

Psychological aftermaths of Covid-19: a study of diagnosed and never diagnosed adults

Riffat Sadiq

Abstract

A cross-sectional comparative study was conducted from March 2021 to May 2022 in Faisalabad district, Pakistan, to rule out the prevalence and comparison of psychological aftermaths of Covid-19 pandemic for adults with and without a diagnosis for the disease. For data collection, a sample of 218 individuals was recruited through purposive sampling technique. Participants, with and without the diagnosis of Covid-19, experienced significant depression, anxiety, stress, and somatic symptoms amid the pandemic. Further analysis revealed that adults diagnosed with Covid-19 significantly reported more depression ($t= 2.76$, $df = 216$, $p = .006$, Cohen's $d=0.37$), more stress ($t= 3.08$, $df = 216$, $p = .002$, Cohen's $d= 0.41$), and more somatic symptoms ($t= 10.83$, $df = 216$, $p = .000$, Cohen's $d= 1.46$) as compared to adults who were not diagnosed with the disease. Contrary to that, a non-significant difference emerged between both the groups of participants with respect to anxiety ($t =0.27$, $df = 216$, $p = .783$, Cohen's $d = 0.03$).

Adults who directly became the physical victim of Covid-19 encountered more psychological aftermaths as compared to those who are still physically safe from the disease.

Keywords: Covid-19, Depression, Anxiety, Stress, Somatic complaints..

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Introduction

Coronavirus disease (Covid-19) has adversely and rapidly affected the entire world and people from all spheres of life. Covid-19, genetically associated with severe acute respiratory syndrome (SARS), affected almost all countries, in a very short time, irrespective of age, gender, and race. People diagnosed with Covid-19 usually report respiratory complaints of mild to moderate level. People

 Department of Applied Psychology, Government College Women University, Faisalabad, Pakistan.

Correspondence: Riffat Sadiq. Email: drriffat.haider@gcwuf.edu.pk

ORCID ID. 0000-0001-7321-792X

already diagnosed with other chronic problems like cardiovascular diseases, diabetes mellitus, cancer, and chronic respiratory problems are more prone to have Covid-19.

Physical, psychological, economic, and social deterioration are the dark facets of Covid-19. A survey report from India highlighted significant psychological consequences of Covid-19 for one third participants of the study, while age, gender, and comorbid physical illness accounted for the higher psychological impact of Coronavirus.¹ Covid-19 escalated the stress and worries among general population.² More depression and stigma was noted among isolated and quarantined participants.³

Amid severe coronavirus pandemic, people were confined to their homes at the expense of their economic, academic, and social needs. People who were physically affected with the disease remained isolated from the rest of the world for a definite time period. During self-isolation, patients were on prescribed medications to overcome their physical symptoms. While struggling with Covid-19 in isolation, patients are vulnerable to develop psychological problems as well, which may prolong even after they recover from the disease. Previous researches yielded an association of extended bedridden time with mental health comorbidity among the participants recovering from Covid-19. In the same study, participants with Covid-19 diagnosis reported the higher ratio of depression, poor sleep quality than participants without the diagnosis.⁴

Covid-19 patients are usually attended by medical specialists whose prime effort is to prevent further proliferation of the disease. But psychological health consequences of the disease are also worth considering. Patients with Covid-19 may live with various psychological problems even when they have physically recovered from it. The present study has been designed with the purpose of investigating the psychological aftermaths of Covid-19 for recovered patients as well as those who are still safe from the disease. In the line of the present objective, it has been postulated that adults diagnosed with Covid-19 would significantly report more depression, anxiety, stress, and somatic complaints as compared to adults who were never diagnosed with it.

Method and Results

The present funded project was first approved by the Academic Management Committee, COLEC (Campus Online Lecturers Evaluation Committee) and then approved by the Ethical Review Committee of Govt. College Women University, Faisalabad. Consent from the participants was taken at the time of data collection using Informed Consent Form. Data was collected from the residents of Faisalabad district from March 2021 to May 2022. Among them, half had been diagnosed with Covid-19, while the other half were not. Before data collection, sample size was computed with G-Power Software⁵. Total minimum required sample was 176 and minimum 88 for each group with medium effect size (0.5) at 0.05 alpha level. Due to the availability of adults with and without Covid-19 diagnosis, maximum 218 adults were recruited, i.e. 109 for each group using purposive sampling technique.

Their ages ranged from 21 to 50 years with mean age of 35.85 ±8.78 years. Maximum duration of the Covid-19 diagnosis was one month. The diagnosis was confirmed after reviewing their medical examination report. However, meetings for the purpose of data collection were held on completion of the quarantine period of 14 days. Only one person (adult) from one family was selected in order to have a control also. On the other hand, it was required that the never diagnosed adults were free from other chronic diseases such as diabetes, asthma, cardiovascular problems, physical disability, and drug abuse.

Demographic form required the information pertaining to demographics and Covid-19 disease. Another measurement used in the project was Depression, Anxiety and Stress Scale (DASS-21). It comprised 3 subscales. Cronbach's alpha of Depression subscale is (0.84), of Anxiety is (0.86), of Stress is (0.83), and of full scale is (α = 0.93).⁶

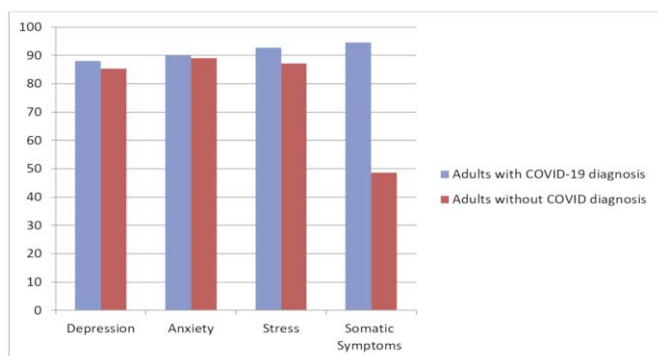


Figure: Prevalence of psychological problems among participants.

Somatic Symptoms Scale (SSS-8) comprised 8 items which were scored on 5 point Likert scale [Not at all = 0, A little bit = 1, Somewhat = 2, Quite a bit =3, Very much = 4]. It is also a reliable and valid measure (α=0.81).⁷

Written consent from all the participants using informed consent form was taken for their active and voluntary participation in this research project. First, they were interviewed for collection of information related to their demographics and disease history. Then, other measures including DASS-21 and Somatic Symptoms Scale were administered on them to examine the psychological aftermaths of Covid-19.

The obtained data was analysed using the SPSS Version-25.0. Descriptive statistics were computed for compiling the demographic information, prevalence, and level of psychological aftermaths/problems (i.e. depression, anxiety, stress, and somatic complaints). Independent samples t-test was computed to find out the difference among both the groups pertaining to psychological aftermaths as the consequence of Covid-19.

Descriptive statistics (Table-1) were computed to determine the prevalence of psychological aftermaths/problems. It was observed that the majority, 37 (38.54 %) of adults diagnosed with Covid-19

Table-1: Prevalence of Psychological Aftermaths/Problems.

Prevalence of Psychological Aftermaths/ Problems	Adults with Covid-19 diagnosis	Adults without Covid-19 diagnosis
Depression	f / %	f / %
Normal	13(11.92%)	16 (14.67%)
Mild	11 (11.45%)	20 (21.5%)
Moderate	28 (29.16%)	43 (46.23%)
Severe	37 (38.54 %)	12 (12.9%)
Extremely severe	20 (20.83%)	18 (19.35%)
Anxiety		
Normal	11 (10.09%)	2(1.83%)
Mild	05 (5.1%)	6 (5.6%)
Moderate	16 (16.32%)	22 (20.56%)
Severe	17(17.34%)	31 (28.97%)
Extremely severe	61 (61.22%)	48 (44.85%)
Stress		
Normal	8(7.33%)	14 (12.84%)
Mild	18 (17.82%)	33 (34.02%)
Moderate	47 (46.53%)	39 (40.2%)
Severe	30 (29.7%)	21 (21.64%)
Extremely severe	6(5.94%)	2 (2.06%)
Somatic Symptoms		
No or minimal	5 (4.58%)	34(31.19%)
Low	11(10.09%)	22 (20.18%)
Medium	14(12.84%)	26 (23.85%)
High	23 (21.1%)	7(6.42%)
Very high	56 (51.37%)	20 (18.34%)

Table-2: Summary of Independent Samples t-test.

Psychological Aftermaths	Adults with Covid-19		Adults without Covid-19		df	t	P	Cohen's d
	M	SD	M	SD				
Depression	20.67	8.84	17.32	9.06	216	2.76	.006	0.37
Anxiety	20.03	9.03	19.72	7.58		0.27	.783	0.03
Stress	23.52	7.67	20.33	7.60		3.08	.002	0.41
Somatic Symptoms	17.02	6.44	8.35	5.32		10.83	.000	1.46

experienced severe depression, 61(61.22%) experienced extremely severe anxiety, 47(46.53%) moderate stress, and 56 (51.37%) experienced very high level of somatic symptoms. On the other hand, among adults who did not have Covid-19, about 43 (46.23%) experienced moderate level of depression, 48 (44.85%) reported extremely severe anxiety, 39 (40.2%) reported moderate stress whereas 34 (31.19%) experienced minimal somatic symptoms.

Summary of independent sample t-test (Table-2) indicated that the adults diagnosed with Covid-19 reported significantly more depression ($t= 2.76$, $df = 216$, $p = .006$, Cohen's $d=0.37$), more stress ($t= 3.08$, $df = 216$, $p = .002$, Cohen's $d= 0.41$) and more somatic symptoms ($t= 10.83$, $df = 216$, $p = .000$, Cohen's $d= 1.46$) as compared to adults who were not diagnosed with Covid-19. Contrary to that, a non-significant difference emerged between both the groups of participants in respect to anxiety ($t=0.27$, $df = 216$, $p = .783$, Cohen's $d = 0.03$).

Discussion

Sudden onset and rapid upsurge of coronavirus cases was just like an earthquake that disrupted everything and altered the world scenario. Increasing deaths globally amplified fear and hopelessness among the masses. In connection with the present research goals, findings of the current study demonstrated that both the groups encountered significant psychological aftermaths, i.e. depression, anxiety, stress, and somatic complaints, due to Covid-19.

During the Covid-19 pandemic, people, whether they were diagnosed with disease or not, remained disturbed owing to being locked in their homes. There was no social life and recreational activities which could mentally relax them and such prison-like environment induced fear, helplessness, and desperate feelings. People were fed up of being confined to their homes. Continuous news of deaths was the additional threat posed by Covid-19. A research from Pakistan also documented higher psychological distress and anxiety but low well-being among participants due to lockdown.⁸ Another research indicated greater prevalence of distress among Indians during the pandemic.⁹

The disease developed fear of being its victim, causing stress, helplessness, and stigma pertaining to the disease.¹⁰

Adults who were diagnosed with Covid-19 experienced severe depression, moderate stress, and extremely severe anxiety along with high level of somatic symptoms. Conversely, adults who were not physically affected by the disease experienced moderate depression, moderate stress, and minimal somatic symptoms but suffered from extremely severe anxiety under the threat of Covid-19 (Table: 1). Participants of both the groups were seen as psychological victims of the disease, though the level of problems varied among them. A previous study also noted significant depression, anxiety, and stress among people due to Covid-19 pandemic.¹¹

It was further noted, at the time of comparative analysis (Table-2), that adults diagnosed with Covid-19 suffered more from psychological aftermaths, i.e. depression, stress, and somatic symptoms, as compared to adults who were never diagnosed with it. It means that people who directly experienced the disease were more vulnerable to psychological turmoil because of the life-threatening nature of the disease. They had seen others dying of Covid-19 that might have developed the fear and anxiety in them. Usually during illness, people easily get frustrated and lose hope especially when so many had already lost their lives due to the chronic illness. Physically and mentally unhealthy people have less control over their emotions and such irregularity and inappropriateness of emotional expression may aggravate psychological chaos. Emotion regulation played a vital role in predicting psychological problems during Covid-19 crisis.¹² In a previous study, researchers also observed apprehension, horrified feelings, hopelessness, and financial and work stress during the pandemic.¹³ However, adults whether they were diagnosed with Covid-19 or not, also suffered from significant anxiety. In fact, the pandemic resulted in global economic, social, and personal crisis. Adults without COVID-19 diagnosis also had seen their loved ones (siblings/close relatives, etc.) suffer. Possibly, all these factors, like threat of death and multiple crises might have induced anxiousness and feeling of apprehension like those who became the physical victims of the disease.

On completion of the study, some limitations were noted. For instance, comparative analysis of psychological

problems amid Covid-19 was done among adults who were diagnosed and those who were not diagnosed with Covid-19 without considering the role of other factors, including demographics, severity, and duration of the disease. Cognitions, personality characteristics, and other mediating factors were not targeted in connection with Covid-19. Further research is needed to explore the intervening factors of developing psychological problems amid the pandemic between diagnosed and never diagnosed participants. Comparison can also be done among those who have additional physical health problems or chronic illness like diabetes, asthma, kidney problem, etc.

Conclusion

Overall findings of the present study draw attention towards the aftermaths of Covid-19 for all whether they were diagnosed with the disease, at least once in life, or not at all. However, diagnosed participants developed more psychological problems than those who were never diagnosed with Covid-19. Paralyzing one's life is a highly dangerous aspect of Covid-19 affecting personal, family, social, and economic domains to the extent that one eventually succumbed before difficulties of various natures. Pragmatic use of designed strategies and preventive measures indeed will be beneficial in managing daily life issues which may reduce the risk of developing stress, anxiousness, and sadness, if any other chronic disease or Covid-19 emerges again in future.

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