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A descriptive study to assess the knowledge, attitude and practice regarding post-COVID care among people in India

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Abstract---Aims: This study aims to assess the level of knowledge, attitude and practices regarding post-covid care among people in India. Methods: A cross sectional descriptive study was conducted over a period of 3 months among 372 participants using convenient sampling through google forms. Results: Present study revealed that 99% had good knowledge and 1% have poor knowledge, 97% have favourable attitude and 3% have unfavourable attitude. In practice 99% have healthy practice and 1% have unhealthy practice after covid -19. The present study reveals that there was a significant positive correlation between knowledge and attitude and knowledge and practice (R=0.139, P=0.7). The Knowledge is directly affected by both attitude and practices towards post -covid care. Conclusion: Most of the people were having positive attitude and are unable to put in practice. But a positive attitude with knowledge changes the behaviour of the person and promotes healthy behaviour and prevents future complications. To increase and to update precautionary behaviour among the public, health officials and policy makers must provide knowledge and efficacy belief through mass communication programs/IEC. If any person wants, rehabilitation can be arranged for the people who are still suffering from the post covid care complications like follow-up treatments.

Keywords---knowledge, attitude, practice and post- covid care.

Introduction

Post-acute covid -19 seems to be a multisystem disease, sometimes occurring after a relatively mild acute illness, around 10% of patients who have tested positive for SARS-CoV-2 virus remain unwell beyond three weeks and a smaller proportion for months, in which people enter their ongoing symptoms on smartphone app. A recent US study found that only 65% of people had returned to their previous level of health 14-21 days after a positive test. It is not known some people's recovery is prolonged.[3] Persistent viraemia due to weak or absent antibody response, relapse or reinfection, inflammatory and other immune reactions, deconditioning, and mental factors such as post-traumatic stress may all contribute .So it is necessary for every individual to know about how care can be taken to prevent long term complications after covid -19.[4]Recovery after any severe debilitating illness may be prolonged. Survivors of covid-19 acute respiratory distress syndrome are at risk of long-term impairment of lung function. Serious interstitial lung disease seems to be rare in patients who are not hypoxic, though data on long term outcomes are not yet available.[2] Many patients are still recovering spontaneously in the first six weeks after acute covid-19 and do not generally require fast-track entry into a pulmonary rehabilitation programme.[1] Those who have had significant respiratory illness may benefit from pulmonary rehabilitation, defined as "a multidisciplinary intervention based on personalized evaluation and treatment which includes, but is not limited to, exercise training, education, and behavioural modification designed to improve the physical and psychological condition of people with respiratory disease." In the context of covid-19, rehabilitation is being delivered by various virtual models, including video linked classes and home education booklets with additional telephone support.[3]There are so many reviews found in related to covid-19 but we all are in need of post-covid care in community which presently needed for the society to boost their immunity and to adjust with pandemic, that's why investigator focused on post covid care.[9]

Aim of study

Aim of the study to assess the knowledge, attitude and practice regarding post -covid care among people in India.

Materials and methods

This study was carried out to assess the knowledge, attitude and practice among 18 years or above age group people regarding post covid care from December 2019 to March 2020 in India. A total of 372 participants were selected by convenient sampling method after getting ethical clearance. Online survey was done using KAP questionnaire including sociodemographic variables via google forms.

Results and Discussions

Results

A total of 372 participants were included in this study. The data reveals that majority 239 (64.2%) of participants were female. In study, most participants belonged to age group of 18-30 year (82.3%); dominant educational status were undergraduates 239 (64.2%). Majority of participants were students 212 (57%), the dominant profession was nursing 316 (84.9%). Further, nearly half 160 (43%) of participant's family income were below Rs.10000 per month. Findings of the study revealed that approximately half 207 (55.6%) of the participants belonged to nuclear family and majority of them 325 (87.4%) were unexposed to COVID as well 328 (88.2%) participants were not having any non-communicable disease. The major source of information in 228 (61.3%) participants were used digital technology like (message, applications, mobiles, and mails).

Table 1
Frequency and percentage distribution of demographic variables of subjects (n=372)

Items	Frequency	Percentage
Gender		
Female	239	64.2
Male	133	35.8
Age		
18-30Years	306	82.3
31-40 Years	55	14.8
41-50 Years	6	1.6
51-60 Years	4	1.1
Above 60 Years	1	0.3
Education		
Able to read Hindi	42	11.3
Postgraduate and above	46	12.4
Postgraduate	21	5.6
Secondary school/Intermediate	22	5.9
Undergraduate	239	64.2
Up to 10^{th} class	2	0.5
Occupation		
Daily wages	1	0.3
Government Job	109	29.3
Not working	7	1.9
Private Job	43	11.6
Students	212	57.0
Profession		
Engineering	7	1.9
General	32	8.6
Medical	13	3.5
Nursing	316	84.9

Teacher	4	1.1
Income Monthly		
Below Rs.10,000	160	43
Rs.10,001-30,000	47	12.6
Rs.30,001-50,001	50	13.4
Above10,000	115	30.9
Type of family		
Extended family	5	1.3
Joint family	157	42.2
Nuclear family	207	55.6
Single parent/ Divorced	3	0.8
Exposure to COVID		
No	325	87.4
Yes	47	12.6
Non communicable disease		
No	328	88.2
Yes	44	11.8
Sources		
Digital technology like messages, apps, mobile, mails	228	61.3
Friends and neighbours	16	4.3
Health care providers	83	22.3
News paper	17	4.6
Television	28	7.5

The level of knowledge regarding post covid care in females were higher than males with significant value 0.02<0.05 level and knowledge scores varied by profession also significant at 0.02<0.05 level df = 4, findings revealed that 369 (97%) of the participants have good knowledge. At 0.05 level of significance in knowledge there was a significant association among gender and profession.

Table 2
Distribution of subjects based on their level of Knowledge

Items	Poor	Good	Df	Chi
Gender				
Female	0	239	1	0.02*
Male	3	130		
Age				
18-30Years	3	303	4	0.95
31-40 Years	0	55		
41-50 Years	0	6		
51-60 Years	0	4		
Above 60 Years	0	1		
Education				
Able to read Hindi	1	41	5	0.84
Postgraduate and above	0	46		
Postgraduate	0	21		
Secondary school/Intermediate	0	22		
Undergraduate	2	237		

Up to 10th class	0	2		
Occupation				
Daily wages	0	1	4	0.68
Government Job	0	109		
Not working	0	7		
Private Job	0	43		
Students	3	209		
Profession				
Engineering	0	7	4	0.02*
General	1	31		
Medical	1	12		
Nursing	1	350		
Teacher	0	4		
Income Monthly				
Below Rs. 10000	2	158	3	0.43
Rs 10001. – 30000	1	46		
Rs 30001 – 50000	0	50		
Above Rs. 50001	0	115		
Type of family				
Extended family	0	5	3	0.49
Joint family	0	157		
Nuclear family	3	204		
Single parent/ Divorced	0	3		
Exposure to COVID				
No	3	322	1	0.50
Yes	0	47		
Non communicable disease				
No	3	325	1	0.52
Yes	0	44		
Sources				
Digital technology like messages, apps, mobile, mails	2	226	4	0.45
Friends and neighbours	0	16		
Health care providers	0	83		
News paper	0	17		
Television	1	27		

In this study there was a favourable attitude towards post covid care among females than males ,18-30 years aged group and occupation were having more favourable attitude and it is highly significant at $p<0.05$ level and all variables represents more favourable attitude towards post covid care.

Table 3
Distribution of subjects based on their attitude

Items	Unfavourable	Favourable	Df	Chi
Gender				
Female	5	234	1	0.34
Male	5	128		
Age				

18-30Years	7	299	4	0.00
31-40 Years	1	54		
41-50 Years	2	4		
51-60 Years	0	4		
Above 60 Years	0	1		
Education				
Able to read Hindi	1	41	5	0.95
Postgraduate and above	1	45		
Postgraduate	0	21		
Secondary school/Intermediate	1	21		
Undergraduate	7	232		
Up to 10th class	0	2		
Occupation				
Daily wages	0	1	4	0.05
Government Job	2	107		
Not working	0	7		
Private Job	5	38		
Students	3	209		
Profession				
Engineering	1	6	4	0.20
General	2	30		
Medical	0	13		
Nursing	7	309		
Teacher	0	4		
Income Monthly				
Below Rs. 10000	2	158		0.28
Rs 10001. - 30000	2	45		
Rs 30001 - 50000	3	47		
Above Rs 50001	3	112		
Type of family				
Extended family	0	5	3	0.96
Joint family	4	153		
Nuclear family	6	201		
Single parent/ Divorced	0	3		
Exposure to COVID				
No	9	316	1	0.79
Yes	1	46		
Non communicable disease				
No	10	318	1	0.24
Yes	0	44		
Sources				
Digital technology like messages, apps, mobile, mails	4	224	4	0.13
Friends and neighbours	1	15		
Health care providers	2	81		
News paper	2	15		
Television	1	27		

It was found that majority of the respondents following healthy practices. Mainly source of information like digital technology, friends & neighbours, health care providers newspaper and Television was highly significant (df =4 $p < 0.05$level) in relation to level of knowledge regarding post covid care.

Table 4
Distribution of subjects based on their practice

Items	Unhealthy	Healthy	df	Chi
Gender				
Female	2	237	1	0.29
Male	0	133		
Age				
18-30Years	2	304	4	0.98
31-40 Years	0	55		
41-50 Years	0	6		
51-60 Years	0	4		
Above 60 Years	0	1		
Education				
Able to read Hindi	0	42	5	0.95
Postgraduate and above	0	46		
Postgraduate	0	21		
Secondary school/Intermediate	0	22		
Undergraduate	2	237		
Up to 10th class	0	2		
Occupation				
Daily wages	0	1	4	0.82
Government Job	0	109		
Not working	0	7		
Private Job	0	43		
Students	2	210		
Profession				
Engineering	0	7	4	0.98
General	0	32		
Medical	0	13		
Nursing	2	314		
Teacher	0	4		
Income Monthly				
Below Rs. 10000	2	158	3	0.44
Rs 10001. - 30000	0	47		
Rs 30001 - 50000	0	50		
Above Rs 50001	0	115		
Type of family				
Extended family	0	5	3	0.99
Joint family	1	156		
Nuclear family	1	206		
Single parent/ Divorced	0	3		
Exposure to COVID				

No	1	324	1	0.11
Yes	1	46		
Non communicable disease				
No	2	326	1	0.60
Yes	0	44		
Sources				
Digital technology like messages, apps, mobile, mails	0	228	4	0.00
Friends and neighbours	1	15		
Health care providers	0	83		
News paper	1	16		
Television	0	28		

Results shows that there was a moderate correlation found between knowledge, attitude and practice which infers that increase in any one component increases other component and vice-versa hence level of knowledge in relation with attitude and practice were highly significant at 0.01level and 0.05 level also.

Table 5
Correlation between knowledge, attitude and practice

	Attitude r (p value)	Practice r (p value)
Knowledge	0.139* (0.007)	0.184* (<0.001)
Attitude		0.131* (0.012)

*Significant at 0.05 level

Data reveals that majority of participants have 97% favourable attitude. It is also revealed that there was a significant positive correlation between knowledge and attitude (0.01 level of significance), along with a significant association of knowledge and attitude with selected demographic variables i.e., age and occupation. There was a significant positive correlation between knowledge and practice at 0.01 level of significance. Many people have heathy practices. Along with that there was a significant association of knowledge and practice with selected demographic variables like sources of information. At 0.05 level of significance, it means people are seeking much information from digital technology, healthcare providers, TV, newspapers, friends and neighbours.

Discussion

The present study mainly focused on post -covid care knowledge, attitude and practice after severe COVID-19 disease, many people will experience a variety of problems with normal functioning and will require rehabilitation services to overcome these problems[4]. The principles of and evidence on rehabilitation will allow an effective response. These include a simple screening process; use of a multidisciplinary expert team; four evidence-based classes of intervention (exercise, practice, psychosocial support, and education particularly about self-

management); and a range of tailored interventions for other problems. The large number of COVID-19 patients needing rehabilitation coupled with the backlog remaining from the crisis will challenge existing services.[12]

A similar cross-sectional study conducted at South Korea to assess knowledge, attitudes and practices towards Covid -19. Data collection took place over 3 days (June 26–29) via an online survey 5 months after the Korea Centres for Disease Control and Prevention (KCDC) confirmed the first COVID case in South Korea; 970 subjects were included in the statistical data analysis. The results revealed that knowledge directly affected both attitudes (e.g., perceived risk and efficacy belief) and practices (e.g., personal hygiene practices and social distancing). Among the influencing factors of COVID-19 preventive behaviours, efficacy belief was the most influential and significant practice factor. It mediated the relationship between knowledge and all three preventive behaviours (wearing facial masks, practicing hand hygiene, and avoiding crowded places). The level of knowledge varied by sociodemographic characteristics. Females ($\beta = 0.06$, $p < 0.05$) and individuals with higher levels of education ($\beta = 0.06$, $p < 0.05$) demonstrated higher levels of knowledge.[5]

Limitations

The study is limited to online survey because of covid restrictions and above 18 years aged people those who have internet services who can operate phone easily hence the findings of the study are limited and generalized to educated people only.

Conclusion

The present study reveals that there was a significant positive correlation between knowledge and attitude and knowledge and practice (R=0.139, P=0.7). The Knowledge is directly affected by both attitudes and practices towards post- covid care. Many people are having positive attitude and are unable to put in practice. The majority of the participants had good knowledge, positive attitude, and sufficient practice. Females and males have significantly different practices. The results are very positive, which shows public are ready to change and able to practice which is a good sign in pandemic. Hence the people should continue to strengthen knowledge, attitude, and practice towards post-covid care to prevent further complications and improve regular follow up, so that every citizen in India and globally we can win the battle against any disease or pandemic.

Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

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