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LIFESTYLE CHANGES RELATED BEHAVIOR IN THE TIME OF CORONAVIRUS DISEASE (COVID-19) PANDEMIC

Author's Name: Noel L. Dominando. Ed.D.

Affiliation: *DepEd-Senior High School in Magalang Stand Alone II, City of San Fernando, Pampanga, Philippines*

E-Mail: christmasdominado@yahoo.com

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Abstract

This study aims to assess the life-style changes related behavior of learners during the time of coronavirus disease (COVID19) pandemic. The respondents of the study were the 198 learners of Senior High School in Magalang Stand Alone 2 Division of Pampanga-Philippines. Descriptive statistics such as Frequency, Percentage Distribution, Weighted Mean, and F-test (one-way ANOVA), were used for data analysis. The findings of the study revealed that the majority of the respondents were 18 years old. In sex of the respondents 61.61% or (122) were females; 38.38% or (76) were males, 61.61% or (122) resides in rural area; 38.38% or (76) in urban area. On the socio-economic status, the highest percentage was 79.79% or (158) in the middle class, and the lowest was 9.09% (18) were in the lower class. For the body mass index 87.87% or (174) were classified as normal; 1% (20) respondents were obese, weight change during COVID19, 52% (104) gained weight; 15% or (29) lost weight during the time of the pandemic. The respondents' lifestyle changes behavior in the time of coronavirus disease (COVID19) pandemic with the highest mean of 3.15 support of their family and friends in eating healthy changed and the lowest mean of 2.72 their intake of a balanced diet. It was also revealed that the null hypothesis was rejected and therefore conclude that there is a highly significant difference between respondents' demographic profile and lifestyle changes related behavior during the time of the pandemic.

***Keywords**: Coronavirus Disease, Behavior, Lifestyle Changes*

INTRODUCTION

Coronavirus (COVID-19) widespread has brought about an obliterating risk to human society in terms of wellbeing, economy, and way of life (Woods et al., 2020). Coronavirus (COVID-19) infection, Governments have upheld confinements on open-air exercises or indeed collective isolate on the populace (Mattioli et al., 2020). Moreover, the spread of coronavirus (COVID-19), the World Wellbeing Organization and the larger part of governments have prescribed that the whole human populace ought to 'stay-at-home' the spread of coronavirus (COVID-19), the World Wellbeing Organization and the standard share of governments have suggested that the complete human populace ought to 'stay-at-home' (Matias et al., 2020). Additionally, The coronavirus (COVID-19) widespread is having a significant impact on all angles of society, counting mental wellbeing and physical wellbeing (Holmes et al., 2020). Thus, coronavirus (COVID-19) confinements such as the closure of schools and parks, and the cancellation of sports tournament and classes around the globe may leads to physical inactivity of learners (Dunton et al., 2020). Furthermore, Social confinement amids the coronavirus (COVID-19) widespread can increment physical inertia and the worldwide problem of cardiovascular illness (Pecanha et al., 2020). The coronavirus (COVID-19) widespread speaks to a gigantic effect on human wellbeing, causing a sudden way of life changes, through social separating and

confinement at domestic, with social and financial results (Di Renzo et al., 2020). On the other hand, Isolate and other lockdowns obedient appear guarantee in lessening the amount of coronavirus (COVID-19) contaminations and passing. It is sensible to expect that lockdown leads to diminished levels of physical movement within the common populace (Füzéki et al., 2020). social separation might be a hazard gauge for, and may contribute to, the poorer by and large cognitive execution, speedier cognitive decay, poorer official working, expanded pessimism and depressive cognition, increased affectability to social threats, a corroborative predisposition in social cognition that's self-protective and incomprehensibly self-defeating, increased human attribution and disease that undermines social cohesion (Cacioppo & Hawkley, 2009). Social confinement and loneliness are related to expanded mortality, but it is dubious whether their impacts are autonomous or whether loneliness speaks to the passionate pathway through which social confinement impedes wellbeing (Steptoe et al., 2013). Social confinement may well be a major and transcendent prosperity issue among community-dwelling more prepared grown-ups, driving them to different negative prosperity conditions (Nicholson, 2012). Social confinement may influence wellbeing, counting health-related behavioral and natural components (Shankar et al., 2011). This pandemic affects the life-style of the populace. Life-style behaviors, quality of rest, stress reactions, and natural variables impact the advancement and movement of cardiovascular infection results. Since standard physical movement, solid count of calories, and the nonattendance of smoking drag out life and upgrade prosperity it is vital for those dependable for the wellbeing and prosperity of the open to advance solid lifestyle behaviors as the foundation of essential and auxiliary avoidance of vascular condition (Cascio, 2015). The widespread of modern coronavirus (COVID-19) is undermining our wellbeing, economy, and life fashion (Foddai et al., 2020). Moreover, the coronavirus (COVID-19) widespread might lead to extra mental wellbeing issues. Be that as it may, few think about have inspected rest issues, sadness, and posttraumatic indications among the common grown-up populace amid the coronavirus (COVID-19) episode, and small is known around adapting behaviors (Guo et al., 2020). The worldwide coronavirus (COVID-19) widespread is influencing people's work-life adjust over the world. For scholastics, restriction arrangements sanctioned by most nations have suggested a sudden switch to home-work, a move to online educating and mentoring, and an alteration of investigation exercises (Corbera et al., 2020). Finally, this pandemic has too altered the public's life fashion; caused broad work misfortunes and weakened the food of several of individuals, as businesses take closed down to regulate the spread of infection. This widespread has besides changed the public's life fashion; caused wide work mishaps and weakened the nourishment of millions of people, as businesses have closed down to regulate the spread of disease (Saadat et al., 2020). Narrow endeavors have been made in this field by researchers across the research community. Research conducted was to design a questionnaire with a sufficient number of items that will be short, crisp, scientifically structured, validated, easy-to-use, and applicable for people of south-east Asian countries to assess their lifestyle-related behavior. Hence, the objective of this study is to assess the life-style changes related behavior of learners during the time of coronavirus disease (COVID19) pandemic.

STATEMENT OF THE PROBLEM

1. How may the demographic profile of the respondents be described in terms of:
   1.1 age;
   1.2 sex;

1.3 type of residence ;
1.4 socio-economic status;
1.5 body mass index; and
1.6 weight change during coronavirus disease (COVID 19) pandemic?

2. How may the lifestyle changes related behavior of the respondents during the coronavirus disease COVID19 pandemic be described?
3. Is there a significant difference between the demographic profile and lifestyle changes related behavior of the respondents?

HYPOTHESIS

Ho - There is no significant difference between the demographic profile and lifestyle changes related behavior of the respondents?

Ha - There is a significant difference between the demographic profile and lifestyle changes related behavior of the respondents?

METHODOLOGY

A descriptive research design utilizing a random sampling technique was used to gather data from sixteen sections of Senior High School in Magalang Stand Alone 2 Division of Pampanga. Data was gathered using a self-administered questionnaire through a google form. The questionnaire took 7 minutes to complete. This study in compliance with the Data Privacy Act (DPA) of 2012, and its Implementing Rules and Regulations (IRR) effective since September 9, 2016, authorizing the Researcher to use the data from this survey to assess the lifestyle changes related behavior of Senior High School learners. Store the data for the analysis of results and accomplishment of the research study. The respondents were informed about the purpose of the study and were confidential. The questionnaire was consist of two parts. The demographic profile of the respondents was integrated into Part I. Part II consist of life-style changes related behavior questionnaire which was developed by Kumari, A., Ranjan, P., Vikram, N. K., Kaur, D., Sahu, A., Dwivedi, S. N., Baitha, U., & Goel, A. (2020) questionnaire to assess changes in lifestyle-related behavior during COVID 19 pandemic. The value of Cronbach's alpha of the questionnaire came out to be (α =0.72) that suggests a good internal consistency. Respondents were required to check the appropriate score base on the Likert scale ranging from 5 (significantly increased), 4 (Slightly increased), 3 (Grossly similar), 2 (Slightly decreased), and 1 (Significantly decreased). For data analysis, the SPSS was being used. F-test (one-way ANOVA), was used for data analysis.

LIMITATIONS

In the field of research, this undertaking has limitations. The lesser sample, conducting the study at one public institution, and random sampling survey design are the limitations of this undertaking which can affect the broad base. However, to researcher knowledge, this is the first research to investigate the life-style changes behavior of Senior High School learners in the Division of Pampanga in the Philippines.

RESULTS AND DISCUSSION

Demographic profile of the respondents

The respondents' demographic profile are described in terms of age, sex, types of residence, socio-economic status, body mass index, and weight change during coronavirus disease (COVID19).

Age

The data showed that the majority of 34.84% or (69) of the respondents were 18 years old, while 34% or (67) was 17 years of age, 30.81% or (61) were 16 years old, and 0.30% or (1) were 15 years of age. A justification that the age range of Senior High School learners were 15 to 18 years old. Education in the Philippines, Senior High School be made of two years of specialized higher secondary education grades 11 and 12, ages 16 to 18 (Macha, Mackie, & Magaziner, 2018).

Sex

In the time being, 61.61% or (122) of the respondents were females while 38.38% or (76) were males. This implies that Senior High School in Magalang Stand Alone 2 were female-dominated institution since it had been apparent that the school has indeed more female learners than male in each class section.

TYPE OF RESIDENCE

The data revealed that 61.61% or (122) of the respondents reside in a rural area, as to the remaining 38.38% or (76) were in the urban area.

Socio-economic Status

As regards the socio-economic status, 79.79% or (158) of the respondents were in the middle class, 11.11% or (22) were in the upper class, and 9.09% or (18%) were in the lower class. This simply shows that majority of parents were belong to middle class. National Statistical Coordination Board (now known as the Philippine Statistics Authority). The middle class plays within the gap between the poor and the rich, and based on these numbers, that line seems to be a lot thinner than what many of us perceived (Adrian, 2020).

Body Mass Index

The mean body mass index of the respondents is described in the following; 87.87% or (174) were normal, 6.06% or (12) respondents were underweight, 5.05% or (10) were described overweight, and 1% or (1) were obese. This implies that majority of the respondents in the time of the coronavirus disease (COVID 19) pandemic were in normal weight.

Weight change during COVID-19

The result of the weight change during coronavirus disease of the respondents designate in the following; 52% or (104) were gained some weight, 33% or (65) of the respondents were their weight is stable; and 15% or (29) of the respondents lost weight during the time of pandemic. This implies that weight gain is one of the many negative impacts of the pandemic among learners in all ages as they are sitting at home for long period of time and lack of physical activity. According to the study of Zachary et al. (2020) risk factors for weight gain during pandemic are inadequate sleeps, snacking after dinner, lack of dietary restraint, eating in response to stress, and reduced physical activity.

Table 1 Demographic Profile of the Respondents

Age	N	%
15	1	0.30%
16	61	30.81%
17	67	34%
18	69	34.84%

Sex		
Male	76	38.38%
Female	122	61.61%
Type of residence		
Urban	76	38.38%
Rural	122	61.61%
Socio-economic status		
Upper class	22	11.11%
Middle class	158	79.79%
Lower class	18	9.09%
Body Mass Index		
Underweight	12	6.06%
Normal	174	87.87%
Overweight	10	5.05%
Obese	2	1%
Weight change during COVID-19		
Weight is stable	65	33%
Lost weight	29	15%
Gained some weight	104	52%

Everyday life, since the coronavirus (COVID-19) pandemic, has made changes to general lifestyle. Table 2 presents the lifestyle changes related behavior of the respondents in the time of pandemic. Data has shown that the respondents obtain a highest computed mean of 3.15 with a descriptive rating ***grossly similar***; a mean of 2.72 was posted the lowest mean with a descriptive rating of ***grossly similar.*** This simply shows that lifestyle may be significantly changed due to the control measures, with the ensuing hazard of sedentary behavior. The COVID-19 widespread speaks to an enormous effect on human wellbeing, causing sudden way of life changes, through social distancing and isolation of locality, with result to trouble in financial, social, physical, and dietary habits and way of life (Di Renzo et al., 2020).

Table 2 Lifestyle Changes Related Behavior of the Respondents

Lifestyle Changes Statements	Mean	Descriptive Rating
1. During COVID pandemic, how has your probability of skipping one of the main meals (breakfast/lunch/dinner) changed?	3.08	Grossly Similar
2. During COVID pandemic, how has your habit of snacking between meals changed?	2.86	Grossly Similar
3. During COVID pandemic, how has your quantity/portions of meals and snacks changed?	2.88	Grossly Similar
4. During COVID pandemic, how has your daily intake of fruits and vegetables changed?	3.07	Grossly Similar
5. During COVID pandemic, how has your intake of a balanced diet (including healthy ingredients such as whole wheat,	2.72	Grossly Similar
6. During COVID pandemic, how has your consumption of junk food/fast food and fried food changed?	2.81	Grossly Similar
7. During COVID pandemic, how has your intake of sugar-sweetened beverages (carbonated soft drinks, sugar-sweetened juices) changed?	2.76	Grossly Similar
8. During COVID pandemic, how has your consumption of sweets/candies/chocolate changed?	2.93	Grossly Similar
9. During COVID pandemic, how has your participation in cooking new/traditional recipes changed?	2.95	Grossly Similar
10. During COVID pandemic, how has your consumption of unhealthy food when you are bored or stressed or upset changed?	2.72	Grossly Similar
11. During COVID pandemic, how has your intake of immunity-boosting foods (lemon, turmeric, garlic, citrus fruits and green leafy	2.78	Grossly Similar
12. During COVID pandemic, how has your intake of nutrition supplements to boost immunity changed?	2.95	Grossly Similar
13. During COVID pandemic, how has the support of your family and	3.15	Grossly Similar

friends in eating healthy changed?		
14. During COVID pandemic, how has your interest in learning healthy eating tips from the media	2.98	Grossly Similar
15. During COVID pandemic, how has your participation in aerobic exercise changed?	2.78	Grossly Similar
16. During COVID pandemic, how has your participation in leisure and household chores changed?	3.06	Grossly Similar
17. During COVID pandemic, how has your sitting and screen time changed?	3.14	Grossly Similar
18. During COVID pandemic, how have your hours of sleep changed?	3.03	Grossly Similar
19. During COVID pandemic, how has your quality of sleep changed?	3.02	Grossly Similar
20. During COVID pandemic, how have your stress and anxiety levels changed?	3.1	Grossly Similar

Table 3 revealed the analysis of variance for the significant difference with the lifestyle change concerning to age. Since the P-value of 0.000 is less than the significance level of 0.05, the research reject the null hypothesis and concludes that there is highly significant difference between the age and lifestyle change related behavior of the respondents in the time of coronavirus disease (COVID19) pandemic. COVID19 widespread has driven to life-changing challenges among people over the globe. Terms like "social distancing" and "self-isolation" have gotten to be a reality. As individuals are attempting to get accustomed with this, the control has radically impacted citizens' lives bringing around a sudden and radical alter in their daily schedule and way of life (Di Renzo et al., 2020).

Table 3 Significant Difference between Age and Lifestyle Changes Related Behavior

	Lifestyle Changes Statements	**F-Value**	**P-Value**	**Descriptive Rating**
	1. During COVID pandemic, how has your probability of skipping one of the main meals (breakfast/lunch/dinner) changed?	537.43	0.0000	
	2. During COVID pandemic, how has your habit of snacking between meals changed?	542.78	0.0000	
	3. During COVID pandemic, how has your quantity/portions of meals and snacks changed?	542.29	0.0000	
	4. During COVID pandemic, how has your daily intake of fruits and vegetables changed?	537.62	0.0000	
	5. During COVID pandemic, how has your intake of a balanced diet (including healthy ingredients such as whole wheat,	546.09	0.0000	
	6. During COVID pandemic, how has your consumption of junk food/fast food and fried food changed?	543.75	0.0000	
	7. During COVID pandemic, how has your intake of sugar-sweetened beverages (carbonated soft drinks, sugar-sweetened juices) changed?	544.95	0.0000	
	8. During COVID pandemic, how has your consumption of sweets/candies/chocolate changed?	540.75	0.0000	
Age	9. During COVID pandemic, how has your participation in cooking new/traditional recipes changed?	540.63	0.0000	***Highly Significant***
	10. During COVID pandemic, how has your consumption of unhealthy food when you are bored or stressed or upset changed?	545.89	0.0000	
	11. During COVID pandemic, how has your intake of immunity-boosting foods (lemon, turmeric, garlic, citrus fruits and green leafy	544.53	0.0000	
	12. During COVID pandemic, how has your intake of nutrition supplements to boost immunity changed?	540.69	0.0000	
	13. During COVID pandemic, how has the support of your family and friends in eating healthy changed?	535.66	0.0000	
	14. During COVID pandemic, how has your interest in learning healthy eating tips from the media	539.60	0.0000	

	15. During COVID pandemic, how has your participation in aerobic exercise changed?	544.57	0.0000	
	16. During COVID pandemic, how has your participation in leisure and household chores changed?	537.97	0.0000	
	17. During COVID pandemic, how has your sitting and screen time changed?	536.17	0.0000	
	18. During COVID pandemic, how have your hours of sleep changed?	538.58	0.0000	
	19. During COVID pandemic, how has your quality of sleep changed?	538.78	0.0000	
	20. During COVID pandemic, how have your stress and anxiety levels changed?	536.93	0.0000	

Findings from the analysis of variance indicated a statistically significant difference between lifestyle changes and sex. The P-value of 0.000 less than the significance level of 0.05, the research rejects the null hypothesis and concludes that there is a highly significant difference between the sex and lifestyle changes related behavior of the respondents in the time of coronavirus (COVID19) pandemic.

Table 4 Significant Difference between Sex and Lifestyle Changes Related Behavior

	Lifestyle Changes Statements	**F-Value**	**P-Value**	**Descriptive Rating**
	1. During COVID pandemic, how has your probability of skipping one of the main meals (breakfast/lunch/dinner) changed?	7079.96	0.000	
	2. During COVID pandemic, how has your habit of snacking between meals changed?	7118.39	0.000	
	3. During COVID pandemic, how has your quantity/portions of meals and snacks changed?	7114.66	0.0000	
	4. During COVID pandemic, how has your daily intake of fruits and vegetables changed?	7079.73	0.0000	
	5. During COVID pandemic, how has your intake of a balanced diet (including healthy ingredients such as whole wheat,	7141.01	0.0000	
	6. During COVID pandemic, how has your consumption of junk food/fast food and fried food changed?	7118.18	0.0000	
	7. During COVID pandemic, how has your intake of sugar-sweetened beverages (carbonated soft drinks, sugar-sweetened juices) changed?	7126.99	0.0000	
	8. During COVID pandemic, how has your consumption of sweets/candies/chocolate changed?	7091.65	0.0000	
Sex	9. During COVID pandemic, how has your participation in cooking new/traditional recipes changed?	7103.00	0.0000	***Highly Significant***
	10. During COVID pandemic, how has your consumption of unhealthy food when you are bored or stressed or upset changed?	7133.17	0.0000	
	11. During COVID pandemic, how has your intake of immunity-boosting foods (lemon, turmeric, garlic, citrus fruits and green leafy	7125.72	0.0000	
	12. During COVID pandemic, how has your intake of nutrition supplements to boost immunity changed?	7105.34	0.0000	
	13. During COVID pandemic, how has the support of your family and friends in eating healthy changed?	7059.85	0.0000	
	14. During COVID pandemic, how has your interest in learning healthy eating tips from the media	7094.32	0.0000	
	15. During COVID pandemic, how has your participation in aerobic exercise changed?	7127.14	0.0000	
	16. During COVID pandemic, how has your participation in leisure and household chores changed?	7082.31	0.0000	
	17. During COVID pandemic, how has your sitting and	7072.56	0.0000	

	screen time changed?			
	18. During COVID pandemic, how have your hours of sleep changed?	7082.97	0.0000	
	19. During COVID pandemic, how has your quality of sleep changed?	7083.44	0.0000	
	20. During COVID pandemic, how have your stress and anxiety levels changed?	7071.63	0.0000	

Discoveries from the analysis of variance in Table 5 revealed a numerically significant difference between lifestyle change and type of residence. The P-value of 0.000 less than the significant level of 0.05, the research reject the null hypothesis and determines that there is a highly significant difference between the type of residence and lifestyle changes related behavior of the respondents in the time of coronavirus disease (COVID19) pandemic.

Table 5 Significant Difference between Type of Residence and Lifestyle Changes Related Behavior

	Lifestyle Changes Statements	F-Value	P-Value	Descriptive Rating
	1. During COVID pandemic, how has your probability of skipping one of the main meals (breakfast/lunch/dinner) changed?	3435.04	0.0000	
	2. During COVID pandemic, how has your habit of snacking between meals changed?	3452.39	0.0000	
	3. During COVID pandemic, how has your quantity/portions of meals and snacks changed?	3450.78	0.0000	
	4. During COVID pandemic, how has your daily intake of fruits and vegetables changed?	3435.36	0.0000	
	5. During COVID pandemic, how has your intake of a balanced diet (including healthy ingredients such as whole wheat,	3462.90	0.0000	
	6. During COVID pandemic, how has your consumption of junk food/fast food and fried food changed?	3454.19	0.0000	
	7. During COVID pandemic, how has your intake of sugar-sweetened beverages (carbonated soft drinks, sugar-sweetened juices) changed?	3458.12	0.0000	
	8. During COVID pandemic, how has your consumption of sweets/candies/chocolate changed?	3443.51	0.0000	
Type of Residence	9. During COVID pandemic, how has your participation in cooking new/traditional recipes changed?	3445.45	0.0000	***Highly Significant***
	10. During COVID pandemic, how has your consumption of unhealthy food when you are bored or stressed or upset changed?	3461.05	0.0000	
	11. During COVID pandemic, how has your intake of immunity-boosting foods (lemon, turmeric, garlic, citrus fruits and green leafy	3457.08	0.0000	
	12. During COVID pandemic, how has your intake of nutrition supplements to boost immunity changed?	3446.00	0.0000	
	13. During COVID pandemic, how has the support of your family and friends in eating healthy	3427.91	0.0000	

	changed?			
	14. During COVID pandemic, how has your interest in learning healthy eating tips from the media	3442.29	0.0000	
	15. During COVID pandemic, how has your participation in aerobic exercise changed?	3457.41	0.0000	
	16. During COVID pandemic, how has your participation in leisure and household chores changed?	3436.52	0.0000	
	17. During COVID pandemic, how has your sitting and screen time changed?	3431.27	0.0000	
	18. During COVID pandemic, how have your hours of sleep changed?	3437.78	0.0000	
	19. During COVID pandemic, how has your quality of sleep changed?	3438.26	0.0000	
	20. During COVID pandemic, how have your stress and anxiety levels changed?	3432.53	0.0000	

As stated in Table 6, the data of the analysis of variance stipulates a statistically highly significant difference between the socio-economic status and lifestyle changes related behavior. The P-value of 0.000 less than the significant level of 0.05, the research reject the null hypothesis and concludes that there is a highly significant difference.

Table 6 Significant Difference between Socio-economic Status and Lifestyle Changes Related Behavior

	Lifestyle Changes Statements	**F-Value**	**P-Value**	**Descriptive Rating**
	1. During COVID pandemic, how has your probability of skipping one of the main meals (breakfast/lunch/dinner) changed?	185.02	0.0000	
	2. During COVID pandemic, how has your habit of snacking between meals changed?	186.35	0.0000	
	3. During COVID pandemic, how has your quantity/portions of meals and snacks changed?	186.23	0.0000	
	4. During COVID pandemic, how has your daily intake of fruits and vegetables changed?	185.07	0.0000	
	5. During COVID pandemic, how has your intake of a balanced diet (including healthy ingredients such as whole wheat,	187.18	0.0000	
	6. During COVID pandemic, how has your consumption of junk food/fast food and fried food changed?	186.63	0.0000	
	7. During COVID pandemic, how has your intake of sugar-sweetened beverages (carbonated soft drinks, sugar-sweetened juices) changed?	186.93	0.0000	
	8. During COVID pandemic, how has your consumption of sweets/candies/chocolate changed?	185.91	0.0000	
Socio-Economic Status	9. During COVID pandemic, how has your participation in cooking new/traditional recipes changed?	185.82	0.0000	***Highly Significant***
	10. During COVID pandemic, how has your consumption of unhealthy food when you are bored or stressed or upset changed?	187.17	0.0000	
	11. During COVID pandemic, how has your intake of immunity-boosting foods (lemon, turmeric, garlic, citrus fruits and green leafy	186.82	0.0000	
	12. During COVID pandemic, how has your intake of nutrition supplements to boost immunity changed?	185.82	0.0000	
	13. During COVID pandemic, how has the support of your	184.62	0.0000	

	family and friends in eating healthy changed?			
	14. During COVID pandemic, how has your interest in learning healthy eating tips from the media	185.63	0.0000	
	15. During COVID pandemic, how has your participation in aerobic exercise changed?	186.82	0.0000	
	16. During COVID pandemic, how has your participation in leisure and household chores changed?	185.16	0.0000	
	17. During COVID pandemic, how has your sitting and screen time changed?	184.69	0.0000	
	18. During COVID pandemic, how have your hours of sleep changed?	185.33	0.0000	
	19. During COVID pandemic, how has your quality of sleep changed?	185.39	0.0000	
	20. During COVID pandemic, how have your stress and anxiety levels changed?	184.92	0.000	

Table 7 revealed the outcome of the analysis of variance point out a statistic highly significant between the body mass index and lifestyle changes related behavior in the time of pandemic. The p-value of 0.000 less than the level of significance of 0.05, the study reject the null hypothesis and conclude this case and assume there is a highly significant difference between two variables.

Table 7 Significant Difference Body Mass Index and Lifestyle Changes Related Behavior

	Lifestyle Changes Statements	**F-Value**	**P-Value**	**Descriptive Rating**
	1. During COVID pandemic, how has your probability of skipping one of the main meals (breakfast/lunch/dinner) changed?	82.33	0.0000	
	2. During COVID pandemic, how has your habit of snacking between meals changed?	83.13	0.0000	
	3. During COVID pandemic, how has your quantity/portions of meals and snacks changed?	83.06	0.0000	
	4. During COVID pandemic, how has your daily intake of fruits and vegetables changed?	82.36	0.0000	
	5. During COVID pandemic, how has your intake of a balanced diet (including healthy ingredients such as whole wheat,	83.63	0.0000	
	6. During COVID pandemic, how has your consumption of junk food/fast food and fried food changed?	83.30	0.0000	
	7. During COVID pandemic, how has your intake of sugar-sweetened beverages (carbonated soft drinks, sugar-sweetened juices) changed?	83.48	0.0000	
	8. During COVID pandemic, how has your consumption of sweets/candies/chocolate changed?	82.87	0.0000	
Body Mass Index	9. During COVID pandemic, how has your participation in cooking new/traditional recipes changed?	82.81	0.0000	***Highly Significant***
	10. During COVID pandemic, how has your consumption of unhealthy food when you are bored or stressed or upset changed?	83.63	0.0000	
	11. During COVID pandemic, how has your intake of immunity-boosting foods (lemon, turmeric, garlic, citrus fruits and green leafy	83.41	0.0000	
	12. During COVID pandemic, how has your intake of nutrition supplements to boost immunity changed?	82.81	0.0000	
	13. During COVID pandemic, how has the support of your family and friends in eating healthy changed?	82.09	0.0000	
	14. During COVID pandemic, how has your interest in learning healthy eating tips from the media	82.70	0.0000	
	15. During COVID pandemic, how has your participation	83.41	0.0000	

	in aerobic exercise changed?			
	16. During COVID pandemic, how has your participation in leisure and household chores changed?	82.42	0.0000	
	17. During COVID pandemic, how has your sitting and screen time changed?	82.13	0.0000	
	18. During COVID pandemic, how have your hours of sleep changed?	82.52	0.0000	
	19. During COVID pandemic, how has your quality of sleep changed?	82.55	0.0000	
	20. During COVID pandemic, how have your stress and anxiety levels changed?	82.27	0.0000	

Findings from the analysis of variance indicated a statistically highly significant difference between weight changes during coronavirus disease (COVID19) and lifestyle changes by the respondents. The P-value of 0.000 less than the significant level of 0.05, the study reject the null hypothesis and settles that there is a highly significant difference.

Table 8 Significant Difference Weight Change during COVID19 and Lifestyle Changes Related Behavior

	Lifestyle Changes Statements	**F-Value**	**P-Value**	**Descriptive Rating**
	1. During COVID pandemic, how has your probability of skipping one of the main meals (breakfast/lunch/dinner) changed?	2344.85	0.0000	
	2. During COVID pandemic, how has your habit of snacking between meals changed?	2370.07	0.0000	
	3. During COVID pandemic, how has your quantity/portions of meals and snacks changed?	2367.68	0.0000	
	4. During COVID pandemic, how has your daily intake of fruits and vegetables changed?	2345.06	0.0000	
	5. During COVID pandemic, how has your intake of a balanced diet (including healthy ingredients such as whole wheat,	2385.21	0.0000	
	6. During COVID pandemic, how has your consumption of junk food/fast food and fried food changed?	2371.56	0.0000	
	7. During COVID pandemic, how has your intake of sugar-sweetened beverages (carbonated soft drinks, sugar-sweetened juices) changed?	2377.31	0.0000	
Weight change	8. During COVID pandemic, how has your consumption of sweets/candies/chocolate changed?	2355.27	0.0000	
during COVID-19	9. During COVID pandemic, how has your participation in cooking new/traditional recipes changed?	2359.96	0.0000	***Highly Significant***
	10. During COVID pandemic, how has your consumption of unhealthy food when you are bored or stressed or upset changed?	2381.50	0.0000	
	11. During COVID pandemic, how has your intake of immunity-boosting foods (lemon, turmeric, garlic, citrus fruits and green leafy	2376.08	0.0000	
	12. During COVID pandemic, how has your intake of nutrition supplements to boost immunity changed?	2361.06	0.0000	
	13. During COVID pandemic, how has the support of your family and friends in eating healthy changed?	2333.36	0.0000	
	14. During COVID pandemic, how has your interest in learning healthy eating tips from the media	2354.92	0.0000	
	15. During COVID pandemic, how has your participation in aerobic exercise changed?	2376.74	0.0000	
	16. During COVID pandemic, how has your participation in leisure and household chores changed?	2346.74	0.0000	
	17. During COVID pandemic, how has your sitting and	2339.63	0.0000	

	screen time changed?			
	18. During COVID pandemic, how have your hours of sleep changed?	2348.01	0.0000	
	19. During COVID pandemic, how has your quality of sleep changed?	2348.55	**-0.0000**	
	20. During COVID pandemic, how have your stress and anxiety levels changed?	2340.47	0.0000	

CONCLUSION

Based on the findings of the study, the demographic profile of the respondents are classified as age, sex, type of residence, socio-economic status, body mass index, and weight change during COVID19. The highest percentage of respondents' age was 34.84% age 18 years old, while the lowest was 0.30% is 15 years old. In sex of the respondents 61.61% or (122) were females; 38.38% or (76) were males. For type of residence 61.61% or (122) resides in rural area; 38.38% or (76) in urban area. On the socio-economic status the highest percentage was 79.79% or (158) in middle class, and the lowest was 9.09% (18) were in the lower class. For the body mass index 87.87% or (174) were classified as normal; 1% (20) respondents were obese. Lastly, weight change during COVID19, 52% (104) gained weight; 15% or (29) lost weight during the time of pandemic.

The respondents' lifestyle changes related behavior in the time of coronavirus (COVID19) pandemic with the highest mean of 3.15 and the lowest mean of 2.72 was posted with the descriptive rating of *Grossly Similar* respectively. This simply affirms that respondent's lifestyle may be significantly changed due to the control measures, with the ensuing hazard of sedentary behavior**.**

Based on the finding revealed in the study, the null hypothesis stating that there is no significant difference between the demographic profile and lifestyle changes of the respondents. Therefore it can be concluded that as the respondents demographic profile as to (age, sex, type of residence, socio-economic status, body mass index, and weight change during COVID19) and lifestyle changes related behavior stating that there is a highly significant difference.

RECOMMENDATIONS

1. In order to avoid permanent changes in lifestyle related behavior extending beyond the duration of coronavirus disease, measure must be taken over in the curricular activities of the students to promote home base physical activities based of individual differences.
2. During the coronavirus disease (COVID19) pandemic, active lifestyle can be promoted by the Department of Education through integration in the subject which combine learning through physical activity.
3. Regular physical activity base on individual capacity at home in the time of pandemic greatly help to mage weight and overcome psychological issues.
4. The findings of the study may have implications for the department education learners for the essential development of public health initiatives that aim to improve lifestyle and physical activity during pandemic.

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