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Anxiety as Major Cause of Back Pain in Post COVID -19 Affected Individuals –from Practitioner’s View

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ABSTRACT

Anxiety is usually transient in nature, but if the symptoms are severe and persistent in the absence of stressor, then it is considered as anxiety disorder. Medical health practitioners have been connected with the patients and hence can better speculate the psychology of human beings. The present study was designed to find out the manifestation of anxiety as repercussion of back pain in the post COVID scenario examined in the setup of a medical practitioner. A survey was conducted among the medical practitioners from India to find out the possibility of anxiety as after-effect of back pain post COVID-19 through questionnaires. Results of the study showed that 95% of patients were in the view to have chances of anxiety with more possibility to have social anxiety and post-traumatic stress anxiety disorder as a consequence of COVID-19. Female and male genders have equal chances, whereas transgender have lesser chances to have anxiety disorders as a consequence of COVID-19. Population above 50 years age might have maximum chance of having anxiety as after-effect of COVID-19. The study concludes to have chances of anxiety as repercussion of COVID-19

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Introduction

Anxiety is an adaptive reaction to stress, which assists the person to cope with the stressful condition. It involves with an unwanted perception of insecurity associated with apprehension [1, 2]. Anxiety is usually transient in nature, but if the symptoms are prolonged and severe in the absence of stressor, then it is considered as an anxiety disorder [3, 4]. Such anxiety disorders are the most common mental disorders experienced by children to the elder human population. The symptoms of anxiety are characterized by fear, stress, high blood pressure, sweating, trembling, etc. About 284 million people experienced anxiety disorder globally in 2017; among them, 179 million were female and 105 million were male [5]. According to a report, the prevalence of anxiety disorders among higher secondary school students in India is 56.8%; among them, 15% have panic disorders, 13% develop generalized anxiety disorders, 4% have separation anxiety, 15.6% suffer social anxiety, and 9.2% exhibit school avoidance anxiety [6]. Anxiety disorders may develop from a complex set of factors including genetic, brain chemistry, environment, personality and life events. Various types of anxiety disorders are shown in Table 1. Barbiturates, benzodiazepines (BZDs), azapirones, norepinephrine, serotonin reuptake inhibitors, monoamine oxidase inhibitors, phenothiazine’s, etc., are the common class psychotropic drugs used for the treatment of anxiety post COVID

back pain. Anxiety may also be a trigger factor for back pain eliminating organic causes. Anxiety and depression are two most common forms of psychological disturbances seen in patients. Back symptoms are frequently accompanied by depression or anxiety and psychological distress. The Hospital Anxiety and Depression Scale (HADS) is one of the most widely used tools in medical practice to identify these. 10 Scant data is available on the prevalence of anxiety and depression in the chronic low back pain population. As such, the current study was planned to assess its frequency in a tertiary care setting [7].

Table 1: Manifestations of Anxiety Disorders and their manifestations

Anxiety disorder	Definition	Symptoms
Panic disorder (PD)	A brief onset of intense fear and discomfort with peak within 10 min	Somatic symptoms: palpitations, sweating, trembling, shortness of breath, chest pain, dizziness Cognitive symptoms: fear of losing control or going crazy, derealization or fear of dying, depersonalization [8]
Obsessive-compulsive disorder (OCD)	Presence of recurrent intrusive thoughts that are anxiety-provoking (obsessions) and/or repetitive behaviors in response to obsessions	Most common obsessions are thoughts about contamination, repeated washing, doubting, aggressive or sexual non-welcoming, excessive sexual thoughts, checking/counting, and ordering and the most common compulsions [9]
Post-traumatic stress disorder (PTSD)	An anxiety disorder that develops in some people after they have been exposed to a traumatic event involving actual/threatened death or serious injury	Flashback Vivid re-experiencing of the trauma: intrusive memories, nightmares, flashbacks Avoidance of reminders or thoughts about contamination, repeated washing, doubting, aggressive or sexual non-welcoming, excessive sexual thoughts, checking/counting, and ordering and the most common compulsions [9]
Social phobia or Social anxiety disorder (SAD)	An intense, persistent, and irrational response to social situations in which the performance of the individual is perceived to be negatively scrutinized or evaluated by unfamiliar people [11]	Generalized social anxiety disorder: fear of multiple social situations Site specific, speaking in public Non-generalized social anxiety disorder: public speaking fears [12]
Specific phobia (SP)	A persistent fear that is excessive or unreasonable, and is instigated by the presence of a specific object/situation	Panic attack due to: Animals: insects, snakes, dogs, etc. Natural environment: darkness, storms, heights, water, etc. Situations: flying, enclosed spaces, elevators, etc. Blood/injection/needle: seeing blood, receiving shots or injection, etc. Microbes: claustrophobia, food refusal, contaminated character, etc. [13]
Generalized anxiety disorder (GAD)	Excessive anxiety and worry (apprehensive expectation) occurring for at least 6 months about several events or activities	Restlessness, fatigue, concentration difficulty, irritability, muscle tension, and sleep disturbance [14]

Materials and Methods

Design of the Questionnaire

A questionnaire was designed to collect information related to correlation of back pain and anxiety as after-effects of COVID-19 from randomly selected patients consulted for back pain via teleconsultation during a period of September 2020 to November 2021. The questionnaire covers the basic information of the respondents with a set of 6 questions. The responses of questions were considered either in the form of “yes” or “no” or based on “score 1–10” as shown in Figure: 1. Then they were rechecked with physiological causes of back pain, through video conferencing having strict criteria of assessment.

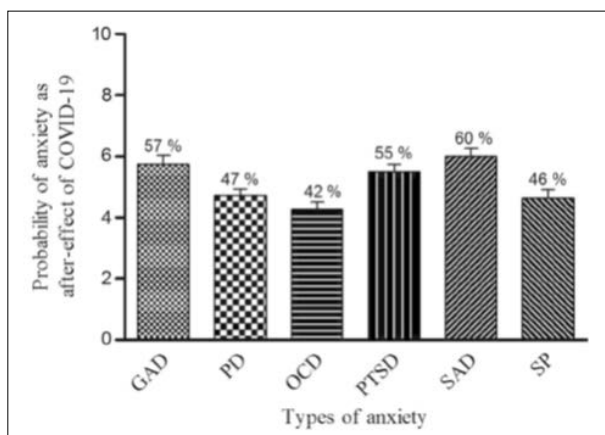


Figure 1

Plan and Methods of Sampling

The questions with the response score 1–10 (each point of score equivalent to 10%) were given in the questionnaire. First three questions in the questionnaire based on “yes” or “no” responses—are you aware about the pandemic situation of COVID-19, are you aware with the post COVID back pain and are you having anxiety. Fourth and Fifth questions were based on score (1–10) to find out the possibility of type of anxiety and age group affected as repercussion of COVID-19. The sixth question was descriptive answer type question kept for any other information related to the study. Post questionnaire- they were subject to visual clinical analysis which proved negave or positive. Substantial evidence was established for the role of distress/depressive mood and, to a lesser extent, somatization of back pain.

Data Compiling and Statistical Analysis

The results were compiled on four major questions-possibility to have anxiety as after effect of back pain post COVID-19, possibility of type of anxiety as after-effect of back pain post COVID-19, possibility of anxiety after-effect of COVID-19 on gender and possibility of anxiety as after effect of COVID-19 in various age groups. Data have been expressed as mean ± standard error of mean. The statistical analysis was done under column analysis (column statistics) using Graph Pad Prism 5 software.

Results and Discussion

The study was conducted to find out the manifestation of back pain following anxiety as repercussion of COVID-19. Out of 167 respondents approached for participation, 81 responded the

questionnaires. Results of the study are shown in Tables 2, 3, and 4 and Figsure 2, 3, 4, and 5. The study was designed in the form of questionnaire to find out the manifestation of anxiety as repercussion of COVID-19. Medical practitioners were taken as the respondents in the study. All participants

Table 2: HADS subclass

HADS subclass	Anxiety subscale	Depression subscale
Normal 0-7	45% (63)	51.4% (72)
Borderline abnormal 8-10	38.5% (54)	36.4% (51)
Abnormal 11-21	16.4% (23)	12.1% (17)

Table 3: Study Title: Possibility of Human Anxiety as a cause of Back Pain in post COVID scenario

Name of respondent:
 Qualification:
 Profession:
 Email:
 1. Are you aware about the pandemic situation of COVID-19: (Yes/No)
 Your response:
 2. Are you aware with the anxiety disorders: (Yes/No)
 Your response:
 3. Do you think anxiety would be one of the major after effects of COVID-19: (Yes/No)
 Your response:
 4. What type of anxiety might be occurred as a major after-effects of COVID-19 (Score your opinion between 0 to 10):
 0 score means – not affected, 10 score means – 100% or Maximum chances to have affected; In between 0-10 (decides the % of chances to affect with anxiety after COVID-19 as after effect)

S. No.	Type of Anxiety	Score (0-10) Your response
1	Generalized anxiety disorders (GAD)	
2	Panic disorder (PD)	
3	Obsessive–compulsive disorder (OCD)	
4	Post-traumatic stress disorder (PTSD)	
5	Social phobia or Social anxiety disorder (SAD)	
6	Specific phobia (SP)	

5. Which of following populations might be affected with the anxiety disorders after COVID-19 as after effects (Score your opinion between 0 to 10):
 0 score means – not affected, 10 score means – 100% or Maximum chances to have affected; In between 0-10 (decides the % of chances to affect with anxiety after COVID-19 as after effect)

S. No.	Population age group	Chances to have anxiety as after-effects of COVID-19 Score (0-10) Your response
1	Children upto 5 years age group	
2	Children between 6-10 years age group	
3	Children between 11-18 years age group	
4	Person between 19-30 age group	
5	Person between 31-50 age group	
6	Person with 51-70 age group	
7	Person above 70 age group	
8	Females	
9	Males	
10	Transgender	

6. Any other information related to the study:
 Signature of respondent:

Table 4: Probability of having different kinds of anxiety related back pain as after-effects of COVID-19

Determinants	Type of anxiety					
	GAD	PD	OCD	PTSD	SAD	SP
No. of values	80	78	80	80	81	79
Mean	5.738	4.718	4.250	5.488	6.012	4.633
25% Percentile	3.000	3.000	2.250	4.000	4.000	2.000
Median	6.000	5.000	4.000	5.000	6.000	5.000
75% Percentile	8.000	6.000	5.750	7.000	8.000	6.000
Lower 95% CI of mean	5.145	4.290	3.746	4.987	5.521	4.070
Upper 95% CI of mean	6.330	5.146	4.754	5.988	6.504	5.196

Table 5: Probability of having anxiety related back pain as after-effects of COVID-19 in various genders

Determinants	Gender		
	Female	Male	Transgender
No. of values	81	81	72
Mean	6.556	6.543	5.153
25% Percentile	5.000	5.000	4.000
Median	7.000	7.000	5.000
75% Percentile	8.000	7.000	7.000
Lower 95% CI of mean	6.133	6.188	4.674
Upper 95% CI of mean	6.978	6.898	5.632

Table 6: Probability of having anxiety related back pain as after-effects of COVID-19 in various age group

Determinants	Age groups						
	Up to 5 year	6–10 years	11–18 years	19–30 years	31–50 years	51–70 years	Above 70 year
No. of values	76	76	79	81	81	81	80
Mean	1.737	2.684	4.405	5.716	6.506	7.321	7.050
25% Percentile	0.0	0.0	3.000	5.000	5.000	7.000	6.000
Median	0.5000	2.500	4.000	6.000	6.000	8.000	8.000
75% Percentile	3.000	4.000	5.000	7.000	7.000	8.000	9.000
Lower 95% CI of mean	1.160	2.061	3.991	5.337	6.125	6.966	6.559
Upper 95% CI of mean	2.314	3.308	4.820	6.095	6.888	7.676	7.541

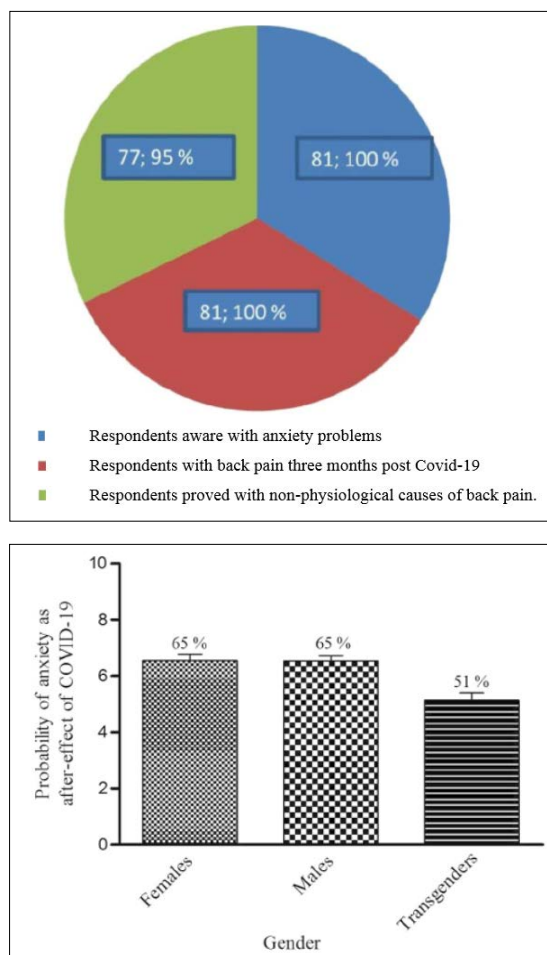


Figure 3: Probability of having different kinds of anxiety as after-effects of COVID-19

Conclusions and Recommendations

The present study concludes that anxiety might occur as one of the after-effects of COVID-19. Back pain as a result of anxiety is an aftermath. There are more possibilities to have social anxiety and post-traumatic stress anxiety disorder as after-effects of COVID-19. Female and male genders have equal chances, whereas transgender has lesser chances to have anxiety disorders as a consequence of COVID-19. Moreover, there are more chances of having anxiety to the population of above 50 years of age group. Based on the findings of the present study, authors recommend to various health agencies and regulatory bodies to have a strategic plan to handle the patients having anxiety disorder as a consequence of COVID-19 to control post anxiety back pain.

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Conflict of Interest: None

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