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# Assessing the Socio-Economic and Health Effects of COVID-19 Lockdown: A Comparative Study of Under-and Over-50-Year-Old Nigerians

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# Abstract:

The emergence of COVID-19 has distorted life and living in all societies including Nigeria, and there is urgent need for research into its diverse effects, as in this study. This is a cross-sectional descriptive study conducted from 20 April to 20 June 2020, with 5,227 participants recruited through various social media using a structured questionnaire. There were 3,173(60.7%) male and 804(15.4%) were  $\geq$ 50 years old. In tracking family life during the lockdown, participants <50years significantly spent more time on family-oriented activities. Socioeconomically, more under-50s received assistance and were more involved in social networking, whereas more over-50s felt lonelier. Additionally, more males and unemployed persons were in need of, but unable to access healthcare. The consequences of these socio-economic and health effects particularly among persons aged  $\geq$ 50years could ripple into long lasting psycho-social and physical health challenges, and it is therefore urgent need to step up efforts to address these problems.

Keywords: COVID-19; socio-economic; health; effect; Nigeria; coronavirus; lockdown

# 1. Introduction

At the end of December 2019, clusters of pneumonia cases were reported in Wuhan city of Hubei province in China, attributed to a novel coronavirus (initially named: 2019-nCOV) (Zhu *et al.*, 2020). This outbreak was considered as meeting the criteria for, and declared a Public Health Emergency of International Concern (PHEIC) by the World Health Organization (WHO) on January 30, 2020 (WHO, 2020a). The novel coronavirus was officially named in February 11, 2020 by the WHO as the 'Severe Acute Respiratory Syndrome Coronavirus 2' (abbreviation: SARS-CoV-2) and the disease named the 'Coronavirus disease 2019' (abbreviation: COVID-19) (WHO, 2020b).By March 11, 2020 there were more than 118,000 cases of COVID-19 in 114 countries with 4,291 deaths and the WHO declared the disease as a Pandemic (WHO, 2020c). At present (4 September, 2020; 3.38am CEST), there are 26,171,112 confirmed cases of COVID-19, with 865,154 deaths globally; and 1,072,858 confirmed cases in Africa reported to WHO (WHO, 2020d). In Nigeria, as at 31<sup>st</sup> August 2020, the Nigeria Centre for Disease Control (NCDC) had tested 405,916 persons and reported 54,008 confirmed cases of COVID-19 with 1,013 deaths at a case fatality rate of 1.9% (NCDC, 2020).

The United Nations (UN) has described the COVID-19 pandemic as a health, economic and social crisis (UN, 2020). Lockdowns instituted for the control of pandemics have health, social and economic consequences across populations (Ahmed *et al.*, 2020). Clinicians all over the world have noticed higher degrees of morbidity and mortality due to the novel SARS CoV-2 among persons with advancing age, especially with co-existing chronic conditions (Doraiswamy, 2020). In developed economies where life expectancy is very high with a larger pool of aged population, 65 years of age is often used as cut-off to demarcate those at greater risk from COVID-19 (Mueller, 2020). However, in developing countries such as in Sub-Saharan Africa with a relatively younger population, a cut-off of 50 years is being applied. This is following the WHO's report that in Africa, mortality from COVID-19 was commonest among persons aged 50 years and above (WHO, 2020 18 March) (WHO, 2020e). Thus, an age cut-off of 50 years is applied in this study to conduct early analyses into the age group most affected by the COVID-19 lockdown in terms of health, social and economic aspects in order to proffer effective policy recommendations to buffer the socio-economic and health impacts in the most populous nation in Africa.

# 2. Materials and Methods

This is a descriptive cross sectional study that collected quantitative data using an online structured questionnaire with Google forms to assess the social, economic and social impacts of the COVID-19 pandemic in Nigeria. The survey was conducted from the 20 April to 20 June 2020, with 5,227 respondents recruited from the general populace as the self-administered questionnaire was administered online through various social media platforms across the 36 States and Federal Capital Territory of Nigeria. The form was designed such that informed consent was obtained before participant would proceed with the survey.

The data were analyzed with Statistical Package for Social Science (SPSS) version 25, using frequencies and proportions for discrete variables, and mean and standard deviation for the continuous variable. Logistic regression was used to measure the relationship between the socio-economic and health variables and the categorized age (<50 vs  $\geq$ 50 years) of the respondents. The level of significance was set at p < 0.05.

#### 3. Results

The respondents were aged 18 to 73 years, with a mean  $\pm$  SD of 37.62 $\pm$ 8.53 years; and were made up of 3,173(60.7%) males and 2,054(39.3%) females. A total of 4423(84.6%) were aged below 50 years and 804(15.4%) were aged 50 years and above. Majority (67.1%) of the respondents had postgraduate level of education, and about a quarter (26.5%) of respondents had undergraduate level of education (Table 1).

	<b>Background Characteristics</b>	Male	Female	Total
1.	Age:			
	18-30	781	825	1606
	31-40	1203	739	1942
	41-50	690	307	997
	51-60	409	152	561
	61-70	45	31	76
	71-80	45	0	45
	Total:	3173	2054	5227
2.	Age (<50 vs ≥50 years):			
	<50 years	2718	1705	4423
	≥50 years	455	349	804
	Total:	3173	2054	5227
3.	Education:			
	No formal education	63	0	63
	Primary	27	15	42
	Secondary	141	89	230
	Undergraduate	897	489	1386
	Post Graduate	2045	1461	3506
	Total:	3173	2054	5227
4.	Employment Status:			
	Student	195	271	466
	Unemployed	604	407	1011
	Employed	1720	988	2708
	Businessperson	654	388	1042
	Total:	3173	2054	5227
5.	Religion:			
	None	75	73	148
	Christian	2306	1741	4047
	Muslim	642	210	852
	Traditionalist	30	0	30
	Other	120	30	150
	Total:	3173	2054	5227

Table 1: Background Characteristics of Respondents

In tracking family life during the lockdown: among participants aged below 50 years, 41.8% strongly agreed to have spent more time with family versus 30.0% of those aged above 50 years. Participants aged below 50 years indicated they were more involved with home schooling (21.5%), family religious activities (25.1%), had more harmony in their homes (19.4%) compared to the over-50 year olds at 16.5%, 18.3% and 14.2% respectively (Table 2). All reported differences in tables 2-6 are statistically significant at p < 0.05.

Ob anna at a si a ti as	<50 years		≥50 years			T - 4 - 1	Develope	
Characteristics	М	F	Total	М	F	Total	Total	P value
I spend more time with my								
family now:								
Strongly agree	1024	825	1849	119	122	241	2090	
Agree	933	600	1533	265	189	454	1987	
Neutral	356	122	468	39	11	50	518	0.001
Disagree	208	55	263	5	5	10	273	
Strongly disagree	197	133	310	27	22	49	359	
Total:	2718	1705	4423	455	349	804	5277	
I am more involved with my								
children's Education now:								
Strongly agree								
Agree	510	442	952	65	68	133	1085	
Neutral	624	619	1243	150	162	312	1555	0.001
Disagree	1060	409	1469	166	70	236	1705	
Strongly disagree	279	130	409	54	35	89	498	
Total:	245	105	350	20	14	34	384	
	2718	1705	4423	455	349	804	5277	
I share more Religious								
activities now with my								
family:								
Strongly agree	612	499	1111	20	78	147	1258	
Agree	1112	737	1849	234	187	421	2270	0.001
Neutral	548	233	781	96	34	130	911	
Disagree	235	119	354	32	31	63	417	
Strongly disagree	211	117	328	24	19	43	371	
Total:	2718	1705	4423	455	349	804	5277	
I have more Harmony in my								
home now:								
Strongly agree	519	337	856	67	47	114	970	
Agree	901	568	1469	176	134	310	1779	
Neutral	892	510	1402	136	102	238	1640	0.001
Disagree	226	201	427	46	50	96	523	
Strongly disagree	180	89	269	30	16	46	315	
Total:	2718	1705	4423	455	349	804	5277	

Table 2: Effect of COVID-19 on Family Life in Nigeria

Socially, more under-50s received help from individuals, non-governmental organizations (NGOs), religious organizations and clubs than persons aged 50 years and above (9.4% vs 7.5%). The results also show that more under-50s (3.3% vs 2.6%) were involved in social networking; and more over-50s indicated they were lonelier (34.3% vs 29.7%) (Table 3).

Characteristics	<50 years		≥50 years			Total	Dualua	
clial acter istics	Μ	F	Total	М	F	Total	TOLAI	P value
I have received help from								
individuals, NGOs during COVID-								
19:								
Yes	159	257	416	21	39	60	476	0.001
No	2559	1448	4007	434	310	744	4751	
Total:	2718	1705	4423	455	349	804	5227	
I am able have social meetings as								
much as before:								
Strongly agree	120	27	147	18	3	21	168	
Agree	188	69	257	49	22	71	328	
Neutral	316	89	405	48	3	51	456	0.001
Disagree	1178	701	1880	203	179	382	2262	
Strongly disagree	915	819	1734	137	142	279	2013	
Total:	2718	1705	4423	455	349	804	5227	
I personally feel more lonely								
now:								
Strongly agree	405	333	738	77	37	114	852	
Agree	867	445	1312	164	112	276	1588	
Neutral	601	302	903	79	58	137	1040	0.001
Disagree	555	466	1021	108	109	217	1238	
Strongly disagree	290	159	449	27	33	60	509	
Total:	2718	1705	4423	455	349	804	5227	

Table 3: Social Effects of COVID-19 Pandemic in Nigeria

	Characteristics	<50 years	≥50 years	P-value
1	I earn less than N23,000 (naira) Monthly; or less than N700			
	(naira)/\$2 Daily:			
	Yes	1484	2939	0.062
	No	297	507	
	Total:	1781	3446	
2	I am able to continue earning income during Lock Down:			
	Agree	981	186	
	Disagree	983	199	
	Neutral	615	102	0.237
	Strongly agree	430	85	
	Strongly disagree	1414	232	
	Total:	1414	232	
3	COVID-19 is affecting My Economy negatively:			
	Agree	1331	241	
	Disagree	72	16	0.816
	Neutral	262	54	
	Strongly agree	2480	440	
	Strongly disagree	278	53	
	Total:	4423	804	
4	My INCOME is the SAME or more during Lock Down:			
	Agree	649	126	
	Disagree	1320	309	
	Neutral	434	77	0.000
	Strongly agree	284	37	
	Strongly disagree	1736	255	
	Total:	4423	804	
5	I am able to Feed Well and Pay All my Bills this period:			
	Agree	877	154	
	Disagree	1155	281	
	Neutral	617	96	0.000
	Strongly agree	391	56	
	Strongly disagree	1383	217	
	Total:	4423	804	

Table 4 shows that financially, more under-50s received less income (39.2% vs 31.7%), and were food deprived (31.4% vs 27.0%).

Table 4: Economic Effects of COVID Pandemic on Income Dynamics of Younger and Older Nigerians

In addition, Table 5 shows that only 30% of respondents were able to go to work or earn money during the pandemic and lockdown. Of the 70% of respondents who were unable to go to work, 95.2% had primary level of education, 92.2% were business persons and 73.4% were aged 50 years and above.

	Characteristics	I am able to go to work during loc	P-value	
		Yes	No	
1	Educational Qualification:			
	No formal education	31	32	
	Post Graduate	1063	2443	0.000
	Primary	2	40	
	Secondary	66	164	
	Undergraduate	415	971	
	Total:	1577	3650	
2	Employment Status:			
	Businessperson	81	961	
	Employed	1119	1589	
	Student	165	301	0.000
	Unemployed	212	799	
	Total:	1577	3650	
3	Age:			
	<50 years	1363	3060	
	≥50 years	214	590	0.017
	Total:	1577	3650	
4	Gender:			
	Male	986	2187	0.077
	Female	591	1463	
	Total:	1577	3650	

Table 5: Relationship of Educational and Employment Status to Ability to GoOut to Work, Access Healthcare and Using Health Insurance

Table 6 shows that in considering access to health care during this period, 28.8% of respondents were in need of, but unable to access healthcare - more among over 50s (31.8%), males (31.4%), individuals with secondary level of education, students and unemployed (39.6%, 35.6% and 35.3% respectively).

	Characteristics	Have you been in need of, bu adequate medical and health ser COVID-19 pande	P-value	
		Yes	No	
1	Educational Qualification:			
	No formal education	16	47	
	Post Graduate	900	2606	
	Primary	1	41	0.000
	Secondary	91	139	
	Undergraduate	496	890	
	Total:	1504	3723	
2	Employment Status:			
	Businessperson	346	696	
	Employed	635	2073	0.000
	Student	166	300	
	Unemployed	357	654	
	Total:	1504	3723	
3	Age:			
	<50 years	1248	3175	0.037
	≥50 years	256	548	
	Total:	1504	3723	
4	Gender:			
	Male	644	1410	0.001
	Female	860	2313	
	Total:	1504	3723	
		Do you have and use Health Insurance?		
	Characteristics	Yes	No	P-value
5	Educational Qualification:			
	No formal education	0	63	
	Primary	0	42	0.000
	Secondary	46	184	
	Undergraduate	129	1257	
	Post Graduate	931	2575	
	Total:	1106	4121	
6	Employment Status:			
	Businessperson	92	950	
	Employed	878	1830	0.000
	Student	45	421	
	Unemployed	91	920	
	Total:	1106	4121	
7	Age:			
	<50 vears	915	3508	0.050
	≥50 vears	191	613	
	Total:	1106	4121	
8	Gender:			
	Male	371	1683	0.000
	Female	735	2438	
	Total:	1106	4121	

 Table 6: Relationship of Educational and Employment Status to Access to

 Healthcare and Using Health Insurance

Additionally from table 6, 4121(78.8%) of respondents did not have and use health insurance. The table shows that 1683(81.9%) of males, 950(91.2%) of business persons, 920(91.0%) of unemployed and 421(90.3%) of students in this study did not have and use health insurance. Also, 100% each of respondents with no formal and primary education did not have and use health insurance. All reported differences are statistically significant at p < 0.05.

#### 4. Discussion

This study shows the socio-economic and health effects of the COVID-19 pandemic in Nigeria, and that of the accompanying lockdown which started on March 30<sup>th</sup> (Amzat*et al.*, 2020). The lockdown was instituted to contain the

pandemic and had effects in both the under- and over- 50-year-olds, but more especially the older age group (over-50year-olds). In this study, individuals aged 50 years and above felt lonelier compared to the under-50s (34.3% vs. 29.7%): and this is a possible consequence of their being less involved in social networking than the under-50s (at 2.6% vs. 3.3%). Other studies have reported that quarantine and lockdowns can cause psychosocial effects including loneliness in addition to socioeconomic distress; and these are explained by many factors including reduced social networking, inability to attend social events as well as withdrawal from social events (Dubey*et al.*, 2020; Brooks *et al.*, 2020). These effects may be more in older persons due to perceived risk for infection from the pandemic as well as from the 'infodemic' or 'pandemic of social media panic', that is, panicking messages spread via several social media platforms (Depoux*et al.*, 2020; Zarocostas, 2020). Thus, current advice rests on implementing physical distance (of at least 6 feet), not distancing socially, achieved through incorporation of digital strategies to meet the personal and social needs of particularly the older persons during the pandemic (Nicol*et al.*, 2020).

It was observed in this study that, compared to respondents aged 50 years and above, more under-50s seemed to fare better in receiving help from individuals, non-governmental organizations and religious organizations and clubs. However, this could be as a consequence of the observation that the under-50s also received comparatively less income (39.2% vs. 31.7%), and were food deprived (31.4% vs. 27.0%). As reported in this study and other studies by Dubey*et al.* (2020) and Erokhin and Gao (2020), COVID-19 has turned out not only a health challenge but an economic and social challenge. Buonsenso*et al.* (2020)'s study on the social consequences of COVID-19 in 78 households in Sierra Leone, West Africa reported a 51-80% (19.2%) to 81-100% (79.4%) reduction of weekly income in households, compared to the prelockdown period; as well as difficulties in providing food for the family members in 82% of households. These results were higher than the values obtained in our study possibly because we studied both urban and rural areas in Nigeria, whereas the study in Sierra Leone was focused on a small rural community with low resource setting. Similarly, Dyer (2020) estimates that the gravest concern about the lockdown in Africa is about people's abilities to feed their families, and this is attributed to the lack of safety nets in the informal sector in which 70% of Africans work in. This concern is worsened by reports by Ogunniyi*et al.* (2017) that 70% of Nigerians live on less than US\$1.25 every day.

These results on challenges with ability to feed among many Nigerians in the face of the country's 'resource-rich' status has been taunted as attributable to a 'resource curse phenomenon', however there is weak evidence for this (Adika, 2020). An explanation for the challenges could be found in Bakalis*et al.* (2020)'s study clarifying that the two-faced nature of COVID-19 on food security as being through direct (disrupted international food supply and demand systems) and indirect (by undermined economic access to food through degrading the purchasing power of the population). Specifically, Nigeria is reported to have more significant causality flowing from food inflation to food insecurity during the pandemic (Erokhin and Gao, 2020).

During the period of the study, more individuals aged 50 years and above were in need of, but unable to access healthcare (31.8%), as well as more males (31.4%), individuals with secondary level of education, students and unemployed (39.6%, 35.6% and 35.3% respectively). A study by Ahmed *et al.* (2020) on access to healthcare in seven slum communities in Nigeria, Kenya, Pakistan and Bangladesh explained a general reduction in access to healthcare services as being due to increased cost of healthcare, reduced household income, increased challenges in physically getting to the facilities and reluctance of individuals to get to health facilities due to fear of getting infected or diagnosed and stigmatized with COVID-19. These factors could also explain the challenges leading to reduced access in this study among the older age group (as older persons may be less able to trek to health facilities during lockdown in the absence of other means of transportation, and may have greater fear of the risk of infection).

Among all participants in the study, majority (78.8%) did not have and use health insurance. There were more unemployed and student participants who did not have and use health insurance, which is in line with Alemu and Adesina (2017)'s conclusion that in general, livelihood is significantly better for engaged persons. This, in the face of increased healthcare cost, could additionally explain why these participants were less able to access healthcare during the COVID-19 pandemic lockdown. The results also showed that specifically, all (100%) participants with primary and secondary levels of education did not have and use health insurance. Thus, it could be argued that investment in education could yield gains beyond the educational sector and into the health sector. Similarly, other studies by Emediegwu (2021) and Odusola (2017) concluded and recommended that heavily investing in the educational sector will make significant positive impact on many aspects of educational and health development in Nigeria.

This study thus highlights as well as advocates the need to prioritize of the health needs of older people in response to the COVID-19 pandemic, an observation also made by Lloyd *et al.* in 2020. This study further found that older persons (aged 50 years and above) spent less time with family, had less involvement with children's homeschooling, less family religious activities and less harmony in their homes compared to the younger persons (aged less than 50 years). In addition, majority of respondents were unable to go to work during the pandemic, more for older persons compared to younger persons. These could be a direct result of the lockdown as well as of guidelines to keep a distance from older persons due to increases health risks during the pandemic. As there is paucity of studies in these aspects, this paper uniquely adds to the knowledge base on the comparative analysis of health and socio-economic effects of the pandemic among under- and over- 50 year olds in Nigeria. This paper also highlights the urgent need to address these challenges to curb their degeneration into longer lasting effects.

#### 4.1. Conclusion

In conclusion, this initial study provides an insight into the short-term and possibly long-term effects of the pandemic on adult Nigerians. Our deposition is that the COVID-19 pandemic has had statistically significant socio-

economic and health effects in Nigeria particularly among persons aged 50 years and older, the less educated, unemployed persons and males. The consequences noted could ripple into long lasting psycho-social and physical health challenges. There is therefore urgent need for individuals, families, non-governmental organizations and the government to step up efforts to address the problems emerging from the pandemic and lockdown especially for citizens 50 years and above who are also at greater health risk during the COVID-19 pandemic.

### 5. Acknowledgements

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#### 6. References

- i. Adika, G. (2020), 'Economic growth dynamics between resource-rich and resource-poor countries in sub-Saharan Africa: The role of politics and institutions', *African Development Review*, Vol. **32**, No. 3, pp. 303-15.
- Ahmed, S.A.K.S., M. Ajisola, K. Azeem, P. Bakibinga, Y. F. Chen, N. N. Choudhury, O. Fayehun, F. Griffiths, B. Harris, P. Kibe, R. J. Lilford, A. Omigbodun, N. Rizvi, J. Sartori, S. Smith, S. I. Watson, R. Wilson, G. Yeboah, N. Aujla, S. I. Azam, P. J. Diggle, P. Gill, R. Iqbal, C. Kabaria, L. Kisia, C. Kyobutungi, J. J. Madan, B. Mberu, S. F. Mohamed, A. Nazish, O. Odubanjo, M. E. Osuh, E. Owoaje, O. Oyebode, J. Porto de Albuquerque, O. Rahman, K. Tabani, O. J. Taiwo, G. Tregonning, O. A. Uthman and R. Yusuf. (2020), 'Impact of the societal response to COVID-19 on access to healthcare for non-COVID-19 health issues in slum communities of Bangladesh, Kenya, Nigeria and Pakistan: results of pre-COVID and COVID-19 lockdown stakeholder engagements', *BMJ Global Health*, Vol. 5, No. 8, pp. 30-42.
- iii. Alemu, A. E. and J. O. Adesina (2017), 'In Search of Rural Entrepreneurship: Non-farm Household Enterprises (NFEs) as Instruments of Rural Transformation in Ethiopia', *African Development Review*, Vol. 29, No. 2, pp. 259-71.
- iv. Amzat, J., K. Aminu, V. I. Kolo, A. A. Akinyele, J. A. Ogundairo and M. C. Danjibo (2020), 'Coronavirus outbreak in Nigeria: Burden and socio-medical response during the first 100 days', International Journal of Infectious Diseases', Vol. 22, No. 98, pp. 218-24.
- v. Bakalis, S., V. P. Valdramidis, D. Argyropoulos, L. Ahrne, J. Chen, P. J. Cullen, E. Cummins, A. K. Datta, C. Emmanouilidisi, T. Fosterj, P. J. Fryer, O. Gouseti, A. Hospido, K. Knoerzerl, A. LeBail, A. G. Marangoni, P. Rao, O. K. Schlüter, P. Taoukis, E. Xanthakis, F. M. Jan and V. Impe (2020), 'Perspectives from CO+RE: How COVID-19 Changed Our Food Systems and Food Security Paradigms', *Current Research in Food Science*, Vol. **2**, No. 3, pp. 166–72.
- vi. Brooks, S. K., R. K. Webster, L. E. Smith, L. Woodland, S. Wessely and N. Greenberg (2020), 'The psychological impact of quarantine and how to reduce it: rapid review of the evidence', *Lancet*, Vol. **395**, No. 10227, pp. 912–20.
- vii. Buonsenso, D., B. Cinicola, F. Raffaelli, P. Sollena and F. Iodice (2020), 'Social consequences of COVID-19 in a low resource setting in Sierra Leone, West Africa', *International Journal of Infectious Diseases*, Vol. **1**, No. 97, pp. 23-26.
- viii. Depoux, A., S. Martin, E. Karafillakis, R. Preet, A. Wilder-Smith and H. Larson (2020), 'The pandemic of social media panic travels faster than the COVID-19 outbreak', *Journal of Travel Medicine*, Vol. 27, No. 3, pp. 1-4.
- ix. Doraiswamy, S., S. Cheema and R. Mamtani (2020). 'Older people and epidemics: a call for empathy [letter]', *Age Ageing*, Vol. 49, No. 3, pp. 493.
- x. Dubey, S., P. Biswas, R. Ghosh, S. Chatterjee, M. J. Dubey, S. Chatterjee, D. Lahiri and C. J. Lavie (2020), 'Psychosocial impact of COVID-19', *Diabetes & Metabolic Syndrome*, Vol. 14, No. 5, pp. 779-88.
- xi. Dyer, O. (2020), 'Covid-19: Africa records over 10 000 cases as lockdowns take hold', BMJ, Vol. 369, No. m1439.
- xii. Emediegwu, L. E. (2021), 'Does educational investment enhance capacity development for Nigerian youths? An autoregressive distributed lag approach', *African Development Review*, Vol. 32, No. S1, pp. S45-S53.
- xiii. Erokhin, V. and T. Gao (2020), 'Impacts of COVID-19 on Trade and Economic Aspects of Food Security: Evidence from 45 Developing Countries', *International Journal of Environmental Research and Public Health*, Vol. 17, No. 16, pp. 1-28.
- xiv. Lloyd-Sherlock, P. G., A. Kalache, M. McKee, J. Derbyshire, I. Geffen and F. G. Casas (2020), 'WHO must prioritize the needs of older people in its response to the COVID-19 pandemic', *BMJ*, Vol. **368**, No. m1164.
- xv. Mueller, A. L., M. S. McNamara and D. A. Sinclair (2020), 'Why does COVID-19 disproportionately affect older people?', *Aging (Albany NY)*, Vol. **12**, No. 10, pp. 9959–81.
- xvi. NCDC (Nigeria Centre for Disease Control) (2020), 'COVID-19 Situation Report 185, 31<sup>st</sup> August 2020', NCDC Situation Report. Available at: https://ncdc.gov.ng/themes/common/files/sitreps/
- xvii. (accessed 4 September 2020)
- xviii. Nicol, G. E., J. F. Piccirillo, B. H. Mulsant and E. J. Lenze (2020), 'Action at a distance: Geriatric research during a pandemic', Journal of American Geriatric Society, Vol. **68**, No. 5, pp. 922-25.
- xix. Odusola, A. (2017), 'Fiscal Space, Poverty and Inequality in Africa', *African Development Review*, Vol. **29**, No. S1, pp. 1-14.

- xx. Ogunniyi, A., O. K. Oluseyi, O. Adeyemi, S. K. Kabir and F. Philips (2017), 'Scaling Up Agricultural Innovation for Inclusive Livelihood and Productivity Outcomes in Sub-Saharan Africa: The Case of Nigeria', *African Development Review*, Vol. 29, No. 52, pp. 121-134.
- xxi. United Nations (UN) (2020), 'Everyone Included: Social Impact of COVID-19 Older Persons', UN Department of Economic and Social Affairs. Available at: https://www.un.org/development/desa/dspd/everyone-included-covid-19.html
- xxii. (accessed 4 September 2020).
- xxiii. WHO (World Health Organization) (2020a), 'WHO Statement on the second meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV)', World Health Organization. Available at: https://www.who.int/news-room/detail/30-01-2020-statement-on-thesecond-meeting-of-the-international-health-regulations-(2005)-emergency-committee-regarding-theoutbreak-of-novel-coronavirus-(2019-ncov)
- xxiv. (accessed 4 September 2020)
- xxv. WHO (World Health Organization) (2020b). 'Naming the coronavirus disease (COVID-19) and the virus that causes it', WHO Technical Guidance Coronavirus disease 2019. Available at: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-(covid-2019)-and-the-virus-that-causes-it
- xxvi. (accessed 4 September 2020).
- xxvii. WHO (World Health Organization) (2020c), 'WHO Director-General's opening remarks at the media briefing on COVID-19 - 11 March 2020', World Health Organization. Available at: https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefingon-covid-19---11-march-2020
- xxviii. (accessed 4 September 2020)
- xxix. WHO (World Health Organization) (2020d), 'WHO Coronavirus Disease (COVID-19) Dashboard, Data last updated 2020/9/4, 3.38am CEST', Global Situation. Available at: https://covid19.who.int
- xxx. (accessed 4 September 2020)
- xxxi. WHO (World Health Organization) (2020e), 'COVID-19 Situation update for the WHO African Region 18 March 2020, External Situation Report 3', WHO Publications. Available at: https://apps.who.int/iris/bitstream/handle/10665/331487/SITREP\_COVID-19\_WHOAFRO\_20200318eng.pdf
- xxxii. (accessed 4 September 2020)
- xxxiii. Zarocostas, J. (2020), 'How to fight an infodemic', *Lancet*, Vol. **395**, No. 10225, pp. 676.
- xxxiv. Zhu, N., D. Zhang, W. Wang, X. Li, B. Yang, J. Song, X. Zhao, B. Huang, W. Shi, R. Lu, P. Niu, F. Zhan, X. Ma, D. Wang, W. Xu, G. Wu, G. F. Gao and W. Tan (2020), 'A Novel Coronavirus from Patients with Pneumonia in China, 2019', *New England Journal of Medicine*, Vol. 382, No. 8, pp. 727-33.