A STUDY TO UNDERSTAND IMPACT OF THE LOCKDOWN DURING COVID-19 ON LIFESTYLE OF YOUNG ADULTS IN BANGALORE, KARNATAKA.

A STUDY TO UNDERSTAND IMPACT OF THE LOCKDOWN DURING COVID-19 ON LIFESTYLE OF YOUNG ADULTS IN BANGALORE, KARNATAKA.

DECLARATION BY STUDENT

I hereby declare that this dissertation titled "Challenges to Maternal Health and Perinatal Care Amid Covid-19: A Scoping Review" is the bonafide record of my original research work. I declare that it has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in the text.

Dhriti Saikia

Date: 30th June, 2022

Express RCM Private Limited
(Fully owned subsidiary of 314e Corporation, USA)
CIN: U72900KA2019PTC067077

TO WHOMSOEVER IT MAY CONCERN

Date: 30th June 2022

This is to certify that **Dhriti Saikia**, Student of MBA - Hospital and Health Management at **IIHMR, Jaipur** has successfully completed 03 (Three) months internship with our company from 1st April 2022 to 30th June 2022.

During this period of internship, her performance was good.

We wish her every success for the future.

Regards,
For **Express RCM Private Limited**

Authorized Signatory

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ITPL Main Road, Mahadevapura,
Bengaluru - 560066

CERTIFICATE

This is to certify that dissertation titled "a study to analyze the effect in health due to adoption of the sedentary lifestyle among the young female adults residing in Bangalore due to covid-19." is a record of the research work undertaken by Dhriti Saikia in partial fulfillment of the requirements for the award of the degree of MBA Hospital and Health Management from the IIHMR University, Jaipur under my guidance and supervision and his/her approach to the research study has been sincere, scientific, and analytical.

Faculty Guide	School Dean
IIHMR University, Jaipur	IIHMR University, Jaipur
Date	Date

ABSTRACT

STUDY OBJECTIVE:

To understand the lockdown's impact due to COVID-19 among the young adults in their lifestyle, residing in Bangalore focusing the age group of 18-30 years.

By assessing and observing the change of physical activity, sleeping pattern and eating habit during pre and post lockdown.

And by understanding the changes in eating habit and sleeping pattern amazing the young adults due to the lockdown imposed.

METHODOLOGY:

A sample size of 73 people of age between 18 and 30, living in urban areas of Bangalore were considered. The method of sampling technique used for this study is Snowball sampling method (Random sample). The data was collected through primary data collection through a structured questionnaire from different residents of Bangalore. Research papers, Guidelines and Standards were referred and reviewed for data collection. As well as Secondary Analysis is done for understanding and interpretation of the current situation.

KEY REULTS:

As per as the above findings, we can note that the lockdown had a significant impact on the lifestyle of an individual. According to the results, percentage of people not engaging in any physical activities drastically increased nearly by 25% and there was a slight drop of individuals who engaged in any form of exercise daily. There was an increase of about 25% in people who did not skip their breakfast during the lockdown. At the same time consumption of fast food increased by 8% but there was a rise about 17% who did not consume any kind of fast food. On the other hand, there was a significant increase in screen time, a 13% increase in using various devices for more than 12 hours. With the help of Excel BMI was calculated, for 69.6% individuals their BMI remained the same.

CONCLUSION:

Lockdown had a slight but significant impact on lifestyle behaviour. During the lockdown individual opted a lethargy and sedentary lifestyle with an increase in duration of sleep, decrease in physical activities, and increase in screen time. But it was also observed that people were conscious about their health and maintained their diet. In the course of lockdown there was a rop in alcohol and smoking habit. This can be either due to the fear of the virulent disease covid-19 or because the observed individuals were residing with their parents during the lockdown. On self-assessment 65.2% agreed that lockdown did change their lifestyle to some extent.

KEY WORDS:

Covid-19, lifestyle behaviour, young adults, physical activity, during lockdown.

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ACKNOWLEDGEMENT

I would like to take this opportunity to express my gratitude towards 314e corp and would like to thank my organizational mentor, Gaurav Mundra, for his guidance and advice throughout my training. Furthermore, I would sincerely like to thank my mentor Mr. Alok Mathur, Associate Professor, IIHMR University, Jaipur for his continuous support throughout my project and internship. Without his help this report could not have been possible. Lastly, I would like to thank all the people who participated and shared their valuable time.

Sincerely,
Dhriti Saikia.

TITLE OF THE STUDY: A study to understand impact of the lockdown during covid-19 on lifestyle of young adults in Bangalore, Karnataka.

CHAPTER 1: INTRODUCTION

Covid-19, a deadly disease as we know it has changed our life and our lifestyle in various aspects. In India the first case was reported on 27th January 2020, which had devastated many families and affected the wellness of all. Covid-19 also known as Coronavirus disease is caused by SARSCoV-2 virus, it was first reported in China in December 2019, spreading throughout the world and on March 11, 2020, WHO announced the Pandemic.

India initiated the first step to curb this pandemic by declaring lockdown on 25th March 2020 for 21 days initially, and later the government extended it till May 31st in 4 phases. During the first lockdown people were indifferent as it did not affect the lifestyle. Many considered it as a refreshing break and many others were suffering from the symptoms and fighting against the disease. Individuals who were not affected by Covid-19 slowly became restless as the lockdown timeline increased. Daily activities were reduced, and physical movements declined. Due to the sudden lockdown, the thought of scarcity of food became a concern due to which people started stocking groceries items in advance. Also, during this time trying out new recipes at home became a trend which led to binge eating and consumption of unhealthy food. This led to a rapid increase in the adoption of sedentary lifestyle mainly among the young adults.

Sedentary lifestyle refers to activities that leads to minimal or low energy expenditure, activities like using mobile phone in a stationary position, playing video games, binge watching movies or series and so on **(1).** It is not something which emerged suddenly during pandemic or was introduced recently, with the advancement of technology it has been adopted by many as compared to our older generation. Sedentary lifestyle was slowly inducing into our lifestyle and many researchers claimed it to be one of the reasons behind various disease. It directly or indirectly affects the health of an individual, the most common direct effect of the sedentary lifestyle is obesity. It is also identified that low physical activities effect the female's mensuration cycle as it indirectly affects the hormones.

During the lockdown period, individuals changed and adopted new behaviours which affected their lifestyle and health.

AIM OF THE STUDY: A study to assess how the lifestyle behaviour of young adults from the age group 18-30 years in Bangalore has been affected due to the lockdown imposed during Covid-19.

OBJECTIVE OF THE STUDY:

To understand the lockdown's impact due to COVID-19 among the young adults in their lifestyle, residing in Bangalore focusing the age group of 18-30 years.

By assessing and observing the change of physical activity, sleeping pattern and eating habit during pre and post lockdown.

And by understanding the changes in eating habit and sleeping pattern amazing the young adults due to the lockdown imposed.

CHAPTER 2: REVIEW OF LITERATURE

Author, Year	Title	Study Location	Sample Size	Salient Features
Yit Siew Chin,Fui at.la. January 18, 2022 **(2)**	The impact of Movement Control Order during the COVID-19 pandemic on lifestyle behaviours and body weight changes: Findings from the MyNutriLifeCOVID-19 online survey	Malaysia	1319	1. It collected anthropometric information about an individual before and after the lockdown period. 2. Similarly it collected data on eating patterns, physical activity, and sleep patterns before and after the lockdown period. 3. It later compared different parameters and calculated p-value so as to compare and understand the changes in lifestyle behavior during the lockdown. 4. It concluded that the pandemic had an impact on the lifestyle of Malaysian residents.
Hammouri H, at.la. January 25, 2022 **(3)**	Lifestyle Variations during and after the COVID-19 Pandemic: A Cross-Sectional Study of Diet, Physical	Jordan	467	1. It focused on changes and the impact of the pandemic on the BMI of an individual. 2. The effect on physical activities and eating habit was analysed using ANOVA. 3. They also considered gender, marital status, and eating habits.

	Activities, and Weight Gain among the Jordanian Adult Population			4. It concluded that married females practiced healthy dietary habits, maximum individuals after the lockdown became conscious about healthy eating habits, more than 50% consumed nutritional components But there was an increase in consumption of junk food, and sweet beverages and a decrease in physical activities.
Madan J, at.la. October 20, 2021 **(4)**	Effect of COVID-19 Pandemic-Induced Dietary and Lifestyle Changes and Their Associations with Perceived Health Status and Self-Reported Body Weight Changes in India: A Cross-Sectional Survey	India	1000	1. Participants included in this study were selected equally from Delhi, Bangalore, Mumbai, and Kolkata. 2. It observed that more people had incorporated healthy food habits and included nutritious healthy food in their diet. 3. But it was also noted that there was an increase in binge eating, and meal portions increased. 4. They also observed that there was an increase in weight gain over the pandemic.
Rawat D at.la. January 13, 2021 **(5)**	Impact of COVID-19 outbreak on lifestyle	India	5957	1. Participants from hospitals and 10 community based were included. 2. It was observed that the

	behaviour: A review of studies published in India			pandemic affected the lifestyle and mental health of the observed participants. 3. It was observed that most individuals suffering from mental stress followed an unhealthy diet. 4. It was noted that there was an increase in weight and a decrease in physical activities.
Souza TC, at.la. January 25, 2022 **(6)**	Lifestyle and eating habits before and during COVID-19 quarantine in Brazil.	Brazil	1368	1. The study used the statistical significance level of P 005, the McNemar, McNemar–Bowker, and Wilcoxon tests were performed to examine changes between the pre-and post-COVID pandemic periods. 2. It was observed that there was a lower frequency of individuals consuming breakfast compared to evening snacks. 3. The findings also revealed that while consumption of fast food, instant meals, and bakery goods increased, consumption of vegetables and fruits fell. 4. The result also showed that there was an increase in the consumption of alcohol and smoking.

				5. The findings also revealed an increase in sleeping hours whereas a decrease in physical activities.
Werneck AO, at.la. Febuary 24, 2021 **(7)**	Associations of sedentary behaviours and incidence of unhealthy diet during the COVID-19 quarantine in Brazil	Brazil	39208	1. The study focused on the impact on the consumption of fast food, and evaluation of on-screen time on TV/mobile/tablet/laptop or computer. 2. The results showed that high rates of TV viewing and computer/tablet usage were linked to greater odds of frequent eating of highly processed foods and low rates of consumption of fruits and vegetables. 3.Consistently using a computer or tablet increased the likelihood of consuming foods that have undergone extensive processing.
Luciano F, at.la. October 21, 2021 **(8)**	COVID-19 lockdown: Physical activity, sedentary behaviour and sleep in Italian medicine students	Italy	1471	1. The study focused on analyzing the effect of lockdown on medical students residing in Italy. 2. To evaluate the physical activity and sleeping pattern, the IPAQ test and Pittsburgh sleep quality index

				was conducted on the students. 3. Physical activities showed a drop while a rise was noted in sleeping time. Individuals with high physical activity showed more sitting and sleeping time.
Lawhun Costello V, at.la. November 24, 2021 **(9)**	Impact of the COVID-19 Pandemic on Objectively Measured Physical Activity and Sedentary Behavior Among Overweight Young Adults: Yearlong Longitudinal Analysis	California	315	1. The study focused on analyzing the impact physical health and examine sedentary behavior. 2. It concluded that there was a drop in physical activity and a rise in sedentary behaviour among young individuals who were overweight or obese as COVID-19 mitigation efforts were put into place. The COVID-19 pandemic's additional, unforeseen effects may include the health problems connected to a sedentary lifestyle.

Table 2.1

CHAPTER 3: METHODOLOGY

- STUDY DESIGN- Descriptive study
- SETTING- The area of study includes urban areas of Bangalore.
- STUDY POPULATION
    - Inclusive criteria- Individuals between the range 18 to 30 yrs., living in urban areas of Bangalore
    - Exclusive criteria- Individuals above 30yrs and below 18 years, and also people with chronic disease like heart attack or suffering from Covid or history of covid-19, who are not advised to exercise or exert any form of pressure to their lungs or heart.
    - Study Tools- Primary data will be collected through online questionnaires.

- DURATION OF THE STUDY: 3 months
- SAMPLE SIZE: A sample size of 73 with people of age between 18 and 30, living in urban areas of Bangalore will be considered.
- SAMPLING TECHNIQUE: The method of sampling technique used for this study is Snowball sampling method (Random sample). The data was collected through primary data collection from different residents of Bangalore. Research papers, Guidelines and Standards were referred and reviewed for data collection. As well as Secondary Analysis is done for understanding and interpretation of the current situation.
- DATA COLLECTION: Through a structured questionnaire primary data will be collected.
- OPERATIONAL DEFINITION:
    - Sedentary lifestyle- It refers to that lifestyle where a person engages in activities like playing indoor games, video games, watching TV, surfing social media which results in low energy expenditure about 1.5 MET
    - Lifestyle includes – behavioural pattern, interaction, consumption, work, activity and interests that describe how a person spends their time.
    - Young Adults- Individuals within the age group of 18-30 years are referred as young adults.

- Coronavirus disease – It is a disease caused by SARS-CoV-2 virus, the first case was reported on Jan 27th, 2020, in India.
- Physical exercise- Activities which helps to maintain fitness and wellness of an individual. It results in expenditure of energy from our skeletal muscles.
- BMI- BMI is referred as body mass index, which is measured using weight and height of an individual so as to identify whether the individual is underweight or overweight.

- DATA ANALYSIS PLAN: Data would be collected through structured questionnaires and data analysis through MS Excel and Google data studio.
- ETHICAL CONSIDERATION:
  - Participants who are willing to take part in the research on their own will would only be considered
  - No harm in anyway should be inflicted on research participants.
  - Participants consent should be taken before the start of the study.
  - Research participant's confidentiality will be protected.
  - Anonymity would be maintained about the individuals and organizations participating in the research
  - All research-related communication would be honest and transparent.
  - Any form of bias should be avoided.

- IMPLICATION OF RESEARCH: We aim to study the impact on young adults due to the lockdown imposed during the pandemic and their changes in physical activity, through the survey we are aiming to understand how it has affected the lifestyle of people which has indirectly affected their physical wellness.

CHAPTER 4: RESULTS

DEMOGRAPHIC DETAILS:

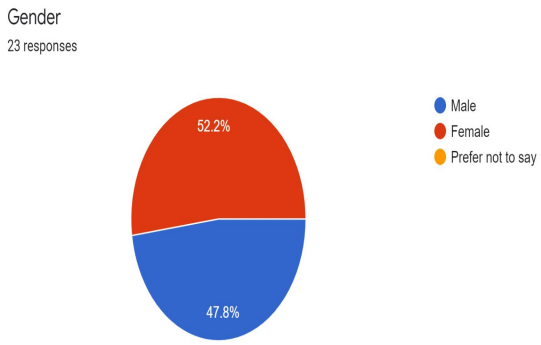


Fig. 4.1
Chart showing Ratio of Male and Female participants

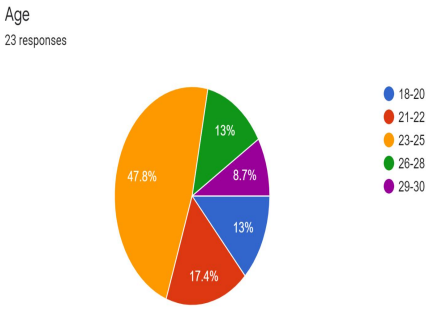


Fig. 4.2
Chart showing age of the participants

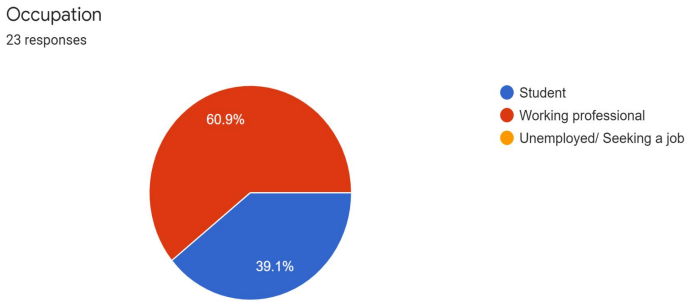


Fig. 4.3
Chart showing occupations of the participants

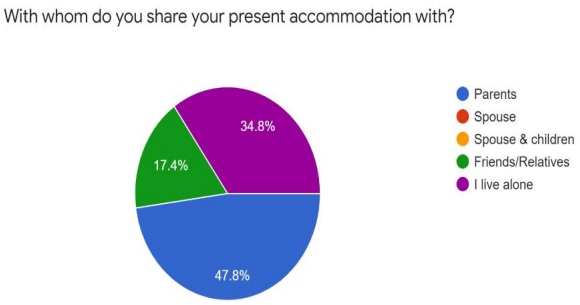


Fig. 4.4
Chart showing current accommodation of the participants

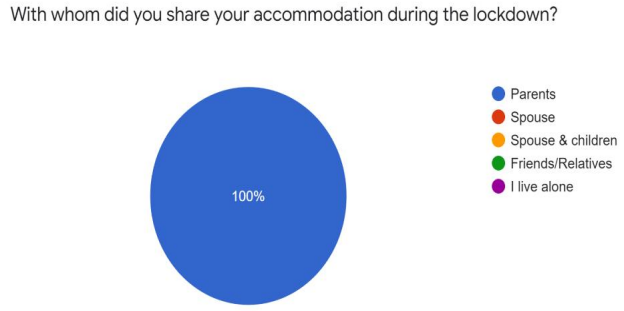
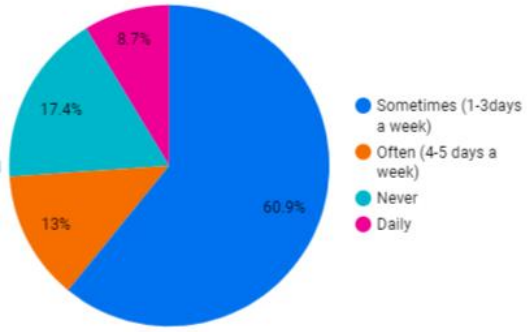
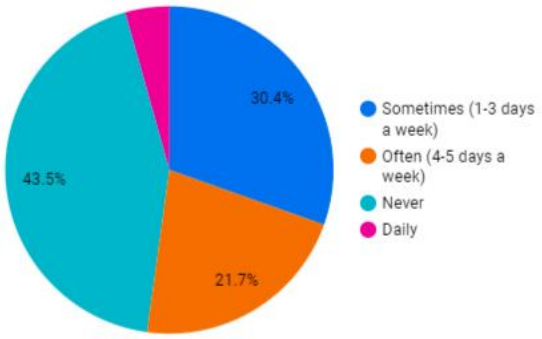
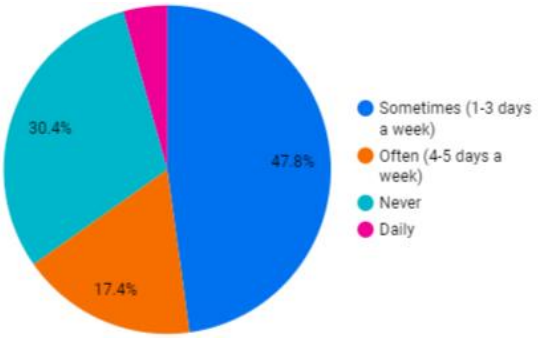
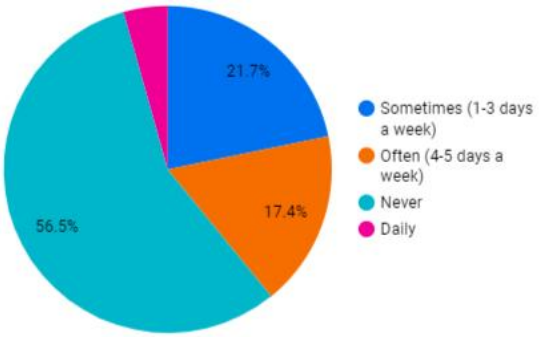
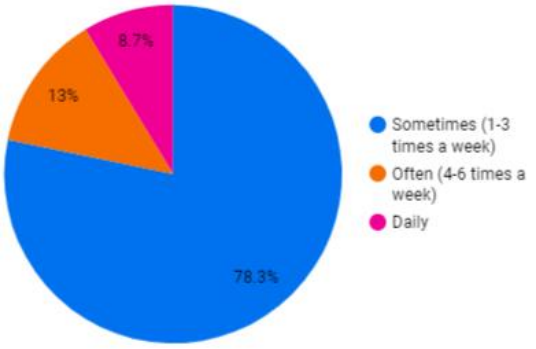
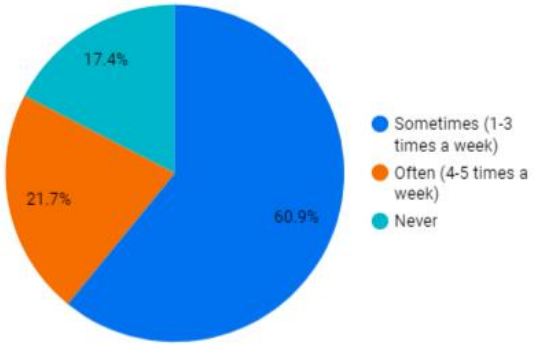
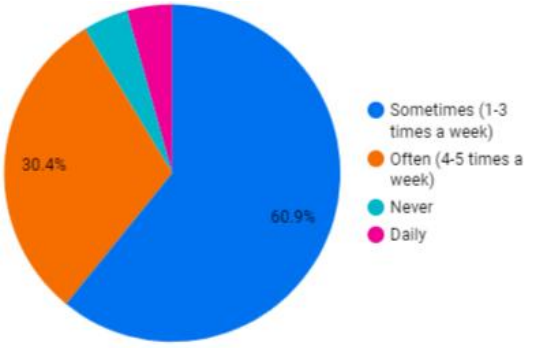
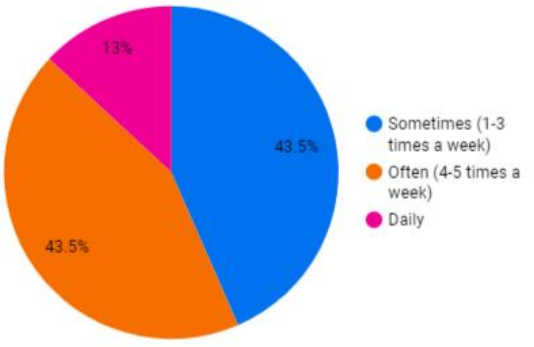


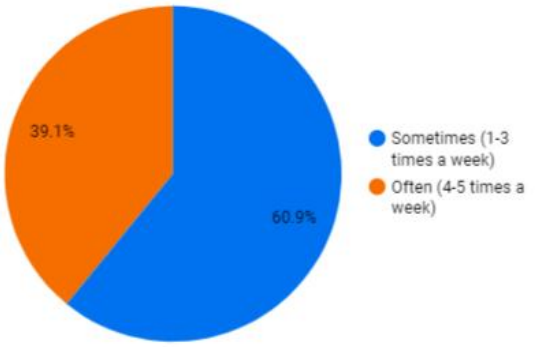
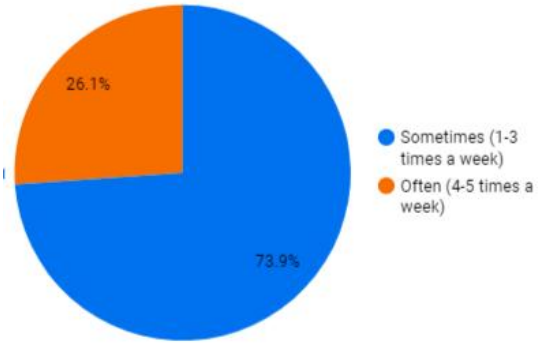
Fig. 4.5
Chart showing accommodation of the participants during lockdown

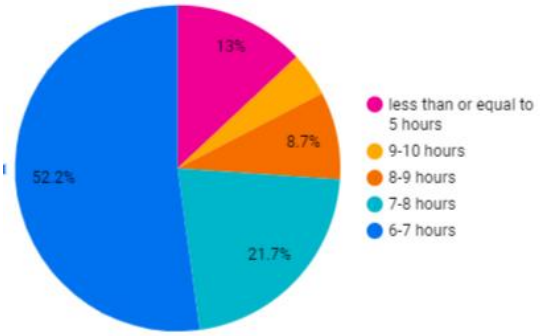
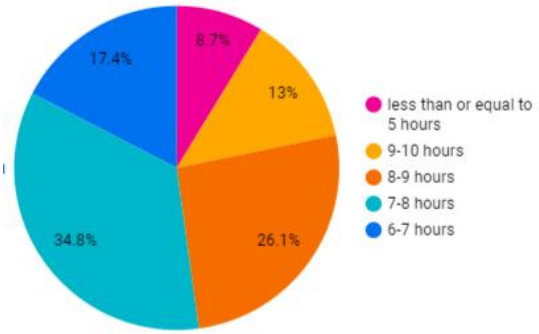
LIFESTYLE BEHAVIOUR BEFORE AND DURING LOCKDOWN:

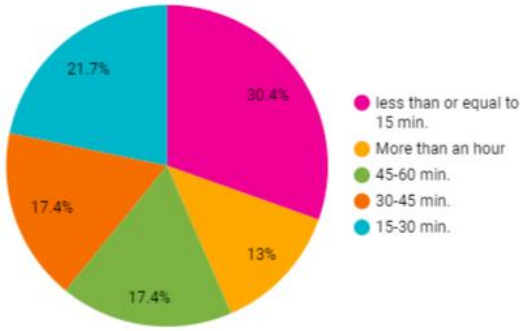
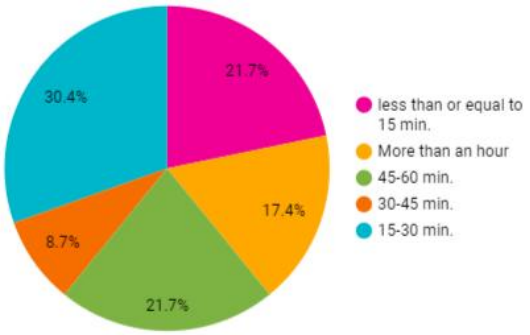
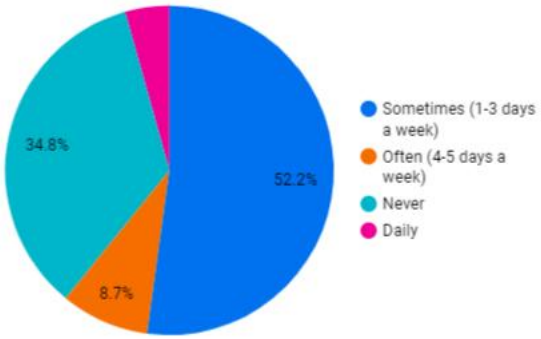
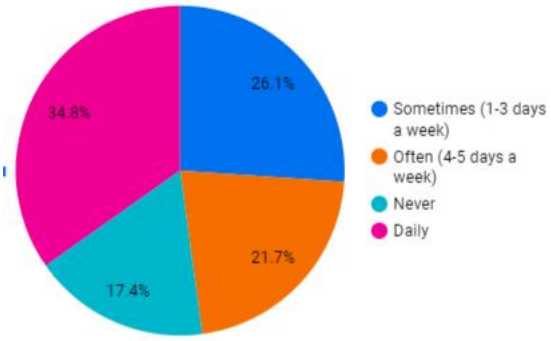
<table>
<tr><td>S.no</td><td>BEFORE PANDEMIC</td><td>DURING LOCKDOWN</td></tr>
<tr><td colspan="3">Assessment of Physical Activity:</td></tr>
<tr><td></td><td> 
</td><td> 
</td></tr>
<tr><td></td><td colspan="2">Percentage of people not engaging in any physical activities drastically increased nearly by 25% and there was a slight drop of individuals who engaged in any form of exercise daily.</td></tr>
<tr><td colspan="3">Assessment of Eating Habit:</td></tr>
<tr><td>1.</td><td>Before Covid Pandemic, frequency of skipping breakfast
 
</td><td>During lockdown, frequency of skipping breakfast
 
</td></tr>
</table>

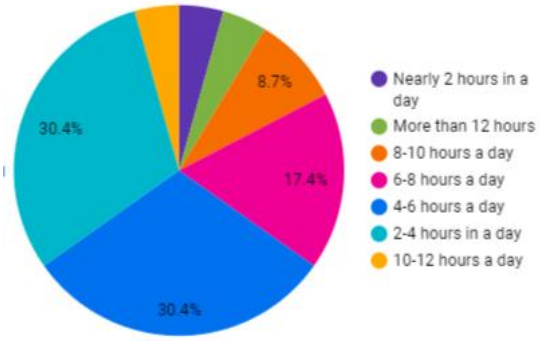
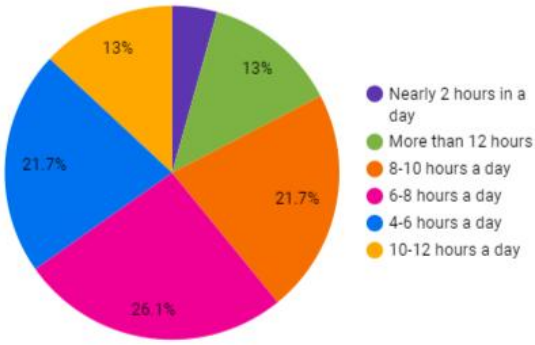
	There was an increase of about 25% in people who did not skip their breakfast during the lockdown.

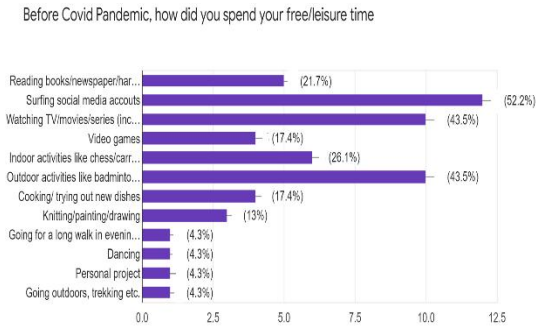
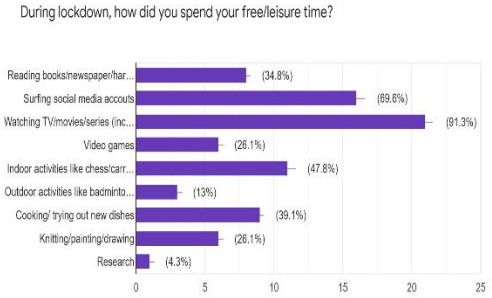
2.	Before Covid Pandemic, frequency of consumption of fast food 	During lockdown, frequency of consumption of fast food 
	Consumption of fast food increased by 8% but there was a rise about 17% who did not consume any kind of fast food.	
3.	Before Covid Pandemic, frequency of snacking between meals 	During lockdown, frequency of snacking between meals 
	Snacking between meals increased for about 20% and nearly individuals who didn't either started consuming snacks sometimes or often or daily.	

4.	Before Covid Pandemic, frequency of consumption of sweet/ chocolates/ sugar-sweetened beverages? 	During lockdown, frequency of consumption of sweet/ chocolates/ sugar-sweetened beverages? 
	Consumption of sweets/chocolates or beverages increased during the lockdown.	
Assessment of Sleeping Pattern		
1.	Before Covid Pandemic, duration of sleep cycle	During lockdown, duration of sleep cycle

		
	There was an improvement in duration of sleep and in fact there was a decrease in people seeping for less than 5 hrs.	

`2.	Before Covid Pandemic, time taken to fall asleep each night 	During lockdown, time taken to fall asleep each night 
	There was no such difference in the time taken to fall asleep each night.	
3.	Before Covid, frequency of afternoon nap? 	During lockdown, frequency of afternoon nap? 
	There was an increase by 20% of individuals who never used to take an afternoon nap, started taking a nap during the lockdown.	

Assessment of Leisure hours utilisation		
1.	Before Covid pandemic, time spent using mobile or in front of a screen (TV/laptop/desktop) 	During lockdown, time spent using mobile or in front of a screen (TV/laptop/desktop) 
	There was a significant increase in screen time, a 13% increase in using various devices for more than 12 hours, 15% increase it for nearly 8-10 hours. And an increase of 9% for using it for 6-8 hours.	
2.	Before Covid Pandemic, hobbies/activities during free/leisure time	During lockdown, hobbies/activities during free/leisure time

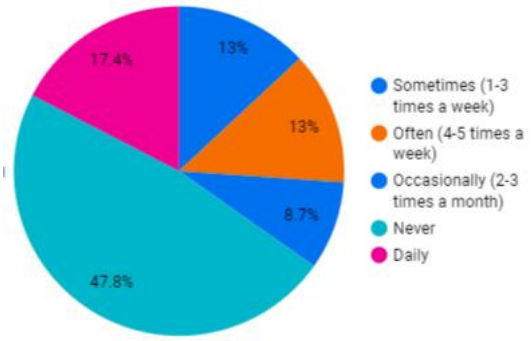
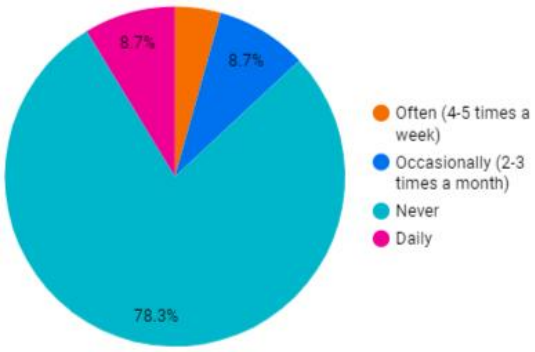
Assessment of substance use		
1.	Before Covid pandemic, smoking habit	During lockdown, smoking habit
		
2.	Before Covid pandemic, alcohol consumption	During lockdown, alcohol consumption

Table 4.1

Change in BMI before and after the lockdown:

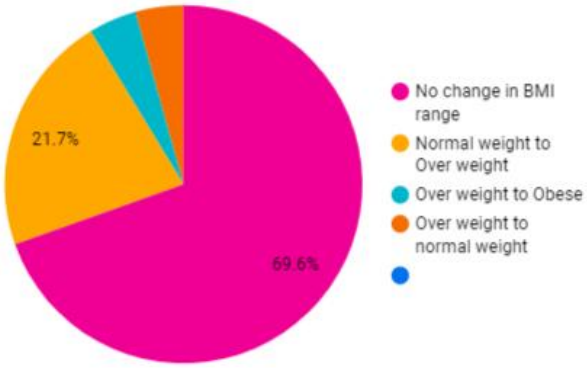


Fig. 4.6
Chart showing change in BMI

69.6% individuals their BMI remained the same. 21.7% individuals gained weight leading them from normal weight to overweight.

SELF ASSESSMENT

Do you think your lifestyle during lockdown has impacted your current lifestyle behavior?

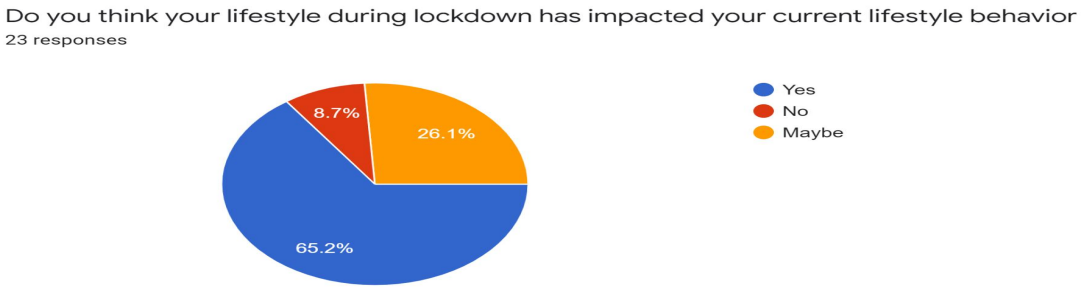


Fig. 4.7
Chart showing self-assessment of the particpants.

On self-assessment 65.2% agreed that lockdown did change their lifestyle to some extent.

Chapter 5: Discussion

As per as the above findings, we can note that the lockdown had a significant impact on the lifestyle of an individual. According to the results, percentage of people not engaging in any physical activities drastically increased nearly by 25% and there was a slight drop of individuals who engaged in any form of exercise daily.

On the contrary people were conscious about their health and maintained of having breakfast daily. There was an increase of about 25% in people who did not skip their breakfast during the lockdown. At the same time consumption of fast food increased by 8% but there was a rise about 17% who did not consume any kind of fast food. Similarly, as per the study by Madan J, 2021 **(4)** and Hammouri H **(3)**, it was observed that more people had incorporated healthy food habits. But on the contrary a rise in consumption of sweets like chocolates, traditional sweets and beverages was observed by nearly 13%. Similar findings were found in the study from Hammouri H **(3)**. An increase binge eating and consumption of snacks between the meals was also observed.

According to National Sleep Foundation Guidelines a young adult should sleep for at least 7-9 hours per night. And as observed form the results, it was noted that there was an improvement in duration of sleep and in fact there was a decrease in people seeping for less than 5 hrs. Over this there was a drastic rise in taking an afternoon nap daily, also supported by the paper from Luciano F **(8)**.

On the other hand, there was a significant increase in screen time, a 13% increase in using various devices for more than 12 hours, 15% increase it for nearly 8-10 hours. And an increase of 9% for using it for 6-8 hours.

New hobbies were developed during the lockdown period other than using of carious device to watch movies, series or play video games or surf through different social media. Hobbies like cooking, trying out new dishes, dancing, working on individual project were adopted.

Usage of substance like smoking and alcohol was decreased that is more people stopped using or changed their habit of smoking and consumption of alcohol.

With the help of Excel BMI was calculated, for 69.6% individuals their BMI remained the same. 21.7% individuals gained weight leading them from normal weight to overweight.

Chapter 5: Conclusion & Suggestion

To conclude, Lockdown had a slight but significant impact on lifestyle behaviour. During the lockdown individual opted a lethargy and sedentary lifestyle with an increase in duration of sleep, decrease in physical activities, and increase in screen time. But it was also observed that people were conscious about their health and maintained their diet. In the course of lockdown there was a drop in alcohol and smoking habit. This can be either due to the fear of the virulent disease covid-19 or because the observed individuals were residing with their parents during the lockdown. On self-assessment 65.2% agreed that lockdown did change their lifestyle to some extent.

Lockdown has impacted the lifestyle behaviour of individuals which might become the leading cause or act as a catalyst for many diseases in the future. Inactivity can slow metabolism and impair the body's ability to control blood sugar levels, regulate blood pressure, and break down fat.

Awareness can be created through various campaigns, advertisements, government can take an initiative to curb the spread of inactivity.

Individuals can make an effort by increasing their daily expenditure of energy by adopting simple steps like walking to their work, preferring stairs over lift, taking breaks in between their sitting position in front of a desk to walk. Indulging in conversation, adopting hobbies like playing sports, gardening, etc. over spending their time using cell phones or laptops.

Many people do not meet the minimum physical activity guidelines and are at risk of developing health problems because of being sedentary for an extended period of time.

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