improve child safety and sustainability of life in the state. On this basis, the study tends to examine the effect of Covid-19 lockdown and social distancing on children aged 5 to 12 years in urban and rural areas in Akwa Ibom State.

### **Purposes of the Study**

The purpose of this study was specifically:

- (1) to examine the influence of Covid-19 lockdown mitigation strategy on child safety in urban areas of Akwa Ibom State.
- (2) to examine the influence of Covid-19 social distancing mitigation strategy on child safety in rural areas in Akwa Ibom State.
- (3) to examine the influence of Covid-19 school closure mitigation strategy on child safety in Akwa Ibom State.

### **Research Questions**

1. Does Covid-19 lockdown mitigation strategy influence child safety in urban areas in Akwa Ibom State?
2. Does Covid-19 social distancing mitigation strategy influence child safety in rural areas in Akwa Ibom State?
3. Does Covid-19 school closure mitigation strategy influence child safety in Akwa Ibom State?

### **Methodology**

Descriptive survey design was adopted for the research study. The study was carried out in Akwa Ibom State. Akwa Ibom State is one of the oil producing States in Nigeria, carved out from the old Cross River State, located in the South-South Geo-political zone of the Niger-Delta Region, Akwa Ibom State was created on the 23<sup>rd</sup> of September, 1987 and it covers a landmass of 7,081km<sup>2</sup> – otherwise read as 2,734 square miles, with a population of 5,450,758 as published by the National Census Commission (2006). 180 teachers were drawn from the three Senatorial Districts through stratified sampling technique, 60 teachers per senatorial district used as respondents in the study. From the 60 teachers per District, 30 teachers were drawn from the urban areas while the other 30 teachers were drawn from the rural areas of the same Senatorial District, selected through simple random sampling technique. From the 3 Senatorial Districts therefore, a total of 90 respondents were drawn from the urban areas while the other 90 respondents were drawn from the rural areas of Akwa Ibom State. A self-

structured 15-item questionnaire was used scored to Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD), and was validated by three research experts. A test-retest reliability index was used by the researcher to ascertain the reliability of the questionnaire. The researcher personally administered the questionnaire to the respondents with the help of three trained research assistants. The instruments were retrieved on the spot, once completed. The exercise lasted two weeks. Responses were analysed with the use of chi-square ( $\chi^2$ ) statistical tool.

## **Results**

### **Research Question 1**

Does Covid-19 Lockdown Mitigation Strategy Influence Child Safety in Urban Areas in Akwa Ibom State?

**Table I: Chi-square ( $\chi^2$ ) statistical analysis of the influence of Covid-19 lockdown mitigation strategy on child safety in urban areas of Akwa Ibom State**

<b>S/N</b>	<b>ITEM</b>	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>	<b>Total</b>
1	Children's needs are met during lockdown	28(23.2)	24(27.6)	28(24.8)	10(14.4)	90
2	Nutritional demands are provided fully.	25(23.2)	33(27.6)	22(24.8)	10(14.4)	90
3	Parents talk about pandemic with children.	23(23.2)	31(27.6)	23(24.8)	13(14.4)	90
4	Enough money is provided for children health care, family demands	22(23.2)	28(27.6)	21(24.8)	19(14.4)	90
5	Children suffer violence, mental health, and parental neglect.	18(23.2)	22(27.6)	30(24.8)	20(14.4)	90
	<b>TOTAL</b>	<b>116</b>	<b>138</b>	<b>124</b>	<b>72</b>	<b>450</b>

**df =12,  $\chi^2$  - cal 14.364,  $\chi^2$  - crit. 21.03, level of significance = 0.05.**

### **Research Question 2**

Does Covid-19 Social Distancing Mitigation Strategy influence Child Safety in Rural Areas?

**Table 2: Chi-square ( $\chi^2$ ) Statistical Analysis of the influence of Covid-19 social distancing mitigation strategy on child safety in rural areas in Akwa Ibom State**

S/N	ITEM	SA	A	D	SD	Total
1	Fear and psychological cramp and anxiety is generated by social distancing on children	35(28.2)	15(23)	25(21.6)	15(17.2)	90
2	Sense of isolation, dejection and abandonment is created on children	28(28.2)	18(23)	23(21.6)	21(17.2)	90
3	Children have limitation of sharing equipment and learning facilities	30(28.2)	27(23)	15(21.6)	18(17.2)	90
4	Children understand the difference caused by social distancing and they are encouraged	17(28.2)	30(23)	25(21.6)	18(17.2)	90
5	Children have innate urge to interact and explore their environment	31(28.2)	25(23)	20(21.6)	14(17.2)	90
	<b>TOTAL</b>	<b>141</b>	<b>115</b>	<b>108</b>	<b>86</b>	<b>450</b>

$df = 12$ ,  $\chi^2 - cal. = 21.584$ ,  $\chi^2 = crit. = 21.03$ , level of significance = 0.05.

### Research Question 3

Does Covid-19 School Closure Mitigation Strategy Influence Child Safety in Akwa Ibom State.

**Table 3: Chi-square ( $\chi^2$ ) Statistical Analysis of Respondents on Covid-19 School Closure Mitigation Strategy.**

S/N	ITEM	SA	A	D	SD	Total
1	Learning is seriously interrupted against the children's will	43(46.4)	64(56.6)	35(34.4)	38(42.6)	180
2	Teachers are stressed and worried on how to make up for the lost program	45(46.4)	56(56.6)	38(34.4)	41(42.6)	180
3	Poor quality teaching/learning has been introduced online as a make-do	49(46.4)	54(56.6)	27(34.4)	50(42.6)	180
4	There is high economic cost to meet up with online teaching/learning	47(46.4)	58(56.6)	34(34.4)	41(42.6)	180
5	Drops Out Rate will be high	48(46.4)	51(56.6)	38(34.4)	43(42.6)	180
	<b>TOTAL</b>	<b>232</b>	<b>283</b>	<b>172</b>	<b>213</b>	<b>900</b>

$df = 12$ ,  $\chi^2 = cal. = 7.079$ ,  $\chi^2 = crit. = 21.03$ , level of significance = 0.05.

## Discussion

From table 1 above, it is indicated that  $\chi^2 = \text{cal}$  is lower than  $\chi^2$  critical at 0.05 level of significance. This shows that covid-19 lockdown mitigation strategy does not influence children in the urban areas of Akwa Ibom State. This goes with Nafisah (2018) in his review which stressed that the evidence to support national lockdown and school closures to combat Covid-19 is very weak and data from the outbreak and transmission impact suggests that school closures have relatively small effect on the spread within the Nigerian community. Akpan (2019) in his direct interview with the Chief Sixtus Inyang on the effect of traditional herbs sourced from the traditional African environment, emphasized that lockdown is counter-productive to the rural people. He stressed that hardship and loss of productivity paves way for coronavirus to permeate the society. The traditional African survives through lemon grass, lime, ginger, garlic, and the natural roots and drinks which build strong immunity in the human system against virus and bacterial attacks. (Cowling, 2008) opined in confirmation of the fact that lockdown goes with a lot of adverse effect but stress that activities in African societies are identified with lots of concoctions consumption traditional foods and fruits shaved and herbal water extracted from the umbrella trees, plantain stem and bush cane waters. Brooks (2017) support this result as he observed that lockdown influence on children is low.

In Table 2, the result shows  $\chi^2$  cal is 21.584 while  $\chi^2$  critical is 21.03 at 0.05 level of significant, indicating that the calculated value is higher than the critical value. On this result Covid-19 social distancing mitigation strategy has influence on children in rural areas of Akwa Ibom State. This is supported by Jackson (2016) who stressed that social distancing interrupts the transmission of Covid-19 virus and curdle the spread of the disease. Rashid (2015) emphasized that social distancing is effective in pausing spread and transmission of the virus but emphasized that social distancing creates a range of psychological harm on the generality of pupil's population. Nafisah et al (2018) suggested that as closure of schools, aimed at combating the spread of the virus is very weak and has small effect on the spread, social distancing results in social isolation among the children. United Nations Educational, Scientific and Cultural Organisation (UNESCO), Nigerian Centre for Disease Control (NCDC) and the World Health Organisation (WHO) give value to social distancing as it interrupts and controls the transmissibility of the virus all over the world.

Table 3 shows that  $\chi^2$  calculated is 7,079 while lower than  $\chi^2$  critical at 0.05 level of significance. This shows that Covid-19 school closure mitigation strategy does not influence children in Akwa Ibom State. Cowling (2020) supported this result as he opined that school closure and social distancing is considered one major antidote to spread and transmission of Coronavirus in the society but emphasized that parents must be forced to work at home, thereby reducing walk-related contacts. Rashid (2015) opined that school closures and lockdowns pose serious hardship on parents, children and environment. Cowling stressed that this result in parental inability to provide for the children and also hamper parents from meeting up with children's school needs, nutritional care and general wellbeing.

## Conclusion

Based on the findings of the study, it was concluded that lockdown and school closures are not the best mitigation strategies for curbing coronavirus pandemic in Nigeria. Social distancing was accepted to be more effective as it directly influences children and parents but gives opportunity for productivity on the path of the parents to be sustained. Sensitization of the populace on the use of sanitizers, face masks and sensitivity to the environment on the

hazards and dangers involved in the transmission of the virus was deemed pertinent. However, lockdowns and school closures should be mild and not rigid to enable parental productivity and academic growth.

### **Recommendations**

Based on the findings here, the following recommendations were given that:

1. Governments, NGOs and other stakeholders should create enough avenues and support for harnessing local herbal medicinal practices, which prove to be effective in curdling the spread and survival of coronavirus and other diseases.
2. Parents, teachers and administrators were admonished to assist in the propagation of positive advocacy towards sensitizing the children and the general populace on the dangers and hazards involved in the transmission and spread of coronavirus.
3. Curriculum planners should include “the introduction of the uses and benefits of some African traditional herbs and plants to man for the good and sustainability of the people against all viruses and other diseases.



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