Effect of COVID 19 pandemic on the BMI and lifestyle of university students

By

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the degree of Bachelors of Pharmacy (Hons)

School of Pharmacy

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Declaration

It is hereby declared that

1. The thesis submitted is my own original work while completing degree at Brac University.

2. The thesis does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.

3. The thesis does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.

4. I have acknowledged all main sources of help.

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Approval

This project titled "Effect of COVID 19 pandemic on the BMI of University Students based on their lifestyles and social behavior" submitted by Samiul Kayenat of Spring 2015 has been accepted as satisfactory in partial fulfillment of the requirement for the degree of bachelors of pharmacy (Hons) on 15th September, 2022.

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Ethics Statement

This survey caused no harm to any animals. All the surveys were collected from individuals via online with their full consent and willingness.

Abstract Summary

COVID-19 Pandemic has affected our life greatly throughout the world. People maintained a regular lifestyle before the pandemic which has been hampered by the lockdown. Also, Obesity has become one of the leading causes of sickness and mortality throughout the world, and it was aggravated by this dangerous viral condition. A questionnaire was issued to the university students of Bangladesh in order to collect data on their height, weight, social media usage time, smoking habits and other relevant factors before and after pandemic from October 2019 to July 2020. This study was conducted to identify, how the BMI and lifestyle of university students were affected during this pandemic. Based on our data it is certain that and social interaction, physical exercise and tea-coffee intake are not accurately related but other factors like sleeping hours, time spending on social media, consumption of carbonated drinks and food schedules were significantly affected after the pandemic.

Keywords: BMI, COVID-19, Pandemic, students, lifestyle.

Dedication

Dedicated to my beloved father and my grandmother whom I lost due to COVID-19 last year. I also wants to thank my mother, younger sister, Aunts and Uncles who supported me throughout my studies both mentally and financially.

Acknowledgement

I would want to thank everyone who assisted me in completing my project work. I'd want to dedicate my work to my family, who were always there for me during my difficult times. I also want to dedicate this to my father whom I lost in this Pandemic. This study would not have been possible without the assistance of the individuals mentioned below, for whom I am extremely thankful. This is my absolute honor to acknowledge them. At first, I will acknowledge my supervisor Dr. Afrina Afrose, Assistant Professor. Department of Pharmacy, Brac University. Throughout this situation, I would never be able to complete my project work without her advice. I also want to acknowledge Professor Dr Eva Rahman Kabir, Dean, School of Pharmacy, Brac University. Also, thanks to Fatema Shorna and Musfica Tabassum Swarna who helped me with their data and Survey analysis. Special thanks to Rifat Rezwan for helping me during the process.

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List of Acronyms

BMI   Body Mass Index

COVID Corona Virus Disease

UNESCO United Nations Educational, Scientific and Cultural Organization

WHO   World Health Organization

SARS   Severe Acute Respiratory Syndrome

IEDCR Institute of Epidemiology Disease Control and Research

CVD   Cardiovascular Disease

NIH   The National Institutes of Health

WC   Waist circumference

Chapter 1: Introduction

1.1 Background

COVID-19 disease is a type of condition caused by a virus known as coronavirus which first detected in China in December 2019. People infected with this disease have respiratory sickness but improve without any particular therapy with the exception of those who are elderly and have health conditions such as cardiovascular disease, diabetes, chronic respiratory disease and so on [1]. People who are already attacked by this virus are prone to become sick easily. This virus created this pandemic situation all over the world which led the world to a halt. In this situation many countries gave lockdown so that it cannot spread. As the virus spread through the droplet of saliva from an infected person lockdown was the only option to stop the spreading. Effect of this pandemic on BMI is taking a big turn whereas in normal situation it didn't fluctuate that much. BMI is the value to determine whether a person is underweight, normal, overweight and obese [2]. It's used to check whether we have a healthy weight according to our height. There are different reasons for changing of a person's BMI which are patterns of physical activity, meal digestion, , social activity, patterns of physical activity and also low energy consumption during work and commute. In this pandemic lockdown some people's BMI increased because of not going anywhere and some peoples decreased because of their socio-economic crisis. People who have BMI score of less than 18.5 should increase their BMI by following the factors which increases the BMI and those who have more than 25 BMI score should follow those factors which decreases the BMI. However, BMI has limitations like all.

1.2 Research Gap

As COVID-19 is a newborn virus and this type pandemic was last seen in 1920 which was Spanish flu, for this reason this type of research hasn't been done yet. We deliberately targeted Bangladeshi university students since they are the most observant age group in terms of lifestyle and social conduct. This pandemic lockdown had an effect on everyone but we wanted to know what the student's life has been after the lockdown. This research will assist us in comprehending the scenario of the change on BMI because of this pandemic. As developed countries are trying to find a cure or vaccine for this including some developing countries as well, we are trying to know how students are coping up with this situation.

1.3 Objectives

The primary goal of this research is to determine how this COVID19 pandemic is affecting the BMI and lifestyle of Bangladeshi students. The survey was performed among the Bangladeshi university students, age of 20-25. Furthermore, the survey is to understand the situation of all the student's life during the pandemic.

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1.4 Significance of Studies

According to UNESCO data, the shutdown of education institutes in 144 nations affected 1.2 billion learners (68.0 percent of the world's total enrolled learners). Also in Bangladesh, 36 million student is out of school and effectively resulted in the discontinuation of normal academic curricula for around 40.0 million children across the country [3]. As a consequence, too many students are staying at home which is affecting there BMI in a very alarming way. This study will

show us how the sudden change in their life is affecting their health and what to do to avoid this

situation.

Chapter 2: Literature Review

2.1 COVID 19

On March 11, 2020, the WHO proclaimed the COVID-19 outbreak a worldwide pandemic. This disease was originally diagnosed as a respiratory illness case in Wuhan City, Hubei Province, China, caused by SARS-CoV-2. It was first identified in Bangladesh on 8th March as three cases of coronavirus were confirmed where the affected came from Italy. Then gradually the number of affected increased as the first coronavirus death was reported on 18th march. As of 31st July 2022 data issued by IEDCR 2,004,892 people were tested positive. Total number of samples tested was 14,602,917 people and the death toll were recorded 29,288 [4]. As we know, all the educational institutions were closed amidst lockdown till last year. So, over 40 million students were studying from home whether online or privately. BMI of the students will have a huge effect as they are staying home and not doing that much of physical exercise.

2.2 BMI

Obesity is a major risk factor for premature mortality and 4.7 million deaths are caused by obesity globally in 2017[5]. The body mass index (BMI) scale is one of the most used metrics for determining the prevalence of obesity and overweight. Weight for height measurement of BMI was characterized by WHO which is routinely used to identify humans as underweight, obese or overweight. Being overweight or obese has a huge impact on someone who lives in society as they are often discriminated because of this. Also, according to a report of WHO, there are risk of health as huge number of adults in the world are obese and some other case overweight (Ritchie and Roser, 2017). Obesity is more prevalent in wealthier nations like Europe, North America, and Oceania but substantially lower in South Asia and Sub-Saharan Africa.

Table 1: World health Organization Specified Body Mass Index Categorization

Classification	BMI(kg/m^2)	
	Principal cut-off points	Additional cut-off points
Underweight	<18.50	<18.50
Severe thinness	<16.00	<16.00
Moderate thinness	16.00 - 16.99	16.00 - 16.99
Mild thinness	17.00 - 18.49	17.00 - 18.49
Normal range	18.50 - 24.99	18.50 - 22.99
		23.00 - 24.99
Overweight	≥25.00	≥25.00
Pre-obese	25.00 - 29.99	25.00 - 27.49
		27.50 - 29.99
Obese	≥30.00	≥30.00
Obese class I	30.00 - 34.99	30.00 - 32.49
		32.50 - 34.99
Obese class II	35.00 - 39.99	35.00 - 37.49
		37.50 - 39.99
Obese class III	≥40.00	≥40.00

Source: Adapted from WHO, 1995, WHO, 2000 and WHO 2004.

2.3 Keeping a healthy and appropriate BMI:

To maintain a healthy and normal BMI the first and foremost step is to get an accurate measurement of body fat. To manage our body fat properly we must get the correct calculation of body fat so that we can properly maintain a healthy diet. Typically, people with a BMI between 18.5 and 25 are considered a healthy percentile. People who have below 18.5 percentile are considered as underweight and people with a BMI from 25-30 are termed overweight, whereas those who have a BMI more than 30 are deemed obese and at a high risk for illness. So, we must exercise, stay hydrated and eat a balanced diet equally to maintain a healthy BMI.

2.4 Factors affecting BMI:

2.4.1 Lifestyle:

Lifestyle is a major factor for changing of BMI as it is very much dependent on how we lead our life. There are some factors which can affect our BMI in our lifestyle those are smoking, physical activity, dietary habits, working hours and sleeping hours. According to a study, smokers have a higher BMI than nonsmokers. So, if we see the study, smokers are more prone to become obese than non-smokers [6]. So, smoking is negatively associated with BMI. Dietary habits are also important and do impact on BMI. People who eat more than three meals tends to get more obese than the people who eats two meals or one meal a day. 31.9% people have BMI of more than 30 when they eat three meals per day whereas 21.3% and 13.8% people have BMI more than 30 when they eat two and three meals per day respectively [7]. So, we can definitely say that dietary habit is more important and closely related with the changing of BMI. Working hours had an effect on BMI as well. Respondents who worked more than 10 hours per day had a higher BMI than those who worked less than 10 hours. This indicates a positive association between hours of working and BMI. Sleeping hours is also a major factor as the study have shown that sleeping more (9+ hrs.) and sleeping less (-5 hrs.) both affects the BMI which can lead to high BMI and also other diseases (Sattar et al, 2013). So, the people who sleeps from 6-9 hours has an average BMI.

2.4.2 Technology and social media

In today's technological world, social media is related to us in every sphere of our life. People are using social media as a source of income by freelancing. People are using technologies left and

right. Almost all top business companies in the world are tech company. Microsoft, google, amazon is thriving the world with their technology advancement. But this has a negative impact too. The more we are using these techs the less we are doing physical activity. Which ultimately affecting our health in general. Using any device before going to bed was related with a statistically significant increase in the use of several kinds of technology before going to bed and usage in the middle of the night, affecting sleep duration [8].

2.4.3 Genetics

Genetics plays an important role in account of someone's weight and height which is directly related to BMI. As a result, it may have an indirect effect on our BMI. Genes impact weight growth, body shape, height, and other factors [9]. If your ancestors are fat, you'll also be fat but sometimes it also changes by healthy diet.

2.4.4 Occupation

Occupation also affects our daily life as it differs whether you're working a corporate job or doing physical job. Which will eventually affect our BMI by changing the weight. If we do a full-time job, we will definitely do more work but if that job requires to sit all day in the chair this will definitely affect our health. Whereas, part-time job can influence our body to suscept to consuming more energy. A recent study shows that, full time job holders have more BMI than the part time job holders [10]. So, we can say that occupation has a huge effect on BMI.

2.4.5 Smoking and Alcohol

There is no strong evidence that smoking cigarettes or drinking alcohol can directly affect our BMI. On the other hand, some study showed that BMI is inversely related with smoking without any genetic influence [11]. Whereas, alcohol doesn't show any significant change except regular drinkers. Their genetic factors declined after drinking regularly.

2.4.6 Physical activity

Physical activity was analyzed in a recent study, and it was shown that the number of steps done per day, body fat percentage, and BMI were all adversely associated [12]. Which means it's not necessary that physical exercise will ensure your healthy BMI but it will definitely help you to keep those on track. Childhood physical activity can help build stronger bones and encourage development. Daily exercise can also help to lose weight, burn more calories and fall into a healthy BMI range.

2.4.7 Diet

Diet has a significant influence in weight loss and growth, and can thus have a direct impact on your BMI. While certain characteristics, like as height, are uncontrollable, others, such as nutrition and proper diet, may be in authority. A healthy, balanced diet increases a person's chances of losing weight and maintaining a healthy BMI.

2.4.8 Education

People might get surprised after hearing that education also had an inverse effect on weight gain which directly related to BMI [13]. It was reported that rural educated women showed more risk factor of being overweight as compared with uneducated women in Bangladesh [14]. People with a higher level of education are less likely to be obese. All in all, the more the education the more the people were aware about their health. So, the factors depend on whether the people are more careful to healthcare or not.

Chapter 3: METHODOLOGY

3.1 Research Design

From November 2019 to July 2020, this descriptive research was carried out at BRAC University's Department of Pharmacy in Dhaka. Around 139 undergraduate students aged 20-25 participated in this survey before November 2019 and after July 2020 COVID-19 pandemic. This study was conducted exclusively to determine any link between the aforementioned characteristics and the participants' BMI and the COVID-19 pandemic.

3.2 Data Collection

The students who were willing to participate in this survey via online a structured questionnaire was made and circulated among them. It was made to compare the information before and after the pandemic. The info was about participant's age, consumption of tea and carbonated drinks, fast food intake, gender, height, living status, marital status, number of cigarette intake per day, sleeping time, time spent on watching TV, time spent on social media, time spent on physical exercise, weight and other necessary data so that it can be compared perfectly. Following that, each individual's BMI was calculated using the WHO method {(weight in kilogram)/ height (in meter)}. The appendix contains a sample of the questionnaire.

3.3 Data analysis

Following data collection from volunteers, the statistical analysis was done by the software IBM

SPSS version 22. At first, we used IBM SPSS to see if there was any significant change in behavior among the subjects. First of all, we used Kruskal-Walli's test which showed significant change but as our Q-Q plot showed not normal distribution of the data we had to do the Mann-Whitney test. Which helped us to determine whether the data were significant or insignificant.

Chapter 4: Results and Discussion

3.3Results

Prior to analysis of the data, the Q-Q plot shows the distribution of data.
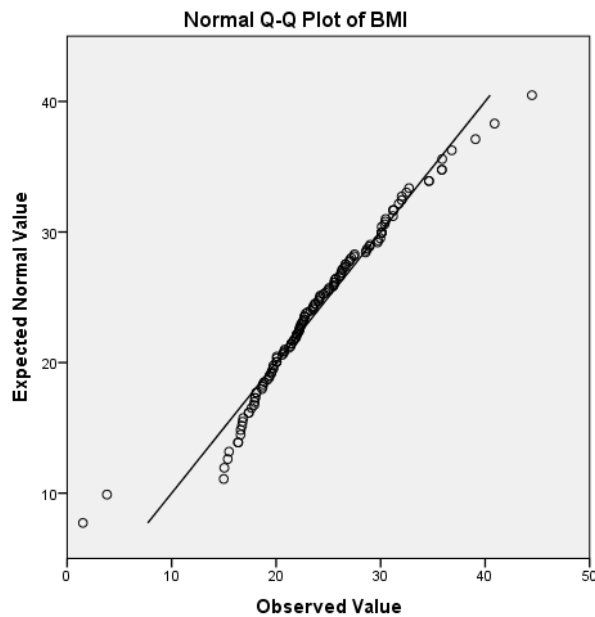
Figure 1: Q-Q Plot showing the distribution of data

Table 2: Test of Normality

	Shapiro-Wilk		
	Statistic	df	Sig.
BMI	.967	137	.002

Shapiro-Wilk test shows that the p value is .002 which is significant and indicates that the data is not normally distributed. In that case non-parametric tests to be performed for further data analysis. Mann-Whitney test showed significant changes in social media, sleeping hours,

smoking, carbonated drinks, fast food and food schedule of the participants before and after the pandemic.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of BMI is the same across categories of Before_after_pandemic.	Independent-Samples Mann-Whitney U Test	.187	Retain the null hypothesis.
2	The distribution of social_media_time_hr is the same across categories of Before_after_pandemic.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
3	The distribution of sleeping_duration is the same across categories of Before_after_pandemic.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
4	The distribution of exercise_hr is the same across categories of Before_after_pandemic.	Independent-Samples Mann-Whitney U Test	.170	Retain the null hypothesis.
5	The distribution of fast_food is the same across categories of Before_after_pandemic.	Independent-Samples Mann-Whitney U Test	.054	Retain the null hypothesis.
6	The distribution of carbonated_drinks is the same across categories of Before_after_pandemic.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
7	The distribution of Tea_coffee is the same across categories of Before_after_pandemic.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
8	The distribution of cigarettes is the same across categories of Before_after_pandemic.	Independent-Samples Mann-Whitney U Test	.914	Retain the null hypothesis.
9	The distribution of workout_hr is the same across categories of Before_after_pandemic.	Independent-Samples Mann-Whitney U Test	.473	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
10	The distribution of food_schedule is the same across categories of Before_after_pandemic.	Independent-Samples Mann-Whitney U Test	.077	Retain the null hypothesis.
11	The distribution of social_interaction is the same across categories of Before_after_pandemic.	Independent-Samples Mann-Whitney U Test	.780	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Figure 2: Summary of test results based on the null hypothesis of all above variables.

Table 3: Summary of Mann-Whitney test results on all the variables before and after pandemic (Median ±SEM and Significance).

Varrables	Asymp. Sig.	Median ±SEM	
		Before Covid	After Covid
BMI	.187	24.09±0.536	24.02±0.422
Social_media time_hr	.000	3.9±0.131	4.01±0.088
Sleeping duration	.000	7.28±0.107	8.05±0.157
Workout_hr	.473	0.65±0.073	0.701±0.081
Exercise_hr	.170	0.88±0.083	0.86±0.083
Fast_food	.054	1.33±0.052	1.56±0.072
Carbonated_drinks	.000	2.34±0.182	2.38±0.182
Food_schedule	.000		
Cigarettes	.077	1.28±0.186	1.52±0.206
Social_interaction	.914		
Tea_coffee	.780	1.40±0.124	2.29±0.132

From this table we can see that the variables like social media time, sleeping hours, consumption of carbonated drinks and the food schedule were significantly affected by the

COVID-19 pandemic (p<0.005). Consumption of fast food and cigarettes showed a little significant effect of COVID-19 pandemic (p<0.01). However, we found no significant effect of COVID-19 pandemic on variables like BMI, workout hour, exercise hour, social interaction and tea coffee consumption.

4.2 Discussion

As we can see from the result, the most significance was shown by usage of social media, change of sleeping duration, fast food eating habit, drinking carbonated drinks, change in food schedule, smoking cigarettes etc. First, we will discuss how social media usage has evolved as a result of the outbreak.
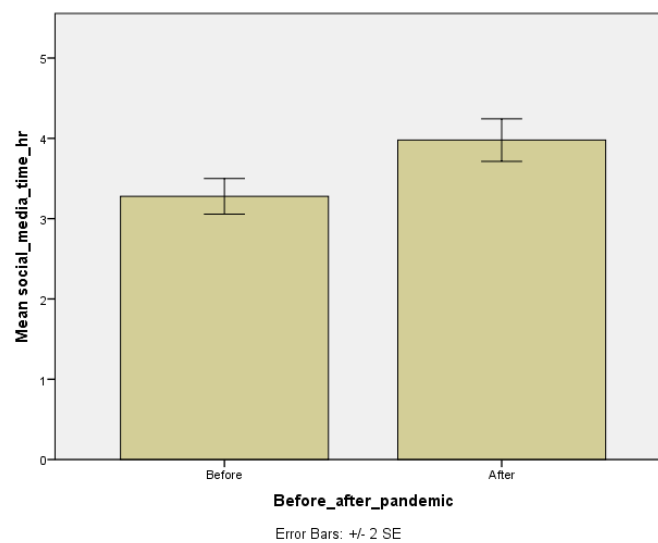
Fig 3: Median ±SEM of duration of social media use by the participants before and after COVID-19 pandemic.

Figure 3 shows that, during the crisis, the use of social media has grown. This finding is also consistent with the findings of Kaya et al [15]. On the other hand, using more social media has increased the spread of fake news. Preventing false news is one way to ease panic as misinformation amplifies panic. It's encouraging that users won't fall prey to misleading news. After that, sleeping duration of the participants were changed drastically after the COVID-19 pandemic.
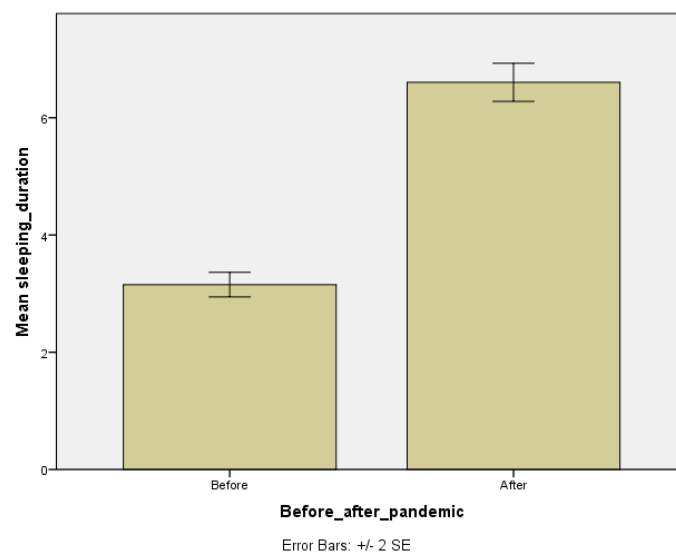

Fig 4: Median ±SEM of duration of sleeping hour before and after COVID-19 Pandemic

From figure 4 we can observe that, sleeping duration has increased a lot after Covid19. This result aligned with the research of Anwar et al[16]. From their research, they observed that most of their respondents experienced a shift in sleep duration where people slept more. Sleeping more was related to the people who were unemployed or a student and also the

people who were single, divorced or separated. Less sleep was associated with retired or a homemaker people.
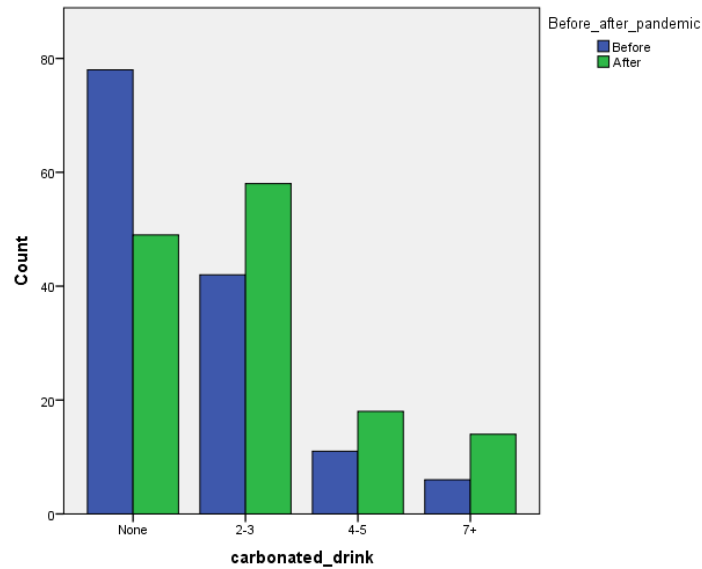

Figure 5: Graph showing consumption of carbonated drink by the participants per week before and after COVID-19 pandemic

In addition, figure 5 shows us that students of Bangladesh started drinking more carbonated beverages after covid. People in the United States, on the other hand, drank less than before the outbreak. Household spending on alcoholic drinks increased during the epidemic. Whereas, nonalcoholic beverages and tobacco items declined dramatically [17]. The alcoholic beverages include whiskey, wine, beer and ale, as well as other alcoholic drinks. Coke, 7-Up, coffee, tea, fruit-flavored drinks, and sports drinks are examples of non-alcoholic beverages. Cigarettes, e-cigarettes and marijuana were all designated tobacco products and smoking supplies.
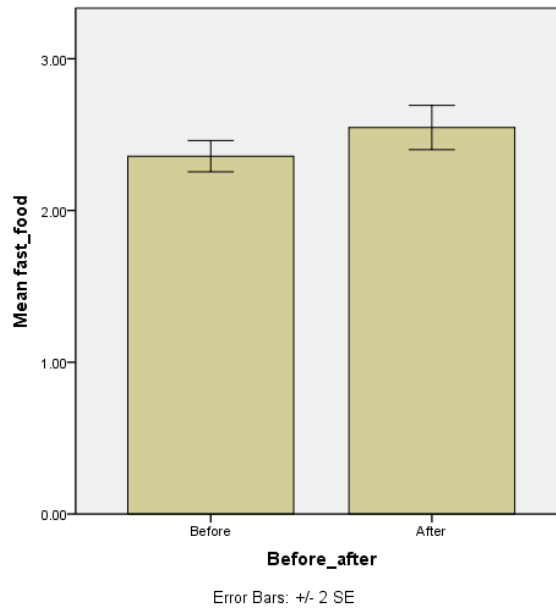
Fig 6: Median ±SEM of amount of fast-food eating by the participants

before and after COVID-19 pandemic

After that, we can detect from figure 6 that the amount of fast-food intake was increased. And the reason behind it was increase of online order due to lockdown. According to a study among 34 countries, during the pandemic certain changes in snacking as well as alcohol use, were investigated. Snacking was shown to be risen for a considerable fraction of the population studied, but fast food and ordered meals decreased. Alcohol consumption showed an upward trend in the participants examined [18]. This might have long-term implications since further lockdowns could cause long-term health concerns. Refined carbohydrates are also associated with the incidence of illnesses such as obesity and type 2 diabetes, both of which raise the risk of severe COVID-19 death[19]. Furthermore, food schedule has also changed of the students according to our result. As students were in lockdown that made them sleep more which resulted in missing breakfast or eating breakfast during lunch time. That further resulted losing the time sense and not eating any of the food on time.
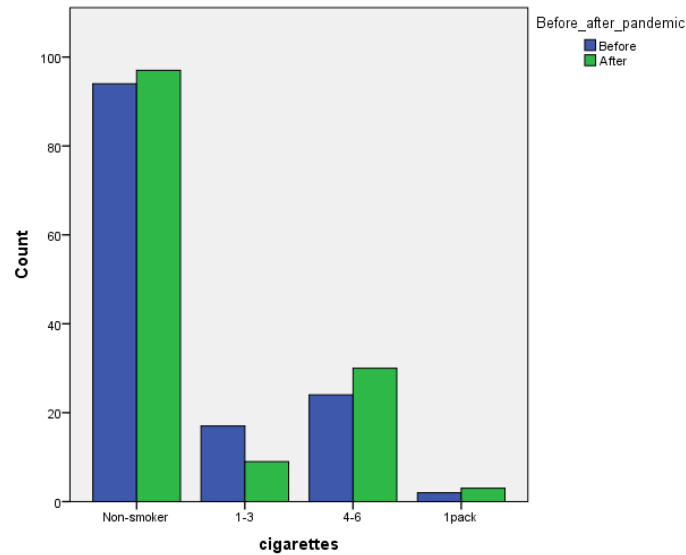
Fig 7: Graph showing number of cigarettes smoked by the participants

before the after the COVID-19 Pandemic

Smoking was another variable which didn't show any significant change among the students during the covid which we can observe from figure 7. As they were locked down in home, they couldn't smoke Infront of the parents. That's the reason of not that much change in the number of cigarettes. Another research found that none of the individuals started smoking during the pandemic, and no existing smokers reported a decrease in tobacco prevalence. Nonetheless, many people reported an increase in cigarette consumption during this pandemic. Whereas, most of the participants tobacco use were unchanged [20].

From our result in Figure 8, we also found out that there was little change in social interaction, tea coffee and workout hour. As there was no lockdown, it was inevitable to have any kind of social interaction during this time.
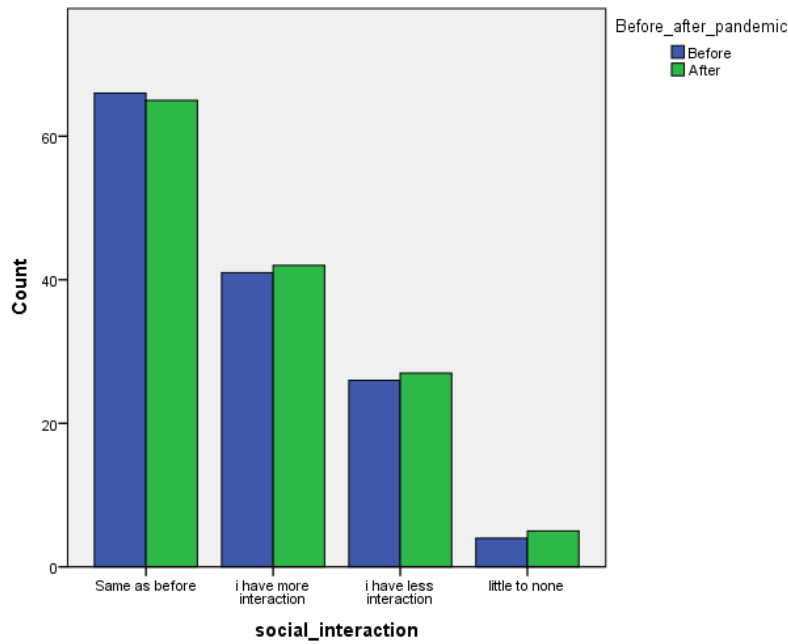
Fig 8: Graph showing changes in social interaction of the participants

before the after the COVID-19 pandemic

From figure-8, we get a clear view of the result that social interaction of the students during the pandemic have not changed that much. But during the lockdown most students have bonded well with their parents. They shared more stories and chit chatted with them more often because the time they got to spent together [21]. Tea-coffee exhibited no impact after intake but possible health effects should not be neglected. As caffeine consumption may directly or indirectly induce bronchodilation and inhibit viral intracellular transcription enduring COVID-19 infection[22]. Another research found no noticeable change in coffee consumption during the coronavirus epidemic but tea consumption climbed dramatically. [23]. Workout hour and exercise hour had no significant changes in the result. As well as the BMI of the students were not that much affected during the pandemic.

Chapter 5: CONCLUSION

5.1 Findings

According to the present data, the lengthy COVID-19 lockdown has had a significant influence on the lives of university students in Bangladesh. The study inferred that social media, sleeping hours, tea-coffee, carbonated drinks, fast food and food schedule was changed during the lockdown. Furthermore, the closure of educational institutions and strict transport restrictions increased the amount of time spent on social media as well as physical idleness. Balanced meals and suitable physical activity, like exercise, can help to solve these issues.

5.2 Limitations

The current analysis has some flaws and is not a perfect examination. The lack of tools for cross-checking the accuracy of the respondents' self-reported data is the most obvious shortcoming of this cross-sectional web-based survey. It was hard for us to objectively determine whether the responders had sufficient insights before completing the Google form. Lastly, the research was based on Bangladeshi students which enclosed the demographic of the research.

5.3 Future Research

Some future research may be designed to compare significant BMI changes among pupils during the COVID-19 lockdown to those of adults at other ages. The present transcribed data can be studied in the long run to establish the impact on university students, as the ongoing outbreak may periodically force lockdown measures. To generate more replicable study

findings, the investigation can potentially be broadened by including more participants with a variety of demographic characteristics.

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Appendix A.

Social media survey

Project name: Effect of COVID 19 pandemic on the BMI of University students based on their lifestyles and social behavior.

Name: Samiul Kayenat

ID: 15146062

University: Brac University

Participants: Students of Brac University

Project Supervisor: Dr. Afrina Afrose, PhD

Assistant Professor, Department of Pharmacy, Brac University.

*Required

Disclaimer

All the date for this survey will be used for research purpose only. The subject's name and identity will not be disclosed in any research publication.

I acknowledge that I have been asked to participate in a survey regarding social media usage. This survey is conducted by Samiul Kayenat. I understood the disclaimer and agreed to participate willingly. *

Signature:

Date:

Name of the participant:

Date of birth:

Name of the University studying:

Department:

Instructions:

Mark only one box.

1. Gender *

Mark only one box.

- Male

- Female

- Others

2. Age *

Mark only one box.

- 21-22

- 23-2

- 25-26

- 26+

3. Height (ft.-in) *

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4. Weight (kg) *

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5. Living Status*

Mark only one box.

- Living alone in apartment

- Sharing

- Rent with family

- Own home

6. Marital status*

Mark only one box

- Married

- Unmarried

- Single

- Divorce

- In a relationship

-

7. How many hours do you spend watching TV every day? *

Mark only one box.

- None

- 1

- 2

- 3

- 4

- 5

- 6+

8. How many hours do you spend on Facebook, YouTube, Instagram, Snapchat, twitter etc every day? *

Mark only one box.

- None

- 1

- 2

- 3

- 4
- 5
- 6+

9. How many hours do you sleep? *

Mark only one box.

- 4
- 5
- 6
- 7
- 8
- 9
- 10+

10. When do you go to sleep? *

Mark only one box.

- Before 10 pm

- 10-11 pm

- 11-12pm

- After l2pm

11. History of insomnia

Mark only one box.

- Yes

- No

12. How many hours do you work out every day? *

Mark only one box.

- None
- l hr
- 2 hrs
- 3 hrs
- 4+ hrs

13. How many hours do you walk, run or play outside every day? *

Mark only one box.

- None

- 1 hr

- 2 hrs

- 3 hrs

- 4+ hrs

14. How often do you eat fast food? *

Mark only one box.

- None

- Once a week

- Twice a week

- Every day

15. How much carbonated drinks (250inl) do you take per week? *

Mark only one box.

- None
- 2-3
- 4-5
- 7+

16. How many cups of tea/coffee do you drink per day? *

Mark only one box.

- None
- 2-3
- 4-5
- 6+

17. Do you eat timely on a regular basis? *

Mark only one box

- Yes
- No
- Sometimes

18. How many cigarettes do you smoke per day?

Mark only one box.

- Non-smoker

- 1-3

- 4-6

- 1 pack

19. Have you ever been to a restaurant because of the recommendation from social media?

Mark only one box.

- Yes

- No

- Sometimes

20. After using social media daily, how do you feel? *

Mark only one box.

- Excited

- Happy

- Normal

- Bored

- Sad

- Depressed

21. How much do you care about your social appearance in Facebook or Instagram? *

Mark only one box.

- Must be perfect

- Has to be good

- Don't care much

- Don't care at all

22.   After starting to use social media, how is your face-to-face interaction with other people?

Mark only one box.

- Same as before
- I have for interaction
- I have less interaction
- little to none

22. Guardian's socio-economic status? *

Mark only one box.

- Less income (below 20000 tk)

- Moderate (20000-50000tk)

- High (50,000tk-100,000tk)

- Ver high (above 100,000 tk)

23. History of mental illness?

Mark only one box.

- Depression

- Anxiety

- Schizophrenia

- Suicidal

- Others

25.   Family history of heath disorder? *

Mark only one box

- Yes

- No