Impact of COVID-19 pandemic on physical, mental, social and economic status among adults at selected villages of Gokak Taluk, Karnataka.

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Abstract:

Context: As the global burden COVID-19 continues to increase, particularly in low and middle income countries such as India, it imposes huge costs on physical mental social and economic status of individuals. **Objective:** To assess the impact of COVID-19 pandemic on physical, mental, social and economic status among adults. **Setting and design:** The study was conducted in selected villages of Gokak Taluk and cross sectional study design was used. **Materials and Methods:** Population was comprised of adults aged between 18-60 years old. The sample size was 130 and simple random sampling technique was used to select the samples. Self constructed assessment scales were used to assess the impact of COVID-19 pandemic among adults. **Statistical Analysis used:** Descriptive and inferential statistics were used with the help of SPSS version 20. **Results:** Among 130 respondents, majority of 83 (63.9%) had mild functional impact, 75 (57.7%) had moderate anxiety, 71 (54.7%) had moderate stress, 130 (100%) had moderate social impact and 110 (84.7%) had moderate economic impact. The demographic variable like 'suffering from COVID-19' was found significantly associated with physical status (χ^2=31.321) and anxiety

status (χ^2=8.060). **conclusions:** Majority of adults were moderately affected by COVID-19 pandemic.

Key-words: COVID-19, physical status, mental status, social status, economic status.

Key Message:

COVID-19 is the greatest global shock in decades. Hundreds of thousands of lives have been lost, people's physical health, mental health, social health and economic health were affected seriously. The resulting loss of employment and income will cause further damage to livelihoods, health, and sustainable development.

Introduction: As the global burden COVID-19 continues to increase, particularly in India, it imposes huge costs on physical mental social and economic status of individuals. As of march 11, 2021 more than 11 million people in India had been infected with COVID-19, and about 158,000 had died. On March 24, 2020, the Indian government ordered a nationwide lockdown, which was extended until June in four phases, and later further extended to specific containment zones.

The pandemic parameters that have gone in Karnataka till 14/07/2022 are as follows, the number of confirmed cases were 39,80,585, deaths were 40,125 among 64.06 million population. Highest number of cases were found in Belgavi District, that was 79,900 confirmed cases and 938 death among 4.780 million population. As the Covid-19 was prevalent throughout the country, even Gokak Taluka had highest number of cases during Covid-19 crisis in Belagavi District. Total Number of population in Gokak was 6,86,000.

Confirmed cases were 6582 and deaths were 458. Therefore Gokak Taluka was selected for the present study to assess the impact of COVID-19 pandemic on adults health.

Subjects and Methods:

Research Approach: The quantitative descriptive research approach was selected to assess the impact of COVID-19 pandemic on physical, mental, social and economic status among adults.

Research Setting: The study was conducted in selected villages of Gokak Taluk.

Design: Cross sectional study design was used

Population: Population was comprised of adults aged between 18-60 years old.

Sampling Technique: *S*imple random sampling technique was used to recruit the 130 samples.

Sampling Criteria

a) Inclusion criteria:

1. The adults in the age group between 18-60 years will be included.

2. The adults who can read and write Kannada or English language

b) Exclusion criteria:

1. The adults who are not willing to participate in the study.

2. The adults who are mentally retarded/ mental ill/ bed ridden.

Development and evaluation of tool and learning package : The following Tools were developed to generate necessary data

<u>Section 1</u>: Baseline characteristics: Baseline characteristics of adults like age, occupation, type of family, educational status, did you have any information on COVID-19, source of information on COVID-19, type of house and monthly income of family.

<u>Section 2</u>: Self constructed assessment scales: Scales were developed to assess the impact of Covid-19 pandemic on physical, mental, social and economic status. The scales were developed by reviewing relevant literature and consulting experts. Developed tools were pretested on small samples to check the reliability.

Data collection Technique: Data collection was done after obtaining ethical clearance form institutional ethical committee. Permission for conducting research in the selected villages was obtained from Taluka Health Officer from Gokak. After selecting families for the study, purposes of present study was informed to each head of the family and written informed consent was obtained from each samples for collection of data.

Statistical Analysis used: The data analysis was planned by using descriptive and inferential statistics with the help of SPSS version 20. The plan for data analysis is as follows:

1. <u>Descriptive statistics:</u> Frequency and percentage distribution was used to analyze baseline characteristics of adults.

2. <u>Inferential Statistics</u>: Chi-square test will be used to find out the association between impacts of COVID 19 on physical, mental, social and economic status of adults and demographic data.

Results:

Organization of the Findings

SECTION 1: Description of baseline characteristics.

SECTION 2: Description of impact of COVID-19 pandemic on physical, mental, social and economic status among adults.

SECTION 3: Findings related to association between demographic variables and physical, mental, social and economic health status.

Section 1: Description of Baseline Characteristics.

The participants were the adults of selected villages of Gokak Taluk. The total participants selected for pilot study were 130 adults. The sample characteristics included were - did you suffer from COVID-19 disease, age in years, religion, type of family, educational status, do you have any information on COVID-19? if yes specify the source of information, support system available and monthly income of family. The data is presented in table 1

Table 1

Description of baseline characteristics in frequency and percentage

N=130

Baseline Characteristics	Category	Frequency (f)	Percentage (%)
Did you suffer from COVID-19 disease?	Yes	28	21.5
	No	102	78.5
Age in years	18 - 30	41	31.5
	31 - 40	61	46.9
	41 - 50	16	12.3
	51 - 60	12	9.2
Religion	Christian	10	7.7
	Hindu	106	81.5
	Muslim	14	10.8
	Others (Specify)	00	00
Type of family	Extended	10	7.7
	Joint	42	32.3
	Nuclear	78	60.0
Educational status	No formal education	18	13.8
	Primary education	58	44.6
	Secondary education	30	23.1
	PUC/HSC	18	13.8
	Graduate and above	6	4.6
Do you have any information on COVID-19?	Yes	109	83.8
	No	21	16.2
	If yes specify the source of information		
	Friends	21	16.1
	Health workers	8	6.1
	Newspaper	00	00
	Articles/Magazines	00	00
	Television/ Radio	80	61.5
Support system available	Friends	6	4.6

	Family members	123	94.6
	Community	1	0.8
Monthly income of family	5000 and below	12	9.2
	5001-7000	35	26.9
	7001-9000	44	33.8
	9001 and above	39	30.0

The data presented in the table 1 indicates that, adults who did not suffer from COVID-19 were 78.5%. Adults aged between 31-40 were 46.9%. Majority of them were Hindu 81.5%. Adults from nuclear family were 60.00%. Adults 44.6% were having primary education. Total 83.8% adults were having information on COVID-19 and source of information was Television/Radio 61.5%. Adults having support system from family members were 94.6%. The 33.8% adults were having 7001-9000 monthly income.

Section 2: Description of Impact of Covid-19 Pandemic on Physical, Mental, Social And Economic Status Among Adults.

Table 2: Findings related to impact of COVID-19 pandemic on physical status among adults

N=130

Level of physical status	f	%
No functional impact	22	16.9
Mild functional impact	83	63.9
Moderate functional impact	25	19.2
Severe functional impact	00	00

The above table shows that among 130 respondents, majority of 63.9% had mild functional impact. Remaining 16.9% respondents had no functional impact.

19.2% respondents had moderate functional impact and none were found with severe functional impact.

Table 3: Findings related to impact of COVID-19 pandemic on mental status among adults

A) Anxiety Status

N=130

Level of anxiety	f	%
Minimal anxiety	00	00
Mild anxiety	44	33.8
Moderate anxiety	75	57.7
Severe anxiety	11	8.4

The above table shows that among 130 respondents, majority of 57.7% had moderate anxiety. Remaining 33.8% respondents had mild anxiety. 8.4% respondents had severe anxiety and none of the respondents were found with minimal anxiety.

B) Stress Status

N=130

Level of stress	f	%
Minimal stress	00	00
Mild stress	36	27.7
Moderate stress	71	54.7
Severe stress	23	17.7

The above table shows that among 130 respondents, majority of 54.7% had moderate stress. Remaining 27.7% respondents had mild stress. 17.7% respondents had severe stress and none of the respondents were found with minimal stress.

Table 4: Findings related to impact of COVID-19 pandemic on social status among adults

N=130

Level of social status	f	%
Minimal social impact	00	00
Mild social impact	00	00
Moderate social impact	130	100
Severe social impact	00	00

The above table shows that among 130 respondents, 100 % respondents had moderate social impact. None of the respondents were found with minimal, mild and severe social impact.

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Table 5: Findings related to impact of COVID-19 pandemic on economic status among adults

Severe economic impact	00	00

N=130

Level of economic status	f	%
Minimal economic impact	00	00
Mild economic impact	20	15.4
Moderate economic impact	110	84.7

The above table shows that among 130 respondents, majority of 84.7% had moderate economic impact. Remaining 15.4% respondents had mild economic impact, and none of the respondents were found with minimal and severe economic impact.

Section 3: Findings Related to Association Between Demographic Variables and Physical, Mental, Social and Economic Health Status.

Table 6: Findings related to association between demographic variables and physical status.

N=130

Demographic variables	Responses	Below median	Median & Above	Total	Chi-square	df	P-value	Inference
Did you suffer from COVID-19 disease?	Yes	2	26	28	31.321	1	0.000	Significant
	No	68	34	102				
Age	18 - 30	24	17	41	2.170	3	0.538	Not significant
	31 - 40	29	32	61				
	41 - 50	9	7	16				
	51 - 60	8	4	12				
Religion	Christian	6	4	10	0.865	2	0.649	Not significant
	Hindu	58	48	106				
	Muslim	6	8	14				
Type of family	Extended	7	3	10	3.437	2	0.179	Not significant
	Joint	26	16	42				
	Nuclear	37	41	78				

Educational status	No formal education	11	7	18	8.651	4	0.070	Not significant
	Primary education	34	24	58				
	Secondary education	18	12	30				
	PUC/HSC	4	14	18				
	Graduate and above	3	3	6				
Do you have any information on COVID-19?	Yes	54	55	109	5.032	1	0.025	Not significant
	No	16	5	21				
Support system available	Friends	5	1	6	3.119	2	0.210	Not significant
	Family members	64	59	123				
	Community	1	0	1				
Monthly income of family	5000 and above	2	10	12	7.695	3	0.053	Not significant
	5001 - 7000	21	14	35				
	7001 - 9000	26	18	44				
	9001 - and above	21	18	39				

The above table depicts association between demographic variables and physical status. The calculated chi square value for suffering from COVID-19 is $\chi^2 = 31.321$ which is more than table value at 0.05 level of significance. Hence it is concluded that there was association found between 'suffering from COVID-19 disease' and physical status. Other demographic variables like age, religion, type of family, educational status, any information on COVID-19, support system available and monthly income were less than table value at 0.05 level of significance. Hence it was

concluded that there was no association and physical status.

found between these demographic variables

Table 7: Findings related to association between demographic variables and mental status.

A). Anxiety Status

N=130

Demographic variables	Responses	Below median	Median & Above	Total	Chi-square	df	P-value	Inference
Did you suffer from COVID-19 disease?	Yes	8	20	28	8.060	1	0.005	Significant
	No	60	42	102				
Age	18 - 30	19	22	41	1.355	3	0.716	Not Significant
	31 - 40	33	28	61				
	41 - 50	10	6	16				
	51 - 60	6	6	12				
Religion	Christian	6	4	10	1.874	2	0.392	Not Significant
	Hindu	57	49	106				
	Muslim	5	9	14				
Type of family	Extended	6	4	10	0.329	2	0.848	Not Significant
	Joint	21	21	42				
	Nuclear	41	37	78				
Educational status	No formal education	8	10	18	8.042	4	0.090	Not Significant
	Primary education	34	24	58				
	Secondary education	16	14	30				
	PUC/HSC	5	13	18				
	Graduate and above	5	1	6				

Do you have any information on COVID-19?	Yes	57	52	57	0.000	1	0.994	Not Significant
	No	11	10	11				
Support system available	Friends	5	1	6	3.470	2	0.176	Not Significant
	Family members	63	60	123				
	Community	0	1	1				
Monthly income of family	5000 and above	5	7	12	1.344	3	0.719	Not Significant
	5001 - 7000	18	17	35				
	7001 - 9000	22	22	44				
	9001 - and above	23	16	39				

The above table depicts association between demographic variables and anxiety status. The calculated chi square value for suffering from COVID-19 disease is $\chi^2 = 8.060$ which is more than table value at 0.05 level of significance. Hence it was concluded that there was association found between 'suffering from COVID-19 disease' and anxiety status. Other demographic variables like age, religion, type of family, educational status, any information on COVID-19, support system available and monthly income were less than table value at 0.05 level of significance. Hence it was concluded that there was no association found between these demographic variables and anxiety status

B). Stess Status

N=130

Demographic variables	Responses	Below median	Median & Above	Total	Chi-square	df	P-value	Inference
Did you suffer from COVID-19 disease?	Yes	23	5	28	0.001	1	0.979	Not Significant
	No	84	18	102				
Age	18 - 30	34	7	41	0.480	3	0.923	Not Significant
	31 - 40	49	12	61				
	41 - 50	14	2	16				
	51 - 60	10	2	12				
Religion	Christian	10	0	10	2.588	2	0.274	Not Significant
	Hindu	85	21	106				
	Muslim	12	2	14				
Type of family	Extended	8	2	10	0.498	2	0.780	Not Significant
	Joint	36	6	42				
	Nuclear	63	15	78				
Educational status	No formal education	18	0	18	7.136	4	0.129	Not Significant
	Primary education	47	11	58				
	Secondary education	22	8	30				
	PUC/HSC	14	4	18				
	Graduate and above	6	0	6				
Do you have any information on COVID-19?	Yes	90	19	109	0.032	1	0.859	Not Significant
	No	17	4	21				
Support system available	Friends	5	1	6	0.222	2	0.895	Not Significant
	Family members	101	22	123				
	Community	1	0	1				
Monthly	5000 and	9	3	12	2.694	3	0.441	Not

income of family	above							Significant
	5001 - 7000	29	6	35				
	7001 - 9000	34	10	44				
	9001 - and above	35	4	39				

The above table depicts association between demographic variables and stress status. The calculated chi square value for demographic variables was less than table value at 0.05 level of significance. Hence it was concluded that there was no association found between demographic variables and stress status.

Table 8: Findings related to association between demographic variables and social status.

N=130

Demographic variables	Responses	Below median	Median & Above	Total	Chi-square	df	P-value	Inference
Did you suffer from COVID-19 disease?	Yes	12	16	28	1.734	1	0.188	Not Significant
	No	58	44	102				
Age	18 - 30	28	13	41	5.159	3	0.161	Not Significant
	31 - 40	28	33	61				
	41 - 50	8	8	16				
	51 - 60	6	6	12				
Religion	Christian	1	9	10	9.748	2	0.008	Not Significant
	Hindu	63	43	106				
	Muslim	6	8	14				
Type of family	Extended	5	5	10	0.147	2	0.929	Not Significant
	Joint	22	20	42				
	Nuclear	43	35	78				
Educational status	No formal education	11	7	18	5.912	4	0.206	Not Significant
	Primary	28	30	58				

	education							
	Secondary education	21	9	30				
	PUC/HSC	8	10	18				
	Graduate and above	2	4	6				
Do you have any information on COVID-19?	Yes	60	49	109	0.391	1	0.532	Not Significant
	No	10	11	21				
Support system available	Friends	4	2	6	1.304	2	0.521	Not Significant
	Family members	65	58	123				
	Community	1	0	1				
Monthly income of family	5000 and above	4	8	12	3.287	3	0.349	Not Significant
	5001 - 7000	22	13	35				
	7001 - 9000	24	20	44				
	9001 - and above	20	19	39				

The above table depicts association between demographic variables and social status. The calculated chi square value for demographic variables like suffering from COVID-19 disease, age, religion, type of family, educational status, any information on COVID-19, support system available and monthly income were less than table value at 0.05 level of significance. Hence it was concluded that there was no association found between these demographic variables and social status.

Table 9: Findings related to association between demographic variables and economic status.

N=130

Demographic variables	Responses	Below median	Median & Above	Total	Chi-square	df	P-value	Inference
Did you suffer from COVID-19 disease?	Yes	22	6	28	0.000	1	0.987	Not Significant
	No	80	22	102				
Age	18 - 30	29	12	41	2.687	3	0.442	Not Significant
	31 - 40	51	10	61				
	41 - 50	12	4	16				
	51 - 60	10	2	12				
Religion	Christian	6	4	10	2.491	2	0.288	Not Significant
	Hindu	84	22	106				
	Muslim	12	2	14				
Type of family	Extended	8	2	10	0.017	2	0.991	Not Significant
	Joint	33	9	42				
	Nuclear	61	17	78				
Educational status	No formal education	15	3	18	1.446	4	0.836	Not Significant
	Primary education	47	11	58				
	Secondary education	22	8	30				
	PUC/HSC	13	5	18				
	Graduate and above	5	1	6				
Do you have any information on COVID-19?	Yes	89	20	109	4.063	1	.044	Not Significant
	No	13	8	21				
Support system available	Friends	5	1	6	3.739	2	.154	Not Significant
	Family	97	26	123				

	members							
	Community	0	1	1				
Monthly income of family	5000 and above	11	1	12	3.254	3	.354	Not Significant
	5001 - 7000	28	7	35				
	7001 - 9000	31	13	44				
	9001 - and above	32	7	39				

The above table depicts association between demographic variables and economic status. The calculated chi square value for demographic variables like suffering from COVID-19 disease, age, religion, type of family, educational status, any information on COVID-19, support system available and monthly income was less than table value at 0.05 level of significance. Hence it was concluded that there was no association found between these demographic variables and economic status.

Discussion: Among 130 respondents, majority of 63.9% had mild functional impact, remaining 16.9% respondents had no functional impact, 19.2% had moderate functional impact and none were found with severe functional impact. Majority 57.7% had moderate anxiety and 54.7% had moderate stress, remaining 33.8% had mild anxiety and 27.7% had mild stress, 8.4% had severe anxiety and 17.7% had severe stress. 100.00% respondents had moderate social impact. 84.7% had moderate economic impact, remaining 15.4% had mild economic impact. These finding were supported by Kavita Singh[1] , 2021; Kritika Poudel[2], 2020; Jeffrey A[3], 2020; Andrew T[4], 2020; Valeria Saladino[5], 2020; Anamika Vajpeyi Misra[6], 2022.

The findings related to association between demographic variables and economic status reveals that, the calculated chi square value for demographic variables like age, religion, type of family,educational

status, any information on COVID-19, support system available and monthly income were less than table value at 0.05 level of significance. Hence it was concluded that there was no association found between these demographic variables and physical, mental, social and economic status.

There was association found between demographic variable like 'suffering from COVID-19 disease' and physical and anxiety status. No association found between 'suffering from COVID-19 disease' and social, economic and stress status.

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