



Impact of Covid-19 on Lifestyle Change Before and After Lockdown

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Abstract

The entire globe is undergoing an unprecedented challenge of unimaginable proportions due to COVID-19 which has affected the lifestyle behaviour of individuals. This study was done to assess the impact of COVID-19 on changes in lifestyle behavior among general population of Chitradurga district. This was a cross-sectional study using online survey by google forms with link sent using WhatsApp. The data was collected from the general population from December 2021 to January 2022. Daily reminder was sent. The survey invitation clearly stated that the participants will have the right not to participate in the survey and participation in the survey will imply providing informed consent. The survey questionnaire would take around 5-7 min to complete which included socio-demographic profile and questions regarding life style. Total 705 responses were received by the stipulated time. Data was extracted in excel sheet from google form and analyzed using SPSS software version 20. Descriptive statistics expressed as frequency, percentages, mean and standard deviation. There were total 705 participants and their mean age was 43.8 years with SD of 9.62. 682 (96.8%) were Hindu by religion, majority (50.1%) of the participants were graduates and 367 (52.1%) were employers. Majority of the respondents heard about COVID-19 pandemic (97.7%) and knew what COVID-19 exactly was (96.2%). Majority (93.1%) of the respondents recognized the symptoms of COVID-19. Majority (88.5%) were supportive of government's decision. Life-style change was mixed. It had affected the food pattern i.e the probability of skipping meals has decreased by 24.2%. The habit of snacking between the main meals has increased by 54.1%. The daily intake of fruits and vegetables has increased by 52.5%. The consumption of fast food or junk food has decreased by 49.2%. The intake of sugar sweetened beverages has decreased by 42.4%. The participation in cooking new or traditional recipes

has increased by 58%. The consumption of unhealthy food when bored has remained same as before by 38%. The intake of nutritional supplements to boost immunity has increased by 60.9%. The time spent in exercise has increased by 48.9%. The participation in leisure activity has increased by 57%. The sitting and screening time has increased by 65.9%. The hours of sleep has increased by 54.1%. The quality of sleep has increased by 44.9%. At the same time the stress and anxiety levels has increased by 45.9%. There is mixed response but most have indulged in eating unhealthy food like junk foods but they have shown interest in learning about healthy lifestyle by involving in cooking and household works.

Keywords: COVID19; Diet; Lifestyle; Lockdown; Sleep

Introduction

Coronavirus disease (COVID-19), which originated in the Wuhan province of China, was declared as a global pandemic by the World Health Organization (W.H.O) on March 11, 2020.⁽¹⁾ Since then it has spread beyond borders and affected the lifestyle behaviour of people.

The entire globe is undergoing an unprecedented challenge of unimaginable proportions due to COVID-19 which has affected the lifestyle behaviour of individuals. This pandemic not only adversely affected the physical health of individuals, but also brought forth significant changes in their lifestyle. India has a widely recognized health care delivery system but due to the lack of organized infrastructure, there is a growing sense of crisis, as the majority (66.53%) of its population reside in rural areas which are plagued with wide discrepancies related to the delivery of health care needs.⁽²⁾ Needless to say, this pandemic has magnified this dearth by diverting its focus on specific medical conditions, neglecting other issues related to lifestyle behaviour.⁽³⁾

The lockdown disrupted normal social, economic, occupational, leisure and religious activity.⁽⁴⁾ A review published recently in Lancet, which studied the literature on the psychological impact of quarantine stated that the separation and curtailed the movement of people potentially exposed to a contagious disease during previous epidemics such as SARS, resulted in a range of psychologi-

cal conditions, from posttraumatic stress symptoms to confusion, anger, depression, stress, insomnia and emotional exhaustion.⁽⁵⁾

Due to this crisis (COVID-19) paralleled with the growing number of cases, there was an immediate spike in the need for several preventive and protective tools namely N-95 masks, personal protective equipment (PPE kits), ventilators, thermo-regulators, oximeters, etc., and as a result of which, the majority of the existing health care facilities/centres were either turned into dedicated COVID-19 centers or existing health resources were shifted to COVID-19 management. Health and wellbeing are the priorities of any nation, therefore India went through perhaps the strictest lockdown in 5 phases following partial-unlock down along with recommendations like restrictions on freedom of movement, social and physical distancing, self-isolation, and quarantine measures, etc., to curb down the disease spread.⁽²⁾

Whilst the entire nation is gradually progressing through the process of gradual 'unlocking', along with the prevailing state of confinement side by side, there is a need of the hour to assess the impact of COVID-19 on changes in lifestyle behaviour among individuals. Arguably all these prevailing restrictions might have had bearing on the eating or dietary habits, sleep status, physical activity, and mental stress, culminating in worsening of both the physical and mental health among the rank and file.

This study was done to assess the impact of COVID-19 on changes in lifestyle behavior among general population of Chitradurga district.

Methodology

This was a cross-sectional study using online survey by google forms with link sent using WhatsApp. The data was collected from the general population from December 2021 to January 2022. Daily reminder was sent. The survey invitation clearly stated that the participants will have the right not to participate in the survey and participation in the survey will imply providing informed consent. The survey questionnaire would take around 5 –7 min to complete. Total 705 responses were received by the stipulated time.

Inclusion criteria

1. Any gender
2. Able to read English
3. Had internet connection and WhatsApp installed on their phone
4. Age more than 18 years

Exclusion criteria

1. Unwilling and not providing informed consent for the study

Self-designed questionnaire: A 38-item self-designed questionnaire was used for the purpose of the study. The questionnaire included questions about 2 domains: (a) sociodemographic profile of the respondents, e.g., subject’s age, gender, marital status, educational qualifications, profession, and residence; (b) Impact of COVID-19 pandemic on the respondents such as eating, physical activity, sleep and other health related behaviours during COVID-19 outbreak.

The domain on eating behavior consists of 12 items on meal pattern, portion size, frequency of meals, food group consumption pattern, emotional eating and intake of high fat, salt and sugar (HFSS) foods and sugar sweetened beverages (SSB) consumption. The domain on physical activity pattern has six items focusing on different components of activity such as aerobic exercise, involvement in household chores, leisure related activity, sitting and screening time.

Data was extracted in excel sheet from google form and analyzed using SPSS software version 20. Descriptive statistics expressed as frequency, percentages, mean and standard deviation.

Results

There were total 705 participants who enrolled for the study. Mean age was 43.8 years with with SD of 9.62 years ranged

from 18 years to 62 years. 67.2% were males and 32.8% were females. 682 (96.8%) were Hindu by religion, majority (50.1%) of the participants were graduates and 367 (52.1%) were employers. [Table 1]

Table 1. Socio-demographic distribution of Study Participants

Variable		Frequency (%)
Gender	Male	474 (67.2%)
	Female	231 (32.8%)
Religion	Hindu	682 (96.8%)
	Muslim	14 (1.9%)
	Christian	1 (0.1%)
	Others	8 (1.2%)
	SSLC	8 (1.2%)
Education	PUC	16 (2.3%)
	Graduate	354 (50.1%)
	Postgraduate	327 (46.4%)
Occupation	Health care providers	211 (29.9%)
	Employers	367 (52.1%)
	Business	101(14.3%)
	Homemakers	26 (3.7%)

Majority of the respondents heard about COVID-19 pandemic (97.7%) and knew what COVID-19 exactly was (96.2%). Majority (93.1%) of the respondents recognized the symptoms of COVID-19, e.g., fever, cough, shortness of breath, and sneezing; however, none recognized myalgia or body aches and pains as one of the symptoms. Near about 46.3% of the respondents enumerated the options to stop COVID-19, e.g., social distancing, hand washing, cough etiquette, and wearing mask. Majority of the respondents were supportive of government’s decision of lockdown (88.5%) and 84.4% were satisfied by the steps taken by the government to contain COVID-19 pandemic. [Table 2]

The Probability of skipping meals has decreased by 24.2%. However it has remained the same for 47.9% of the people. The habit of snacking between the main meals has increased by 54.1%. The quantity/portions of meals and snacks have increased by 45.9%. The daily intake of fruits and vegetables has increased by 52.5%. The consumption of fast food or junk food has decreased by 49.2%. The intake of sugar sweetened beverages has decreased by 42.4%. The participation in cooking new or traditional recipes has increased by 58%. The consumption of unhealthy food when bored has remained same as before by 38%. The intake of nutritional supplements to boost immunity has increased by 60.9%. The support of the family and friends in eating healthy has increased by 76%.

Table 2. Knowledge about COVID-19 among the study participants

Knowledge about COVID-19		Frequency (%)
Heard about COVID-19 pandemic	Yes	689 (97.7%)
	No	16 (2.3%)
COVID-19 is	Bacterial disease	7 (0.9%)
	Severe flu like illness caused by nCoV/SARS virus	678 (96.2%)
	Protozoal disease	00
	Don't know	20 (2.9%)
Symptoms of COVID-19	Fever	05 (0.7%)
	Cough	04 (0.6%)
	Bodyache	02 (0.3%)
	Difficulty in breathing	36 (5.2%)
	Sneezing	02 (0.3%)
	All of the above	656 (93.1%)
	How to prevent COVID-19 spread*	Social distancing
	Hand washing	425 (60.3%)
	Cough etiquette	68 (9.6%)
	mask	256 (36.3%)
	All of the above	326 (46.3%)
Do you support the government decision of lockdown	Yes	624 (88.5%)
	No	40 (5.7%)
	May be	41 (5.8%)
Satisfied with the steps taken by govt to contain COVID-19 pandemic	Yes	595 (84.4%)
	No	20 (2.8%)
	To some extent	90 (12.8%)

*multiple answers

The interest in learning healthy eating tips from media has increased by 55.8%. The time spent in exercise has increased by 48.9%. The participation in leisure activity has increased by 57%. The sitting and screening time has increased by 65.9%. The hours of sleep have increased by 54.1%. The quality of sleep has increased by 44.9%. At the same time the stress and anxiety levels has increased by 45.9%. [Table 3]

Discussion

In our study we noticed mixed responses from participants, both in positive and negative modes. The socio-demographic profile suggests that majority of the respondents were male, well-educated, Hindus and were employers. This survey consciously made an attempt to keep the health-care professional

out of the ambit, but still near about one-tenth (29.9%) were health-care providers.

Majority of the respondents were aware of the symptoms of COVID-19 and were also aware of the precautionary steps to follow to prevent the spread of the disease. This gave the impression that public health awareness measures were percolating down to the general population. Majority of the respondents supported government's decision of lockdown and were satisfied by the steps taken by the government to contain COVID-19 pandemic. This showed that general people were ready to sacrifice their personal agenda for greater good. These findings were similar to a study conducted by Kaustav Chakraborty et al in West Bengal.⁽⁵⁾ In a study conducted by Gunchan Paul et al, 34.2% of general population knew that COVID-19 is a viral disease whereas

Table 3. Lifestyle changes before and after lockdown among the study participants

Lifestyle	Increased	Same as before	Decreased
Probability of skipping main meals	197(27.9%)	338(47.9%)	170(24.2%)
Habit of snacking between the main meals	381 (54.1%)	226(32.1%)	98(13.8%)
Quantity/portions of meals and snacks	324 (45.9%)	282(40%)	99(14.1%)
Daily intake of fruits and vegetables	370 (52.5%)	213 (30.2%)	122 (17.3%)
Consumption of fast food or junk food	148 (20.9%)	211 (29.9%)	346 (49.2%)
Intake of sugar sweetened beverages	135 (19.2%)	271 (38.4%)	299 (42.4%)
Participation in cooking new/Traditional recipes	409 (58.0%)	275(39%)	21(3%)
Consumption of unhealthy food when bored	176 (24.9%)	268 (38.0%)	261(37.1%)
Intake of nutritional supplements to boost immunity	430 (60.9%)	240 (34.1%)	35(5%)
Support of the family and friends in eating healthy	536(76%)	162(23%)	7(1%)
Interest in learning healthy eating tips from media.	394(55.8%)	268(38.1%)	43(6.1%)
Time spent in exercise	345(48.9%)	261(37%)	99 (14.1%)
Participation in leisure and household chores	402 (57%)	282 (40%)	21(3%)
Sitting and screen time	465 (65.9%)	176 (25%)	64(9.1%)
Hours of sleep	381 (54.1%)	268 (38%)	56 (7.9%)
Quality of sleep	317 (44.9%)	310 (44%)	78 (11.1%)
Stress and Anxiety levels	324 (45.9%)	233 (33.1%)	148 (21%)

38% considered it as a biological weapon.⁽⁶⁾

In a similar study conducted by Prasanth Sankar et al in South India, it was found that the most important dietary change during the lockdown, 80.9% reported increased consumption of vegetables, 42.7% reported increased consumption of fruits, whereas only 24.5% reported increased consumption of snacks, fried or processed foods. 63% reported decreased consumption of snacks, fried or processed foods, whereas only 11.8% had a change in meal timings. Less than 3% consumed health supplements or home remedies as a preventive strategy against COVID-19. Almost same findings were noted in our study.⁽⁷⁾

In a study conducted by Amerta Ghosh et al⁽⁸⁾ in North India, 56% of patients reported that they were taking same quantity of diet as before lockdown whereas 25% were eating less than before. Increase in consumption of fruits was recorded in 20%, and interestingly, 7% of patients started eating fruits during lockdown. In 23% of patients there was

an increase in frequency of snacking (more than 4 times/day). Some form of exercise was followed by 62% of patients. These finding were similar to our study.

In our study we found that hours of sleep had increased among 54.1% participants. In a similar study conducted in Italy showed that sleep habits has increased by 54% which is very similar.⁽⁹⁾

Conclusion

During the current pandemic there have been many lifestyle changes noted in our participants. COVID-19 had negative impact on their lifestyle. There is mixed response but most have indulged in eating unhealthy food like junk foods, but they have shown interest in learning about healthy lifestyle by involving in cooking and household works. A detailed understanding can help to develop interventions to mitigate the negative lifestyle behaviors manifested during COVID-19.

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