

Research Article**Impact of Psychological Factors on Eating Habits during Pandemic Lockdown in India****¹Ahmed Ali Ajmal Pasha | ^{*2} Syed Arif Pasha | ³Muneeb Jehan**

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ABSTRACT:

Background: COVID-19 and lockdown brought consequences like stress, anxiety, depression, social and physical distancing and it has significant impact on well-being, health of people, life style, quality of life, dietary habits and increase several public health issues.

Aim: The main purpose of this current study was to investigate the impact of psychological factor son eating habits of people during lockdown.

Material and Methods: Survey approach design was used using emotional eater questionnaire (EEQ). It has 10 items. Population of the current study was residents of Hyderabad state India. Questionnaire was distributed using Google forms in Facebook, emails, WhatsApp groups and Instagram. Total 211 completed questionnaires were used in the analysis. SPSS was used for statistical analysis.

Findings: Results revealed that there is significant difference and change observed in eating habits of people before lockdown and during lockdown.

Conclusions: It is concluded that during lockdown people prefer comfort food which directly increase risk of diabetes, cardiovascular diseases. Due to no or limited physical activities people gained weight and other psychological problems such as anxiety, stress and depression. There is need to focus on the diseases pattern built during lockdown.

Implications: Several non-communicable diseases such as diabetes and heart diseases increased during pandemic lockdown therefore it significantly increased the burden of non-communicable diseases on healthcare organizations. There is needed to make policies to reduce and control expenditure on non-communicable diseases.

KEYWORDS

Psychological Factors, Eating Habits, Lockdown, COVID-19, Emotional Eater Questionnaire..

1 | INTRODUCTION

The rapid spread of corona virus in all over the World not only influenced the economy but well-being of people as well. Corona virus (COVID-19) started spreading from the city of Wuhan China in 2020.¹ World Health Organization (WHO) in January 2020 declared a public health emergency and global pandemic in March 2020.² The government took preventive measures in form of social distancing and imposing lockdown all over the country.³ During lockdown all schools, colleges and universities were closed and teaching and physical learning activities were prohibited but online and e-learning activities were carried out using different platforms such as zoom, WebEx, Microsoft team etc.⁴ Lockdown is related with movement restrictions. Due to these restrictions people does not have physical activities which brings several changes such as anxiety, stress, depression, craving for more sugary foods, more intake of food, change in dietary habits, eating more while sitting at home.⁵ Change in eating habits is related with macronutrient intake during lockdown.⁶ As human beings are more social and long social and physical distancing put psychological stress which leads to more intake of food⁷. The numbers of studies conducted on dietary and eating habits have reported more food intake, more smoking, alcohol intake, weight gain and change in sleeping patterns.⁸ Spending more time at home leads to comfort food i.e. craving for more food. Comfort food is rich in carbohydrates which increase production of serotonin which directly affects ones' emotions and help in reducing stress⁹. There is direct relationship between comfort food and obesity, cardiovascular diseases, weight gain and diabetes.^{10,11} Moreover psychological factors such as stress, anxiety, boredom and loneliness have also impact on eating habits.¹² Gaining weight in young age is directly related with cardiovascular diseases and diabetes level. Due to poor life style people gained weight in lockdown in India. With the increase in diseases will directly increase of expenditure on non-communicable diseases. Thus the above mentioned issues have led this study to investigate the factors affecting dietary habits in Indian population during lockdown. Therefore the following research questions have been postulated:

RQ1: Does psychological factors affect eating habits in Indian population during lockdown?

2 | MATERIAL AND METHODS

2.1 | Research Design

This is quantitative study, survey design was adopted. Nature of data was primary and cross-sectional. Data was conducted online in December 2021 and January 2022 from respondents using Google forms. Respondents with age higher than >18 years from Hyderabad India participated in the survey. Participants were contacted through Facebook, WhatsApp, email and Instagram. Populations of the study were residents of Hyderabad state India. Also academic institutions, health and medical facilities' workforce also requested to participate in the study. Total 211 respondents completely filled the online form.

2.2 | Measures/Instrumentation

Questionnaire consists of three sections, first section consists of socio-economic/demographic characteristics of the respondents, 2nd sections consist of items related with psychological factors third section consist of eating/dietary habits. All the questionnaires were adopted from Hamzaidet al¹³ and Garaulet et al.¹⁴ The name of the questionnaire is emotional eater questionnaire (EEQ). It's a 10 item questionnaire. This is 4 point scale in which responses range from 1-4, 1 stands for never, and 4 stands for always.

2.3 | Data Analysis Techniques

SPSS was used for analysis of the data. Frequency and percentage are reported to represent socio-economic information of the respondents. The EEQ is based on thirty points in which score of less than 5 represents non-emotional eater and score of 21-30 represents very emotional eater. Pair sample and independent sample t-test were performed to check the difference in the mean scores of eating habits before and during lockdown. Chi-square test

also performed to check the impact of psychological factor son dietary habits.

3 | RESULTS

Table 1 presented socio-economic or demographic information of the respondents. There were 150 (71.1%) females participated followed by male respondents 61((28.9%). Further analysis of results revealed that majority of the respondents have between four to 5 family members i.e. 100 (47.39%) followed by those respondents who have one to 3 members 88 (41.7%) only 23 people live alone which is 10.9% of the sample size. In addition 187 (88.6%) respondents started working from home during lockdown and only 24 (11.34%) said No we go to our offices daily basis. These respondents might work in food and beverages or healthcare organizations.

TABLE 1 Socio-Economic Information

| Variables | Characteristics | n | % |
|----------------|-----------------|-----|-------|
| Gender | Male | 61 | 28.90 |
| | Female | 150 | 71.10 |
| Family Members | Living alone | 23 | 10.9 |
| | 1-3 Members | 88 | 41.70 |
| | 4-5 Members | 100 | 47.39 |
| Remote working | Yes | 187 | 88.6 |
| | No | 24 | 11.37 |

TABLE 2 Percentage of Food Intake

| Variables | Food Intake | X ² Test | P values |
|-----------|-------------|---------------------|----------|
| Male | Yes | 35(57.37%) | 189.16 |
| | No | 26 (42.62%) | |
| Female | Yes | 41 (27.33%) | 1.932 |
| | No | 109 (72.66%) | |

Respondents were also inquired about their food intake. On the basis of gender 35 men (57.37%) revealed that yes they increase their food intake during lockdown while 26 (42.62%) said no. on the other hand only 41 (27.33%) female revealed that they started taking more food while majority of the female respondents 109(72.66%) said no we did not started taking more food. These results of male respondents are clearly different from their female counterparts.

TABLE 3 Psychological Factors and Eating Habits

| Variables | Before Lockdown | X ² /p | During Lockdown | X ² /p |
|--------------------------------|-----------------|-------------------|-----------------|-------------------|
| Method of Cooking | | | | |
| Steam | 126 (59.71%) | 12.34 | 90 (42.65%) | 15.61 |
| Fry | 85 (40.28%) | p<0.05 | 121(57.34%) | p<0.05 |
| Cold Drinks Intake | | | | |
| Yes | 56(26.54%) | 26.77 | 192(90.99%) | 24.33 |
| No | 155(73.45%) | | 19(9.00%) | |
| Change in eating Habits | | | | |
| Yes | 93(44.07%) | 6.19 | 166(78.67%) | 10.12 |
| No | 118(55.92%) | | 45(21.32%) | |
| Number of Meals | | | | |
| 2 Times/day | 99(46.91) | 259.01 | 9(4.26%) | 372.87 |
| 3 Times/day | 81(38.38%) | | 12(5.68%) | |
| 4 Times/day | 20(9.47%) | p<0.01 | 115(54.5%) | p<0.01 |
| 5-6 times/day | 11(5.21%) | | 75(35.54%) | |
| Quality of Sleep | | | | |
| Worse | 27(12.79%) | 8.91 | 144(68.24%) | 101.32 |
| Better | 184(87.20%) | p<0.05 | 67(31.75%) | p<0.01 |

Table 3 presented the impact of emotional eater questionnaire i.e. psychological factors impact on eating habits of people. It is found that there is significant difference found in eating habits of people before lockdown and during lockdown. The cooking methods, intake of soft drinks, change in dietary habits, increased in number of meals per day and quality of sleep shows significant difference before lockdown and during lockdown.

4 | DISCUSSION AND CONCLUSION

This study has tried to answer the research question that whether psychological factors have some association on eating habits of people during or before lockdown or not? Yes lockdown has psychological impact on dietary habits of people in India. Findings revealed that there is significant change is seen in eating habits, intake of cold drinks, and number of meals, craving for sugary foods, taking more snacks less physical activities and gaining more weight in lockdown. These foods are called comfort foods which are rich in sugar and carbohydrates have direct relation with cardiovascular diseases and risk of diabetes. Though comfort food help in reducing stress but when there is long social distancing and no physical activities or limited activities there might be a chance of getting exposed to chronic diseases. Therefore it is concluded that during lockdown Indian people gain more weight, diabetes and cardiovascular diseases which has significantly increase the burden of non-communicable diseases on health sector. The findings of the existing study are in line with findings of past studies which also found significant impact of pandemic lockdown on dietary habits and eating habits in different countries around the World.^{15,19}. Therefore the findings of this study are justified.

5 | POLICY IMPLICATIONS AND RECOMMENDATIONS

Due to increase in cardiovascular diseases and diabetes there would be burden on MoH India for expenditure on non-communicable diseases. It is recommended that awareness about dietary habits among general public should be raised so that people start adopting healthy life style and burden on MoH for non-communicable diseases must be reduced.

6 | LIMITATIONS AND FUTURE DIRECTIONS

This is one of the pioneer studies conducted in India during lockdown. This study has number of contributions but there is important to high light the limitations which could open doors for new research in future. The study has used single method of data collection and analysis therefore it can be a source of common method bias (CMB) it is recommended to use longitudinal or mix method to reduce the issue of CMB. The sample size is so small it is suggested to use big sample size i.e. more than 500 or 1000 in future studies.

Conflict of Interest: There is no competing interest

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