

**COVID-19 PANDEMIC, PERSONAL HYGIENE AND
DIETARY BEHAVIOR OF GHANAIS: FROM THE
PERSPECTIVE OF INHABITANTS OF BURMA CAMP,
ACCRA**

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Abstract

COVID-19 has affected various aspects of life including education and health. This study examined how the pandemic has affected dietary behavior and personal hygiene of people in a descriptive survey. The study was underpinned by the human capital and social learning theories. A total of 133 inhabitants of Burma Camp who were conveniently selected responded to a set of questionnaire. Analytical techniques employed in the study included means, standard deviation and regression. The study found that COVID-19 has affected dietary behavior of people in many ways including paying much attention to their dietary behavior, not eating outside food, often eating warm food, and taking Vitamin C supplements. However, COVID-19 pandemic has not reduced consumption of alcohol, consumption of canned fruit juice,

and overall consumption of canned foods. Again, because of the pandemic people now take their personal hygiene seriously, frequently use alcohol based hand sanitizer, wash their hands with soap routinely, observe physical distance at public places, and avoid crowded places. The regression analysis confirmed that COVID-19 has an effect on the dietary behavior and personal hygiene of inhabitants at Burma Camp. The findings have also been discussed in the context of their value for theoretical literature. As a way of recommendation, inhabitants are encouraged to continue to take their dietary behaviors and personal hygiene seriously so as to stay healthy amidst the spread of the virus.

Introduction

The world is overwhelmed with COVID-19 pandemic, halting national and global health systems. The devastations of the pandemic are resulting in significant number of fatalities in places such as the United States of America (USA), Europe, Asia and Africa (Public Health Update [PHU], 2020; World Health Organization, 2020a). The pandemic constitutes a major blow on several aspects of lives including the health and economic lives of people (World Health Organization, 2020b). Though it is difficult to estimate the numbers in cases, deaths and recoveries (Hussain et al, 2020) the effects of the COVID-19 pandemic extend beyond health, economy, socio-political, education, and religion, to social interactions, and psycho-emotional dimensions of individuals, communities, and nations (Aktuğ et al., 2020). The COVID-19 pandemic is a global health and human crisis threatening the food security and nutrition of many people. It has become increasingly acknowledged that obesity increases the severity of symptoms and impairs treatment outcomes in those affected by COVID-19 (PHU, 2020).

Before the COVID-19 pandemic, different levels of malnutrition were already prevalent with many people consuming an energy dense, nutrient poor diet (Njike et al., 2016). The majority of the UK population were not participating in recommended levels of daily activity for physical and mental health benefit and to support maintenance of a healthy weight (Chief Medical Officers' Physical Activity Guidelines, 2019). Weight control is complex, influenced by an interaction of various factors including biological, behavioral, environmental, societal and cultural (PHU, 2020). People are faced with

many challenges towards successful, sustainable weight control and relapse is common even when their lives are relatively stable and there is some degree of certainty. People benefit from support to develop personal and practical strategies which can become part of their routine and help them to lose weight and maintain their weight in the long term (Montesi et al, 2016; Teixeira, 2015). The COVID-19 pandemic is equally causing its devastation on the African continent like other continents. South Africa has recorded the highest number of cases with Ghana being among the top-five most hit nations in the continent (PHU, 2020). Ghana recorded its first case, an imported case, of the virus on the 12th of March, 2020, and since then, the country is steadily recording increasing numbers which stand at 5638, with 28 deaths and 1460 recoveries as of 15th May, 2020 (Ghana Health Service, 2020). The pandemic has caused governments all over the world including Ghana's government to initiate series of Public Health Preventive Measures (PHPM). Theoretically, the COVID-19 pandemic presents a huge challenge to the human capital formation and subsequently the economic development of nations. According to the human capital theory, organizations and nations need citizens who are healthy and possess the required competencies to drive development. Thus, where organizations and nations are denied healthy people who have the requisite competencies, growth and development will become a mirage (Ferioli et al., 2020; Odoom, 2019; Odoom, Kyeremeh & Opoku, 2014).

Previous studies (Aman et al., 2020; Amine et al., 2011; Fenollar & Mediannikov, 2018; Osei-Brobby, 2021) have found that proper diets and nutrition are critical in the prevention of chronic diseases. The consumption of healthy foods is essential in the management of diseases including COVID-19 pandemic. This suggests that poor dietary behavior contributes to the increasing infection rate of diseases (Pickering et al., 2011) and the case of COVID-19 is no exception. In support of this assertion, the Food and Drugs Authority [FDA] (2020) of Ghana maintains that consumption of healthy foods among Ghanaians is an effective way of preventing the spread of COVID-19 virus in the country. The Authority therefore calls on all Ghanaians to seriously observe proper dietary behavior in the face of the pandemic.

Since the onset of the COVID-19 pandemic, there has been so much education on health. People have tried so hard to boost their immune system in order to survive in this pandemic by having a good

balanced diet, having regular exercises, adequate rest and (Huber et al., 2020; Odoom et al., 2021; Richards, 2022). In order to maintain good personal hygiene in the COVID-19 pandemic, the FDA (2020) of Ghana has issued a statement on Hand Washing. “Keeping hands clean through improved hand hygiene is one of the most important steps we can take to avoid getting sick and spreading germs to others. Many diseases and conditions are spread by not washing hands with soap and clean, running water. If clean, running water is not accessible, as is common in many parts of the world, use soap and available water being poured over the hand. An alcohol-based hand sanitizer is effective to clean hands (FDA, 2020; Pickering et al., 2011).

A crucial part of the education on the pandemic in in Ghana has centered on the need for citizens to pay attention to their dietary behaviors. In his 11th update, the president of the Republic of Ghana, Nana Addo Danquah Akufo- Addo encouraged Ghanaians to consume our local foods, spices, vegetables and fruits because they are rich in nutrients. This would boost their immune system and help in the fight against the pandemic. This particular update has influenced the dietary behavior of Ghanaians tremendously (Government of Ghana, 2020). Many Ghanaians have been consuming the food the president mentioned in his 11th update like kontomire, cocoyam, yam, plantain, dawadawa, sobolo, fruits and vegetables. Dawadawa is a local food stuff usually eaten by Ghanaians in the northern part of the country whilst sobolo is a local fruit juice which is locally made from a combination of leaves and plants which are deemed to be medicinal and nutritious. Vitamin C, also known as ascorbic acid, is necessary for the growth, development and repair of all body tissues. It is involved in many body functions, including formation of collagen, absorption of iron, the proper functioning of the immune system, wound healing, and the maintenance of cartilage, bones, and teeth. Studies have found that consumption of fresh fruits and vegetables is vital in boosting immune systems of people in the face of the pandemic (Hubbub, 2020; PHU, 2020; Zelman, 2020). Again, COVID-19 pandemic has led to a decrease consumption of alcohol and junk foods (Hubbub, 2020; PHU, 2020).

It is generally recognized that Ghanaians have cultivated the habit of eating healthy diets (Ansah et al., 2020) including consuming a lot of fruits and vegetables which are good sources of Vitamin C in order to boost their immune system and remain healthy amidst the

COVID-19 pandemic, a situation which is increasing the demand for Vitamin C supplement in the country. This shift in the consumption pattern among Ghanaians is partly ascribed to the call by the President Nana Akuff Addo for people to eat balanced diets to remain healthy in the face of the pandemic (Government of Ghana, 2020). Nonetheless, it is believed that the pandemic has presented a challenge to many people who want to maintain many health-related behaviors. Issues such as lockdowns and social and physical distancing have all led to changes in shopping and cooking habits, and access to foods. Consequently, the situation has led to changes in dietary intake such as decreased consumption of fresh fruit and vegetables, increased alcohol purchasing and increased snacking on cakes, biscuits, confectionary and savory snacks for example (PHE, 2020; Hubbub, 2020).

Personal hygiene is also another way to survive in the current COVID-19 pandemic. Personal hygiene can be defined as an act of maintaining cleanliness and grooming of the external body. Maintaining good personal hygiene consists of bathing, washing your hands, brushing teeth and sporting clean clothing (Osei-Brobby, 2021). Additionally, it is also about making safe and hygienic decisions when you are around others (Osei-Brobby, 2021). According to Finger et al. (2012), physical exercises and activities play a crucial role in maintaining the personal hygiene of people. In a phenomenological study conducted by Ansah et al. (2020) on physical activity and dietary behaviors of Ghanaians during the COVID-19 lockdown, it was found that during the lockdown period, some individuals attempted to increase their physical activity levels by doing exercises, and dancing more. However, the study found that some Ghanaians also experienced a tremendous degree in physical activity because of lack of space in the face of lockdowns. It was further observed that the eating habit of the residents changed, where many tried to eat healthy foods whilst others experienced poor dieting behavior. Besides, boredom set in for some of the residents who also reported weight gain as a result of the lockdown. Thus, it is clear that experiences of Ghanaians during the lockdown period in terms of physical activity, dietary behaviors, boredom, and changes in weight have been affected largely by the pandemic. Indeed, as more people observed their family members and friends who had engaged in exercises and were eating healthy foods and were seeing some results in their health it encouraged many more people to embrace

personal hygiene and dietary behavior. Theoretically, this manifestation finds relevance in the Albert Bandura's social learning theory. The theory posits that people learning through observation of behaviors and the outcome of those behaviors being observed (Bandura, 2009; Odoom, 2021).

In another study conducted by Bonful et al. (2020) on prevention of COVID-19 in Ghana, Compliance Audit of Selected Transportation Stations in the Greater Accra Region of Ghana, it was found that majority (80%) of public transportation stations had at least one Veronica Bucket with flowing water and soap for passengers to wash their hands. Whilst the study by Ansah et al. (2020) is limited to the Physical Activity and Dietary Behaviors of Ghanaians during the lockdown, this current study will focus on the Impact of COVID-19 Pandemic on the Dietary Behavior and Personal Hygiene of the inhabitants of Burma Camp (even after lockdown). Again, whilst the study by Bonful et al. (2020) focused on the personal hygiene of some selected transportation stations in the Greater Accra Region of Ghana, this current study will focus on the dietary behavior and personal hygiene of citizens in the face of the COVID-19 in Ghana using the inhabitants of Burma Camp as a case.

Research Methodology

The descriptive survey design was adopted for this study. The inhabitants of Burma Camp constituted the study population. The study focused on the adult population of the inhabitants in the area. The researchers employed the convenience sampling method to select respondents for the study. The use of this method was informed by the fact that due to the pandemic it was difficult to have people who were randomly selected to cooperate with the researcher. Thus, the researcher relied on inhabitants who were ready and interested in the study. In all, 133 inhabitants were involved in the study. Questionnaire was the instrument used for obtaining data for the study. A set of questionnaire was administered to residents at Burma Camp. The questionnaire consisted of close-ended questions. Consent was sought from the population of study to conduct the study. The objectives of the research were explained to the respondents. Respondents were assured of confidentiality as the information was for academic purposes. A period of two weeks was used to collect data. Data collected was coded and

entered into the Statistical Product and Service Solutions (SPSS) computer software version 22. Frequencies, percentages, means, standard deviation and Regression analysis were used to analyze the data.

Results and Discussion

The results from the demographic data show that majority (53.4%) of the respondents were females whilst 46.6% were males. Also, majority of respondents (72.9%) were below 40 years of age whilst many (57.9%) of them having 1st degree as their educational qualification. Again, 6% of the respondents had secondary education although 3.8% had no formal education. Table 1 displays the demographic data of respondents.

Table 1: Demographic Data of Respondents

Variable	Frequency	(%)
Sex		
Male	62	46.6
Female	71	53.4
Total	133	100
Age (Years)		
Below 25	9	6.8
25 – 29	19	14.3
30 – 34	35	26.3
35 – 39	34	25.6
40 and above	36	27.1
Total	133	100
Educational Qualification		
No Formal Education	5	3.8
BECE	-	-
WASCE	8	6.0
HND/Diploma	13	9.8
1 st Degree	77	57.9
2 nd Degree	26	19.5
Others	4	3.0
Total	133	100

How COVID-19 has Affected Dietary Behavior of Inhabitants

In responding to this issue, a mean range of 1 to 5 was used for analysis, with 1 representing lowly agreed and 5 representing highly agree. Respondents now pay much attention to their dietary behavior (M=4.27, SD=1.13), they do not easily eat outside food (M=4.02, SD=1.20), often eat warm food (M=4.20, SD=1.15), Vitamin C supplements (M=4.41, SD=0.26). However, the study observed that the dietary behavior of respondents has not affected consumption of alcohol (M=2.24, SD=0.98), and consumption of canned fruit juice (M=2.36, SD=1.11). Again, COVID-19 did not lead to a decrease in the overall consumption of canned foods (M=2.54, SD=0.86). The study also established that respondents had a change in their dietary behaviors as a result of observing eating behavior of family members (M=4.21, SD=1.01) and friends (M=4.01, SD=0.81).

Table 2: How COVID-19 has Affected Dietary Behavior of Inhabitants

	Minimum	Maximum	Mean	Std Dev.
I now pay much attention to my dietary behavior.	1.00	5.00	4.2782	1.13052
I do not easily eat outside food.	1.00	5.00	4.0226	1.20269
I often eat warm food because of the virus.	1.00	5.00	4.2030	1.15312
I have incorporated fruits into my diet.	1.00	5.00	3.5038	1.17914
I have incorporated vegetables into my diet.	1.00	5.00	4.4962	1.17824
I have reduced my alcohol consumption.	1.00	5.00	2.2403	0.98246
I take vitamin C supplement often.	1.00	5.00	4.4135	0.26208
I take freshly juice instead of canned fruit juice.	1.00	5.00	2.3684	1.11106
I have increased my garlic intake.	1.00	5.00	4.2180	1.01756
I exercise regularly to	1.00	5.00	2.1053	1.09588

prevent weight gain.				
I have eliminated junk food from my diet.	1.00	5.00	4.3083	1.10220
There is an overall decrease in the consumption of canned foods.	1.00	5.00	2.5449	0.86045
I have incorporated a local drink like 'Sobolo' and 'Asaana' into my diet.	1.00	5.00	3.3008	1.05159
Eating habits of family members encouraged me to change my eating behavior.	1.00	5.00	4.2180	1.01756
I observed eating habits of friends to change my eating habits.	1.00	5.00	4.0145	0.8146

Source: Field Data, 2021

How COVID-19 has Affected Personal Hygiene among Inhabitants

To determine how the pandemic has affected personal hygiene among inhabitants of Burma Camp, a mean range of 1 to 5 was used for analysis, with 1 representing lowly agreed and 5 representing highly agree. On how COVID-19 has affected personal hygiene of respondents a number of revelations were made. For example, the study found that respondents now take their personal hygiene seriously (M=4.54, SD=1.37), and frequently use alcohol based hand sanitizer (M=4.75, SD=1.33). Respondents also now wash their hands with soap routinely (M=4.48, SD=0.34), observe physical distance at public places (M=4.40, SD=0.27), and avoid crowded places (M=4.51, SD=0.24). On the contrary, respondents found it difficult to bath (M=2.33, SD=0.22) and change their clothes (M=2.21, SD=0.16) as soon as they return home.

Table 3: How COVID-19 has Affected Personal Hygiene among Inhabitants

Issue	Minimum	Maximum	Mean	Std. Dev.
I take my personal	1.00	5.00	4.544	1.3799

hygiene seriously now				
I often use alcohol- based hand rub	1.00	5.00	4.751	1.3375
I routinely wash my hands with soap	1.00	5.00	4.4842	0.3485
I routinely wash my hands under running water	1.00	5.00	2.4442	0.2245
I wear a nose mask before stepping out of my home	1.00	5.00	4.7557	1.3830
I take my bath my clothes as soon as I return home	1.00	5.00	2.331	0.2292
I take my change my clothes as soon as I return home	1.00	5.00	2.213	0.1622
I observe physical distancing at public places	1.00	5.00	4.4060	0.2753
I observe social distancing at public places	1.00	5.00	4.3609	1.27528
I try to avoid crowded places	1.00	5.00	4.5113	0.24082
I wash my hands thoroughly with soap under running water before preparing any food	1.00	5.00	3.6165	1.15943
I cover my mouth with my elbow when coughing or sneezing	1.00	5.00	2.3068	0.1895
I cover my mouth with my tissue when coughing or sneezing	1.00	5.00	4.7068	0.81095

I dispose of used tissue immediately	1.00	5.00	3.7368	1.37563
I dispose of used nose mask in a bin	1.00	5.00	3.6692	1.40196
I observed personal exercises of family members which encouraged me to do physical exercise	1.00	5.00	4.3315	0.45141
My friends who were doing physical exercise urged me do same	1.00	5.00	4.4060	0.2753

Source: Field Data, 2021

Regression Analysis

Covid-19 and its Effect on Dietary Behavior and Personal Hygiene among respondents

As shown in Table 4, there is one independent variable and three predictor values. With an adjusted R Square of 0.710 indicating that 71% of the variance of the dependent variable is explained by the independent variable. Again, the mean squares (47.794, 0.440), $F = 108.725$ and $p\text{-value} < 0.01$ shows it is statistically significant. This suggests that COVID-19 pandemic has an effect on the dietary behavior and personal hygiene and compliance to Covid-19 protocols of inhabitants at Burma Camp.

Table 4: Multiple Regression

Constant	0.010		.214	
Variables	Coefficients		Std. Error	t-
Statistic				Sig.
0.048		.962		
Dietary Behavior	0.459		.075	
6.112	.010			
Personal Hygiene	0.093		.069	
1.358		.177		

Covid-19 compliance	0.418	.042
9.926		.000
R-squared	=	0.717
Adjusted R-squared	=	0.710
Sum of Squares regression and residual	=	143.383, 56.707
Mean square	=	47.794, 0.440
F-statistic	=	108.725
Prob.	=	0.010

Discussion of Results

The study discovered that COVID-19 has affected dietary behavior of respondents in many ways including paying much attention to their dietary behavior, not eating outside food, often eating warm food, and taking Vitamin C supplements. However, the study established that not much has changed among respondents with respect to consumption of alcohol, consumption of canned fruit juice, and overall consumption of canned foods. The importance of the findings on dietary behaviors confirms that of Gleeson et al. (2004) who contend that proper diet and nutrition enhance the health of persons. Further, respondents had a change in their dietary behaviors as a result of observing eating behaviors of family members and friends. The findings of the present study further corroborate that of Ansah et al. (2020) who observed that the eating habit of Ghanaians has changed because of the cOVID-19 pandemic. The value of the results on dietary behavior has been stressed by Wypych, Marsland and Ubags (2017) who observed that dietary ingredients are significant determinants of gut microbial composition and consequently can shape the characteristics of immune responses in the body. COVID-19 world pandemic imposed a new set of challenges for the individual to maintain a healthy diet. Again, the findings reinforce the importance of the calls made Richards (2022) regarding the need for people to pay attention to good dietary behaviors in the face of the COVID-19 pandemic. Findings from the study were at variance with previous studies which found that COVID-19 pandemic has led to a decrease in consumption of fresh fruits and vegetables, and high consumption of alcohol and junk foods (Hubbub, 2020; PHU, 2020). However, Ansah et al. (2020) conceded that whilst many Ghanaians tried to eat healthy foods there were pockets of the citizens who still

experienced poor dieting behavior. Similarly, the study goes to reinforce the potency of the social learning theory which states that people learn through observation and the outcomes of what is being observed. Clearly, influences from dietary behaviors of friends, colleague workers and family members had influence on the personal hygiene and dietary behaviors of respondents (Bandura, 2009).

Regarding personal hygiene of respondents, the researchers found that respondents now take their personal hygiene seriously, frequently use alcohol based hand sanitizer, wash their hands with soap routinely, observe physical distance at public places, and avoid crowded places. Nonetheless, respondents could not quickly bath and change their clothes after returning home. According to Ali et al. (2013), health risk factors are directly related to some important daily activities implicated with worthy operational actions and obligatory responsibilities, such as washing hands before meals and after defecation with soap, brushing teeth at least twice a day specially after breakfast and after meals, taking bath with soap regularly, keeping nails short and taking regular exercise. The results of this study reinforce the study by Ansah et al. (2020) which revealed that the pandemic has improved the personal hygiene of Ghanaians. Further, the findings on personal hygiene converge with Gleeson et al. (2004) who believed that physical exercises help improve the health of people against diseases. Again, physical exercises by family members and friends urged respondents to engage in physical activities to improve their health; a revelation whose relevance finds manifestation in the social learning theory (Bandura, 2009; Odoom, 2021).

The study further established that COVID-19 pandemic has a significant effect on the dietary behavior and personal hygiene and compliance to Covid-19 protocols of inhabitants at Burma Camp. It is clear from the study that experiences of Ghanaians during the lockdown period in terms of personal hygiene, dietary behaviors, and compliance with safety protocols have all been affected by the pandemic. In particular, the findings of the study validate Huber et al. (2020) who observed that the pandemic has changed the dietary behaviors of people. Again, the overall implication the findings is that as Ghanaian citizens continue to pay attention to their personal hygiene and dietary behavior amidst the pandemic, they are likely to stay healthy to contribute to the growth and development of the nation. In short, the study strengthen the

importance of the human capital theory which enjoins organizations and nations to have individuals who are healthy and possess the required competencies to drive their growth and development (Ferioli et al., 2020; Odoom, 2019; Odoom, Kyeremeh & Opoku, 2014).

Conclusion and Recommendations

COVID-19 affects dietary behavior of people in various ways. They paying much attention to their dietary behavior, not eating outside food, often eating warm food, and taking Vitamin C supplements. However, COVID-19 pandemic has not reduced consumption of alcohol, consumption of canned fruit juice, and overall consumption of canned foods. Regarding personal hygiene of respondents, it is clear that people now take their personal hygiene seriously, frequently use alcohol based hand sanitizer, wash their hands with soap routinely, observe physical distance at public places, and avoid crowded places. In short, COVID-19 has an effect on the dietary behavior and personal hygiene of inhabitants at Burma Camp. Inhabitants are encouraged to continue to take their dietary behaviors and personal hygiene seriously in order to stay healthy to withstand the spread of the virus. The Ministry of Information (MoI) should team up with National Commission for Civic Education (NCCE) and media houses to provide more public education on COVID-19 in order to increase public awareness about the existence of the disease. Religion is an effective tool for social change and so religious organizations should use their platform to create awareness and provide education on COVID-19. Again, the NCCE should team up with interested corporate and religious bodies to provide more public education on the vaccine to allay fears associated with the vaccine for people to accept the vaccine. Also, inhabitants are encouraged to see the need to accept the vaccine and avail themselves for vaccination. As a limitation, the reliance on only quantitative techniques could hinder the depth of the issues interrogated. It is therefore suggested that further studies be done on the subject matter with some emphasis on qualitative measures.

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