



PROJECT REPORT

on

Impact of COVID-19 Awareness on Food Habit and Lifestyle of Rural Working People - a case study of Dhamorihat Sub Registrar Office, Naogoan, Bangladesh.

Submitted to

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LETTER OF TRANSMITTAL

Date: 29 May 2021

The Head

Department of Nutrition and Food Engineering (NFE). Daffodil International University.

Subject: Submission of Project Report.

Dear Sir,

It is a great pleasure to submit my Project Report, as a partial requirement and a prerequisite for completion of the BSc. in Nutrition and Food Science Program. I believe it is one of my great achievements to pursue and successfully complete my project work under the supervision of **Dr. Amir Ahmed**, Associate Head, Department of Nutrition and Food Engineering, Daffodil International University. This report is based on my work entitled **“Impact of COVID-19 Awareness on Food Habit and Lifestyle of Rural Working People - a case study of Dhamorihat Sub Registrar Office, Naogoan, Bangladesh.”** I have got the opportunity to carry out my study at the Sub Registrar Office of Dhamorihat, Naogoan. The idea and the research framework were greatly assisted by my supervisor and highly inspired by the Sub Registrar of the Office. I have completed my data collection through both an online procedure due to the consideration pandemic and nationwide lowdown as well in person survey. However, I strongly believe that I have maintained the ethical standard of research and also satisfied the basic research methodology in my project.

I shall be highly obliged if you are kind enough to accept this project report and provide me your valuable judgment. It would be my immense pleasure if you find this report useful and informative to have an apparent perspective on the issue.



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LETTER OF RECOMMENDATION

This is to certify that the project report entitled “**Impact of COVID-19 Awareness on Food Habit and Lifestyle of Rural Working People - a case study of Dhamorihat Sub Registrar Office,**

Naogoan, Bangladesh.” has been submitted for assessment to the examination committee by Faozia Afrose bearing ID: 171-34-617, Department of Nutrition and Food Engineering (NFE), Daffodil International University (DIU).

We are pleased to declare that this report is entirely written by the author and all the related works have been conducted by the intern under my strong supervision and observation. This is a piece of original work and has not been submitted or published anywhere for any other purpose.

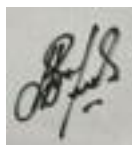
We strongly recommend the approval of the report by the authority and we also pursue a positive and fair evaluation of this work.

We wish her all the success in life.



23/07/2021

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DEDICATION

This research work is dedicated to my beloved father **Md. Bodor Uddin**, mother **Ms. Samsunnahar** and husband **Md. Abdus Salam Bokul** who gave me the support and courage to fulfill this work successfully.

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ABSTRACTS

On December 12, 2019 a brand-new Coronavirus (SARS-Cov2) emerged in Wuhan, China, sparking a deadly disease of acute breathing syndrome in humans (COVID-19). Coronavirus infection has challenged the entire world system. The whole world is stagnant due to the Corona pandemic. At this time, millions of people have lost their lives due to the deadly coronavirus. The list is getting longer day by day. Life is going on a new normalcy. A kind of instability and insecurity is intensifying in the minds of the people due to unknown fears. Coronavirus pandemic has taken a toll on our health. Even if the vaccine hits the market, it will take a long time to reach everyone. Covid-19 virus affects different people in different ways. Most of the infected may have mild to medium symptoms and may recover without being admitted to the hospital. The survey was conducted at the office of the Sub-Register among the staff, copyists and the deed writers as it is the most crowded government office at the upazila level. The impact of coronavirus among these people and the mass people who came there for transfer of their land is a significant one given that the registration department is the second largest revenue earning sector after National Board of Revenue (NBR). In this study, the aim is to investigate the impact of Coronavirus on eating habits, food intake and lifestyle. The way of Coronavirus has impacted all spheres of our lives will lead to an understanding of the challenges lying ahead and how people can resume normal services or whether life can be the same again or not. By studying the participant's changing pattern in lifestyle, food habits etc. The aim is to reach a conclusion on dietary changes and impact of lifestyle changes during this pandemic.

Keywords: Food Habit, COVID-19, Life Style, Health and Hygiene, Bangladesh.

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CHAPTER-1

1. INTRODUCTION

The COVID-19 pandemic is a giant scale threat to human health and also the economy everywhere on the planet. As of currently there appears to be no successful remedy for the malady. So, to regulate the unfold of the malady all the plausible alternatives square measure being checked out. No stone is left unturned to chop the transmission of the virus to minimum (Jeppesen & Miklian, 2020).

Figure-1: Corona Virus



1.1 An Overview of COVID-19 Pandemic:

The freshly discovered Coronavirus is to blame for the infection and unfold of Coronavirus illness (COVID-19). COVID-19 is caused by a specific coronavirus named SARS-CoV2. Coronaviruses are widely celebrated to own caused physical conditions varied from the respiratory illness to a lot of severe illnesses like Middle East metabolism Syndrome (MERS) furthermore as Severe Acute metabolism Syndrome (SARS). individuals infected with this virus typically complain of gentle to moderate respiratory disorder and in most cases recover with none requiring treatment. People who are older and prone to medical conditions like polygenic disorder, chronic respiratory disorder, upset and cancer are a lot doubtless to be infected severely (Kondziolka et al., 2020).

1.2 Coronavirus Outbreak

Coronavirus is causing mayhem globally since its deadly outbreak in December 2019 in Wuhan city of central Hubei province of China. The World Health Organization (WHO) could do nothing but declare a never seen global health emergency on 30th January 2020 in the aftermath of alarming reporting of the spread of the virus worldwide. Till 31st May 2020, a mammoth total of 5,939,234 confirmed infected globally and further 367,225 casualties have been reported by WHO. Bangladesh reported its first COVID-19 case on 08 March 2020 (Ouassou et al., 2020]

1.3 Coronavirus Infection Symptoms

COVID-19 symptoms do not follow a regular pattern unlike other diseases making it harder to diagnose. People infected with this virus will mostly appear to have mild to moderate illness and recover without medical care or hospitalization (Casella, 2021).

Most Common Symptoms

- Fever
- Dry cough
- Tiredness

COVID-19 Coronavirus Symptoms World Health Organization 12 November 2020

SERIOUS COVID-19 SYMPTOMS REQUIRING IMMEDIATE MEDICAL CARE

- If you develop any of these symptoms, call your healthcare provider or health facility and seek medical care immediately.
- This is not an exhaustive list. These are the most common symptoms of serious illness, but you could get very sick with other symptoms – if you have any questions, call for help immediately.

Shortness of breath/ Difficulty breathing Loss of speech or mobility or confusion Chest pain

MOST COMMON SYMPTOMS

Fever Cough Tiredness Loss of taste or smell

LESS COMMON SYMPTOMS

Sore throat Headache Aches and pains

Diarrhea A rash on the skin or discolouration of fingers or toes Red or irritated eyes

PLEASE NOTE:

- If you live in an area where malaria, dengue or other infections are common and you have any of above symptoms, seek immediate medical care according to the local health authorities.
- Stay in touch with your primary care provider to ensure you continue to receive the routine care you need, such as medication refills, follow-ups and other routine consultations.

Less Common Symptoms

- Aches and pain

- Sore throat
- Diarrhoea
- Conjunctivitis
- Headache
- Loss of taste or smell
- A rash on skin, or discoloration of fingers or toes

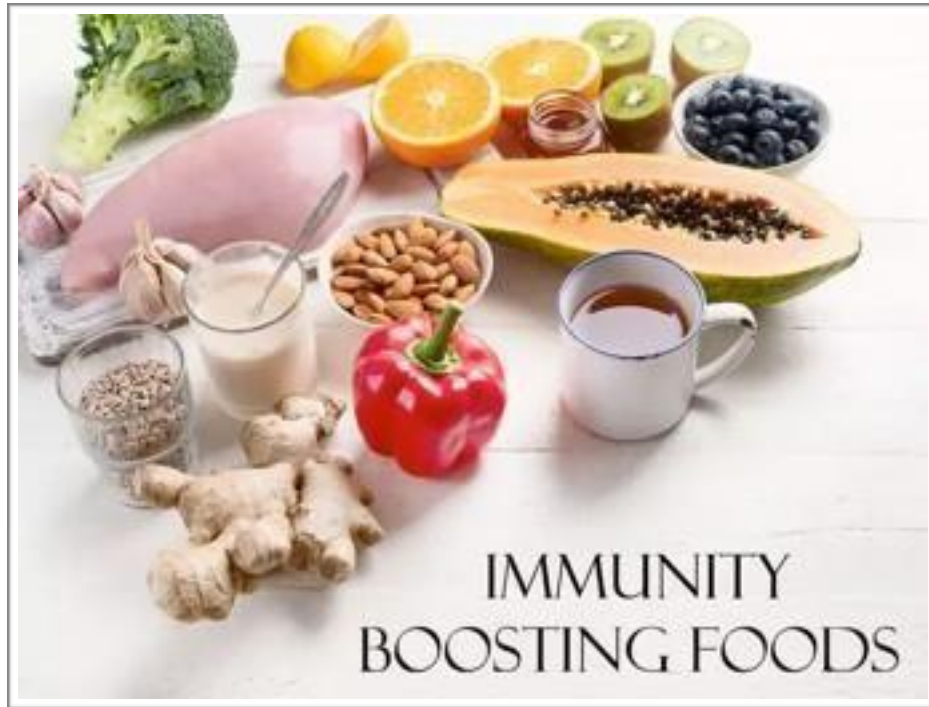
Serious Symptoms

- Difficulty breathing or shortness of breath
- Chest pain or pressure
- Loss of speech or movement [Marco Cascella, 2021]

1.4 Role of Vitamins in Immune Development

For proper functioning of the body nutrition and association square measure essential. A combination of diet and healthy way boost the system lowering the danger of chronic and infectious diseases. Thus, contemporary and unprocessed foods in one's diet can guarantee enough vitamins, minerals, dietary fibers, macromolecule and antioxidants therein body. To lower the danger of avoirdupois, cardiovascular malady, diabetes, stroke, overweight and few cancer sorts one ought to have enough water and avoid salt, fat or sugar (Aman and Masood, 2020).

Figure-2: Immunity Boosting Foods



The antioxidants accessible in fruits, nuts, vegetables and seeds minimize inflammation by fighting compounds referred to as free radicals. seafood, olive oil and food contain healthy fat that will increase immunity and reduce inflammation. to stay yourself hydrous, having enough water and alternative fluids (Aman and Masood, 2020). To prevent and management the COVID-19, additionally step up our body system we are able to follow the routine or task that is given below:

1. Take a cup of cocktail juice together with lemon, garlic, ginger, honey, black seed, turmeric raw.
2. Drink lots of water and additionally drink lukewarm water.
3. Eat countless fruits and inexperienced unifoliate vegetables that are unit enriched with antioxidants and eat foods that are unit high in calciferol like farm food, liver, egg yolk, oily fish etc.
4. Try to eat recent foods and unprocessed meals every day (Morais, 2021).

Role of Citrus fruits / Vitamin-C

Vitamin-C or nutrition| antioxidant may be a water-soluble vitamin. It supports the operation of assorted kinds of immune cells and enhances the cells' ability to guard against the infection. It

additionally supports metabolism and keeps our system healthy. It's a robust inhibitor that counters against aerophilic stress that's caused by the free radicals (Saeid et al., 2021).

Role of Ginger

It is a root and aromatic spice which is loaded with nutrients such as vitamin B6 and dietary minerals like magnesium, manganese. In fact, raw ginger has around 79% water, 18% carbohydrates, 2% protein and 1% fat. It can improve immunity because it has the antiinflammatory and antioxidant properties [Orisakwe et al., 2020].

Role of Garlic

It contains so many bioactive components such as phenolic compounds, organic sulfides, saponins and polysaccharides. These bioactive compounds show many biological functions such as antioxidant, anti-inflammatory, anti-cancer, digestive system protective, anti-obesity, antidiabetic, cardiovascular protective, anti-bacterial, anti-fungal activities and renal protective (Fan Yang et al., 2020).

Role of Honey

It is an inhibitor that helps in neutralizing the free radicals in our body. analysis by Michigan State University says that honey is wealthy in iron. Ca and metal and additionally raw honey have antioxidants, anticancer, antimicrobial, anti-inflammatory drugs, and antiproliferative. It will increase T and B lymphocytes, antibodies, eosinophils, neutrophils, monocytes and natural killer cells generation throughout primary and secondary immune responses in tissue culture (Fan Yang et al., 2020).

Role of Black Seed Oil

It has 2 elements: Thymoquinone and Nigelimine. Thymoquinone will shield against COVID-19 infection. It's restrictive effects on virus infection and melioration MODS complications by restoration of oxidation-reduction and immune balances. It is a monoterpene molecule with @daffodil international university

chemicals referred to as 2-methyl-5 isopropyl-1,4-benzoquinone. It's a copious gift in seeds of black caraway L. That's referred to as black seed (Maideen, 2020).

Role of Protein

The Nucleocapsid macromolecule (N Protein) of severe acute metabolic process syndrome Coronavirus a pair of (SARS-CoV2) is found within the microorganism core. immune {serum globulin immune gamma globulin immune globulin} (IgG) targeting N macromolecule is detectable within the serum of infected patients. The result of high titers of immune globulin against N-protein on clinical outcomes of SARS-CoV2 unwellness has not been represented. We have a tendency to study four hundred RT-PCR confirmed SARS-CoV2 patients to work out freelance factors related to poor outcomes, as well as medical aid Unit (MICU) admission, prolonged ICU keep and hospital admissions, and in-hospital mortality (Batra et al., 2021).

Role of Zinc

Especially, the role of metallic elements in viral-induced vascular complications has barely been mentioned, so far. Apparently, most of the chance teams represented for COVID-19 are at an equivalent time to teams that were related to deficiency disease. As metallic element is important to preserve natural tissue barriers like the metastasis epithelial tissue, preventing infective agent entry, for a balanced operate of the system and therefore the reaction system, deficiency disease will in all probability be additional to the factors predisposing people to infection and prejudicial progression of COVID-19 (Wessels et al., 2020).

Role of Vitamin D

It is projected that vitamin D signals temper respiratory organ inflammatory cascades throughout infection, and insufficiency of vitamin D causes exaggerated inflammatory protein storms, resulting in exacerbated disease. in addition, analogous to studies of reduced cancer incidence, the indefinite quantity of vitamin D compounds administered to patients close to the higher limit of

safety could serve to maximize immune health advantages and mitigate inflammation and illness severity in SARS-CoV2 infections (Vandana et al., 2021).

1.5 Lifestyle changes during COVID-19

Since there's no specific cure or immunizing agent for COVID-19 is obtainable however, we have a tendency to might forestall the unfold of this deadly pandemic by dynamic our lifestyles and following some etiquettes. Some specific rules recommended by the globe Health Organization (WHO) have to be compelled to be followed. For instance, washing hands with soap and water for a minimum of twenty seconds, employing a mask whereas outdoors, maintaining social distancing, staying inside and avoiding public gatherings. we have a tendency to additionally have to be compelled to be aware of a couple of a lot of social etiquettes like leaving behind shaking hands and stimulation (Renzo et al., 2020).

Benefits of using masks

A mask which is made by three layers of cloth can help to reduce the spread of the virus by people who have coronavirus but we can't depend on this because it can cover 20% of spreading. On the other hand, a surgical mask which is a loose-fitting disposal mask that can cover only 50% of spreading the virus. But N95 masks have more protection because they can filter out both large and small particles and this mask can cover 95% of spreading virus (Basu et al., 2020)

The importance of social distancing

The virus COVID-19 spreads mainly among those people who are in close contact for a longer period of time. The spread occurs when an infected person sneezes or coughs, talks and droplets from their mouth or nose are spread in the air and land in the nose or mouth of people nearby. The people who don't have any symptoms of coronavirus can also spread coronavirus because recent study shows that some people get coronavirus without having any symptoms. So, everyone should stay at least 6 feet away from others as much as possible (Basu et al., 2020).

The importance of hand cleaning

Coronavirus disease spreads when mucus or droplets contain the virus which gets into our body through our eyes, nose or throat. Mostly the virus can easily spread from one person to another to the next via hands. Easiest and most important way to prevent this virus is to wash our hands frequently with soap and water for at least 20-30 seconds for killing the virus when it's a fatty layer of the virus which will be disrupted by soap molecules (Basu et al., 2020).

Covid-19 may not be entirely preventable by lockdown alone. The best way to minimize the disease's mortality rate is to avoid public meetings and quarantine the elderly and vulnerable. Simultaneously, an attempt ought to be created to ascertain innovative methods for existing service facilities to extend the desired health service delivery for the treatment of sick individuals. The designation ought to be confirmed by conclusive review and COVID-19, suspected and nonCOVID-19 cases ought to be triaged supported clinical criteria. Cases that are properly diagnosed and classified should be hospitalized or isolated once applicable. Any other World Health Organization has had contact with them and has to be tracked down, isolated and monitored on an individual basis. We should try to boost our immunity naturally by obtaining enough sleep because the system and sleep square measure are inextricably connected. Regular exercise will assist you keep in form whereas conjointly reducing stress (Renzo et al., 2020).

CHAPTER-2

2. LITERATURE REVIEW

Based on the publication by (Sosa et al., 2020), the aim of their study was to research the dietary habits and changes in modus vivendi throughout the Covid-19 imprisonment amount on the nine DE Julio town, Bs. As. Argentina. The survey by victimization google kind was conducted by them and therefore the form was divided into varied sections like sociodemographic information, uptake habits, physical activity and emotions and ideas associated with the isolation amount. The survey reached 287 responses which was with a medium socioeconomic level. throughout the

isolation amount, the frequency of purchase had attenuated, however the intake of food, cakes and bread is high. The concern of physical activity, principally seventieth declared coach before Covid-19 imprisonment and it had attenuated by thirteen throughout the imprisonment amount. Other activities conducted throughout the COVID-19 lockdown; the foremost mentioned were improvement the house, cooking, looking at tv, series and films. A share larger than five hundredth of the surveyed population associated things of imprisonment with positive emotions (share with my family, occupy home); whereas solely pure gold associate it with negative emotions (anxiety, anguish, fear). It's expected that the bulk habits can come back to tradition, however, it'd be attention-grabbing to grasp that those developed, adopted and enforced throughout imprisonment can stay inside the new normality.

According to the study by (Renzo et al., 2020), the aim is to research the immediate impact of the COVID-19 pandemic on intake habits and mode changes among Italian population aged ≥ 12 years. The study instrument comprised a structured form packet that inquired demographic data (age, gender, place of residence, current employment); anthropometrics knowledge (reported weight and height); dietary habits data (Adherence to the Mediterranean Diet, daily intake of bound foods, food frequency, range of meals/day); mode habits data (grocery looking, smoke habit, sleep quality and physical activity). The survey was conducted from fifth to twenty fourth of April 2020, the perception of weight gain was discovered in forty eight.6% of the population; three.3% of smokers set to quit smoking; a small magnified physical activity has been rumored, particularly for bodyweight coaching, in 38.3% of respondents; the population cluster aged 18-30 years resulted to possess the next adherence to the Mediterranean Diet when put next to the younger and therefore the older ($p=0.000$; $p=0.000$); 15 August 1945 of respondents turned to farmers or organic buying teams for fruit and vegetables, particularly in North and Center Italian Republic, wherever BMI values were lower. Within the gift study, we tend to provide for the primary time knowledge on the Italian population mode, intake habits and adherence to the Mediterranean Diet pattern throughout the COVID-19 internment. However, because the COVID-19 pandemic is in progress, our knowledge has to be compelled to be confirmed and investigated in future larger population studies.

Based on the study by (Husain and Ashkanani 2020), A cross-sectional study was conducted through a web form employing a convenience sample of 415 adults living in Kuwait (age vary 18–73 years). The rate of skipping breakfast remained consistent, with a small increase throughout the pandemic. Lunch remained the most reported meal before and through COVID-19. Compared to before COVID-19, folks were far more likely to have a late-night snack or meal throughout COVID-19 (OR= three.57 (95% CI one.79–7.26), $p < 0.001$). Moreover, there was a forceful decrease within the frequency of fast-food consumption throughout COVID-19, up to eighty-two reported not overwhelming nutrition ($p < zero.001$). There was a big increase within the proportion of participants the United Nations agency had their main meal freshly created (OR=fifty-nine.18 (95% CI six.55–1400.76), $p=0.001$). concerning food cluster patterns, no important variations were found before and through the pandemic in terms of the weekly frequency of consumption, except within the case of fish and food. there have been no exceptional changes in drink consumption habits among participants before and through the pandemic, aside from Americano low and recent juice. Moreover, there was a good reduction in physical activity and a rise within the quantity of screen time and inactive behavior. A notable increase was detected in day-time sleep and a decrease in night-time sleep among participants. In general, this study indicates some changes in way of life, as well as changes in some uptake practices, physical activity and sleeping habits throughout the pandemic.

It's vital that the government considers the necessity for nutrition education programs and campaigns, significantly throughout this important amount of the pandemic in Kuwait.

According to the publication by (Mumena, 2021), the study aimed to research the impact of COVID-19 curfew on intake habits, food intake, and weight per food security standing in Asian nation. Material and Methods: This retrospective study enclosed 879 participants WHO were recruited via a web form. knowledge on demographics, food security standing (via the Food Insecurity expertise Scale), and changes in intake habits, food intake, and weight before and through the curfew were collected. Changes in intake habits (mealtime and daily range of meals) throughout the curfew were additional common among severely food-insecure participants. Having longer to cook was the explanation for changes in intake habits in food-secure and gentle food-insecure participants, whereas anxiety caused changes in intake habits altogether

foodinsecure teams. Food inconvenience was frequently rumored among severely food-insecure participants. Food insecurity didn't have an effect on food intake throughout the curfew. However, intakes of fruits, savory snacks, and sweets and candies were higher among food-secure participants ($p=0.000$ for all). Weight accrued considerably throughout the curfew within the foodsecure and gently food-insecure teams (0.98 kg, $p=0.004$, and 0.56 kg, $p=0.014$, respectively). Intake of food between meals accrued among food-secure participants throughout the COVID-19 curfew. Health organizations ought to emphasize via social media the importance of avoiding overconsumption of foods, promoting positive intake habits, and increasing physical activity throughout the curfew to take care of health and forestall weight gain.

Based on the publication by (Chopra et al., 2020), the study may be a cross-sectional web-based survey. A valid form to assess the changes in lifestyle-related behavior was administered on adults across Asian countries employing a Google on-line survey platform. A total of 995 responses (58.5% male, mean age thirty-three.3 years) were collected. associate degree improvement in healthy meal consumption pattern and a restriction of unhealthy food things was discovered, particularly within the younger population (age <30 years). a discount in physical activity plus a rise in daily screen time was found particularly among men and in upper-socioeconomic strata. Quarantine iatrogenic stress and anxiety showed a rise by a unit in nearly twenty-five percent of the participants. COVID-19 marginally improved the uptake behaviors, nonetheless tierce of participants gained weight as physical activity declined considerably plus a rise in screen and sitting time. psychological state was additionally adversely affected. a close understanding of those factors will facilitate the development of interventions to mitigate the negative style behaviors that have manifested throughout COVID-19.

According to the study by (Zhao Hu et al., 2020), an online survey was conducted in 2020. mode behaviors together with leisure-time exercise, leisure-time screen time, and dietary intake were self-reported. SWB was measured in victimization and the overall prosperity Schedule (GWS). alternative covariates together with sociodemographic factors, self-rated physical health, perceived social support, and loneliness were conjointly assessed by a structured form. A variable ordinal regression methodology was accustomed to analyze the association between SWB and mode behaviors also as perceived mode changes. A total of 1033 participants aged between eighteen and

sixty years were enclosed during this study. The mean GWS score was seventy-one.7 points. regarding seventieth of the respondents reported defrayal longer viewing screens, whereas regarding half-hour reported associate degree hyperbolic frequency of vegetable and fruit intake once the happening of COVID-19. Inactive exercise (odds magnitude relation [OR] one.16, 95% CI 1.02-1.48), occasional vegetable intake (OR one.45, 95% CI 1.10-1.90), occasional fruit intake (OR one.31, 95% CI 1.01-1.70), and infrequently skipping breakfast (OR one.43, 95% CI 1.081.91) were related to lower SWB once adjusting for sociodemographic factors, self-rated physical health, perceived social support, and loneliness. Moreover, participants WHO perceived a decrease within the frequency of vegetable, fruit, and breakfast intake were a lot of seemingly to report lower SWB. The COVID-19 pandemic might have positive and negative impacts on completely different aspects of mode behaviors. each unhealthy mode behaviors and negative mode changes were related to lower SWB. These findings offer scientific proof which will inform mode pointers and public psychological state interventions throughout the COVID-19 happening.

Based on the study by (Al-Saleh et al., 2021), to assess population healthy manner changes throughout internment in Abha town, KSA throughout COVID-19 pandemic. A descriptive crosssectional approach was used targeting all accessible populations in Abha town. information was collected from participants victimization electronic pre-structured form. The tool can cowl participants' socio-demographic information, participants' medical record, perception concerning internment and residential quarantine, and totally different manner aspects throughout internment. A complete sample of 1641 respondents were enclosed within the current survey. Male participants were 733 (44.7%) and (61.1% of the participants aged thirty-five years or additional. actual of eighty fifth of the participants united on internment effectualness. Daily sleep hours for fewer than eight hours were recorded for 662 (40.3%) participants. As for dietary habits, 885 participants (53.9%) modified their dietary habits throughout internment. sport follow throughout internment was reportable by 981 (59.8%) of the participants. internment connected behavior information showed that ninety-eight.5% of the participants were committed to internment either part (18.8%) or utterly (79.6%). Lastly, this study disclosed that COVID-19 pandemic through internment jointly of the suggested precautions to reduce virus transmission changed nearly all aspects of daily manners together with dietary habits, behavior, social relations, and life sharing.

CHAPTER-3

3. OBJECTIVE

3.1 General Objective:

Many research finding in last one strongly supports a direct correlation between COVID-19 awareness and lifestyle changes in different parts of the globe with a large variation in the demographic distinction. This lifestyle changes ranged from a very negative attributes such sleep disturbance, weight gain, minimal mobility etc. and some very positive attributes such as healthy food habit, higher intake citrus fruits and standard hygiene practice. The major intention of this study is to analyze the impact of COVID-19 awareness in the lifestyle changes, more specifically on food habit, healthy wellbeing and good hygiene practices in a selected population. This would encourage further study whether the changes in lifestyle, more specifically eating habits can play a gigantic role in fighting COVID-19 by boosting immunity.

3.2 Specific Objective:

1. Exploring the impact of COVID-19 awareness on food habit of the selected population during this pandemic.
2. Identifying whether or not the COVID-19 awareness and new normal lifestyle has any positive and negative impact on different parameters of daily routine of the working people in the selected office.
3. Gaining a preliminary idea about the level of good hygiene practice among the working people in a densely crowded area.

CHAPTER-4

4. METHODOLOGY

This is an exploratory type research. The examination aimed to research the instant effect of the COVID19 pandemic on ingesting behaviors and life-style changes more specifically changes in food intake. The look

at tool comprised a based questionnaire form that inquired demographic information (age, gender, employment); anthropometrics data (stated weight and height); nutritional conduct information (adherence to the Mediterranean diet, every day consumption of positive foods, meals frequency, quantity of meals/day); way of life conduct information (grocery shopping, smoking habit, sleep habit and physical activity).

4.1 Design

The study was center on an online and in person survey using questionnaires with 200 respondents at a land registration office where hundreds of people take service every week. The study is an observational and statistical of discrete and qualitative factors like the awareness among people, eating habits changes, lifestyle changes during corona period.

4.2 Time Period: The survey was conducted from 7th November 2020 to 25th of December 2020.

4.3 Statical Analysis: To analyze the response from participants descriptive statistics in the form of proportions have been applied. Microsoft Excel, version 1.0.1, 2018 has been used for cleaning, visualization and data wrangling.

4.4 Sampling:

Populations -

The total number of participants are **n = 200**

4.5 Data Collection Method:

- a) Google Forms
- b) Personal Interview

The survey developed using Google forms was carried out using different social media platforms ranging between two to three weeks. Additional data were collected directly from the people who are entitled to either submit or prepare deeds on behalf of the public or help them in collecting certified copies of the already registered deeds. The participants were requested to contribute to the study, willfully and were told to respond by filling up upon receiving the link of the form. The form consisted of total 32 questions, consisting of answer type questions, multiple choice questions, checkbox questions etc. Different socio-demographic variables like age, gender and occupation were included in the questionnaire.

CHAPTER-5

5. FINDINGS

5.1 Socio-Demographic Variables

A total of 200 responses were recorded. Out of all the individuals who participated in the study 171 were male while 29 were female, accounting for 85.71% and 14.28% of total responses, respectively (Figure 1)

Table 1: Ratio of Gender in percentage

Male	Female
84.71%	14.28%

Fig 1: Pie chart showing the distribution of participants based on gender

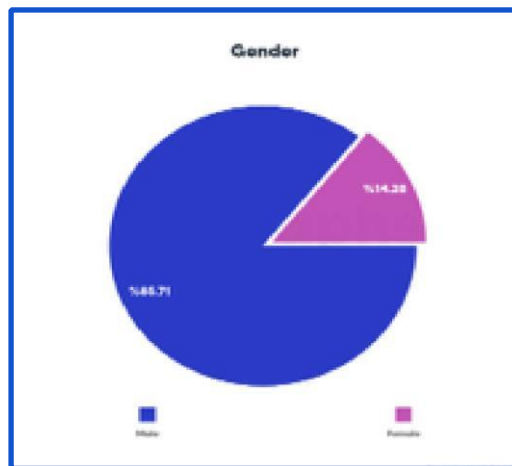


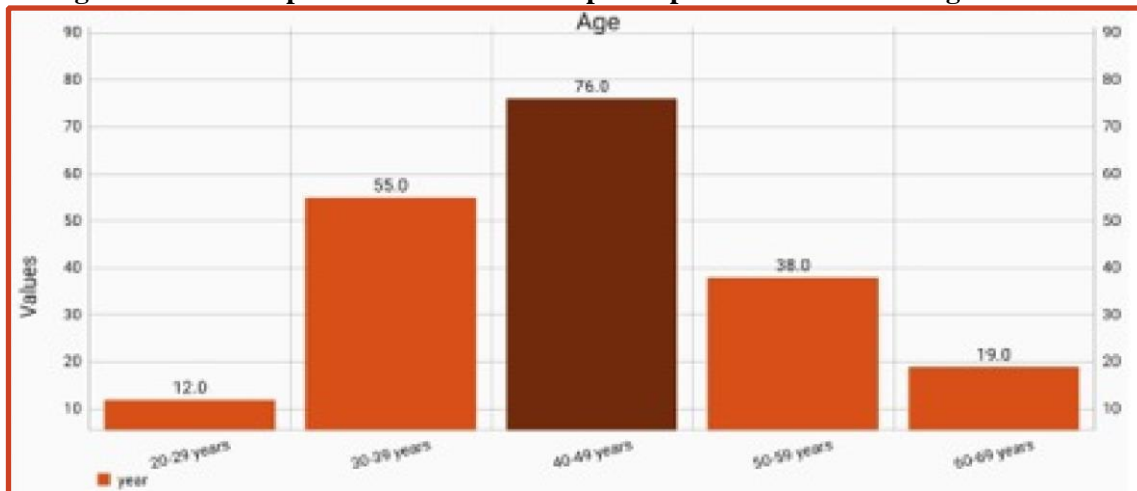
Table 2: Distribution of participants by age range

Age Range	Number of participants
20-29 years	12
30-39 years	55

40-49 years	76
50-59 years	38
60-69 years	19

The age range was 20 to 69 years. Maximum number of participants were aged between 40 to 49 years (Figure 2). The maximum value is 76, so the percentage of the maximum value is $(76/200) \times 100 = 38\%$

Fig 2: Bar chart depicts the distribution of participants based on their age



5.2 Eating Behaviors

One thing that has been heavily influenced in the aftermath of coronavirus is eating habits. By analyzing the pattern in the eating habits of the people participating in the survey it is prevalent that the deadly virus has to some extent at least brought about changes in the eating habits of the people even in the remote part of the country as well as in the world.

Table-3: Participants intaking Vitamin-C enriched food

Vitamin C enriched food	Number of participants intaking this food before Covid-19	Number of participants intaking this food during Covid-19
Lemon	70	160
Orange	115	145
Pineapple	70	90
Amla	40	120
Guava	55	105
Green chili	150	165

People both educated or illiterate have been conscious enough to add more foods containing Vitamin C and Antioxidant. People are taking more frequent meals than they were used to. The inclusion of citrus fruits is a common changing habit.

Fig 3: Figure shows the intake of citrus fruit (Vitamin C)

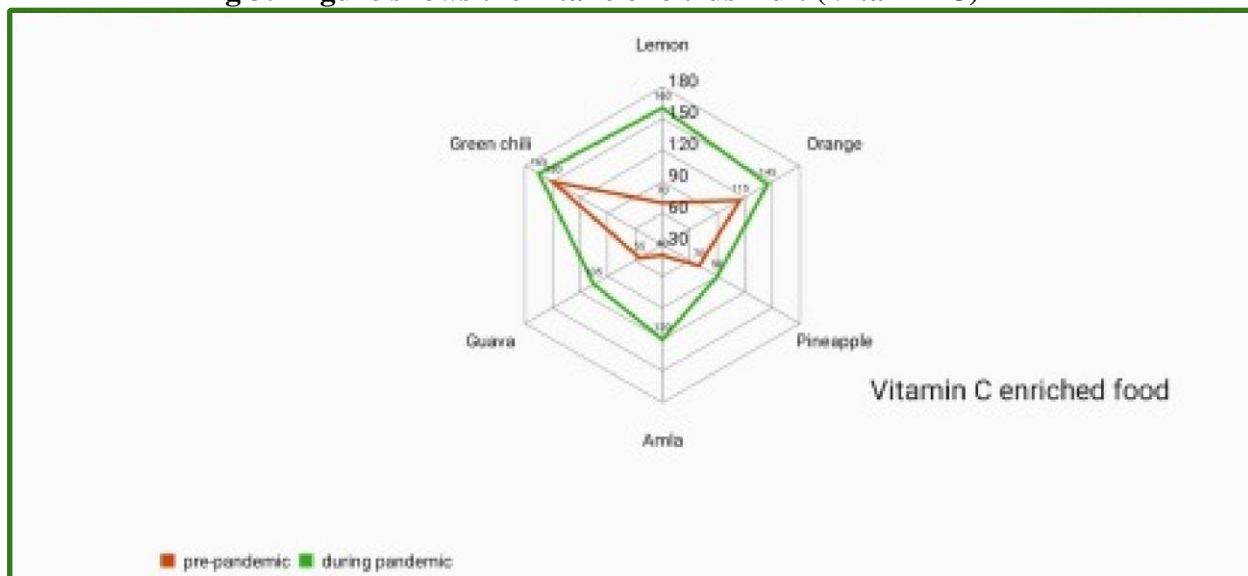


Table 4: People taking Foods containing Antioxidant

Antioxidants Containing Foda	Number of people taking before Covid-19	Number of people taking during Covid-19
------------------------------	-----------------------------------------	-----------------------------------------

Carrots	12	90
Egg	70	130
Liver	10	80
Spinach	80	130
Lemon	70	160
Dairy items	50	110
Pumpkin	80	120

Fig 4: Chart showing the intake of foods containing antioxidants

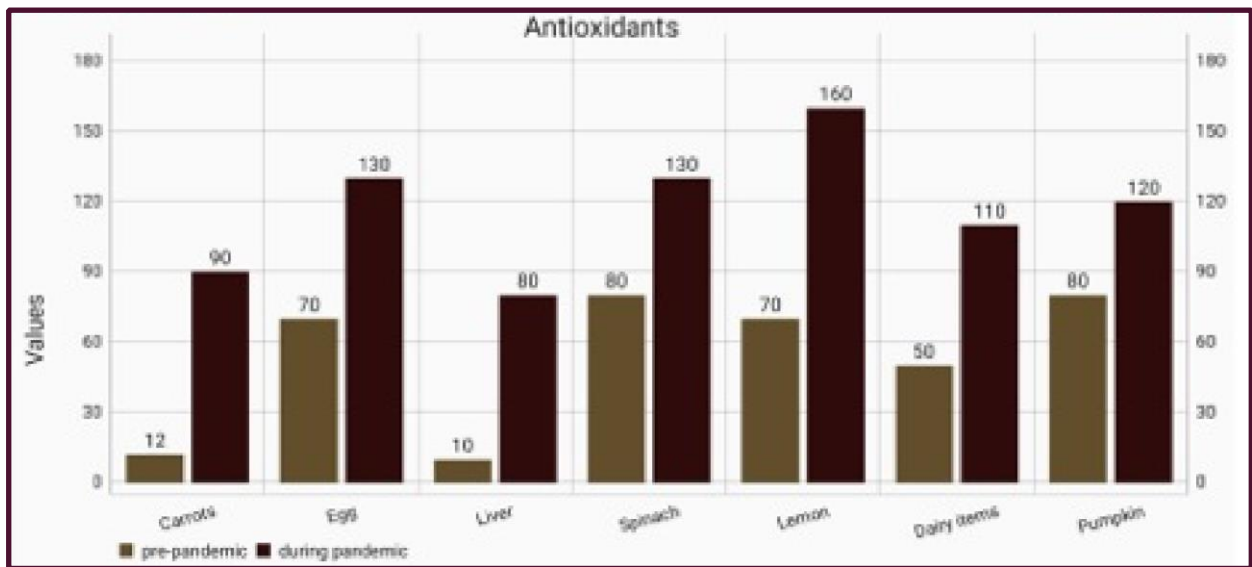
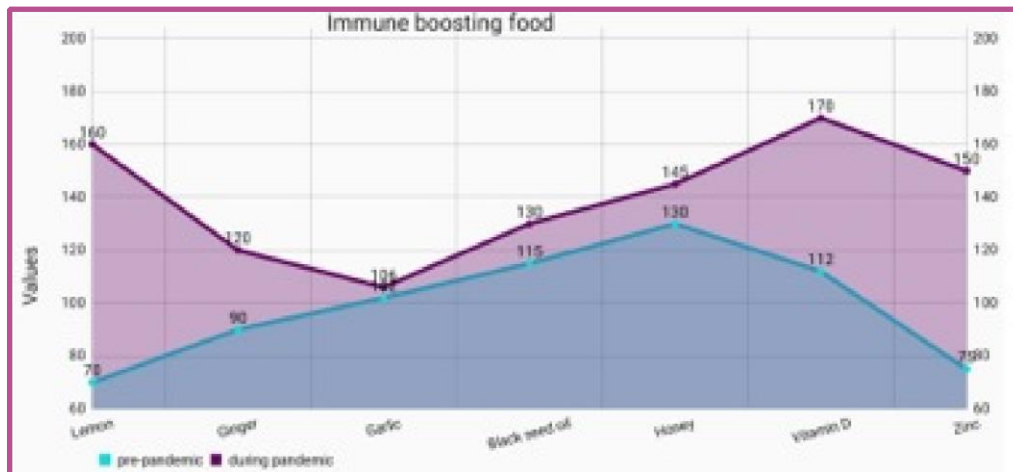


Table 5: People intake immune boosting food pre-pandemic and during pandemic

Immune boosting food	N (pre-pandemic)	N (during pandemic)
Ginger	90	120
Garlic	102	106
Black seed oil	115	130
Honey	130	145
Vitamin D	112	170
Zinc	75	150

Fig 5: Intake of immune boosting food pre-pandemic and during pandemic



5.3 Lifestyle

The most amazing find in the survey is that all the participants are said to have worn face masks in their working place. Apart from that the participants have ensured using soap or hand sanitizers in their public functions and also frequently washing their hands, wear gloves, for protecting their hair and eyes they use cap and goggles. People also use PPE in their working place to reduce the contamination from the virus.

We found the maximum value from the figure that is 190, so the percentage will be $(190/200) \times 100 = 95\%$. So, 95% of people wore masks while 5% of people didn't wear any mask.

Table 6: Proportion of participants who wore Mask

People who wore mask	People without Mask
190	10
95%	5%

Fig 6: This figure shows the proportion of participants who wore mask



Table 7: Proportion of hygiene practice

Hygiene practice to prevent Covid-19	Number of people maintain hygiene practice
Wearing mask	190
Using hand sanitizer	175
Using soap	169
Wearing gloves	120
Frequently washing hands	185
Using PPE	20
Using face shield / goggles	50
Using Cap	45

In regard to lifestyle changes during the COVID-19 lockdown, most of the participants declared to have changed their habits. In particular, smoking habits have been reduced slightly during this pandemic. Some people quit smoking during this pandemic.

Fig 7: Line chart showing maintaining hygiene to protect against COVID-19

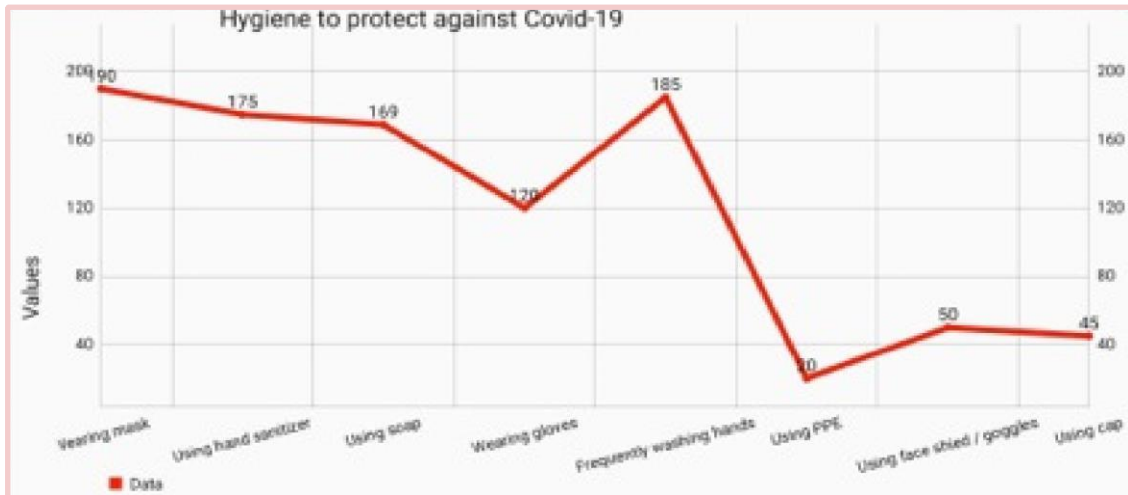


Table 8: Ratio of Smoking Habits

Number of Cigarettes	(N) Pre-Covid19	(N) During Covid-19
< 5 cigarettes / day	81	74
5-10 cigarettes / day	60	51
> 10 cigarettes / day	7	6
No Smoking	52	69

Fig 8: Bar graph represents the smoking habit

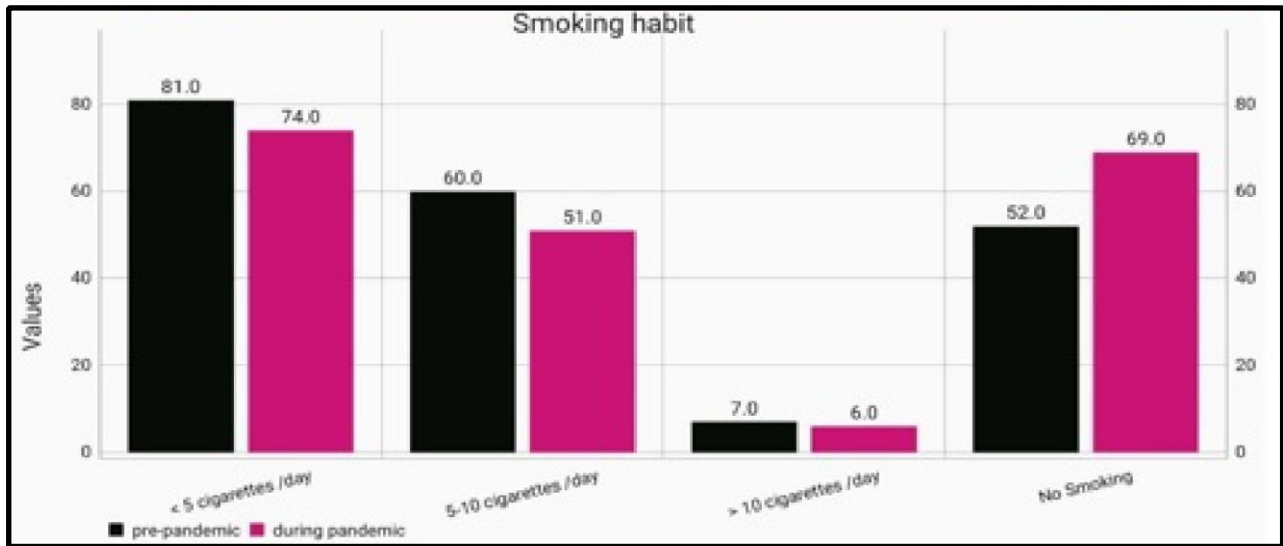
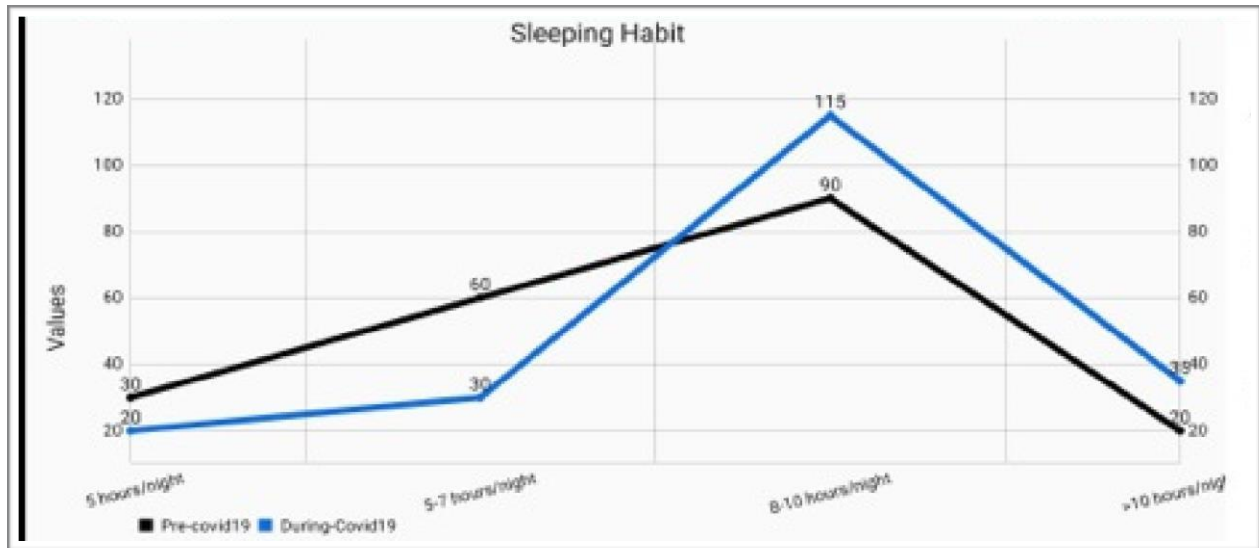


Table 9: People's Sleeping Habits

Sleeping time	People's sleeping habits preCovid19	People's sleeping habits during Covid-19
< 5 hours / night	30	20
5-7 hours / night	60	30
8-10 hours / night	90	115
> 10 hours / night	20	35

Fig 9: Line graph shows the changes in sleeping schedule of participants



The sleeping habits of participants have been changed. The sleeping time had increased during this pandemic.

6. DISCUSSION

The current study aimed to look at the people's lifestyle during COVID-19 pandemic lockdown. All qualified respondents for the survey questionnaire were included in the sample, which covered various aspects of lifestyle such as general lifestyle, daily activities as well as dietary habits. The survey respondents ranged in age, gender, weight and height.

6.1 Changes in Dietary Habits

The large scale spread of coronavirus has alarmed people so much that they are left with no other choices than to look after themselves in a way never seen before. The lockdown imposed by the government meant people were forced to stay home and have their frequent meals in small quantities. This also exerts various positive and some negative changes as well in their lifestyle including sleep disturbance, frequent eating etc.

The overflow of information in this open era of information and technology provided people with food habits, health rules, homemade remedies that can prevent coronavirus or reduce the chances of getting infected by boosting immunity. Information from different types of offline and online media enabled people to get better prepared. The participants admitted to have taken more citrus fruits, Vitamin-D fortified food or supplement, zinc and immune boosting foods such as ginger, garlic, honey and black seed oil.

6.2 Awareness and preparedness in prevention of infection

Almost all the responders in this survey stated wearing a mask while going outdoors. A surgical mask can also additionally shield others via means of lowering the respiration sections of the mask water, however it can't filter very small virus particles getting into via the mask. N-95 mask is higher at defensive each the mask wearer and different surrounding people as it's far designed to dan 95% of the very small particles. Some N-95 masks have a valve to make it less complicated for the wearer to breathe, however this

releases unfiltered air while the wearer breathes out and may also nevertheless cause coronavirus transmission.

The participants used to wash their hands with soap and water on a regular basis every day. The permanent staff had the opportunity to wear Personal Protective Equipment (PPE) that also included goggles, face shields, gloves etc.

6.3 Lifestyle changes

As smoking is injurious to health and it will increase the probabilities of disease which may have fatal consequences just in case of coronavirus, folks tried to vary their smoking habit.

During this pandemic a rise withinside the sleeping time of individuals. The participants' sleeping habits were naturally due to their inactivity and no sense of urgency to attend the workplace. They now not had to awaken early to arrange deeds for registration. The dearth of activity meant less stress and a lot of relaxation considering the transfer of property and its registration could be a terribly eminent act.

CHAPTER-7

7.1 CONCLUSION

Isolation has both positive and negative effects, but some people have returned home during the pandemic and cut back on their fast-food consumption. Eating foods that support our immune system, planning meals, meals portions and positive thoughts can all help us deal with the negative health effects of isolation. Changes in eating habits due to increased quarantine stress are a major concern due to increased food intake and breakfast trends. The most amazing finding of the survey is that over hundred deed writers, few

dozen copyists and half a dozen staffs served around a thousand public each day, four days a week without a single case of coronavirus infection case. That offers hope in our fight against the deadly disease. Mass awareness, wearing masks, following social distancing, health rules and last but not the least food habits that boost immunity have simultaneously played the most significant role in having zero infection cases in a very crowded place. If all these are ensured it is possible to reduce or control the spread of COVID19 in other places or all over the country in general.

7.2 RECOMMENDATION

On the basis of the findings, the following things are recommended:

- Wearing face mask
- Maintaining physical distance
- Washing hands with soap and water when needed
- Using hand sanitizer
- Eating citrus fruits and vegetables
- Strictly following health rules
- Making people around aware

will definitely reduce the risk of Coronavirus infection. In the particular case we also found that some positive practices initiated by the key decision maker of the case organization imparted positive outcome which can be followed by other organizations as well.

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ANNEXURE-1

Sample Questionnaire and Variables Measured:

1. Name

- Individual

2. Gender

• Male / female

3. Age

I) Range

• (20-29)

• (30-39)

• (40-49)

• (50-59)

• (60-69)

4. Do you know about Covid-19?

• Yes

• No

5. What foods did you take as a food enriched with Vitamin C before Covid-19?

• Lemon

• Orange

• Pineapple

• Amla

- Guava
- Green chili

6. What foods are you taking as a food enriched with Vitamin C during Covid-19?

- Lemon
- Orange
- Pineapple
- Amla
- Guava
- Green chili

7. Which foods did you take as an antioxidant before Covid-19?

- Carrots
- Egg
- Liver
- Spinach
- Lemon
- Dairy items
- Pumpkin

8. Which foods are you taking as an antioxidant during Covid-19?

- Carrots
- Egg
- Liver
- Spinach
- Lemon
- Dairy items
- Pumpkin

9. Do you take supplements?

- Yes
- No

10. Did you take immune boosting foods before Covid-19 as follows:

- Lemon
- Ginger
- Garlic
- Black seed oil
- Honey
- Vitamin D
- Zinc

11. Are you intaking immune boosting foods during Covid-19 as follows:

- Lemon
- Ginger
- Garlic
- Black seed oil
- Honey
- Vitamin D
- Zinc

12. How much water do you intake per day? Write below-

13. Did your sense of hunger change during Covid-19? Write below-

14. Do you eat frequently?

- Yes
- No

15. Are you wearing mask when you go outside?

- Yes

- No

16. Which type of hygiene practice are you maintaining during Covid-19:

- Wearing mask
- Using hand sanitizer
- Using soap
- Wearing gloves
- Frequently washing hands
- Using PPE
- Using face shield / goggles

17. Do you smoke?

- Yes
- No

18. How many cigarettes did you smoked in a day before Covid-19?

- < 5 Cigarettes / day
- 5-10 cigarettes / day
- > 10 cigarettes / day
- No smoking

19. How many cigarettes are you smoked in a day during Covid-19?

- < 5 Cigarettes / day
- 5-10 cigarettes / day
- > 10 cigarettes / day
- No smoking

20. Do you sound sleep / sleeping well?

- Yes

- No

21.How many hours did you slept before Covid-19?

- < 5 hours / night
- 5-7 hours / night

- 8-10 hours / night
- > 10 hours / night

22.How many hours are you slept during Covid-19?

- < 5 hours / night
- 5-7 hours / night
- 8-10 hours / night
- > 10 hours / night

23.Are you affected by Covid-19?

- Yes / NO

24.Do you know the helpline number for servicing Covid-19? If you know write the helpline number-

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