



## Impact of Covid-19 Pandemic on Health and Socioeconomic Conditions on Population of Central India

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### KEYWORDS

Cross-sectional survey, Covid-19, Health dynamics, Pandemic implications, Socioeconomic impact

### ABSTRACT:

**Background:-**This research investigates the effects of COVID-19 on Central India, taking into account health, socioeconomic, and age-related factors.

**Aim:-**To offer perceptions into the pandemic's consequences, age-related differences, and coping strategies, directing specifically designed therapies for resilience.

**Methodology:-**A structured questionnaire sent through Google Forms was utilized in a cross-sectional study conducted from June to November 2022 with 281 participants ages 18 to 60. Descriptive statistics were used by two assessors to do a quantitative analysis of the replies.

**Results:-**Of 281 participants (71.2% aged 18–35), 89.7% took safety measures and showed teamwork, however 25.3% had financial difficulties. Psychological and economic consequences were expressed in social isolation (43.4%) and interruptions in everyday living (77.6%). Diverse age cohorts demonstrated distinct patterns, underscoring the necessity for tailored approaches. Thinking ahead was evident when it came to investing (25.3%) and entrepreneurship (30.6%).

**Conclusion:-**This study highlights age-specific subtleties and coping mechanisms while revealing pandemic implications. Despite noting drawbacks including sample concentration and recollection bias, the geographic focus on Central India provides insightful information about the region. Subsequent studies that tackle economic implications and a range of viewpoints may improve understanding overall. Essentially, the population of Central India can use this study as a useful guide to navigate and strengthen their resilience in the face of pandemic threats.

### Introduction

The SARS-CoV-2 virus, which caused the COVID-19 pandemic, has affected public health as well as disturbed many facets of society globally. Numerous studies have examined the complex effects on social, mental, and physical health, using Central India as a microcosm to illustrate larger global issues. [1–6] Beyond short-term health issues, the epidemic has irreversibly changed every day routines, making precautions permanent fixtures.

[1,6] Beyond its clinical symptoms, the virus has caused widespread dread, exacerbating uncertainty and distress throughout the course of a protracted and disturbing pandemic. [1,2,6,7,8] The culturally varied region of Central India has distinct coping methods that are influenced by local dynamics. The pandemic has caused significant financial losses, company interruptions, and in certain cases, economic crises. [4, 5, 8] Changes in job patterns, layoffs, and a reassessment of livelihoods are



commonplace in Central India's unique economic terrain, highlighting the fundamental connection between socioeconomic well-being and health. Despite these difficulties, Central India has demonstrated resiliency by utilizing a variety of coping mechanisms, such as turning to conventional medicine or looking into alternate vocations. [6, 7] These adaptable strategies have presented a complex story of victory over adversity and sparked transformative responses and a reevaluation of cultural standards. The experiences of Central India highlight our common humanity in the face of unusual conditions and uncertainty, offering priceless insights for the international conversation on the pandemic's effects. To close knowledge gaps and provide customized recommendations for improved resilience and wellbeing in the area, this study examines the healthsocioeconomic dynamics in Central India during COVID-19.

## Methodology

**Study design:-** A cross-sectional survey was carried out at College of Dental Science.,Rau and N.S.C.B medical college and hospital,Jabalpur, Madhya Pradesh, to look at how the COVID-19 epidemic affected the socioeconomic status and general health of people in Central India between June 2022 to November 2022. Inclusion criteria:-

- Central Indian citizens within the age range from 18 to 60
- Participants willing to give informed permission.
- Capacity to understand and answer the survey.

## Exclusion criteria:-

- People living outside of Central India
  - <18 or > 60 years of age
  - Refusing to give informed permission.
- Participants:-** A total of 281 people from Central India were involved in the study through random sampling, guaranteeing diversity across age groups. The age range of most participants (71.2%) were 18–35, which provided a more nuanced view of the experiences, difficulties, and coping strategies common to the younger generation.

**Data collection and analysis:-** A designed questionnaire covering health, safety procedures, COVID-19 experiences, financial concerns, mental health, and coping techniques was administered via Google Forms on social media platform Key insights were extracted from

the quantitative analysis of the responses by two assessors, PG and AK. The frequency and percentage of various participant experiences and attitudes were measured using descriptive statistics. Participants gave informed consent, and participants' anonymity and confidentiality were guaranteed. An ethical review board gave its approval to the research.

## Results

With 281 participants, the study provides a thorough look at the impact of COVID-19 in Central India, where the bulk of the population (71.2%) is between the ages of 18 and 35. Seventy-six percent of the participants reported feeling more anxious about their health because of family members with COVID-19 [Table 1]. Adopted safety measures (89.7%) demonstrate a group effort to fight the pathogen. Nonetheless, socioeconomic consequences are apparent, as 25.3% of people report having financial troubles. The psychological and economic consequences are highlighted by instances of social isolation (43.4%) and disturbances in everyday life and work (77.6%) [Table 2].

Persistent symptoms (15.7%) and post-COVID health consequences (25.3%) are indicators of health-related concerns. [Table 3]. Notable findings include the value of health insurance being acknowledged (72.2%) and the importance of family support (94.7%). Relying on home remedies (71.2%) and recreational activities (59.4%) are examples of coping techniques. [Table 3]. Table 2 indicates that there are still economic difficulties, with 25.3% of respondents reporting a financial crisis and 55.5% reporting higher expenses. Considerations of entrepreneurship (30.6%) and investment (25.3%) are examples of forward-thinking mindsets.

A careful examination of different age groups shows different trends, highlighting the need for customized interventions. The 18–35 age group showed a greater propensity to put off seeking medical attention, whereas individuals under the age of 18 experienced difficulties in accessing healthcare and experienced increased worry related to loss. Younger participants preferred leisure pursuits over mental health therapy. Chi-square tests reveal that age affects experiences and responses to the pandemic's problems in a significant way ( $p < 0.05$ ) [Table 4].

Hence, these results underscore the necessity of focused interventions and support networks to tackle the diverse issues encountered by the populace, especially the

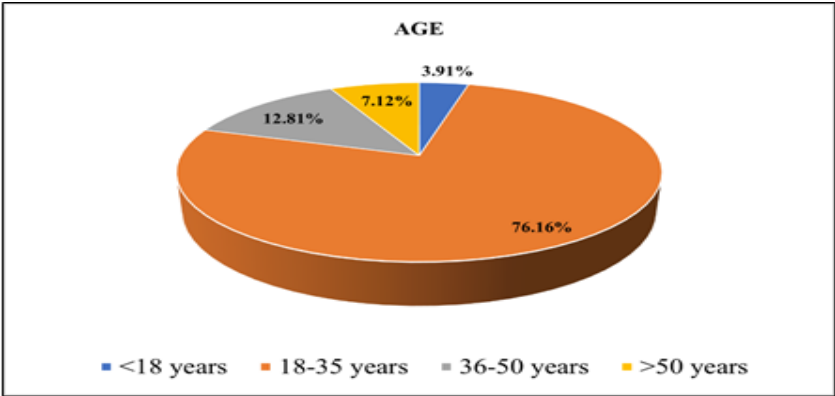


younger age bracket, and to cultivate adaptability in the face of unforeseen circumstances.

**Table 1:** Distribution of study participants based on age

Age group	Number of subjects (%)
<18 years	11 (3.9%)
18-35 years	214 (76.2%)
36-50 years	36 (12.8%)
>50 years	20 (7.1%)
Total	281 (100.0%)

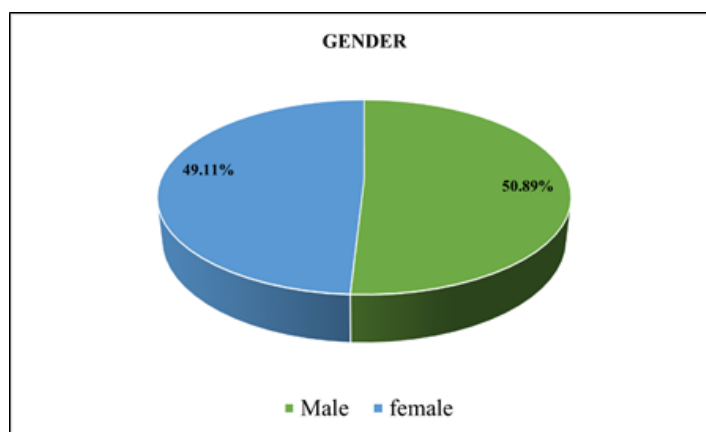
**Figure 1:** Distribution of study participants based on age



Gender	Number of subjects (%)
Male	143 (50.1%)
Female	138 (49.9%)
Total	281 (100.0%)

**Table 2:** Distribution of study subjects based on gender

**Figure 2:** Distribution of study subjects based on gender

**Table 3:** Description of response to various questions

Question	Responses	Number of subjects (%)
Did you or any of your family member had covid?	Yes	143 (50.9%)
	No	130 (46.3%)
	May be	8 (2.8%)
Were you anxious, fearful about your health?	Yes	204 (72.6%)
	No	77 (27.4%)
Did you take all the precautions like washing hands, wearing mask, using sanitizer, maintaining social distancing?	Yes	252 (89.7%)
	No	2 (0.7%)
	Not always	27 (9.6%)
Did you neglect your regular treatment/checkup during covid phase?	Yes	95 (33.8%)
	No	186 (66.2%)
Did you encounter scarcity for medical help (hospital beds, Doctors, emergency medications)?	Yes	119 (42.3%)
	No	162 (57.7%)
Did your health get affected post covid?	Yes	71 (25.3%)
	No	115 (40.9%)



	Not valid	95 (33.8%)
Did your covid symptoms lasted for longer duration?	Yes	44 (15.7%)
	No	119 (42.3%)
	Not valid	118 (42.0%)
Did you experience side effects of covid treatment like hairfall, myalgia (muscle pain) and others?	Yes	60 (21.4%)
	No	190 (67.6%)
	May be	31 (11.0%)
Did you take or still taking multivitamins and other prophylactic medication?	Yes	67 (23.8%)
	No	161 (57.3%)
Did you feel like opting for mental health counselling?	Sometimes	53 (18.9%)
	Yes	45 (16.0%)
	No	195 (69.4%)
Were you in constant stress of losing someone?	Sometimes	41 (14.6%)
	Yes	120 (42.7%)
	No	109 (38.8%)
Were you in constant state of dilemma to step out of your house?	Sometimes	52 (18.5%)
	Yes	134 (47.7%)
	No	147 (52.3%)
Were you stressed about losing your job?	Yes	38 (13.5%)
	No	208 (74.0%)
	Sometimes	35 (12.5%)
Did you feel socially cut off?	Yes	122 (43.4%)
	No	112 (39.9%)



	May be	47 (16.7%)
Did you indulge yourself in recreational activities to keep yourself occupied?	Yes	167 (59.4%)
	No	59 (21.0%)
	Sometimes	55 (19.6%)
Did you feel helpless during lockdown?	Yes	129 (45.9%)
	No	152 (54.1%)
Was your family a constant support at that time?	Yes	266 (94.7%)
	No	15 (5.3%)
Did COVID related news on T.V had a negative impact on your mental peace?	Yes	205 (73.0%)
	No	76 (27.0%)
Did you experience uncertainty of life?	Yes	185 (65.8%)
	No	96 (34.2%)
Were you in dull spirit / Irritated during covid?	Yes	186 (66.2%)
	No	95 (33.8%)
Did you suffer from financial hardship or economical crisis?	Yes	71 (25.3%)
	No	161 (57.3%)
	Sometimes	49 (17.4%)
Were your needs of essential items (Grocery, others) fulfilled?	Yes	199 (70.8%)
	No	38 (13.5%)
	Sometimes	44 (15.7%)
Did you struggle to meet the needs of your daily expenses?	Yes	59 (21.0%)
	No	179 (63.7%)



	Sometimes	43 (15.3%)
Did you or any of your family member suffer job loss?	Yes	65 (23.1%)
	216No	217(76.9%)
Did you experience less job opportunity?	Yes	139 (49.5%)
	No	142 (50.5%)
Did you pay extra to buy essential household stuffs?	Yes	156 (55.5%)
	No	85 (30.2%)
	May be	40 (14.2%)
Did you invest money on covid safety products?	Yes	230 (81.9%)
	No	51 (18.1%)
Did you think of starting your own business rather than relying on jobs?	Yes	86 (30.6%)
	No	159 (56.6%)
	Already did	36 (12.8%)
Did you invest on stock market, cryptocurrency or liquid commodities during covid?	Yes	71 (25.3%)
	No	210 (74.7%)
Was there any change in your daily schedule?	Yes	218 (77.6%)
	No	43 (15.3%)
	May be	20 (7.1%)
Do you think covid-19 pandemic hindered your learning (Academics)?	Yes	176 (62.6%)



	No	69 (24.6%)
	May be	36 (12.8%)
	Yes	178 (63.3%)
Do you feel lockdown made people develop a sedentary lifestyle?	No	38 (13.5%)
	May be	65 (23.1%)
	Yes	93 (33.1%)
Work from home was difficult for you to manage?	No	121 (43.1%)
	Sometimes	67 (23.8%)
	Yes	200 (71.2%)
Did you opt for precautionary home remedies?	No	35 (12.5%)
	Sometimes	46 (16.4%)
	Yes	170 (60.5%)
Did you stock up for essentials in fear of lockdown?	No	71 (25.3%)
	Sometimes	40 (14.2%)
	Yes	203 (72.2%)
Did you feel the need of having health insurance policies?	No	43 (15.3%)
	May be	35 (12.5%)

**Table 4:** Comparison of response to various questions among different age groups

Question	Responses	Age groups		df	Pvalue
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		<18 years (n=11)	18-35 years (n=214)	36-50 years (n=36)	>50 years (n=20)	Total (n=281)	Chi-square value		
Did you or any of your family member had covid?	Yes	4 (36.4%)	113 (52.8%)	19 (52.8%)	7 (52.8%)	143 (50.9%)	6.763	6	.343
	No	6 (54.5%)	96 (44.9%)	15 (41.7%)	13 (65.0%)	130 (46.3%)			
	May be	1 (9.1%)	5 (2.3%)	2 (5.6%)	0 (0.0%)	8 (2.8%)			
Were you anxious, fearful about your health?	Yes	9 (81.8%)	154 (72.0%)	27 (75.0%)	14 (70.0%)	204 (72.6%)	.686	3	.877
	No	2 (18.2%)	60 (28.0%)	9 (25.0%)	6 (30.0%)	77 (27.4%)			
Did you take all precautions like washing hands, wearing mask, using sanitizer, maintaining social distance?	Yes	11 (100.0%)	192 (89.7%)	31 (86.1%)	18 (90.0%)	252 (89.7%)	2.570	6	.861
	No	0 (0.0%)	2 (0.9%)	0 (0.0%)	0 (0.0%)	2 (0.7%)			
	Not always	0 (0.0%)	20 (9.3%)	5 (13.9%)	2 (10.0%)	27 (9.6%)			
Did you neglect your regular treatment/ checkup during covid phase?	Yes	1 (9.1%)	72 (33.6%)	12 (33.3%)	10 (50.0%)	95 (33.8%)	5.352	3	.148
	No	10 (90.9%)	142 (66.4%)	24 (66.7%)	10 (50.0%)	186 (66.2%)			
Did you encounter scarcity for medical help (hospital beds, Doctors, emergency medications)?	Yes	4 (36.4%)	98 (45.8%)	10 (27.8%)	7 (35.0%)	119 (42.3%)	4.775	3	.189
	No	7 (63.6%)	116 (54.2%)	26 (72.2%)	13 (65.0%)	162 (57.7%)			
Did your health get affected post covid?	Yes	2 (18.2%)	57 (26.6%)	7 (19.4%)	5 (25.0%)	71 (25.3%)	1.607	6	.952
	No	5 (45.5%)	84 (39.3%)	17 (47.2%)	9 (45.0%)	115 (40.9%)			
	Not valid	4 (36.4%)	73 (34.1%)	12 (33.3%)	6 (30.0%)	95 (33.8%)			
Did your covid symptoms lasted for longer duration?	Yes	1 (9.1%)	37 (17.3%)	3 (8.3%)	3 (15.0%)	44 (15.7%)	3.519	6	.741
	No	6 (54.5%)	88 (41.1%)	18 (50.0%)	7 (35.0%)	119 (42.3%)			
	Not valid	4 (36.4%)	89 (41.6%)	15 (41.7%)	10 (50.0%)	118 (42.0%)			
Did you experience side effects of covid treatment like hairfall, myalgia (muscle pain) and others?	Yes	2 (18.2%)	47 (22.0%)	8 (22.2%)	3 (15.0%)	60 (21.4%)	1.811	6	.936
	No	8 (72.7%)	142 (66.4%)	24 (66.7%)	16 (80.0%)	190 (67.6%)			



	May be	1 (9.1%)	25 (11.7%)	4 (11.1%)	1 (5.0%)	31 (11.0%)			
Did you take or still taking multivitamins and other prophylactic medication?	Yes	3 (27.3%)	54 (25.2%)	6 (16.7%)	4 (20.0%)	67 (23.8%)	2.395	6	.880
	No	6 (54.5%)	118 (55.1%)	24 (66.7%)	13 (65.0%)	161 (57.3%)			
	Sometimes	2 (18.2%)	42 (19.6%)	6 (16.7%)	3 (15.0%)	53 (18.9%)			
Did you feel like opting for mental health counselling?	Yes	0 (0.0%)	36 (16.8%)	4 (11.1%)	5 (25.0%)	45 (16.0%)	6.180	6	.403
	No	10 (90.9%)	144 (67.3%)	27 (75.0%)	14 (70.0%)	195 (69.4%)			
	Sometimes	1 (9.1%)	34 (15.9%)	5 (13.9%)	1 (5.0%)	41 (14.6%)			
Were you in constant stress of losing someone?	Yes	3 (27.3%)	98 (45.8%)	12 (33.3%)	7 (35.0%)	120 (42.7%)	13.256	6	.039*
	No	8 (72.7%)	72 (33.6%)	20 (55.6%)	9 (45.0%)	109 (38.8%)			
	Sometimes	0 (0.0%)	44 (20.6%)	4 (11.1%)	4 (20.0%)	52 (18.5%)			
Were you in constant state of dilemma to step out of your house?	Yes	7 (63.6%)	110 (51.4%)	10 (27.8%)	7 (35.0%)	134 (47.7%)	9.316	3	.025*
	No	4 (36.4%)	104 (48.6%)	26 (72.2%)	13 (65.0%)	147 (52.3%)			
Were you stressed about losing your job?	Yes	0 (0.0%)	31 (14.5%)	5 (13.9%)	2 (10.0%)	38 (13.5%)	3.427	6	.754
	No	10 (90.9%)	154 (72.0%)	28 (77.8%)	16 (80.0%)	208 (74.0%)			
	Sometimes	1 (9.1%)	29 (13.6%)	3 (8.3%)	2 (10.0%)	35 (12.5%)			
Did you feel socially cut off?	Yes	5 (45.5%)	94 (43.9%)	13 (36.1%)	10 (50.0%)	122 (43.4%)	3.571	6	.735
	No	3 (27.3%)	85 (39.7%)	18 (50.0%)	6 (30.0%)	112 (39.9%)			
	May be	3 (27.3%)	35 (16.4%)	5 (13.9%)	4 (20.0%)	47 (16.7%)			
Did you indulge yourself in recreational activities to keep yourself occupied?	Yes	8 (72.7%)	125 (58.4%)	22 (61.1%)	12 (60.0%)	167 (59.4%)	1.791	6	.938
	No	1 (9.1%)	45 (21.0%)	8 (22.2%)	5 (25.0%)	59 (21.0%)			



	Sometimes	2 (18.2%)	44 (20.6%)	6 (16.7%)	3 (15.0%)	55 (19.6%)			
Did you feel helpless during lockdown?	Yes	2 (18.2%)	103 (48.1%)	17 (47.2%)	7 (35.0%)	129 (45.9%)	4.814	3	.186
	No	9 (81.8%)	111 (51.9%)	19 (52.8%)	13 (65.0%)	152 (54.1%)			
Was your family a constant support at that time?	Yes	11 (100.0%)	203 (94.9%)	35 (97.2%)	17 (85.0%)	266 (94.7%)	4.799	3	.187
	No	0 (0.0%)	11 (5.1%)	1 (2.8%)	3 (15.0%)	15 (5.3%)			
Did COVID related news on T.V had a negative impact on your mental peace?	Yes	6 (54.5%)	160 (74.8%)	27 (75.0%)	12 (60.0%)	205 (73.0%)	4.023	3	.259
	No	5 (45.5%)	54 (25.2%)	9 (25.0%)	8 (40.0%)	76 (27.0%)			
Did you experience uncertainty of life?	Yes	4 (36.4%)	149 (69.6%)	21 (58.3%)	11 (55.0%)	185 (65.8%)	7.560	3	.056
	No	7 (63.6%)	65 (30.4%)	15 (41.7%)	9 (45.0%)	96 (34.2%)			
Were you in dull spirit/Irritated during covid?	Yes	6 (54.5%)	149 (69.6%)	18 (50.0%)	13 (65.0%)	186 (66.2%)	6.025	3	.110
	No	5 (45.5%)	65 (30.4%)	18 (50.0%)	7 (35.0%)	95 (33.8%)			
Did you suffer from financial hardship or economic crisis?	Yes	2 (18.2%)	55 (25.7%)	10 (27.8%)	4 (20.0%)	71 (25.3%)	4.820	6	.567
	No	8	119	19	15	161			
		(72.7%)	(55.6%)	(52.8%)	(75.0%)	(57.3%)			
	Sometimes	1 (9.1%)	40 (18.7%)	7 (19.4%)	1 (5.0%)	49 (17.4%)			
Were your needs of essential items (Grocery, others) fulfilled?	Yes	9 (81.8%)	149 (69.6%)	27 (75.0%)	14 (70.0%)	199 (70.8%)	3.539	6	.739
	No	2 (18.2%)	31 (14.5%)	3 (8.3%)	2 (10.0%)	38 (13.5%)			
	Sometimes	0 (0.0%)	34 (15.9%)	6 (16.7%)	4 (20.0%)	44 (15.7%)			
Did you struggle to meet the needs of your daily expenses?	Yes	2 (18.2%)	46 (21.5%)	7 (19.4%)	4 (20.0%)	59 (21.0%)	2.408	6	.879
	No	8 (72.7%)	138 (64.5%)	21 (58.3%)	12 (60.0%)	179 (63.7%)			
	Sometimes	1 (9.1%)	30 (14.0%)	8 (22.2%)	4 (20.0%)	43 (15.3%)			
	Yes	0 (0.0%)	53 (24.8%)	9 (25.0%)	3 (15.0%)	65 (23.1%)	4.446	3	.217



Did you or any of your family member suffer job loss?	No	11 (100.0%)	161 (75.2%)	27 (75.0%)	17 (85.0%)	218 (76.9%)			
Did you experience less job opportunity?	Yes	3 (27.3%)	113 (52.8%)	16 (44.4%)	7 (35.0%)	139 (49.5%)	5.159	3	.161
	No	8 (72.7%)	101 (47.2%)	20 (55.6%)	13 (65.0%)	142 (50.5%)			
Did you pay extra to buy essential household stuffs?	Yes	5 (45.5%)	128 (59.8%)	14 (38.9%)	9 (45.0%)	156 (55.5%)	7.538	6	.274
	No	4	57	16	8	85			

		(36.4%)	(26.6%)	(44.4%)	(40.0%)	(30.2%)			
	May be	2 (18.2%)	29 (13.6%)	6 (16.7%)	3 (15.0%)	40 (14.2%)			
Did you invest money on covid safety products?	Yes	9 (81.8%)	178 (83.2%)	29 (80.6%)	14 (70.0%)	230 (81.9%)	2.185	3	.535
	No	2 (18.2%)	36 (16.8%)	7 (19.4%)	6 (30.0%)	51 (18.1%)			
Did you think of starting your own business rather than relying on job s?	Yes	2 (18.2%)	74 (34.6%)	5 (13.9%)	5 (25.0%)	86 (30.6%)	7.828	6	.251
	No	7 (63.6%)	114 (53.3%)	25 (69.4%)	13 (65.0%)	159 (56.6%)			
	Already did	2 (18.2%)	26 (12.1%)	6 (16.7%)	2 (10.0%)	36 (12.8%)			
Did you invest on stock market, cryptocurrency or liquid commodities during covid?	Yes	1 (9.1%)	60 (28.0%)	6 (16.7%)	4 (20.0%)	71 (25.3%)	4.098	3	.251
	No	10 (90.9%)	154 (72.0%)	30 (83.3%)	16 (80.0%)	210 (74.7%)			
Was there any change in your daily schedule?	Yes	9 (81.8%)	175 (81.8%)	25 (69.4%)	9 (45.0%)	218 (77.6%)	19.300	6	.004*
	No	2 (18.2%)	25 (11.7%)	7 (19.4%)	9 (45.0%)	43 (15.3%)			
	May be	0 (0.0%)	14 (6.5%)	4 (11.1%)	2 (10.0%)	20 (7.1%)			
Do you think covid-19 pandemic hindered your learning (Academics)?	Yes	7 (63.6%)	145 (67.8%)	19 (52.8%)	5 (25.0%)	176 (62.6%)	17.975	6	.006*
	No	2 (18.2%)	45 (21.0%)	13 (36.1%)	9 (45.0%)	69 (24.6%)			
	May be	2 (18.2%)	24 (11.2%)	4 (11.1%)	6 (30.0%)	36 (12.8%)			
Do you feel lockdown made people	Yes	7 (63.6%)	132 (61.7%)	24 (66.7%)	15 (75.0%)	178 (63.3%)	2.743	6	.840



develop a sedentary lifestyle?	No	1 (9.1%)	29 (13.6%)	6 (16.7%)	2 (10.0%)	38 (13.5%)			
	May be	3 (27.3%)	53 (24.8%)	6 (16.7%)	3 (15.0%)	65 (23.1%)			
Work from home was difficult for you to manage?	Yes	4 (36.4%)	71 (33.2%)	15 (41.7%)	3 (15.0%)	93 (33.1%)	7.071	6	.314
	No	5 (45.5%)	94 (43.9%)	10 (27.8%)	12 (60.0%)	121 (43.1%)			
	Sometimes	2 (18.2%)	49 (22.9%)	11 (30.6%)	5 (25.0%)	67 (23.8%)			
Did you opt for precautionary home remedies?	Yes	9 (81.8%)	153 (71.5%)	28 (77.8%)	10 (50.0%)	200 (71.2%)	8.081	6	.232
	No	0 (0.0%)	29 (13.6%)	2 (5.6%)	4 (20.0%)	35 (12.5%)			
	Sometimes	2 (18.2%)	32 (15.0%)	6 (16.7%)	6 (30.0%)	46 (16.4%)			
Did you stock up for essentials in	Yes	4	135	19	12	170	6.913	6	.329
fear of lockdown?		(36.4%)	(63.1%)	(52.8%)	(60.0%)	(60.5%)			
	No	3 (27.3%)	53 (24.8%)	10 (27.8%)	5 (25.0%)	71 (25.3%)			
	Sometimes	4 (36.4%)	26 (12.1%)	7 (19.4%)	3 (15.0%)	40 (14.2%)			
Did you feel the need of having health insurance policies?	Yes	7 (63.6%)	157 (73.4%)	28 (77.8%)	11 (55.0%)	203 (72.2%)	5.884	6	.436
	No	3 (27.3%)	30 (14.0%)	4 (11.1%)	6 (30.0%)	43 (15.3%)			
	May be	1 (9.1%)	27 (12.6%)	4 (11.1%)	3 (15.0%)	35 (12.5%)			

Chi-square test. \*p-value<.05 was considered statistically significant.

## Discussion

Central India serves as a microcosm representing the complex interplay between health, socioeconomic circumstances, and psychological well-being that are posed by the COVID-19 epidemic. A recent study with 281 participants offers significant insights into the pandemic's consequences, ranging from increased health anxiety to lifestyle adaptations and financial challenges. It also focuses on age-specific variances within the 18–35 age range.

**Health impact and chronic conditions:** The study conducted by Singh and colleagues focuses on the effect of COVID-19 on chronic illnesses in India. Constant symptoms (15.7%) and post-COVID health consequences (25.3%) are noted in the Central India study. [6] The interdependence of economic and

health well-being is emphasized in Mishra et al.'s exploration of the worldwide COVID-19 consequences. [9] Health-related quality of life during home confinement is examined in depth in Azizi et al.'s investigation. [10] *Lifestyle changes and behavioural impact:-* Rawat et al.'s review on COVID-19's impact on Indian lifestyle informs changes in psychology and behavior. [7] The Central India survey aligns, indicating a psychological toll, with 43.4% feeling social isolation. [7] Sang et al.'s emphasis on physical activity for well-being aligns with Central India's use of recreational activities (59.4%) as coping mechanisms. [11] Bourdas and Zacharakis's study on the lockdown's effect on Greek adults' physical activity adds another dimension. [12]

**Socioeconomic implications:-** The Central India study and the socio-economic analysis of South Asia by Rasul et al. highlight



economic difficulties such as rising costs and financial problems. [8] According to Gupta et al.'s empirical assessment, 25.3% of respondents reported having a financial problem. [13] A more comprehensive view is offered by the discussion by Abbas et al. [14] *Age-specific differences*:- The Central India study's focus on age-specific differences is consistent with Abbas et al.'s findings regarding age-related behavioral responses. [14] The study by Bambra et al. emphasizes the necessity of age-appropriate therapies that are customized. [15] This viewpoint is further supported by Zhang et al.'s analysis of age-related impacts on mental health. [16]

*Psychological impact and coping mechanisms*:-As a coping mechanism, leisure activities are prioritized in Central India (59.4%), which is consistent with a study by Sang et al. on the psychological impacts of COVID19 house confinement. [11] Dubey et al.'s research on COVID-19 and mindfulness offers more information. [17] An additional viewpoint is provided by Hanke et al.'s study on legally required constraints. [18]

*Young mental health*:- According to Hawke et al.'s fast survey, anxiety levels among younger people are higher due to COVID-19, which is consistent with studies from Central India. [19] The knowledge of various local experiences is expanded by Addis et al.'s study of the psychological impact of COVID-19 on patients with chronic illnesses in Northeast Ethiopia.

[20] The discussion on controlling noncommunicable diseases during the COVID-19 pandemic is aided by Yadav et al.'s syndemic viewpoint. [21] In the framework of Central India, this thorough analysis offers a scientific basis for understanding the effects of COVID-19 and customizing responses to a range of problems.

### Advantages and Limitations

The current paper examines many pandemic implications in-depth and is backed up by pertinent citations. Potential recall bias, difficulties with crosssectional design, and a concentration of samples in the 18–35 age group are among the limitations that could impact generalizability. Online distribution may lead to selection bias. Notwithstanding its limitations, the geographic emphasis on Central India provides insightful information about the region, and a more thorough analysis of the economy could improve comprehension of the socio-economic implications.

### Conclusion

This research on COVID-19 in Central India offers important new understandings of age-specific differences, health effects, and coping strategies, as well as a path forward for customized therapies. Although useful for healthcare and policy recommendations, more research could improve understanding

by resolving limitations, investigating economic ramifications, guaranteeing representative samples, and taking regional and longitudinal perspectives into account. All things considered, this study provides a useful compass for the people of Central India to navigate pandemic problems and build resilience.

### References

1. Dai J, Sang X, Menhas R, Xu X, Khurshid S, Mahmood S, Weng Y, Huang J, Cai Y, Shahzad B, Iqbal W, Gul M, Saqib ZA, Alam MN. The Influence of COVID-19 Pandemic on Physical Health-Psychological Health, Physical Activity, and Overall Well-Being: The Mediating Role of Emotional Regulation. *Front Psychol.* 2021 Aug 16;12:667461. doi: 10.3389/fpsyg.2021.667461.
2. Abbas SA, Athar S, Jilani NZ. The Impact of the COVID-19 Pandemic on the Physical and Mental Health of School-Aged Children. *HCA Healthc J Med.* 2023 Jun 28;4(3):223-228. doi: 10.36518/2689-0216.1547. PMID: 37434906; PMCID: PMC10332375.
3. Kumar R, Bharti N, Kumar S, Prakash G. Multidimensional impact of COVID-19 pandemic in India-Challenges and future direction. *J Family Med Prim Care.* 2020;9(12): 5892-95, DOI: 10.4103/jfmpc.jfmpc\_1625\_20
4. Aneja R, Ahuja V. An assessment of socioeconomic impact of COVID-19 pandemic in India. *J Public Aff.* 2021 May;21(2):e2266. doi: 10.1002/pa.2266. Epub 2020 Oct 15. PMID: 33173441; PMCID: PMC7646007.
5. Gopalan HS, Misra A. COVID-19 pandemic and challenges for socio-economic issues, healthcare and National Health Programs in India. *Diabetes Metab Syndr.* 2020 Sep-Oct;14(5):757-759. doi: 10.1016/j.dsx.2020.05.041. Epub 2020 May 30.
6. Singh K, Kondal D, Mohan S, Jaganathan S, Deepa M, Venkateshmurthy NS, Jarhyan P, Anjana RM, Narayan K MV, Mohan V, Tandon N, Ali MK, Prabhakaran D, Eggleston K. Health, psychosocial, and economic impacts of the COVID-19 pandemic on people with chronic conditions in India: a mixed methods study. *BMC Public Health.* 2021;21: 685. <https://doi.org/10.1186/s12889-021-10708-w>
7. Rawat D, Dixit V, Gulati S, Gulati S, Gulati A. Impact of COVID-19 outbreak on lifestyle behaviour: A review of studies published in India. *Diabetes Metab Syndr.* 2021 Jan-Feb;15(1):331-336. doi:





10.1016/j.dsx.2020.12.038. Epub 2021 Jan 13. PMID: 33493852; PMCID: PMC7837201.

8. Rasul G, Nepal AK, Hussain A, Maharjan A, Joshi S, Lama A, Gurung P, Ahmad F, Mishra A, Sharma

E. Socio-Economic Implications of COVID-19 Pandemic in South Asia: Emerging Risks and

Growing Challenges. *Front Sociol.* 2021 Feb 24;6:629693.

doi: 10.3389/fsoc.2021.629693. PMID:

33869579; PMCID: PMC8022444.

9. Mishra NP, Das SS, Yadav S, Khan W, Afzal M, Alarifi A, Kenawy ER, Ansari MT, Hasnain MS,

Nayak AK. Global Impacts of Pre- and Post-

COVID-19 Pandemic: Focus on Socio-Econ

10. Azizi A, Achak D, Aboudi K, PMID:

34484032Saad E, Nejari C, ; PMCID:

PMC8415626.

Nouira Y, Hilali A, Youlyouz-Marfaq I, Marfaq A. Health-related quality of life and behavior-related lifestyle changes due to the COVID-19 home confinement: Dataset from a Moroccan sample.

Data Brief. 2020 Oct;32:106239. doi:

10.1016/j.dib.2020.106239. Epub 2020 Aug 27. PMID: 32868996; PMCID: PMC7449885.

11. Sang X, Menhas R, Saqib ZA, Mahmood S, Weng Y, Khurshid S, Iqbal W, Shahzad B. The

Psychological Impacts of COVID-19 Home Confinement and Physical Activity: A Structural Equation Model Analysis. *Front Psychol.* 2021 Jan 15;11:614770. doi: 10.3389/fpsyg.2020.614770. PMID: 33519638; PMCID: PMC7843378.

12. Bourdas DI, Zacharakis ED. Impact of COVID-19 Lockdown on Physical Activity in a Sample of Greek Adults. *Sports (Basel).* 2020 Oct 21;8(10):139. doi: 10.3390/sports8100139. PMID: 33096721; PMCID: PMC7589063

13. Gupta V, Santosh KC, Arora R, Ciano T, Kalid KS, Mohan S. Socioeconomic impact due to COVID-19: An empirical assessment. *Inf Process Manag.* 2022 Mar;59(2):102810. doi: 10.1016/j.ipm.2021.102810. Epub 2021 Nov 15. PMID: 35165495; PMCID: PMC8829432.

14. Abbas J, Mahmood S, Ali H, Ali Raza M, Ali G, Aman J, Bano S, Nurunnabi M. The Effects of Corporate Social Responsibility Practices and Environmental Factors through a Moderating Role of Social Media Marketing on Sustainable Performance of Business Firms. *Sustainability.* 2019;11:3434. <https://doi.org/10.3390/su11123434>

15. Bambra C, Riordan R, Ford J, Matthews F. The COVID-19 pandemic and health inequalities.

*Journal of Epidemiology and Community Health.* 2020;214401. doi:10.1136/jech-2020214401.

16. Zhang Y, Ma ZF. Impact of the COVID-19 Pandemic on Mental Health and Quality of Life among Local Residents in Liaoning Province, China: A Cross-Sectional Study. *Int J Environ Res Public Health.* 2020 Mar 31;17(7):2381. doi: 10.3390/ijerph17072381. PMID: 32244498; PMCID: PMC7177660.

17. Dubey N, Podder P, Pandey D. Knowledge of COVID-19 and Its Influence on Mindfulness, Cognitive Emotion Regulation and Psychological Flexibility in the Indian Community. *Front Psychol.*

2020 Nov 12;11:589365. doi: 10.3389/fpsyg.2020.589365. PMID: 33281687; PMCID: PMC7689361.

18. Hanke AA, Sundermeier T, Boeck HT, Schieffer E, Boyen J, Braun AC, Rolff S, Stein L, Kück M, Schiffer M, Pape L, de Zwaan M, Haufe S, Kerling A, Tegtbu U, Nöhre

M. Influence of Officially Ordered Restrictions During the First Wave of COVID-19 Pandemic on Physical Activity and Quality of Life in Patients after Kidney Transplantation in a Telemedicine Based Aftercare

Program-A KTx360° Sub Study. *Int J Environ Res Public Health.* 2020 Dec 7;17(23):9144. doi: 10.3390/ijerph17239144. PMID: 33297529; PMCID: PMC7730551.

19. Hawke LD, Barbic SP, Voineskos A, Szatmari P, Cleverley K, Hayes E, Relihan J, Daley M, Courtney D, Cheung A, Darnay K, Henderson JL. Impacts of COVID-19 on Youth Mental Health, Substance Use, and Well-being: A Rapid Survey of Clinical and Community Samples: Répercussions de la COVID-19 sur la santé mentale, l'utilisation de substances et le bien-être des adolescents: un sondage rapide d'échantillons cliniques et communautaires. *Can J Psychiatry.* 2020 Oct;65(10):701-709. doi:

10.1177/0706743720940562. Epub 2020 Jul 14. PMID: 32662303; PMCID: PMC7502874.

20. Addis SG, Nega AD, Miretu DG. Psychological impact of COVID-19 pandemic on chronic disease patients in Dessie town government and private hospitals, Northeast Ethiopia. *Diabetes Metab Syndr.*

2021 Jan-Feb;15(1):129-135. doi: 10.1016/j.dsx.2020.12.019. Epub 2020 Dec 10. PMID: 33338951; PMCID: PMC7728425.

21. Yadav UN, Rayamajhee B, Mistry SK, Parsekar SS, Mishra SK. A Syndemic Perspective on the Management of Non-communicable Diseases Amid the COVID-19 Pandemic in Low- and Middle Income Countries. *Front Public Health.* 2020 Sep 25;8:508. doi: 10.3389/fpubh.2020.00508. PMID: 33102414; PMCID: PMC7545493.