Original Article

Coping Strategies Among Medical Professionals During COVID 19 Outbreak

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ABSTRACT

Background: COVID 19 is an ongoing pandemic that has affected people and health workers world-wide. Health care workers not only face short term effects but also long-term psychological consequences due to these stressful situations. Coping strategies can influence health however coping strategies among medical fraternity have not been studied adequately.

Methodology: A cross sectional descriptive study was done through an online self-reporting survey model. The BRIEF COPE tool developed by Carver et al was used to assess the coping style. The coping strategy employed was compared to socio-demographic and other variables like professional experience

Results: Increasing age was positively correlated with emotion focused and problem focused coping strategies. Marital status had a positive correlation with emotion and problem focused strategies

Conclusion: Coping styles in medical professionals differs from those of the general population seen in previous studies. Within the group of medical professionals, those with higher age, higher designation and being married were more likely to use problem focused and emotion focused coping mechanisms which are in general adaptive strategies.

Keywords: Coping, Brief-COPE, medical professionals, COVID 19

Running Title: Coping among doctors during COVID

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INTRODUCTION

COVID19 is an ongoing pandemic that has affected millions of people worldwide. Since the beginning of this pandemic, frontline medical staff in India have been subjected to increased workload and excess working hours.[1] This situation has resulted in various psychological impacts like increased stress, anxiety, insomnia and depressive symptoms.[2] Studies from the SARS and MERS outbreak show that health care workers not only face short term effects but also long-term psychological consequences due to these stressful situations.[3]

Lazarus et al,[4] define coping as the process of "constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands". In simple terms, it is the process by which a person attempts to manage stressful demands. The different forms of coping strategies include problem focused, emotion focused and dysfunctional coping strategies. Problem focused coping is focusing on the specific problem or situation that has arisen and trying to find some way of changing

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it or avoiding it in the future, whereas, emotion focused coping is focusing on alleviating the emotions associated with the stressful situation, even if the situation itself cannot be changed. Avoidant or dysfunctional strategies or maladaptive strategies include substance use, denial, self-blame etc.5

People who tend to use problem-focused coping in stressful situations show lower levels of depression both during and after the stressful situation.[4] Meyer et al, found that maladaptive strategies have a greater relationship with mental health problems such as depression.[6] On the other hand, adaptive strategies have a stronger relationship with psychological well-being. Matud, studied gender differences in stress and coping and found that women have more emotion focused coping than men.[7]

Coping strategies among medical fraternity have not been studied adequately unlike burnout and stress. There is a need for these studies in India because mental health of medical staff can also impact the quality of service rendered especially during a pandemic. This study aims to identify the most common coping strategies used by frontline medical staff and to find any correlation between socio demographic characteristics and the coping strategies.

METHODOLOGY

Study Design and Participants

A cross sectional descriptive study done through an online self-reporting survey was conducted in July 2020 at a tertiary health care centre in Tamil Nadu, India. The survey consisting of socio demographic details and the BRIEF COPE questionnaire was sent to the study population comprising of interns, post graduates, and teaching faculty which included assistant professors, associate professors and professors. Institutional ethical committee approval was obtained.

Measures

The socio-demographic data included age, gender, educational status, religion, designation, habitat details and marital status.

The Brief COPE tool developed by Carver et al, is a validated self-administered, open access, 28 item questionnaire, consisting of 14 coping strategies with 2 items per strategy.[8] The 14 coping strategies were categorised into emotion focused (emotional support, positive reframing, humour, acceptance, religion), problem focused (active coping, instrumental support, planning) and dysfunctional coping (self-distraction, denial, substance use, behavioural disengagement, venting, self-blame). Each item is scored on a Likert scale of 1-4 from "haven't been doing this at all" to "been doing this a lot". The score for each strategy was calculated by adding the scores of the 2 individual items that constitute that particular strategy.

Statistical analysis

Descriptive analysis was done on the socio demographic variables. Spearman's correlation was done to assess the relationship between the variables. T test and ANOVA was performed to analyse within group differences in mean coping scores. P value of <0.05 was considered significant. All the analysis were performed using the SPSS software version 18.

RESULTS

Socio-demographic characteristics

A total of 84 valid and complete responses were received and included in the study. The socio-demographic profile of the population is given in Table 1. It shows those aged less than or equal to 30 years were higher in number. Gender distribution shows more females than males. Most of them were postgraduates and were Hindu by religion. Post Graduate Residents and Interns were predominant in the study population. Unmarried people were higher in number compared to married people.

Table 1: Socio-demographic characteristics

Variable	Frequency (n = 84)	Percent
Age		
<=30	58	69
>30	26	31
Gender		
Female	49	58.3
Male	35	41.7
Education		
Postgraduate	55	65.5
Undergraduate	29	34.5
Religion		
Christian	5	6
Hindu	69	82.1
Non-religious (atheist)	10	11.9
Designation		
Intern	29	34.5
Residents	36	42.9
Faculty	19	22.7
Living with currently		
Alone	17	20.2
Family	29	34.5
Friends	38	45.2
Marital status		
Married	29	34.5
Single or never married	55	65.5

Coping strategies

Emotion focused and problem focused coping was used by most professionals. (Table 2)

Table 2: Frequency of different coping styles.

Coping Strategy	Frequency	Mean Score
Emotion Focused	40	24.13
Problem Focused	24	14.83
Dysfunctional	48	21.20

Relation between socio-demographic variables and coping strategies

Spearman's correlation coefficient for emotion focused, problem focused and dysfunctional coping against significant socio demographic variables are given. Age was positively correlated with emotion focused and problem focused coping strategies (correlation coefficient - 0.249 and 0.356 respectively). **(Table 3)** Designation was positively associated with problem focused strategies (0.317). Marital status had a positive association with emotion and problem focused strategies (0.341 and 0.374 respectively). **(Table 4)** Dysfunctional coping strategies had no significant correlation with any variables.

Table 3: Correlation between socio-demographic variables and coping strategies.

Coping Strategy	Correlation Coefficient (p value)
Emotion Focused with Age	.249* (0.022)
Problem Focused with Age	.356** (0.001)
Dysfunctional Coping with Age	-0.068 (0.536)

*n = 84; *p value<0.5, **p value <0.01*

Table 4 - T scores of significant variables

Variable	Coping Style	T score	df	p value
Designation	Emotion focused	3.297	50.8	0.002*
	Problem focused	3.457	53.7	0.001*
	Dysfunctional	0.209	53.5	0.835
Marital Status	Emotion focused	3.62	62	0.001*
	Problem focused	3.836	65.5	0.00
	Dysfunctional	0.897	61	0.373

n = 84; *p value<0.5, **p value <0.01

Comparison of groups

T test was done to demonstrate the difference in mean coping scores of the different groups like age- less than or equal to 30 vs more than 30, marital status- married vs unmarried. The t scores were found to be significant for emotion focused and problem focused strategies as shown in table 3. ANOVA was performed to analyse within group difference of mean coping scores of designation - interns, residents and faculty. The results of which are given below in table 4. Post hoc analysis showed that postgraduate residents had more emotion focused strategies than faculty (p value - 0.005) and faculty had more problem focused strategies than postgraduate residents and interns (p value - 0.001).

Designation	Type III Sum of Squares	df	Mean Square	F	Sig.
Emotion focused	363.542	2	181.771	5.308	0.007
Problem focused	247.582	2	123.791	8.086	0.001
Dysfunctional	127.502	2	63.751	2.125	0.126

DISCUSSION

Our study indicates that there is a variable distribution of problem focused, emotion focused and dysfunctional strategies among our medical professionals. Previous studies in China have demonstrated that medical staff had more adaptive strategies[9,10] (problem and emotion focused) than maladaptive strategies but this finding could not be supported by our study, probably because individual's response to items on dysfunctional coping items may be variable.

This study shows that with increasing age, medical professionals tend to use more emotion focused and problem focused strategies, with problem focused strategies having a strong positive correlation as age increases. On the contrary, studies comparing age and coping mechanisms report that older adults were less likely to use problem focused coping due to physiological vulnerability and health related stressors.[11] This difference could be attributed to the fact that the study population here is a group of medical professionals with adequate knowledge about the stressor (in this case, COVID 19) unlike general population in previous studies.

With higher designation, medical professionals used more problem based coping mechanisms which are mostly adaptive strategies. Studies have shown that resident doctors have higher stress compared to other medical professionals.[10] Higher designation like teaching faculty thus could have less stress comparatively and tend to use adaptive coping mechanisms. Also, teaching faculty are in general older in age compared to residents and interns and this contributes to them using problem focused mechanisms. This goes along with our finding regarding age and coping strategies.

Being married positively correlated with emotion focused coping and problem focused coping in our study similar to previous studies which also indicate the same.[12] They have more emotional and instrumental support, are well planned and have more acceptance compared to unmarried individuals.[13]

Our study was inconsistent with previous studies regarding the association between gender and coping mechanisms. We had no statistically significant ($p<0.05$) association between the two variables i.e., no gender difference existed in terms of coping mechanisms. This inconsistency may be due to the fact again that it is a group of medical professionals and this could be an indicator of equal distribution of stress among both genders in the medical field. Dysfunctional coping strategies had no statistically significant correlation with any variable in our study but usually dysfunctional coping is an indicator of higher levels of stress.[14] This could either mean that the levels of stress due to COVID 19 was less among medical professionals or the participants had a biased answering in questions related to substance use, self-blame or denial.

LIMITATIONS

The study population was small and an extensive questionnaire of 28 items in online survey could have been a confounding factor. A comparison of the coping mechanisms of medical professionals with general population could have contributed more to understanding the coping strategies. Measurement of stress along with coping would have rendered us to do a comparison of both.

CONCLUSION

Our study shows that the factors affecting the coping mechanisms in medical professionals differs from those of the general population seen in previous studies. Within the group of medical professionals, those with higher age, higher designation and being married were more likely to use problem focused and emotion focused coping mechanisms which are in general adaptive strategies. Interventions targeting maladaptive components of emotion focused strategies and dysfunctional strategies could help medical professionals cope better with the COVID scenario and they need to be aimed at younger age group, unmarried people, interns and resident doctors.

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