

Dietary Practices of Jamaicans during the COVID-19 Pandemic

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Abstract

Background: The emergence of Corona Virus Disease 2019 (COVID-19) has contributed to many life-changing events influencing people worldwide.

Objective: This study aimed to examine whether eating habits have changed during the COVID-19 pandemic, how the COVID-19 pandemic influenced the food consumption of Jamaicans and the diet intake of Jamaicans before and during the COVID-19 pandemic.

Methods: A Web-based non-probability sampling survey was distributed to 510 sampled respondents across all the parishes in Jamaica through text messages, calls, emails, and face-to-face interviews. The data were gathered and then converted from Google Forms to the Statistical Packages for the Social Sciences (SPSS) for Windows, Version 25.0, with a 95% confidence interval.

Results: The findings indicate most of the sampled respondents were females (68.0%, n=347), 18-25 age cohort (36.5%, n=186), and that 55% (285) of them indicated that they had a change in dietary practices while 44% (n=225) did not. A cross-tabulation between gender and change in dietary practices of Jamaicans during the COVID -19 pandemic was done, which indicated that there was no statistical relationship between the two aforementioned variables ($\chi^2_{\text{critical}} = 5.02 > \chi^2_{\text{calculated}} = .159$, $P = 0.69$); therefore, this study failed to reject the null hypothesis.

Conclusions: Most Jamaicans' dietary practices have changed since the COVID-19 pandemic. Furthermore, the study revealed that dietary

practices improved individuals eating healthier and reduced consumption of foods that had a negative health impact.

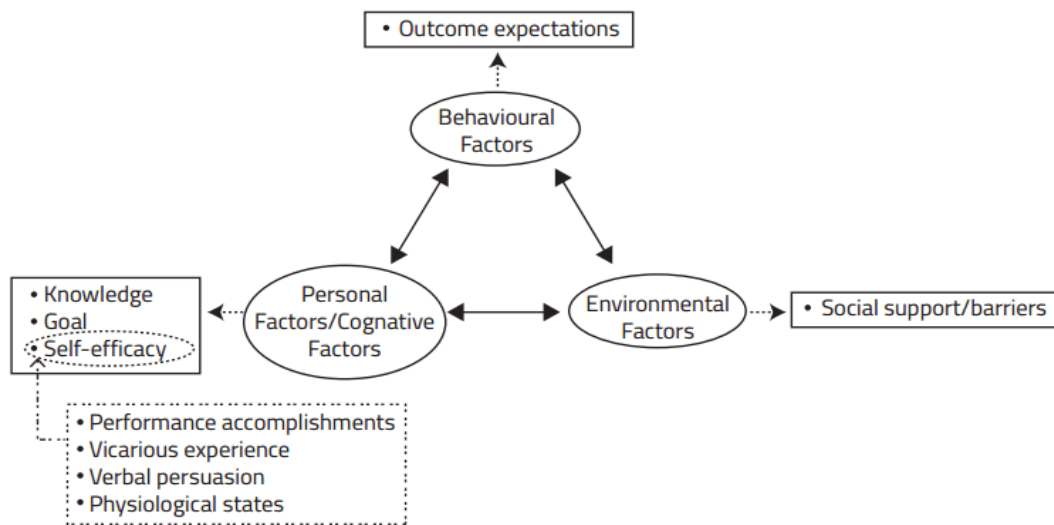
Keywords: COVID-19, diet, dietary practices, consumption.

Introduction

The emergence of Corona Virus Disease 2019 (COVID-19) has contributed to many life-changing events in people worldwide. The World Health Organization (WHO) stated that currently, there is limited understanding of the transmission, mechanism, and treatment of COVID-19 (Hooper, Abdelhamid, Bunn, Brown, Summerbell, & Skeaff, 2015; WHO, 2018). However, research suggested that COVID-19 spreads via person-person contact through respiratory droplets; as a result, social distancing, hand washing, and wearing of face coverings are crucial to reducing the spread of the virus (Bennett et al., 2021). Foods have a direct influence on one's general health inclusive of brain functioning and moods (Australian Government, 2019; Firth, Gangwisch, Borsini, Wootton, & Mayer, 2020; Lachance & Ramsey, 2015; Mental Health Foundation, 2021). Therefore, having good dietary practices plays a significant role in promoting and maintaining good health, preventing some chronic diseases, treating others, and helping the body recover from illness. In addition, habitual eating of more calories than the body uses for maintenance and physical activity produces obesity and increases the risk of several chronic diseases, including coronary artery disease and non-insulin-dependent diabetes (Woteki and Thomas, 1993). These chronic illnesses make an individual more susceptible to COVID-19, increasing their risk of contracting the virus.

This research aims to examine whether Jamaicans' eating habits have changed, how the pandemic has influenced food consumption, and what the diet intake of Jamaicans was like before and during the COVID-19 pandemic. Data collection occurred among different individuals in Jamaica, ranging from 18 to 58 years old, to help the researchers achieve the underlying goal. Research findings will offer information relevant to understanding how the COVID-19 pandemic has influenced dietary changes among different individuals and determine if these changes have impacted their lives positively or negatively. Furthermore, it may support the public's education and facilitate the government and other entities interested in Jamaicans' dietary intake during the pandemic. However, there are limitations to the current study. Firstly, the survey tool was web-based (Google forms) which might have led to selection bias, and lastly, the required sample of respondents was 1096, and the number of individuals that took part is 510. Hence, this study employed social cognitive theory as its framework in order to contextualize and interpret the current findings.

Theoretical Framework



Source: (source research, 2021)

Figure 1. The elements of the Social Cognitive Theory

Figure 1 depicts the social cognitive theory, a learning theory developed by Albert Bandura in 1986 (Bandura, 1986; 2002). The social cognitive theory provides a framework for understanding the active shaping of people and the influence of their environment on this process. In particular, the theory details observational learning and modelling processes and the impact of self-efficacy on the production of behaviour. Bandura claimed that observational learning through which people observe and imitate models they encounter in their environment enables people to acquire information much more quickly. Perceptions of self-efficacy influences people's choices and beliefs in themselves, including the goals they choose to pursue and the efforts they put into them, how long they are willing to persevere in the presence of obstacles and setbacks, and the outcomes they expect. (Vinney, 2019).

H₁: Dietary practices have changed since the start of the COVID-19 pandemic.

H₀: Dietary practices have not changed since the start of the COVID-19 pandemic.

The social cognitive theory applies to the context of this study because, during the pandemic, different individuals have made healthy lifestyle changes, including dietary practices, to adjust to the impact of the COVID-19 pandemic on their lives. Therefore, based on the theory, through one's belief in their self-efficacy, one can observe these behaviours and make a change to impact their health positively.

Literature Review

COVID-19, a disease caused by the novel coronavirus, became a global health threat and subsequently become a pandemic. COVID-19 pandemic imposed a new set of challenges for the individuals to maintain a healthy diet. First, the state of curfew announced in many countries

around the globe led all public and private sector institutions, except for health care facilities and a limited number of essential services, to close down, and if possible carried its operation remotely (without face to face interactions) (Naja & Hamadeh, 2020).

Ruiz-Roso et al. (2020) showed that South American residents demonstrated a positive change in their dietary practices. In support, Nakamura, Shirai & Sakuma (2021) showed that the Japanese also experienced a positive change in dietary practices during the COVID-19 Pandemic. According to Del Pozo de la Calle et al. (2012), Spanish residents a 20% increase in consumption. On the contrary, Del Pozo de la Calle et al. (2012) reported a conflict between increases and decreases emanating from other European countries. Also, Vu et al. (2021) conducted a study that assessed the association between consumption patterns and the development of COVID-19.

Although COVID-19 restrictions limit interpersonal contact and transmission, many experts have voiced their concerns about the long-lasting effect of curfews on an individual's mental and physical health. There was a positive association between coffee consumption and the development of COVID-19 disease (Vu et al., 2021). There was a negative association between animal protein consumption and COVID-19 lockdown (Ruiz-Roso et al., 2020). In contrast, there was no change in the association between animal protein consumption and COVID-19 lockdown for Japanese residents and Iranian hospital patients (Nakamura, Shirai & Sakuma, 2021; Mohseni et al., 2020).

Lockdown has restricted the number of hours permitted for outdoor physical activities and people's access to fresh food (Bennett et al., 2021). Individuals consume food products that lower their immunity, resulting in a positive association between dietary consumption and the development of COVID-19 (Vu et al., 2021). On the contrary, there was a reduction in vitamins and minerals (Del Pozo de la Calle et al., 2012). Previous research has shown that increased stress during a global pandemic can severely impact an individual's lifestyle habits (Bennett et al., 2021). There was a positive association between the consumption of fruits of fruit, vegetables, and animal proteins during the COVID-19 lockdown (Del Pozo de la Calle et al., 2012; Ruiz-Roso et al., 2020; Vu et al., 2021; Sidor & Rzymiski, 2020; Ruiz-Roso et al., 2020; & Amatori et al., 2020). Dietary consumption of food items increased from 40% before the COVID-19 to 75% during the pandemic (Del Pozo de la Calle et al., 2012). However, there was information about dietary habits in many European countries (Del Pozo de la Calle et al., 2012). Nevertheless, stress and anxiety increase alcohol intake and consumption of sugary foods (Bennett et al., 2021). There was an increase in the consumption of sweets, sugary, and fatty foods during the COVID-19 lockdown (Del Pozo de la Calle et al., 2012; Ruiz-Roso et al., 2020; Sidor & Rzymiski, 2020; & Ruiz-Roso et al., 2020). A positive association existed between alcohol consumption and the action of COVID-19 lockdown (Del Pozo de la Calle et al., 2012; & Sidor & Rzymiski, 2020). Positive lifestyle habits also have emerged from the pandemic, including more time for cooking and reduced fast-food consumption (Bennett et al., 2021). There is a positive association between dietary consumption and the health status of college students during COVID-19 (Amatori et al., 2020).

Bennett et al. (2021) indicated that various psychological changes have also affected food-related behaviours during COVID-19. For example, people at low risk for the COVID-19 infection who received extensive communication about the risk of the disease were likely to experience stress. Risk perception was associated with COVID-19 and influence people's behaviour of food purchase and consumption. The increased restrictions on movement amid COVID-19 strengthen people's survival instincts, forcing them to consider a "new normal" taking on the behaviour of "active agents."

Social cognitive theory underpins this research because people's proactive behaviours influence others while experiencing environmental influence (e.g., COVID-19). Some of the proactive behaviours during COVID-19 were: a decrease in social activities, an increase in the use of delivery services, increased purchase of more packaged hygienic food, and purchasing fewer fresh foods with a longer shelf-life. Furthermore, people practised other positive behaviours, which became standard practise leading to decreased shopping trips, increased consumption of healthy foods, and more home-cooked meals, boosting their immune system (Vinney, 2019).

To maintain good health and normal immune function, consuming essential nutrients through a well-balanced diet in fruits, vegetables, whole grains, plants, animal protein, and healthy fats is critical (Abbas & Kamel, 2020). Del Pozo de la Calle et al. (2021) contend that a positive association between the consumption of whole foods and fibres and COVID-19 lockdown. In COVID-19 infected individuals, nutritional status is a crucial factor for optimal prognosis and impacts the clinical severity of COVID-19. Therefore, dietary supplementation with selected vitamins (e.g., A, B, C, and D), minerals (selenium, zinc, and iron), and Omega-fat acids serve as a part of treatment options for COVID-19 patients. (de Farai Coelho-Ravagnaniet, al., 2021; Zhan, Chen & Liu, 2021).

Materials and Methods

This study utilized an associational cross-sectional research design using a non-probability sampling technique (Babbie, 2010; Creswell, 2013; Neuman, 2014; Polit, 1996; Rea & Parker, 2014). According to Bhandari (2020), quantitative research involves the process of objectively collecting and analyzing numerical data to describe, predict, or control variables of interest. The goals of quantitative research are to test causal relationships between variables, make predictions, and generalize results to broader populations (McLeod, 2019) which this study.

A standardized survey (questionnaire) tool created using Google Forms collected the data between May to June 2021 for analysis in this study. The questionnaire consisted of fifteen closed-ended questions. The sampled respondents in all the parishes of Jamaica received the survey tool through text messages, calls, emails, and face-to-face settings to voluntarily participate, without any incentives. Researchers shared the purpose of the study with participants and secured informed consent for the study. In addition, respondents received instructions on completing the survey. A total of 510 participants took part in the online survey. Data were collected across the three counties in Jamaica from individuals aged 18 to over 58 years.

The data were analyzed using the Statistical Packages for the Social Sciences (SPSS), cross-tabulations, percentages, frequencies, and bivariate analysis (chi-square) between the different variables. A two-tailed p-value test of 5% tested the null hypothesis and statistical significance.

Findings and Analysis of Results

Table 1 depicts the demographic characteristics of the sampled respondents. Of the sampled respondents (n=510), most of them were females 32 % (163), were in the 18-25 age cohort 36.5 % (186), and resides in the county of Middlesex 44.90 % (229).

Table 1. Demographic Characteristics of the Sampled Respondents, n=510

Details	% (n)
Gender	
Male	32.0 (163)
Female	68.0 (347)
Age Cohort	
18-25	36.5 (186)
26-33	26.9 (137)
34-41	10.8 (55)
42-49	8.0 (41)
50-57	10.6 (54)
58+years	7.3 (37)
Area of Residence (parish)	
St. Elizabeth	26.5 (135)
Manchester	21.4 (109)
Westmoreland	3.3 (17)
Trelawny	1.0 (5)
St. Thomas	1.8 (9)
Portland	1.2 (6)
St. Mary	0.2 (1)
Clarendon	8.8 (45)
Kingston and St Andrew	16.5 (84)
St Ann	1.8 (9)
St James	2.9 (16)
St Catherine	12.7 (65)
Hanover	2.0 (10)

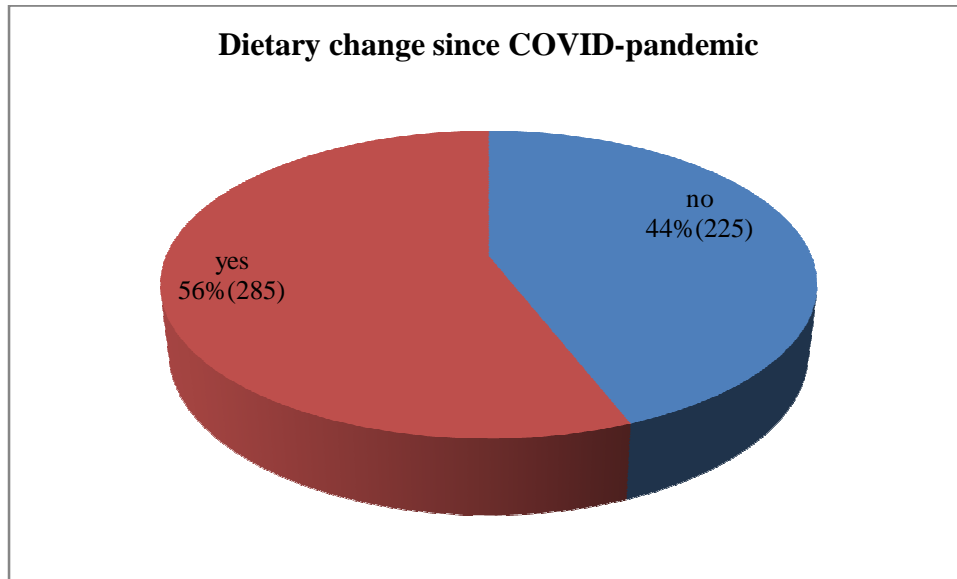


Figure 2. Respondents' dietary practices

Figure 2 depicts the data of the sampled respondents' dietary practices. Of the sampled respondents, 55% (285) indicated that they had a change in dietary practices, while 44 % (225) indicated that their dietary practices did not change.

Table 2 depicts data on the sampled respondents, of which 35.3 % (180) had a neutral response to the increased intake of immunity-boosting foods. However, 32.9 (168) agreed that they consumed fewer fast foods compared to before the pandemic. Furthermore, 36.1 % (184) strongly disagreed that they consumed more alcohol than before the pandemic. In addition, 24.7% (126) disagreed with consuming more comfort foods, and 25.9 (132) disagree with having an increased intake of sugary beverages.

Table 2. Eating habits changed during the COVID-19 pandemic, n=510

Details	% (n)
Increase intake of immunity-boosting foods (e.g., garlic, turmeric, citrus fruits)	
Strongly disagree	7.8 (40)
Disagree	13.5 (69)
Neutral	35.3 (180)
Agree	26.1 (133)
Strongly agree	17.3 (8)
Consumed less fast food compared to before the COVID-19 Pandemic	
Strongly disagree	9.8 (50)
Disagree	14.3 (73)
Neutral	25.1 (128)
Agree	32.9 (168)
Strongly agree	17.8 (91)
Consumed more alcohol than before the COVID-19 Pandemic	

Strongly disagree	36.1 (184)
Disagree	26.3 (134)
Neutral	18.2 (93)
Agree	10.2 (52)
Strongly agree	9.2 (47)
Consumed more fruits and vegetables than before COVID-19 Pandemic	
Strongly disagree	8.2 (42)
Disagree	17.5 (89)
Neutral	34.9 (178)
Agree	25.3 (129)
Strongly agree	14.1 (72)
Consumed more comfort food (ice cream, cakes, and snacks)	
Strongly disagree	19.2 (98)
Disagree	24.7 (126)
Neutral	22.0 (112)
Agree	21.4 (109)
Strongly agree	12.7 (65)
Increase Intake of sugar-sweetened beverages (carbonated drinks, sugary juices)	
Strongly disagree	19.8 (101)
Disagree	25.9 (132)
Neutral	24.1 (123)
Agree	19.8 (101)
Strongly agree	10.4 (53)

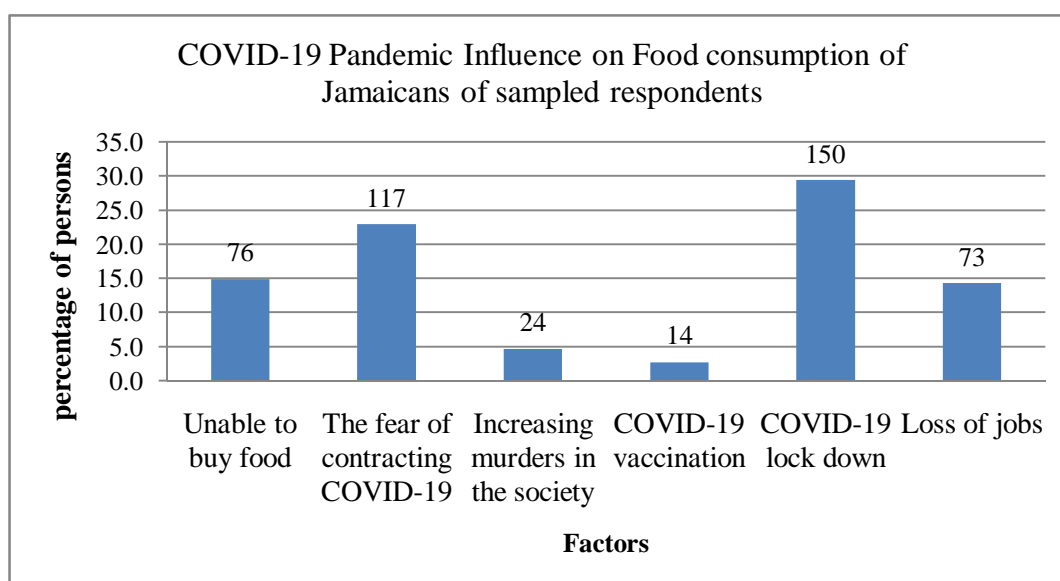


Figure 3. COVID-19 pandemic influence on Food Consumption of sampled Respondents

Figure 3 depicts the data on the factors that influenced the dietary change of the respondents, with 29.4% (150) reflecting dietary changes in response to the COVID-19 lockdown, 22.9% (117) reflected those whose dietary practices changed because of the fear of contracting COVID-19. Furthermore, 14.9% (76) reflected those whose change in diet was influenced by being unable to buy food, 14.3% (73) reflected those whose diet changed because of the loss of jobs, 4.7% (24) increase murders influenced dietary change in society, and 2.7% (14) were influenced by COVID-19 vaccination.

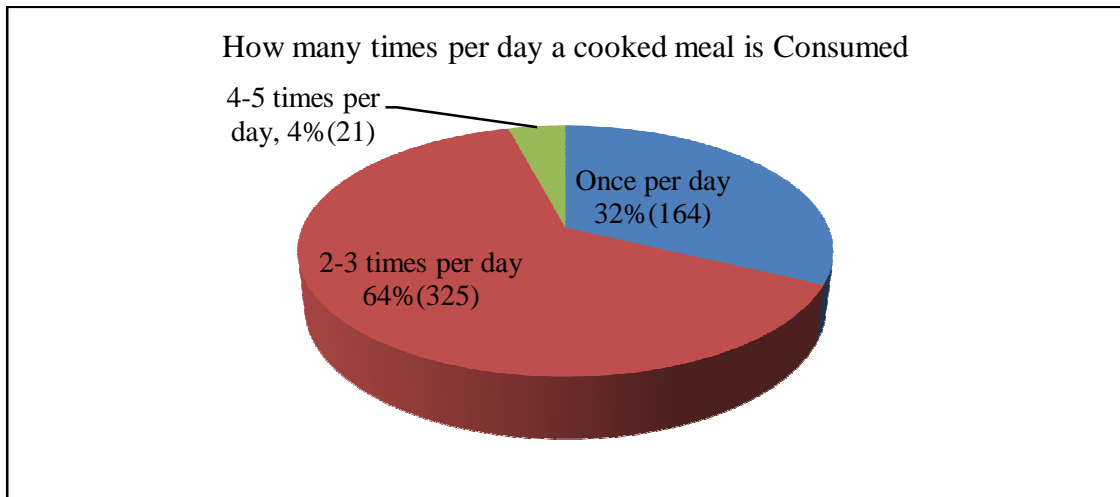


Figure 4. How many times per day a cooked meal is consumed

Figure 4 presents the data on how many times per day the respondents consumed a cooked meal since the start of COVID-19 (March 2020). Of the sampled respondents, the majority of the 64% (325) consumed a cooked meal 2-3 times per day, 32.2% (164) consumed a cooked meal once per day, 4.1% (21) consumed a cooked meal 4-5 times per day, and none of the respondents consumed a cooked meal six or more times.

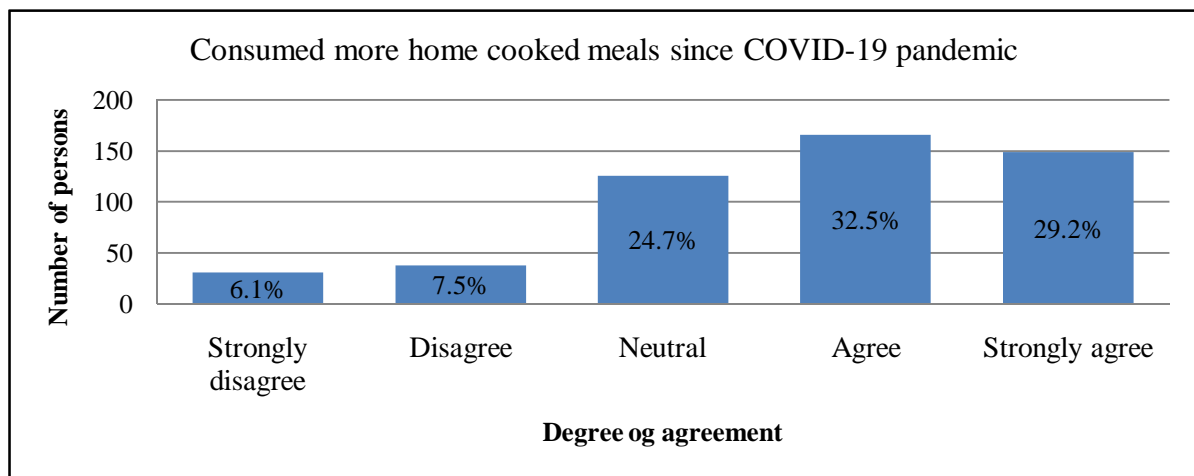


Figure 5. Consumed more home-cooked meals since the COVID-19 pandemic

Figure 5 depicts the data on the consumption of more home-cooked meals since the start of COVID-19 (March 2020). Of the sampled respondents, the majority of the 32.5% (166) agreed,

29.2% (149) strongly agreed, 24.7% (126) were neutral, while 7.5% (38) disagreed, and 6.1% (31) strongly disagreed.

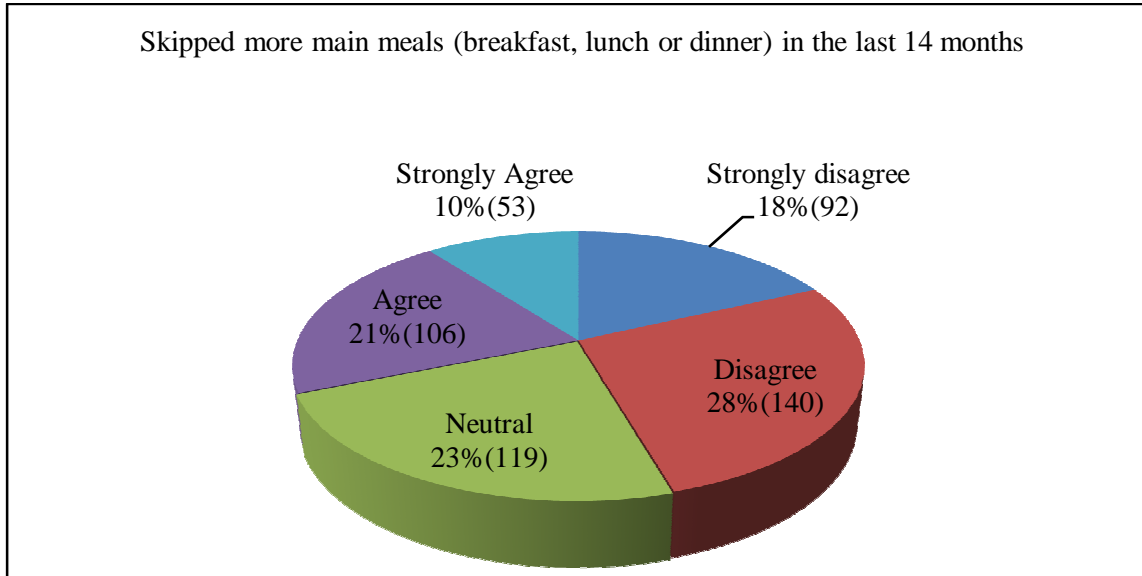


Figure 6.Skipped more main meals (breakfast, lunch, or Dinner) Since the COVID-19 pandemic

Figure 6 depicts data on respondents who have skipped more main meals since the start of COVID-19 (March 2020). Of the sampled respondents, most of them, 28% (140) disagreed, 23% (119) were neutral, 21% (106) agreed, 18% (92) strongly agreed, and 10% (53) strongly agreed.

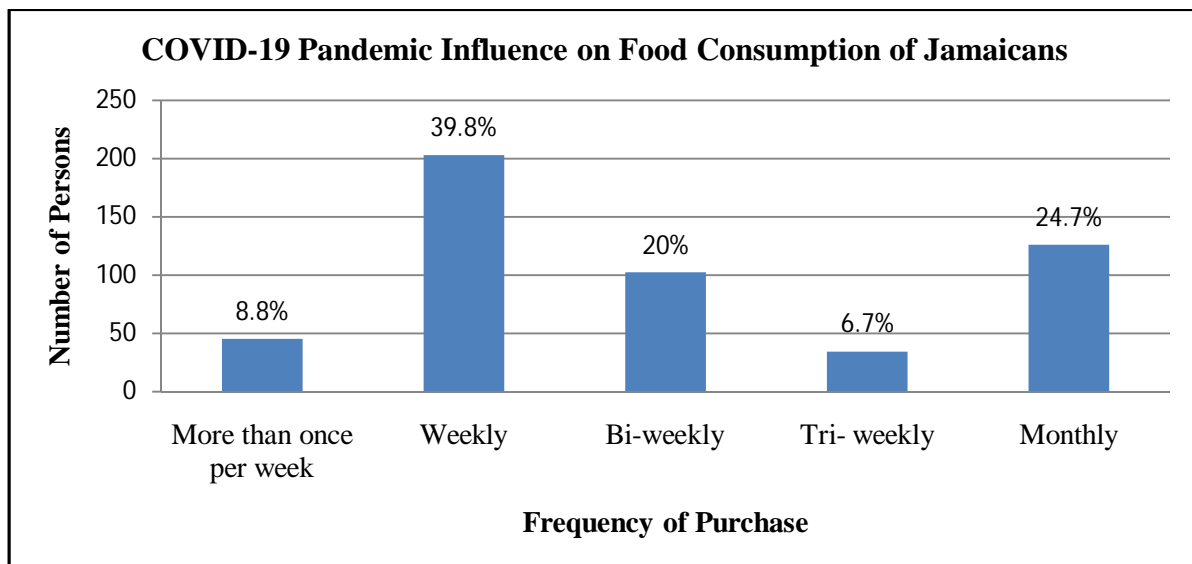


Figure 7.COVID-19 Pandemic influence on food consumption of sampled respondents

Figure 7 depicts show often the respondents were able to buy vegetables, fruits, and legumes since the start of COVID-19 in March 2020. Of the sampled respondents, 39.8% (203) purchased these items weekly, 24.7% (126) bought these items monthly, 20% (102) purchased these items bi-weekly, 8.8% (45) bought these items more than once per week, and 6.7% (34) bought these items tri-weekly.

Table 3 depicts a cross-tabulation between change in dietary practices and gender of Jamaicans. Of the 32 % (163) males who participated, 31.2% (89) had a change in diet. Of the 68 % (347) females that participated, 68.8% (196) had a change in diet. The cross-tabulation and Chi-square test findings revealed no statistical association between the two variables as mentioned above ($\chi^2_{\text{critical}} = 5.02 > \chi^2_{\text{calculated}} = 1.159$, $P = 0.69$). Therefore, we failed to reject the null hypothesis.

Table 3.A cross-tabulation between change in dietary practices and gender of sampled respondents, n=510.

Details		Changed dietary practices		Total
		Yes	No	
Gender	Male	89	74	163
		31.20%	32.90%	32%
	Female	196	151	347
		68.80%	67.10%	68%
Total		285	225	510
		100%	100%	100%

Table 4 depicts a cross-tabulation between gender and consumption of more alcohol than before the pandemic. Of the sampled respondents, 67.1 % (233) of females disagreed, and 52.2 % (85) of the males disagreed that their alcohol consumption increased 22.7 % (37) of the males and 16.1 % (56) of the females were neutral, indicating that their level of alcohol consumption remained the same. 25.2 % (41) of the males agreed that their alcohol consumption increased, while 16.7% (58) of the females agreed that they had increased alcohol consumption. The findings revealed that there is a statistical relationship between the two aforementioned variables ($\chi^2_{\text{critical}} = 11.14 < \chi^2_{\text{calculated}} = 12.082$, $P = 0.017$). Hence, we reject the null hypothesis.

Table 4.A cross-tabulation between gender and increased consumption of alcohol of sampled respondents, n=510.

Details		Gender		Total
		Male	Female	
Increase in alcohol consumption	Strongly disagree	51	133	184
		31.3%	38.3%	36.1%
	Disagree	34	100	134
		20.9%	28.8%	26.3%
	Neutral	37	56	93
		22.7%	16.1%	18.2%
Agree	19	33	52	
	11.7%	9.5%	10.2%	
Strongly agree	22	25	47	
	13.5%	7.2%	9.2%	
Total		163	347	510
		100.0%	100.0%	100.0%

Discussion

The foods that we consume have a direct impact on our general health or well-being (Australian Government, 2019; Firth, Gangwisch, Borsini, Wootton, & Mayer, 2020; Lachance & Ramsey, 2015; Mental Health Foundation, 2021). Having good dietary practices play a significant role in promoting and maintaining good health, preventing some chronic diseases, treating others, and helping the body recover from illnesses (Harvard University, 2021; Woteki and Thomas, 1993), and therefore explain the rationale behind food tips promulgated by the World Health Organization (WHO, 2021). Social cognitive theory is a learning theory developed by Albert Bandura in 1986. The theory provides a framework for understanding how people are actively shaped and are shaped by their environment (Vinney, 2021). This frame work supports this study in the context of the observed behaviours during the pandemic. Different individuals made healthy lifestyle changes, including dietary practices, to adjust to the impact of the COVID-19 pandemic on their lives. Therefore, our study was based on the dietary practices of Jamaicans during the COVID-19 pandemic. Throughout this research, researchers examined whether Jamaicans' eating habits changed, how the pandemic influenced food consumption, and the diet intake of Jamaicans like before and during the COVID-19 pandemic.

Over one month (May-June 2021), a total of 510 participants took the online survey. Data were collected across the three counties in Jamaica from individuals aged 18 to over 58 years. Table 1 depicts the demographic data of all sampled respondents. Of all the respondents, most are females with 68%, while the male is 32%. Most of the respondents are young adults (18-25), 36.5% of all responses. The majority of these persons reside in the Middlesex area (Clarendon, Manchester, St. Ann, St. Catherine, and St. Mary) data collection, data analysis showed that the eating habits of Jamaicans have changed since the COVI-19 pandemic. According to Figure 2, 56% of respondents indicated that their dietary practices have changed since COVID-19, while 44% said their dietary practices have not changed. This result shows that people have become more health literate since the COVID-19 pandemic, which is in keeping with the dietary guidelines promulgated by the Jamaican Ministry of Health in 2015 (Food and Agriculture Organization, 2015).

Based on social cognitive theory, people's behaviours are influenced by their culture inclusive of eating habits (Reddy & Anitha, 2015). Hence, eating habits are determined by a plethora of factors (biochemical, educational, physiological, and psychological factors), and now the environmental must be brought into the discourse of food consumption. The COVID-19 pandemic has influenced the food consumption of Jamaicans in many ways, which is somewhat similar to what obtained in Denmark, Germany, and Slovenia (Janssen, Chang, Hristov, Pravst, Profeta, & Millard (2021) and Ethiopia (Hirvonen, de Brauw, & Abate, 2021). The current study showed that 29.6% of the respondents indicated that their dietary changes were influenced by COVID-19 lockdown, 2.31% by fear of contracting COVID-19, 15.1% by being unable to buy food, 14.1% by loss of jobs, 4.7% by increase murders in society and 2.7% by COVID-19 vaccination. Figure 5 presents data on respondents who have skipped more main meals since the

start of COVID-19. Of the sampled respondents, most disagreed with 27.5%, 23.3% were neutral, 20.8% agreed, 18% strongly agreed, and 10.4% strongly agreed. This study shows that people are primarily at home and started consuming all the main meals necessary for proper body function.

According to research, people should eat immunity-boosting foods such as garlic, turmeric, and citrus to enhance the immune system (Vinney, 2021). The existing evidence suggested that the only sustainable way to survive in the current situation is to strengthen the immune system. An adequate intake of zinc, iron, and vitamins A, B 12, B6, C, and E is essential for maintaining immune function (Aman & Masood, 2020). In the present study, table 2 shows an increase in respondents' intake of immune-boosting foods as more responses were in agreement. Of all the samples, 35.3 % indicated it was neutral, 26.1% agreed, 17.3% strongly agreed, while 13.5% disagreed and 7.8% strongly disagreed.

This study further detected a significant reduction in fast food consumption among Jamaicans, which concurs from Denmark, Germany, and Slovenia (Janssen, Chang, Hristov, Pravst, Profeta, & Millard (2021). Table 2 presents the data on the decreased intake of fast food since the start of COVID-19. Of all the sampled respondents, the majority, 32.9%, agreed, followed by 25.1% neutral, 17.8% of them strongly agreed, while 14.3% disagreed and 9.8% strongly disagreed. It is plausible that the rise in home cooking is related to the decrease in fast food consumption as people have more free time due to the curfews and lockdowns. However, another possible explanation is that people want to eat healthier to prevent the spread of COVID-19, thus the increase in home cooking. Figure 4 presents the data on the consumption of more home-cooked meals since the start of COVID-19. Of the sampled respondents, the majority of the 32.5% agreed, 29.2% strongly agreed, 24.7% were neutral, while 7.5% disagreed and 6.1% strongly disagreed.

Figure 3 shows that since COVID-19, most Jamaicans consume cooked meals 2-3 times per day, 63.7%, 32.2% consumed once per day, and the minority consumed 4-5 times per day. Table 2 also presents the data on the increased consumption of comfort food such as ice cream, cakes, and snacks, since the start of COVID-19. Of the sampled respondents, the majority of the 24.7% disagreed, 22% were neutral, 21.4% agreed, 19.2% strongly disagreed, and 12.7 % strongly agreed. Home-cooked meals can also be a factor that contributes to this result, as elaborated on above.

Table 2 presents the data on the increased alcohol consumption since the start of COVID-19 (March 2020). Of the sampled respondents, the majority of the 36.1% strongly disagreed, 26.3% disagreed, 18.2% of them were neutral, while 10.2% agreed and 9.2% strongly agreed. The result of this study shows that most of the respondent's alcohol consumption has not increased. The consumption of fruits and vegetables is recommended to support the immune system and help fight viruses, especially during this Pandemic (Aman & Masood, 2020). Table 2 presents the data on the increased consumption of fruits and vegetables since the start of COVID-19. Of the sampled respondents, 34.9% were neutral, 25.3% agreed, 17.5% disagreed, 14.1% strongly

agreed, and 8.2% strongly disagreed. The results show that people are now consuming more fruits and vegetables than before the pandemic because they are becoming more aware and health literate, as stated above. In addition, groceries purchase increased in frequency. Figure 6 shows how often Jamaicans buy vegetables, fruit and legumes since the COVID-19 Pandemic. The majority of the respondents started to make purchases weekly 39.8%, monthly 24%, bi-weekly 20%, more than once per week 8.6% and minority made purchases tri-weekly 6.7%. The results imply that people started prioritizing their health, resulting in more vegetables, fruit, and legumes to help fight the virus.

Table 2 presents the data on the increased intake of sweetened beverages since the start of COVID-19. Of the sampled respondents, 25.9% disagreed, 24.1% were neutral, 19.8% strongly disagreed, the same percentage also agreed, and 10.4% strongly agreed. This result can be that Jamaicans are now consuming more water than sweetened beverages. Water provides proper functioning of systems, and drinking more water can help prevent toxins from building up in the body; this would, in turn, have a positive impact on the immune system.

Table 3 presents a cross-tabulation between gender and change in dietary practice. Of the 32 % of males who participated, 31.2% had a change in diet. Of the 68 % females that participated, 68.8% had a change in diet. Thus, the data shows that more females had a change in diet than males. Testing the hypothesis showed no statistical relationship between the two variables ($\chi^2_{\text{critical}} = 12.83 > \chi^2_{\text{calculated}} = 5.854$, $P = 0.321$). Hence, we fail to reject the null hypothesis. Therefore, gender does not have any statistical influence on the change in dietary practices.

Table 4 presented a cross-tabulation between gender and increased consumption of alcohol during the Pandemic. Of the sampled respondents, 67.1% of females disagreed, and 52.2% of the males disagreed that their alcohol consumption increased 22.7% of the males and 16.1% of the females were neutral, indicating that their level of alcohol consumption remained the same. 25.2 % of the males agreed that their alcohol consumption increased, while 16.7% of the females agreed that they had increased alcohol consumption. Thus, more females than males had an increase in alcohol consumption. The hypothesis testing resulted in findings that revealed a statistical relationship between the two variables mentioned above ($\chi^2_{\text{critical}} = 11.14 < \chi^2_{\text{calculated}} = 12.082$, $P = 0.017$). Hence, we rejected the null hypothesis.

Conclusion

This research provides information on the dietary practices of Jamaicans during the COVID-19 pandemic. Throughout this research, the researchers examined whether Jamaicans' eating habits changed, how the pandemic influenced food consumption, and the diet intake of Jamaicans like before and during the COVID-19 pandemic. Over one month (May-June 2021), a total of 510 participants took the online survey. Data were collected across the three counties in Jamaica from individuals aged 18 to over 58 years. The majority of respondents were females between the age of 18 -25 and resided in the Middle sex area of Jamaica.

The current research suggests that eating habits have changed since the COVID-19 pandemic, influencing food consumption. COVID-19 lockdown was a factor for those who experienced dietary change, increasing the practice of home-cooked meals and reduce fast-food consumption, resulting in the absence of skipping main meals. Like Jamaicans, eating behaviour in other nations have equally changes since the COVID-19 pandemic (Eftimov, Popovski, Petković, Seljak, & Kocev, 2020; Guney, & Sangun, 2021

The research results identify the factors that impacted Jamaican's diet intake before and during the COVID-19 pandemic. The researchers contend that people became more health literate and started to consume more fruits and vegetables along with immunity, boosting foods as was recommended that they help enhance the immune system and fight this virus. For most respondents, alcoholic beverages did not increase during this pandemic. However, more females than males had an increase in alcohol consumption, nor did the intake of sweetened beverages. Most Jamaicans' dietary practices have changed since the COVID-19 pandemic. Furthermore, the study revealed that dietary practices improved individuals eating healthier and reduced consumption of foods that had a negative health impact.

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