

Relationship between anxiety and health specific self-efficacy during home quarantine in SARS-CoV-2 COVID-19 disease

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ABSTRACT

Background: The sudden attack of SARS-CoV-2 shut down many countries around the globe and imposed a new set of challenges in front of every human being. Quarantine is the most effective way to prevent disease propagation. Home quarantine effects on mental health, which causes worries, stress anxiety and depression. the aim of the study is to find out the anxiety and health specific self-efficacy of home quarantine people from Nashik Rural and Urban area.

Method: A Cross-Sectional, telephonic survey was conducted between 8st June 2020 to 28th June 2020 in Nashik city (Maharashtra, India) of home quarantined people. 59 people in total consented to be involved in the study (Male = 37 and Female = 22). Home quarantined people's Anxiety was measured with Charles D. Spielberger State Trait Anxiety Inventory and Health Specific Self-Efficacy is measured through Health Specific Self Efficacy Scale by Ralf Schwarzer & Britta Renner (2009). **Results:** The results show that Male participants face more state anxiety (M= 55.05, SD =19.15) than female participants (M= 48.13, SD =18.45), and trait anxiety (M= 39.72, SD =14.33) than female participants (M= 34.95, SD =15.29). There is negative correlation between state anxiety and Nutrition Self-Efficacy ($r = -.529$ $p < 0.00$), Physical Exercise Self Efficacy ($r = -.651$ $p < 0.00$) and state anxiety is positively correlated with Alcohol Resistance Self Efficacy ($r = .405$ $p < 0.00$). There is negative correlation between trait anxiety and Nutrition Self-Efficacy ($r = -.473$ $p < 0.00$), Physical Exercise Self Efficacy ($r = -.639$ $p < 0.00$) and state anxiety is positively correlated with Alcohol Resistance Self Efficacy ($r = .298$ $p < 0.00$). **Conclusion:** Male participants have more State and Trait anxiety than female participants during home quarantine. Females show more Health specific self-efficacy than male participants. State and Trait anxiety negatively correlated with Nutrition health specific self-efficacy and physical exercise specific self-efficacy while state and Trait anxiety positively correlated with Alcohol Resistance Self-Efficacy.

Keywords: Home Quarantined, COVID-19, State Trait Anxiety, Health Specific Self-Efficacy.

The sudden attack of SARS-CoV-2 shut down many countries around the globe and imposed a new set of challenges in front of every human being. This virus occurred in Wuhan, China and rapidly spread all over the globe causing hundreds of thousands

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of deaths. India is on the fourth rank reported for the patients for COVID 19 on 28th June.¹

SARS-CoV-2 is a respiratory illness and has become a pandemic. The major cause of the spread of corona virus is person to person transmission through droplets while coughing and sneezing. The detection of the Corona positive patients is very difficult since many carriers of the corona virus are asymptomatic. Therefore, some carriers may not take necessary precautions for not spreading the disease.

Preventive measures like social distancing, lockdown, case detection, isolation, contact tracing and quarantine of exposed have been revealed as effective actions to control the spreading of the diseases.²

Quarantine is the most effective way to prevent disease propagation. Quarantine is the separation and restriction of movement of people who have potentially been exposed to a contagious disease to ascertain if they are unwell, so as to reduce the risk of them infecting others.³

Recently quarantine has been used on the context of SARS-CoV-2 all over the world. According to the symptoms shown, different types of quarantine are imposed on the person. The two types of quarantine are:

- 1. Institutional quarantine:** Institutional quarantine is imposed at a facility under the supervision of the Health Services working under the government for 14 days. The person who is asymptomatic or has mild symptoms is enforced to institutional quarantine.
- 2. Home quarantine:** Home quarantine is home based isolation. The person who is close contact with COVID-19 patients but the swab test is negative is enforced to home quarantine for 14 days with a stamp on their hand identifying them as quarantined.

No vaccine or proper drugs are available for SARS-CoV-2 and there is doubtful information regarding factors related to incubation period, number of infected people, actual mortality rate. Insufficient control over this virus develops insecurity, fear, anxiety about the disease in the society at large.⁴

Close family members, colleagues or the near and dear of the infected, may have extra stress, worries and anxiety. Home quarantined people face more psychological stress and fear about the infection. The indicating stamp on the hand of the quarantined is stigmatic and creates fear, numbness, worry, anxiety and depression.

Nowadays we are in an abnormal pandemic time, with lockdown shutting down our normal daily activities, taking a toll our mental and physical health. Home quarantine makes us more vulnerable to mental disturbance and imposes stigmatic feelings. This can affect our medical health self-efficacy like lower nutritious food intake and lack of proper exercise. The anxiety and depression push us towards unhealthy habits like smoking and drinking.

SARS-CoV-2 needs our immunity strong. Nutritious food and proper exercise boost our immunity against the corona virus. The unhealthy habits of smoking, drinking, lack of exercise and unhealthy food intake can push us towards the SARS-CoV-2.

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Mission Begin Again started from 8th June, 2020, with the unlocking process increasing the number of patients of SARS-CoV-2 Maharashtra. In the Mission Begin Again and the unlocking process, the number of corona positive patients increased in Nashik rural and urban area. This situation increased the home quarantined people. The increased number of patients of SARS-CoV-2 caused increased fear and anxiety. People started going out for their work and day to day life and interacted with more and more people, which caused the spread of SARS-CoV-2, and we reached the third phase of SARS-CoV-2.

The aim of the study is to find out the anxiety and health specific self-efficacy of home quarantine people from Nashik Rural and Urban area.

METHODOLOGY

Participants & procedure

A Cross-Sectional, telephonic survey was conducted between 8st June 2020 to 30th June 2020 in Nashik city (Maharashtra, India) of home quarantined people. 59 people in total consented to be involved in the study (Male = 37 and Female = 22). The age group is between 21 to 55 (Mean=38). The survey was conducted for people:

1. Whose one or more family members are COVID -19 patients? and,
2. Who are in close contact with COVID-19 patients and are therefore home quarantined?

Excluding Criteria

The people who have only travel history but are not in close contact with COVID-19 patients but are still quarantined.

People who are below the age of 21 and above the age of 55.

Measures

Following measures were used to collect data from home quarantine people in COVID - 19.

Personal information

The personal data sheet containing age, educational qualification, occupation, marital status family history, travel history, other medical problems administered first. The respondent was asked to tell personal data without leaving any information incomplete.

State –trait anxiety inventory

Home quarantined people's Anxiety were measured with Charles D. Spielberger State Trait Anxiety Inventory,⁵ a standardized tool. This Inventory contains two separate 20 items self-report scales for measuring present level of Anxiety (state) and general level of anxiety (trait).

State Anxiety (S-Anxiety)

The S-Anxiety is assessed through State-Trait Anxiety Inventory Form I (STAI-1), consisted of 20 statements assessed how respondents feel 'right now' and the intensity of their feeling of anxiety on a four-point rating scale with 1) Not at all, 2) Somewhat, 3) Moderately so, 4) Very much so. The reliability of the tool with Cronbach's Alpha is .90. the subjects were asked to rate the intensity of their feelings on the four-point scale for each item.

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Trait Anxiety (T-Anxiety)

The Anxiety is assessed through State-Trait Anxiety Inventory Form II (STAI-2), consisted of 20 statements the participants had to report “generally how they feel” by rating themselves on the four-point scale 1) Not at all, 2) Somewhat, 3) Moderately so 4) Very much so.

Health specific self efficacy scale

Health Specific Self Efficacy evaluated through Health Specific Self Efficacy Scale by Ralf Schwarzer & Britta Renner (2009).⁶ This scale contains three separate self-report scales i.e. Nutrition self-Efficacy contains 5 items; physical Exercise self-efficacy scale contain 5 items and Alcohol Resistance Self-Efficacy scale contain three items. Participants had reported their response in format (1) very uncertain, (2) rather uncertain, (3) rather certain, and (4) very certain. The test-retest reliability of Nutrition self-efficacy is .59.

RESULT

The purpose of the present study is to explore the relationship between Health Specific Self Efficacy and State – Trait anxiety among home quarantine people during Novel Corona Virus Disease. The responses of the participants were analyzed, by using the statistical software SPSS.

Table No. 1: Descriptive Statistics of State-Trait Anxiety, Health Specific Self-Efficacy

Gender	Variable	N	Mean	Std. Deviation
Total	State Anxiety	59	52.47	19.03
	Trait Anxiety	59	37.94	14.75
	Nutrition Self-Efficacy	59	14.16	3.54
	Physical Exercise Self-Efficacy Scale	59	11.89	3.45
	Alcohol Resistance Self-Efficacy Scale	59	2.15	3.50
Male	State Anxiety	37	55.05	19.15
	Trait Anxiety	37	39.72	14.33
	Nutrition Self-Efficacy	37	13.64	3.50
	Physical Exercise Self-Efficacy Scale	37	11.13	3.15
	Alcohol Resistance Self-Efficacy Scale	37	3.27	3.92
Female	State Anxiety	22	48.13	18.45
	Trait Anxiety	22	34.95	15.29
	Nutrition Self-Efficacy	22	15.04	3.51
	Physical Exercise Self-Efficacy Scale	22	13.18	3.62
	Alcohol Resistance Self-Efficacy Scale	22	.27	1.27

Table no. 1 shows the mean and standard deviation of the variables, anxiety (state and trait anxiety) and health specific self-efficacy (Nutrition, Physical Exercise and Alcohol Resistance self-efficacy) of all the participants involved in the study. The results show that Male participants faces more **state anxiety** (M= 55.05, SD =19.15) than female participants (M= 48.13, SD =18.45), and **trait anxiety** (M= 39.72, SD =14.33) than female participants (M= 34.95, SD =15.29). The result shows that 08 females (36.36%) have severe anxiety and 21 males (56.76%) shows severe anxiety, while 03 females (13.63%) and 04 males (10.81%) show mild anxiety. 11 females (50%) and 12 males (32.43%) males have moderate level of anxiety.

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When asked about the anxiety they express themselves that during the uncertain situation of the pandemic and the close contact with the COVID-19 increase their anxiety and worries about getting infected.

The health specific self-efficacy involves Nutritional self-efficacy, physical exercise Self-Efficacy and Alcohol Resistance Self-Efficacy Scale, the result shows that female (M= 15.04, SD =3.51) have more nutritional self-efficacy than male (M= 13.64, SD =3.50). female (M= 13.18, SD =3.62) have self-efficacious about physical exercise than male (M= 11.13, SD =3.15). male have low self-efficacy for Alcohol resistance (M= 3.27, SD =3.92) than female participants (M= .27, SD =1.27). 7 (31.81%) females follow proper nutrition like hot water, golden milk and nutritional food for their meals and breakfast with the practice of yoga and meditation. Seven males (18.91%) follow proper nutrition and yoga exercise with walking. 11 females (50.00%) and 14 (37.83%) males follow nutrition but lack exercise. Only one woman consumes alcohol occasionally and 04 (18.18%) females didn't follow proper nutritional diet and didn't do any exercise during the home quarantine. Sixteen males (43.24%) people didn't follow proper nutritional diet and didn't do any exercise during the home quarantine, nine people consume alcohol and increased the consumption of alcohol.

Table No. 2 - Correlation between Anxiety & Health Specific Self -Efficacy.

		Nutrition Self-Efficacy	Physical Exercise Self-Efficacy Scale	Alcohol Resistance Self-Efficacy Scale
State Anxiety	Pearson Correlation	-.529**	-.651**	.405**
	Sig. (1-tailed)	.000	.000	.001
	N	59	59	59
Trait Anxiety	Pearson Correlation	-.473**	-.639**	.298*
	Sig. (1-tailed)	.000	.000	.011
	N	59	59	59

Table No. 2 shows the correlation between Anxiety and Health Specific Self-Efficacy. There is negative correlation between state anxiety and Nutrition Self-Efficacy ($r = -.529$ $p < 0.00$), Physical Exercise Self Efficacy ($r = -.651$ $p < 0.00$) and state anxiety is positively correlated with Alcohol Resistance Self Efficacy ($r = .405$ $p < 0.00$).

There is negative correlation between trait anxiety and Nutrition Self-Efficacy ($r = -.473$ $p < 0.00$), Physical Exercise Self Efficacy ($r = -.639$ $p < 0.00$) and state anxiety is positively correlated with Alcohol Resistance Self Efficacy ($r = .298$ $p < 0.00$).

The result shows that when the anxiety increased it causes on the food intake and physical exercise. Due to anxiety and worries the diet rules weren't followed properly, unhealthy food habits were developed, due to the lockdown walking habits and exercise deteriorated and increased anxiety causes consumption of more alcohol in male participants.

DISCUSSION

The pandemic COVID-19 spreads very rapidly in the community at the process of unlocking. The present study conducted at the stage of first phase of unlock in Maharashtra (India). At these stages lockdown restrictions are imposed to containment zones, and in non-containment zones shopping malls, religious places, hotels and restaurants are reopening during this phase. In the first unlocking phase the number of COVID patients increased in

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Nashik District and the number of institutional quarantine as well as home quarantine was also increased.

Fear, anxiety, stress and depression are the common psychological responses for Pandemic COVID-19, due to that most of the common people the main aim of the study was to measure the anxiety level and level of health specific self-efficacy of the home quarantine people and found that male in the urban area has more anxiety than women.

Social distancing, lockdown, self-isolation are the measures used to control the spread of disease. India is on the fourth rank reported for the patients for COVID 19 on 28th June (World Health Organization, 2020). Number of patients reported in the particular area has been divided into containment zone, red zone, orange zone and green zone. In the containment area and Red zone people have very strict rules of Isolation and social distancing because the number of patients is high in this area.

The members who are close contact with the COVID 19 patients are either go to the institutional quarantine center or they are compulsorily home quarantine to control the spread of the disease. The major part is that the people who are either institutional or home quarantine have a stamp on their hand, which is very stigmatic and affect on the mental health. The major mental health problem is fear of getting infected, anxiety and worry, depression, over stress.

Study conducted on University students shows that 0.9% shows severe symptoms of anxiety, 2.7% shows moderate symptoms and 21.3% shows mild symptoms, about the epidemic ⁷

In the present study the home quarantined male shows increased anxiety in the pandemic. The major reason is getting infected during the incubation period and the indicating stamp on the hand of the quarantined is stigmatic and creates fear, numbness, worry, anxiety and depression. financial worries and tension of unemployment is another cause of increased anxiety and increased the alcohol consumption during the home quarantined period. Three women out of four having severe anxiety are COVID-19 positive when they are quarantined and afterwards shifted to the hospital, and male participants were COVID-19 positive out of eight males, after the survey in the follow up two participants face severe condition and not able to survive when they caught COVID-19. Out of 59 participants 13 participants were co morbid but very efficient about the schedule of diet and exercise, they were safely completed the period of quarantine.

CONCLUSION

In conclusion the participants involved in the study were close contact with the COVID-19 patients. The participants who have health specific self-efficacy follows proper exercise and diet plan, according to the health care professional. They are positive towards the future and faces lower level of anxiety. They have worries about the infection but positively cope up with the situation, and utilize the period of home quarantine in reading, writing and listening music.

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Conflict of Interest

The author declared no conflict of interest.

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