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DEPRESSION, ANXIETY AND STRESS AMONG INDIVIDUALS IN QUARANTINE IN RURAL INDIA AND EFFECT OF THE LIVED EXPERIENCE ON THEIR ATTITUDINAL PERCEPTIONS ABOUT COVID-19

Community Medicine

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ABSTRACT

Background: COVID-19 crisis has increased the depression, anxiety and mental stress burden. Stressful situations and environments like quarantine can further exacerbate these conditions. We studied association of depression, anxiety, stress and the lived experience on outlook towards adherence to preventive practices.

Methods: A simultaneous (Quant + Qual) mixed method study was carried out in 228 persons in facility based quarantine in a rural area of India. Depression, Anxiety and Stress Scale 21(DASS 21) and associated adherence behaviours to preventive measures were inquired into. Interviews about lived experiences and a Focus Group Discussion was conducted to gain quality insights.

Results: Anxiety levels were higher with 19.7% reporting very severe anxiety, 11% reporting severe and 21.5% reporting moderate anxiety. Non adherence to wearing masks (37.3%) and social distancing (34.6%) elicited higher depression, anxiety and stress scores whereas non adherence to hand hygiene reported in 43.8% was not associated with significant rise in anxiety scores.

Conclusions: Quarantined individuals suffering from depression, anxiety and stress require counselling. This time should also be used as an opportunity to reinforce proper preventive behaviours found lacking among the quarantined as the experience makes them introspective and more amenable to change.

KEYWORDS

Facility based Quarantine, Non Adherence, Lived experience, COVID-19.

INTRODUCTION

The attitude of public and public health experts alike has undergone change as the COVID-19 pandemic has persisted for nearly a year. In addition to control of the disease, COVID 19 pandemic now presents a public mental health challenge.[1]

The pandemic has led to institution of stringent quarantine and isolation strategies globally leading to large scale disruption in the way of life. Facility based quarantine is the separation and restriction of movement of people who have potentially been exposed to a contagious disease to ascertain if they become unwell, so reducing the risk of them infecting others.[2] In public perception there is not much difference between quarantine and isolation leading to instances of shunning of quarantined individuals.

Fang Tang et al. reported a high prevalence of negative psychological symptoms regarding quarantined respondents in China. Stigmatization and discrimination during community surveillance, especially after carpet check and being reported by relatives, and subsequent social exclusion of suspected and confirmed cases led to public anxiety and panic.[3] In India too, studies have showed fear, stigma, anxiety and misinformation surrounding the pandemic adding to the woes of the affected.[4,5]

The current study aimed to find the depression, anxiety and stress levels among the quarantined individuals and more importantly tried to understand its effects on their attitudes and perceptions regarding the disease after this lived experience.

MATERIAL & METHODS

A simultaneous (Quant + Qual) mixed method study was conducted wherein 228 individuals who were contacts of positive cases and were quarantined while awaiting their reports in a facility in rural area of Maharashtra state in India were interviewed and quantitative data was collected from them. A focus group discussion and interviews were also conducted in a subset of 8 individuals to gain further insights. The study period was 3 months (May 2020 to July 2020).

Prior approval of institutional ethics committee was taken (Reg no: RMC/UG-PG/2020/58) and written informed consent was taken from all respondents prior to inclusion in the study. Procedure prior to administering the questionnaire, ethical conditions for participating in the study were explained to the respondents. These included privacy, voluntary participation, anonymity, confidentiality, and protection from both psychological and physical harm.

The questionnaire included demographic information of patients and their adherence to preventive measures. The DASS 21 (Lovibond & Lovibond Depression, Anxiety and Stress Scale 21) was used to obtain scores for Depression, Anxiety and Stress. It is a 21-item self-report measure used to assess depression, anxiety and stress. Items on DASS are rated on 4-point Likert type ranging from 0 (did not apply to me) to 3 (applied to me most of the time). Separate scores for depression, anxiety and stress were obtained by this scale. Internal consistency has been demonstrated in clinical samples(r=0.71). Construct validity demonstrated with significant correlations between Anxiety Scale & Beck Anxiety Inventory (r=0.81); Depression scale & Beck Depression Inventory (r=0.74).[3] The DASS 21 has been found reliable & valid method for assessing client changes in depressive mood and anxiety.[4] It has previously been used in rural Indian population.[5,6] Data Analysis items in the DASS subscales were scored according to instructions in the technical manual. Higher the score on each subscale more distressed the individual.

Quality inputs were obtained by interviewing participants regarding their attitudinal perceptions and lived experience common themes were isolated from the responses. Descriptive statistical analysis was done using percentage, mean and standard deviation values. Unpaired t test was used to compare mean Depression, Anxiety and Stress scores. Open Epi was used to carry out statistical analysis.

RESULTS

The mean age was 38.05 ± 15.32 years. Most people who were quarantined were the younger contacts of positive cases who were older. Males were 148(64.9%) and females were 80 (35.1%). There was no sex wise difference between DASS scores. Anxiety levels were higher with 19.7% reporting very severe anxiety, 11% reporting severe and 21.5% reporting moderate anxiety. These were proportionately higher as compared to depression and stress levels. **(Table 1)**

Table 1: Depression Anxiety and Stress in Quarantined Individuals

	No. of Patients n=228	Percentage
Depression		
Normal	91	39.9

Mild	38	16.7
Moderate	68	29.8
Severe	16	7.0
Very Severe	15	6.6
Anxiety		
Normal	63	27.6
Mild	46	20.2
Moderate	49	21.5
Severe	25	11.0
Very Severe	45	19.7
Stress		
Normal	158	69.3
Mild	27	11.8
Moderate	27	11.8
Severe	15	6.6
Very Severe	1	0.4

Non adherence to wearing masks (37.3%) and social distancing (34.6%) elicited higher depression, anxiety and stress scores whereas non adherence to hand hygiene reported in 43.8% did not show significantly higher anxiety scores, showing higher depression and stress scores none the less. **(Table 2).**

Table 2: Comparison of mean Depression, Anxiety and Stress in Quarantined individuals who reported following precautionary measures and those who did not

Study Variable (n)	Depression		Anxiety		Stress	
	Mean (SD)	t test	Mean (SD)	t test	Mean (SD)	t test
Were you wearing a mask?						
• Yes (143)	5.64 (3.8)	t=2.303 df=226	5.74 (3.52)	t=2.116 df=226	5.62 (3.4)	t=3.122 df=226
• No (85)	6.85 (3.8)	p=0.02 2	6.81 (3.96)	p=0.035	7.15 (3.7)	p=0.002
Were you following hand washing guidelines?						
• Yes (118)	5.53 (3.46)	t=2.255 df=226	5.83 (3.33)	t=1.304 df=226	5.53 (3.2)	t=2.870 df=226
• No (100)	6.68 (4.2)	p=0.02 5	6.47 (4.08)	p=0.194	6.9 (3.88)	p=0.004
Were you maintaining social distancing?						
• Yes (149)	5.17 (3.35)	t=5.155 df=226	5.38 (3.309)	t=4.432 df=226	5.45 (3.22)	t=3.799 df=226
• No (79)	7.81 (4.2)	p<0.00 1	7.58 (4.037)	p=0.001	7.42 (4.08)	p=0.001

The summary findings of Focus group discussion are shown in table 3**.**

Table 3: Summary Findings of Focus Group Discussion

Themes	Sub Themes	Responses
Perceptions	Guilt	*I should have been more careful*
	Fear	*I am afraid of what will happen to my family members?*
	Willingness to change	*I will be more careful now that God has given me another chance*
Practices	Masking	*I wear a mask, tell others to wear and stay away from those who don't*
	Social Distancing	*I swear I will follow proper distancing now*
	Hand Washing	*I wash (hands) when I come from outside*
Apprehensions	Concern for Family members	*Won't get see them for the last time*
	Business/Employment	*Don't know how are they*
	Waiting & Uncertainty	*Who will look after them*
		Very inconvenient. Waiting is difficult

Some Lived Experiences

A 22 year old engineering student was quarantined and her family was also isolated. The father was diabetic and hypertensive. She returned home from Pune tested negative. A week later her father developed symptoms and whole family was tested. Her parents were positive and were isolated. She was deeply concerned about his wellbeing as his general condition was not good. There was a sense of helplessness accompanied by concern for family as he was the sole bread winner. She remarked, "*If something happens to father I don't know what we will do, I am praying for him constantly."*

A 54 year old clerk was quarantined. He had attended a family function 4 days back where one of the attendees was detected as positive for COVID -19. All around about 30 people were quarantined. He cursed himself for attending the function. *"We are stuck between the fear of COVID and following social norms. This has changed everything. Now I am even afraid to show common curtsey to friends and relatives."* For the next year it is better to mind our own business and wish others on phone.

A 39 year old homemaker was quarantined as her husband was positive. She stated that she had not ventured outside the house since lockdown was imposed. *Men have to go to work. We are more afraid of starving than sickness. Now if I become positive I can't blame anyone even though I followed all instructions. He was careful too, but what to do now, whatever is destiny will happen. Just give me 'clear certificate' to show my neighbors or they will not allow us to go back home.*

DISCUSSION

The depression, anxiety and stress scores were all elevated with anxiety score showing highest rise. This finding was not unexpected. Non adherence to wearing masks (37.3%) and following social distancing measures (34.6%) elicited feelings of regret and guilt from the respondents that the lack of hand hygiene (43.8%) did not. They felt that they would not have been in their current predicament had they followed preventive measures properly. The importance of hand hygiene had to be further impressed upon them.

Brooks et al. have concluded that most of the adverse effects come from the imposition of a restriction of liberty; voluntary quarantine is associated with less distress and fewer long-term complications. Public health officials should emphasize the altruistic choice of self-isolating.[6] Worry about members who were quarantined elsewhere, worry about elderly, worry that they will contract disease, lack of proper stay arrangements, isolation from family, postponement of educational activities, career plan and family functions like weddings were chief concerns.

Quarantined individuals suffering from depression, anxiety and stress require proper counselling. This period should also be used as an opportunity to reinforce proper preventive behaviours found lacking among the quarantined as the experience makes individuals more introspective and amenable to change. Continuous surveillance of the psychological consequences for outbreaks should become routine as part of preparedness efforts worldwide. Guo Q et al. recommend that necessary measures should be provided to address depression and other psychiatric symptoms for COVID-19 patients and attention should be paid to patient perceived stigma and coping strategies when delivering psychological interventions.[7]

Migrants had especially hard time during the pandemic, which is due to the vulnerabilities they are subjected to.[8] The uncertainty of having a dreadful illness, limited family support, fear of death of self, near and dear ones imposes a severe stressful mental state, and therefore mental health evaluation and mental health support to the patients' needs to be routinely done.[9] The educational sector was also affected deeply by the pandemic and school/college based mental health assessment and interventions will be desirable in future.[10,11] Studies suggest that primary care physicians and mental health professionals should be prepared to tackle post COVID era mental health consequences too.[12,13]

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