

Impact of Coronavirus (COVID-19) Pandemic on Households' Livelihood: Empirical Evidence from Sokoto State, North Western Nigeria

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Abstract

This study investigates the impact of coronavirus (covid-19) pandemic on households' livelihood in Sokoto State, Nigeria using a survey dataset for a sample of two hundred and seventeen (217). The study applied mean and standard deviation in analyzing the data and finding suggests that covid-19 has negatively has negatively affected the household's livelihood in terms of food security, market accessibility, and income generation activities and women and youths empowerment. The study further revealed that the pandemic put on negative influence on social activities of the households such as children education, social structure and gender relations. Furthermore, the study concludes that, covid-19 has negative effects on cultural activities of the households such as community events, funeral activities, ceremonies, sports activities and cultural values. In addition to covid-19 pandemic, this study also indicated that psychological behaviour of household such as sustainable behavior, uncertainty; infections fears and family relations were negatively affected. From the foregoing, this study recommends the needs for the government to create a window in fiscal policy that will accommodate any unforeseen health challenges in the future. Based on the previous experience, the study further recommends the need for the households to be on alert on the future pandemic and take precautions measures that would prevent the deterioration of socio-cultural activities and psychological behaviour.

Keywords: covid-19, households, livelihood, Nigeria

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1. Introduction

The covid-19 pandemic is one of the most devastating events that has disrupted and impacted on the economic social and physical activities in livelihood of households all over the world. According to World Health Organization-WHO (2020) and International Monetary Fund-IMF (2020) the Pandemic spread like a wild fire to over two hundred (200) countries around the world and brings on the most economic slowdown since the Great depression. Covid-19 Pandemic was first identified in Wuhan, China, causing massive death and has spread to almost all parts of the world (Akanni & Gabriel, 2020). WHO (2021), reported that globally, as of 29 September 2021, that there have been 232,636,622 confirmed cases of covid-19 with 4,762,089 number of deaths. In addition, the Nigerian Centre for Disease Control (NCDC) reported that as of 29 September 2021, there have been a total number of 205,484 confirmed cases with 9,286 of active cases and 2,702 deaths cases of covid-19 in Nigeria.

In addition, the disease covid-19 not only signifies a global public health emergency but has also become an international economic problem that is likely to expand inequalities and affect poor and vulnerable populations. The covid-19 has led to nearly shutdown of the world's economy as airports, supermarkets, seaports, parks, stadiums, cinemas, hotels, restaurants among others were closed (World Bank, 2020). These have gradually milled world economies. In addition, the pandemic shocks have led to closure of international borders across the world, a punch on globalization by all countries. This obviously calls for self-reflection, forcing countries to search inward to survive especially countries like Nigeria that are export dependent. Thus, covid-19 pandemic has created the conditions that are equivalent to levels of deprivation last seen in the mid-1980s (UNDP, 2020).

The pandemic has resulted in a drastic decrease of exports, particularly raw materials; a decline in commodity prices to historical lows; a sharp decline in services especially tourism; and a steep reduction in remittances. This necessitates direct costs related to morbidity, health care, and uncertainty. Moreover, the indirect costs in terms of containment and mitigation measures imposed to reduce the spread of the disease include reduction of labour, production capacity, productivity and erosion of human capital (World Bank, 2020). The Bank further noted that, the pandemic has negatively created demand, supply and welfare shocks on individuals and households for all countries. From the demand and supply sides, the pandemic has caused the reductions of people's ability to work and firms to produce; it lowers the incentive for people to consume and for firms to invest. It may hurt low- and middle-income countries disproportionately because they lack the resources

and capacity to deal with systemic shocks, having larger informal sectors, shallower financial markets, less fiscal space, and less developed institutions and governance.

Considerably, coronavirus has negative effect on households' income due to illness and decline in formal and non-formal employment and remittances. Disruptions in the delivery of essential goods and services, including health care, education and nutrition. Thus, erode not only welfare but also human capital and future productivity. Furthermore, the epidemic adversely affected women and other vulnerable groups outside the formal social protection system. Moreover, the corrosion in welfare, closure of educational institutions and other services, and the increase in stress and violence can have irreversible negative consequences for adolescent girls and children. Disability, ethnic, religious, or geographic characteristics may further worsen the negative effect from the pandemic. Hence, the pandemic has produced adverse effects on poverty, vulnerability and human capital especially in low-and middle-income countries (World Bank, 2020).

It is against this background that this study seeks to examine the effect of covid-19 pandemic on households' livelihood in Sokoto State.

2. Dimension of Households' Livelihood

The framework depicted in Figure I explains the possible channels through which covid-19 pandemic may likely affect the livelihood of households within the dimensions of the social, economic, cultural and physiological perspectives.

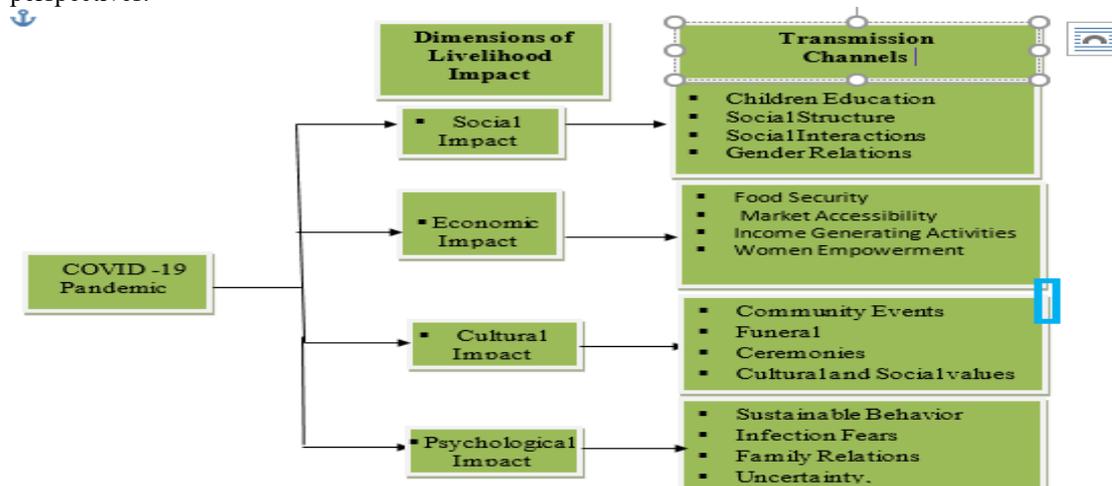


Figure 1: Conceptual Framework of the Research Project

3. Literature Review

Several research efforts have been devoted to understanding the impact covid-19 on different works of life in Nigeria and beyond. In addition to conceptual presentation on the possible effect of covid-19 on households' livelihood, similar empirical studies were conducted. For instance, Global Alliance for Improved Nutrition-GAIN (2021) examines the impact of covid-19 on Nigeria's Food Systems.

The results show that 15 months after the first cases of covid-19 were recorded in Nigeria households are still struggling with the effects of covid-19 control measures, including income losses, trade disruptions and increasing food prices. In addition to covid-19 related disruptions, the food system is being disrupted by increasing incidence of communal conflicts, the presence of militant groups, violent clashes between herders and farmers, banditry, kidnappings and Boko Haram who recently attacked and hoisted their flag in some villages in Northern Nigeria. Their activity contributes to food insecurity by disrupting food production and supply chains. As unemployment correlates positively with crime, these developments were likely exacerbated by covid-19, as the loss of livelihoods and income-earning opportunities caused by the pandemic may have driven many youths to join criminal groups. SMEs are indirectly affected by shortages in supplies of agricultural products, continued decreased consumer spending and persistent restrictions. Given the absence of active commodity exchanges and significant food reserve storage systems, the disruptions to crop production create a supply shock that translates into high food prices.

World Bank (2020) analyzed the economic policy response to the covid-19 crisis in a global scenario. Result also shows that lower-income countries increasingly find themselves locked out of global financial markets, even as they face capital outflows and deteriorating remittances. In addition to the demand shortfall and financial stress, the covid-19 crisis also involves a major supply shock. Internationally, supply chains threaten to break down, which may result in shortages of key inputs and higher food prices. An important difference from

previous crises is the potential for a recurrent return of the supply shock until a vaccine is developed. This threat weighs on the prospects for recovery. Domestically, the study reveals that, social distancing measures and lockdowns, which many countries have implemented in some form to stave off the contagion, reduce both labour supply and demand, as well as increase transaction costs.

UNDP (2020) examined the socioeconomic impact of the covid-19 Pandemic in North Eastern Nigeria. The results indicated that covid-19 crisis worsen the difficult situation in particular for communities residing in the study area. Livelihoods have been disrupted by the armed conflict and both production systems and households in the region remain fragile to external shocks.

In addition, the findings show that the ongoing crisis continues to have a profound impact on the population with an estimated 7.1 million people in need of humanitarian assistance in Borno, Adamawa, and Yobe states (BAY). The covid-19 pandemic has resulted in a slowdown in production and intra- and interregional agricultural trade in the North-East, including the movement of key agricultural commodities, thus region's food supply chains were fully affected.

Balana et al., (2020) conducted a mobile phone descriptive survey on effects of covid-19 pandemic policies on the incomes, employment, and food security situation of smallholder farming households using data collected from sample households in four Nigerian states. The findings indicate that 88 percent of the households reported that they lost about 50 percent of their income due to the pandemic. As a result, about 66 percent of respondents reported they reduced food consumption during the period. Travel and movement restrictions caused disruptions in agricultural activities and supply chains, as 29 percent of respondents reported planting fewer crops, 24 percent reduced cropping area, and 24 percent reduced fertilizer application.

In terms of household's food security, results show that covid-19 significantly worsened the food security situation of many households in Nigeria, especially poorer households. More than 80 percent of respondents worried about not having enough food and 77 percent ate less food than they thought they should. Survey households also reported a significant reduction of consumption of proteins (eggs, meat, and dairy products) and fruits since the pandemic struck.

Hossain (2021) estimated the covid-19 impacts on employment and livelihood of marginal People in Bangladesh. The results indicate that the pandemic has created tremendous negative impacts on the livelihood of the marginal population in Bangladesh. Many people working in the informal sector have lost their job and income due to the ongoing pandemic. Unemployment and poverty among the people in both urban and rural areas throughout the country have increased. The success in economic growth in the last few decades could not save poor people to become extreme poor because economic prosperity was not inclusive in Bangladesh.

Adebayo and Milu (2020) impact of covid-19 on food systems and rural livelihoods in Nigeria using a stratified random sample of 110 respondent households drawn from five Local Government Areas (LGAs) in Ogun (Ijebu East, Obafemi Owode, and ImekoAfon) and Kaduna (Chikun and Soba) State. The findings show that movement restrictions resulted in reduced availability and high cost of farm labour, which in turn, resulted in a decline in land area cultivated. The ability of farmers to sell their produce declined due to covid-19 restrictions on the movement of traders from outside the communities, resulting in over-supply and lower farm gate prices. Only about half of households engaged their children in schoolwork during the covid-19 lockdown. Religious organizations were the most common source of assistance, but the majority of households did not get any form of covid-19 related assistance. The majority of households reported decreased availability and higher prices of food items in the covid-19 period. The majority of households experienced a decline in consumption of healthy and nutritious food in terms of frequency, quantity and quality.

Hawa and Park (2022) examined how coronavirus disease has impacted FDI, using the quarterly data on bilateral FDI flows 173 home to 192 host countries from the first quarter of 2019 to the second quarter of 2021. The study measure the severity of covid-19 damages using three indicators – the number of confirmed cases, the number of deaths and the stringency index of government policies that restricts peoples activities. The results find that the severity of covid-19 in host countries adversely affected FDI in the manufacturing sector, while the effect of home countries has significantly negative impact on Greenfield FDI.

Ogundipe, Festo and Ajayi (2021) investigated the effect of covid-19 pandemic on FDI flows into Nigeria from the third quarter of 2020. Using quarterly data and applying trend analysis. Findings shows that FDI flows have been on decline over the years.

Henry (2021) examined the impact of covid-19 on Economic Growth in Nigeria. Using cross sectional survey research design and a mix-method was used in collecting the data; cronbach alpha was used to assure its reliability. The secondary data was analysed using a one sample t-test and least squares method. Findings revealed that the covid-19 induced lockdown has significantly constrained economic activities and the circular flow of income and impacted negatively on economic growth. The study recommends the need for policy makers to take drastic measures to curtail the pandemic and forestall a recession.

Nweze and Nnadi (2021) investigated the effect of covid-19 lockdown on the Nigerian economy. Using survey design and structured questionnaires administered to Nigerians of different ranks in the states in Nigeria.

Two hypotheses were formulated and tested using Godden statistical tool for analysis. Findings revealed that there is a significant positive relationship between covid-19 economic lockdown and Nigerian economy, the study also shows that government policy has a significant positive effect on curb the economy of Nigeria. The study recommends that government policies along with other covid-19 activities should be strictly observed in practice.

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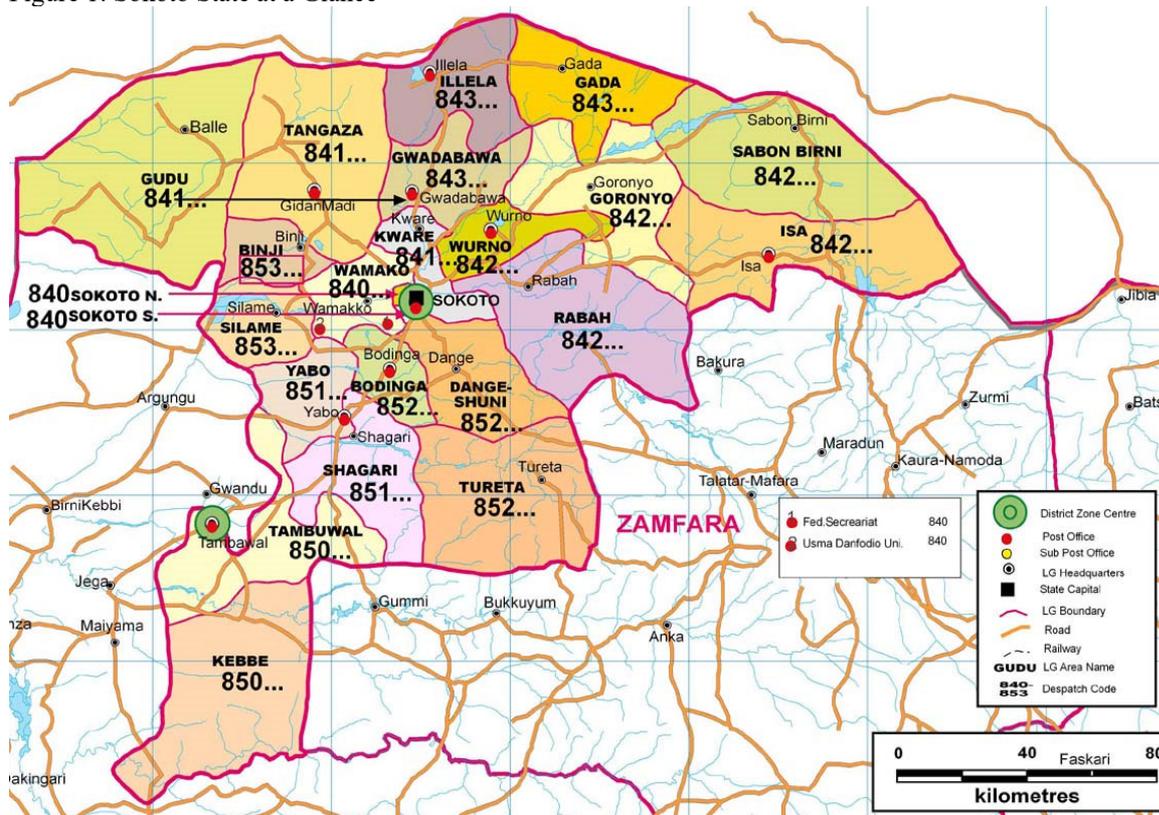
4. Methodology

The study employed Quantitative design and availability sampling technique in selecting the number of households while multi-stage sampling is used to select samples from the 23 Local Government Areas (LGAs) in Sokoto State. The researchers utilized a structured questionnaire as instruments of data collection The EAs selected for the study are those the General Household Living Standard (GHLS) Survey conducted by Nigerian Bureau of Statistics (NBS) in collaboration with World Bank in 2020 as its sample. From the survey, Sokoto metropolis has a representative sample of 230 households, 10 households randomly selected from each of the 23 wards in the study area. The phone contacts of the 230 sample households collected in the GHLS survey were used for mobile phone survey opted in this study. The household heads constituted the respondents for the study. However, the data collected on the basis of the research questions were analyzed using descriptive statistics (mean and standard deviation). The decision rule is that averages of 3.0 and above was considered as agreed, while an average of 2.99 and below were considered as disagreed with respect to research questions. A mean of 3.0 according to Yusuf, Gambari, Daramola, Badmus and Isiaka (2018) was used as a criterion to decide the mean scores for five-point items. Hence, the mean criterion of 3.0 was calculated from the sum of 5+ 4+3+2+1 divided by 5.

4.1 Brief Description of the Study Area

Sokoto State is located in the extreme Northwest of Nigeria and has a total of twenty three (23) LGAs. According to the census conducted by the National Bureau of Statistics in 2006, it has an estimated population of more than 4.2 million with vast land of 27,973km, square. Over 80% of people living in the state practice agriculture with an annual average temperature of 28.3⁰C and the rainy season are from June to October. In another survey by the NBS in 2010, Sokoto state's GDP per capita stood at \$1274 billion but the poverty rate is 50.6%, the unemployment rate is 17.9%, average household size is 5.6% and population density is 133.07km². As of 2012, the percentage of the population that is food poor is 56.5%, income inequality is measured at 0.46% and incidence of poverty stood at 81.3% in 2015. Figure 1 presents its geographical features and the 23 local government areas in the State.

Figure 1: Sokoto State at a Glance



Source: Sokoto State Government

The justification for the choice of Sokoto as study area as it becomes imperative to draw the attention of all stakeholders (households, government, farmers, marketers, etc. on the implications of covid-19 on households livelihood in the State for effective policies, rational decisions and corrective measures for available, affordable and reliable measures on the future pandemic.

4.2 Population and Sample

The study examined households in Sokoto as the study population. Due to the complex nature of the population, the study draws a sample of twelve (12) LGAs systematically using the expression N/n where N is the population and n is the sample size. The sample size (n) is determined using Yamane's (1998) formula for sample size determination presented in equation (2.1) with $e = 0.05$ as the margin error.

$$n = \frac{N}{1 + N(e^2)} \tag{2.1}$$

The 12 LGAs sampled were drawn at the interval for reliability and consistency. Households were further sampled though without the sampling frame using the following expression as formulated by Cochran (1963:75) which yield a representative sample for a large population;

$$n = \frac{Z^2 pq}{e^2} \tag{2.2}$$

Where n is the sample size and Z is the abscissa of the normal curve, e is the desired level of precision or margin error ($e = 0.05$) and p is the estimated proportion of an attribute that is present in the population and q is equal top-1. In all, the study surveyed 400 households across the 12 LGAs in the state.

4.3 Analysis

The study utilized descriptive statistics; simple percentages and tables to present the analysis of the data surveyed from impact of covid-19 on household's livelihood in Sokoto State.

5. Discussion of Findings

This section analyses and interprets the results from the data collected in the field of the study. Initially four hundred and eighty (230) copies of survey questionnaire were administered while four hundred and seventeen

(217) questionnaires were retrieved and used for data analysis. A total number of thirteen (13) questionnaires were not returned by the respondents after two weeks of distribution. This represents five per cent (5.65%) of the total questionnaires.

The interpretation is divided into four; namely, economic impact of covid-19 on households, covid-19 and social activities of households, covid-19 and cultural activities of households and covid-19 and psychological behaviour of households in Sokoto State, Nigeria. The results discussion begins with economic impact of covid-19 on households; and the results are summarized and reported in Table 4.1.

Table 4.1: Economic Impact of Covid-10 on Household

S/N	Statements	Mean	Std. Dev.	Decision
1.	Covid-19 has negative effect on your food security	3.79	0.40	Agree
2.	Covid-19 has causes difficulties in Market accessibility during the pandemic	3.70	0.45	Agree
3.	There is a reduction in income generation activities due to covid-19 pandemic in your business	3.70	0.64	Agree
4.	A result of the pandemic there is decline in Women and youth empowerment in your society	2.69	0.78	Agree
Cumulative Mean		3.47		
Decision Mean		2.50		

Source: Field survey (2022.)

Table 4.1 present the results on how covid-19 pandemic impacted on households in Sokoto State. From the Table 4.1, it was discovered that, the entire respondent agreed that covid-19 has negatively affected the household. This is simply because, the cumulative mean 3.47 is greater that the decision mean 2.50. This clearly indicated that, covid-19 has affected the food security of the households, causes difficulties in market accessibility as well as reduction in income generation of the households due to pandemic. Covid-19 pandemic also affected people's participation in economic activities particularly women and youths empowerment in the society during the pandemic in Sokoto State.

Table 4.2: Covid-19 and Social Activities of Households

S/N	Statements	Mean	Std. Dev.	Decision
1.	Covid-19 create difficulties in your children education	3.70	0.56	Agree
2.	Covid-19 causes disarray in social structure due to pandemic in your society	3.38	1.01	Agree
3.	Loss of Gender relations caused by covid-19 pandemic in your family	2.60	1.02	Agree
Cumulative Mean		3.22		
Decision Mean		2.50		

Source: Field survey (2022.)

Table 4.2 contains the effects of covid-19 pandemic on social activities of households in Sokoto State. From the Table 4.2 above, it was clear that, all the respondents agreed on the effects of covid-19 pandemic on social activities of the households in the state. These responses should not be unconnected with the fact that, the cumulative mean 3.22 is greater than the decision mean 2.50. From the analysis, the results indicated that covid-19 has led to closure of schools and causes difficulties in children education, social structures were seriously affected and gender relation become difficult due to fear of the spread of the virus

Table 4.3: Covid-19 and Cultural Activities of Households

S/N	Statements	Mean	Std. Dev.	Decision
1.	Difficulties in organizing community events as a results of the pandemic in your locality	3.39	0.92	Agree
2.	Covid-19 causes fears of the pandemic and low turnout during funeral activities	3.20	0.75	Agree
3.	Difficulties in organizing ceremonies during marriages, naming ceremonies and other activities in your family	3.59	0.66	Agree
4.	Covid-19 causes stoppage of sports activities in your area due to pandemic	3.79	0.40	Agree
5.	Covid-19 affects cultural values during the pandemic	3.09	0.95	Agree
Cumulative Mean		3.41		
Decision Mean		2.50		

Source: Field survey (2022.)

Table 4.3 analyzed the results of the effects of covid-19 pandemic of cultural activities of the households. In the Table 4.3 aforementioned, the respondents agree that cultural activities have been affected during the pandemic as contained in both the cumulative mean 3.41 and the decision mean 2.50. The results further revealed that, covid-19 has negatively affects community events due to social distancing, causes fears in funeral activities, difficulties in organizing ceremonies such as marriage, sports activities were halt during the pandemic as well as cultural values in Sokoto State.

Table 4.4: Covid-19 and Psychological Behavior of Households

S/N	Statements	Mean	Std. Dev.	Decision
1.	Sustainable behavior unsure during the pandemic	3.20	0.75	
2.	Covid-19 causes Uncertainty in business, education as a results of the pandemic	3.20	0.75	
3.	Covid-19 cause Infections Fears during the pandemic and lack of social interactions	2.80	1.17	
Cumulative Mean		3.07		
Decision Mean		2.50		

Source: Field survey (2022.)

Table 4.4 revealed the results of the effects of covid-19 pandemic on psychological behaviour of the households in Sokoto State. All the respondents agreed that, covid-19 has affected the psychological behaviour of the households during the pandemic as evident on the cumulative mean 3.07 and the decision mean 2.50. During the pandemic the sustainability in people's behaviour was uncertain due to the negative effects of covid-19 on psychological behaviour of the households, causes uncertainty in business due to inaccessibility of the market and infections fears which causes fear in human contacts and banned in social gathering during the pandemic in Sokoto State. Therefore, the study concludes that, the psychological behaviour of the household was negatively affected during the outbreak.

6. Conclusion and Recommendations

This study concludes that covid-19 has negatively affected the household's livelihood in terms of food security, market accessibility, and income generation activities and women and youths empowerment. The study further concludes that the pandemic put on negative influence on social activities of the households such as children education, social structure and gender relations. Furthermore, the study concludes that, covid-19 has negative effects on cultural activities of the households such as community events, funeral activities, ceremonies, sports activities and cultural values. Finally, the study also concludes that, covid-19 has negative effects on psychological behaviour of household such as sustainable behaviour, uncertainty, infections fears and family relations. Based on the findings, this study recommends the needs for the government to create a window in fiscal policy that will accommodate any unforeseen health challenges in the future. Based on the previous experience, the study further recommends the need for the households to be on alert on the future pandemic and take precautions measures that would prevent the deterioration of socio-cultural activities and psychological behaviour.

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