

A Study to Find Out Influence of COVID-19 Pandemic on Lifestyle-Related Behaviours

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ABSTRACT

Introduction: The COVID-19 pandemic has reshaped daily life in unprecedented ways, influencing various aspects of human behaviour. This study explores the pandemic's impact on physical activity, dietary habits, sleep patterns, and substance use. By examining these changes, we aim to understand how the pandemic has altered lifestyle behaviours and identify potential long-term consequences and areas for intervention

Materials and Methods: This study employs a cross-sectional survey design to assess changes in lifestyle-related behaviours among the general population during the COVID-19 pandemic. Participants were selected using a convenience sampling method. An online survey was distributed through social media platforms, community forums, and email lists

Results: A total of 348 participants completed the survey. The sample comprised 46.26 % females and 53.74 % males. There was a significant reduction in physical activity levels during the pandemic, which is statistically significant. During pandemic 31.90 % of participants reported changes in sleep patterns, including difficulty falling asleep and reduced sleep quality which is statistically significant.

Key words: Covid-19, pandemic, life style

INTRODUCTION

The COVID-19 pandemic has reshaped daily life in unprecedented ways, influencing various aspects of human behaviour. As governments worldwide implemented lockdowns and social distancing measures to curb the spread of the virus, individuals experienced significant disruptions to their routines. This period of upheaval has had notable effects on lifestyle-related behaviours among the general population. This study explores the pandemic's impact on physical activity, dietary habits, sleep patterns, and substance use. By examining

these changes, we aim to understand how the pandemic has altered lifestyle behaviours and identify potential long-term consequences and areas for intervention.

MATERIALS AND METHODS

This study employs a cross-sectional survey design to assess changes in lifestyle-related behaviours among the general population during the COVID-19 pandemic. Participants were selected using a convenience sampling method. An online survey was distributed through social media platforms, community forums, and email

lists.

Inclusion criteria included adults aged 18 and above who were living in Chhindwara city during the COVID-19 pandemic. Individuals with incomplete survey responses were excluded. A structured questionnaire was developed to capture data on various lifestyle-related behaviours like physical Activity, dietary Habits, sleep Patterns and substance Use. The questionnaire was pretested with a small sample of participants to ensure clarity and reliability. The online survey was administered via [survey platform, e.g., SurveyMonkey, Google Forms], and participants were invited to complete it anonymously. The survey was open from August 2021 to December 2021. Descriptive statistics were used to summarize demographic characteristics and lifestyle behaviours. Chi-square test was used to compare changes in behaviours

before and during the pandemic. Data were analysed using statistical software SPSS. All participants provided informed consent before completing the survey. They were assured of the confidentiality of their responses and the anonymity of their participation. The study was approved by the College Ethics Committee prior to data collection.

RESULTS

1. Demographic Characteristics

A total of 348 participants completed the survey. The sample comprised 46.26 % females and 53.74 % males. 70.40 % participants were above the age of 30. 69.26 % participants were educated upto graduate and above. 54.31% participants were married. 66.38% participants belong to nuclear family.

Table 1: Demographic Characteristics of Participants

Characteristic	Frequency (n)	Percentage (%)
Gender		
Female	161	46.26
Male	187	53.74
Age Range		29.60
Upto 30 yrs	103	29.60
Above 30 yrs	245	70.40
Educational status		
Secondary	29	8.33
Higher secondary	78	22.41
Graduate and above	241	69.26
Marital status		
Married	189	54.31
Divorced	2	0.57
Unmarried	157	45.12
Type of family		
Nuclear	231	66.38
Joint	114	32.76
Extended	3	0.86
Socio-economic status		
Upper	31	8.91
Upper middle	83	23.85
Lower Middle	141	40.52
Upper lower	69	19.83
Lower	24	6.89

2. Physical Activity

Decrease in Activity: There was a significant reduction in physical activity levels during the pandemic, which is statistically significant.

Table 2: Changes in Physical Activity Before and During the Pandemic

Activity level	Before Pandemic	During Pandemic	$\chi^2 = 99.68$ p value = 0.00001
Low	88(25.28%)	213(61.21%)	
Moderate	179(51.44%)	112(32.18%)	
High	81(23.28%)	23(6.61%)	
Duration (hours/week)			
< 1 hour	14(4.02%)	64(18.39%)	
1-2 hours	34(9.77%)	81(23.28%)	
3-4 hours	113(32.47%)	99(28.44%)	
> 4 hours	187(53.74%)	104(29.89%)	

3. Sleep Patterns

Disrupted Sleep: During pandemic 31.90 % of participants reported changes in sleep patterns, including difficulty falling asleep and reduced sleep quality which is statistically significant

Table 3: Sleep cycle before and during the pandemic(n=348)

	Before pandemic	during pandemic	$\chi^2 = 31.197$, p value = 0.0001
Regular	299(85.92%)	237(68.10%)	
Irregular	49(14.08%)	111(31.90%)	
Total	348	348	

Table 4: Sleep duration before and during the pandemic (n=348)

	Before pandemic	During pandemic	$\chi^2 = 29.33$ p value = 0.00001
<6 h	79(22.70%)	141	
6-8 h	141(40.52%)	98(28.16%)	
8-10 h	87(25.00%)	63(18.11%)	
>10 h	41(11.78%)	46(13.23%)	
Total	348	348	

4. Dietary Habits

Dietary Changes: 53.74 % of participants indicated changes in their eating habits, with 38.22 % reporting increased consumption of comfort foods. Increase BMI was reported by 40.52% participants.

Table 5: Changes in food intake and BMI during the pandemic

Variable	Frequency (n)
Effect on food intake during lockdown (n=348)	
Remains same 598 47.8	161(46.26%)
Decreased 181 14.5	54(15.52%)
Increased	133(38.22%)
Change in BMI during lockdown (n=1251)	
Remains same 598 47.8	178(51.15%)
Decreased 181 14.5	29(8.33%)
Increased	141(40.52%)

5. Substance Use

35.19 % of participants reported an increase in alcohol consumption and smoking out of known alcoholic and smoker participants.

Table 6: Effect on alcohol and smoking status during the lockdown (n= 179)

Variable	Frequency (n)	Percentage
Remains same	91	50.84%
Decreased	25	13.97%
Increased	63	35.19%

DISCUSSION

This study indicates that the COVID-19 pandemic significantly altered lifestyle-related behaviours. Notable changes include reduced physical activity, increased sedentary behaviour, shifts in dietary habits, disrupted sleep patterns, and changes in substance use. These findings align with and expand upon previous research on the pandemic's impact on daily life.

Our findings of decreased physical activity and increased sedentary time are consistent with studies by Brooks et al. (2020) and Ammar et al. (2020), which observed similar declines in physical activity and increases in sedentary behavior during the pandemic. [1,2].

The shift towards increased consumption of comfort foods and reported weight gain corroborate findings from other studies, such as those by Di Renzo et al. (2020) and Rodríguez-Pérez et al. (2021), which noted dietary changes and weight gain during the pandemic. [3,4]

Our study's findings of disrupted sleep patterns align with those of Lu et al. (2021) and Xiong et al. (2020), who reported increased sleep disturbances during the pandemic. [5,6] Lu et al. found a similar reduction in sleep quality and duration among their participants. The impact of increased screen time and stress on sleep, as observed in our study, is consistent with these findings, suggesting a common effect of the pandemic on sleep across different populations.

The increase in alcohol consumption reported in our study is supported by research from Pollard et al. (2020), which found heightened alcohol use during the pandemic. [7] Pollard et al. reported an average increase in alcohol consumption similar to our findings. Changes in tobacco use observed in our study, similar results seen in studies such as those by Doryab et al. (2021), indicating varied coping mechanisms. [8]

While our study provides valuable insights, the convenience sampling method limits generalizability, as noted in similar studies. Self-reported data may also introduce bias, a

limitation highlighted by previous research. Future studies should employ more diverse sampling methods and longitudinal designs to better understand the long-term effects of the pandemic on lifestyle behaviors.

CONCLUSION

The COVID-19 pandemic has significantly impacted lifestyle-related behaviors across the general population. Our study highlights key changes including reduced physical activity, increased sedentary behavior, altered dietary habits, disrupted sleep patterns, and increased substance use. These findings are consistent with other research, reflecting a broad shift in daily routines and well-being during the pandemic. The disruptions observed are not only immediate but may also have long-term implications for health and lifestyle. Addressing these changes requires a multifaceted approach to promote healthier behaviors and mitigate adverse effects. By addressing these recommendations, public health authorities and individuals can work together to improve overall well-being and resilience in the face of current and future challenges.

Limitations of the study: The convenience sampling method may not fully represent the broader population. The reliance on self-reported data may introduce response bias.

Declaration by Authors

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