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# Anxiety, OCD, delusions, and religiosity among the general public during the COVID-19 pandemic

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## Abstract

The COVID-19 outbreak has not only affected the physical health of the public but also resulted in severe psychological outcomes. This study aims to investigate the psychological effects of the COVID-19 outbreak on Pakistan's general public. In order to identify the main psychological factors that have emerged due to the current pandemic, extensive literature and opinion pieces of psychologists were reviewed. After a thorough study of the existing scholarship, four main psychological factors were investigated: stress and anxiety, obsessive compulsive disorder (OCD), delusions of getting infected from the disease, and religiosity. A research survey was circulated among the sample population online. A total 356 valid responses were received in the period of two to three weeks. Findings showed that the respondents reported a moderate level of anxiety, occasional symptoms of OCD, and delusions. However, respondents showed a high inclination toward religion during the current pandemic situation. Furthermore, respondents highlighted a few other psychological factors, such as financial strain and loneliness, in the survey. The primary sources of COVID-19-related information were social media and television among the general public of Pakistan. Finally, guidelines and tips from the reviewed psychologists and psychiatrists on overcoming the highlighted psychological problems that have arisen due to the COVID-19 outbreak were summarised.

## 1 | INTRODUCTION

Throughout the history of humankind, nothing has claimed more lives than infectious diseases. Pandemics have changed the course of human history and affected human lives forever (Bose, 2020). Some pandemics killed nearly half of the global population of that time (Johnson, 2006). Psychological effects of pandemics are also enormous and long-lasting, such as continuous fear of being infected, isolation, anxiety, depression, and economic pressures for all segments of society

(Shuja *et al.* 2020). This research attempts to evaluate the psychological and behavioral responses to COVID-19, one of the deadliest outbreaks of the century. In January 2020 the world started paying attention to the fast-spreading viral infection, which originated in Wuhan, China's seafood market, in December 2019 (Lu, Stratton and Tang, 2020). COVID-19, formally known as "2019 Novel Coronavirus (2019-nCoV) Pneumonia" results in fatal respiratory complications, and until today it has claimed 179,069 lives around the globe with 276,516 positive cases (World Meter, 2020). To curtail the virus's spread, the administration took multiple measures such as lockdown, social distancing, and self-isolation (Su *et al.* 2020). Since the World Health Organization (WHO, 25 March 2020) declared COVID-19 as a pandemic and a global health emergency on 30 January 2020 psychologists and psychiatrists warned the world about the vast psychological effects of the outbreak (Woodyatt, 15 April 2020). After reviewing the literature and reading the opinion pieces of psychologists about the psychological reactions to the COVID-19 outbreak, we identified four factors: stress and anxiety, obsessive-compulsive disorder (OCD), delusions, and religiosity. Stress, anxiety, and depression have been the most widely reported psychological outcomes of the pandemics (Kyung and Niederdeppe, 2013; Wheaton, Abramowitz, Berman, Fabricant and Olatunji, 2012). Feelings of despair, anxiety, and depression is the most prominent and natural response of COVID-19 patients, as well as patients' relatives and friends, and health care professionals (Xiang *et al.* 2020). However, few of the studies have also reported moderate to severe levels of stress on the general public as well (Wang *et al.* 2020).

Furthermore, few researchers in psychiatry have highlighted another vital factor that could also emerge due to the COVID-19 outbreak – obsessive-compulsive disorder (OCD) (Kumar and Somani, 2020). Symptoms defining OCD are diverse and include various intrusive thoughts, preoccupations, rituals, and compulsions (Leckman *et al.* 1997). One of the most commonly reported rituals is excessive handwashing and continuous fear of contamination (Akhtar *et al.* 1975). Daily newspapers, social media, and print media being bombarded with health advise, such as washing hands for 30 seconds, using sanitisers, and avoiding handshakes, can lead a person to behave hysterically towards personal hygiene conditions, which may result in OCD. Hao *et al.* (2020) highlighted that large-scale lockdown has resulted in psychological distress and numerous psychological disorders among the general public, especially psychiatric patients. Excessive media campaigns and continuous discussions about the severity of the outbreak may also lead a person to be delusional about being infected with the disease (Sallam *et al.* 2020). Martin (2020) presented different cases where subjects were convinced they had contracted the coronavirus despite receiving negative test results. Martin (2020) named such delusions as "corona psychosis". Similarly, Ferando *et al.* (2020) also reported the three cases of non-infected individuals facing the delusions of getting the virus, attributing their delusions to the prevailing fear of the COVID-19 pandemic. One possible reason for burgeoning delusional effects and misleading perception in people's minds is a constant negative and distressing environment in which people live during global lockdown (Rodríguez-Rey *et al.* 2020; Rossi *et al.* 2020).

Another factor that is imperative in the context of Pakistan is religiosity. Pakistan is a non-secular country with 95 to 98 per cent practicing Muslims who are rigid and inflexible in their belief system (Blom, 2017). Religious people turn towards God for psychological comfort and try to find solutions to their problems in religion during times of crisis and chaos (Tix and Frazier, 1998; Koenig and Larson, 2001; Chaudhry, 2008). So, as soon as COVID-19 invaded Pakistan, different Wazaif and spiritual remedies circulated on social and mainstream media. Calls for collective prayers were made throughout the country for seeking God's forgiveness and mercy (Pakistan Today, 2020). In this research, we have also tested the effects of the COVID-19 outbreak on people's religiosity. Furthermore, we also investigated the primary sources of information about the COVID-19 situation and which sources are causing more psychological distress for Pakistan's public. Finally, we have summed up the recommendations, suggestions, and guidelines from well-reputed psychologists and psychiatrists on coping with psychological issues arising from the COVID-19 pandemic situation.

## 2 | LITERATURE REVIEW

### 2.1 | History of Coronavirus (COVID-19)

In the current century, humankind has seen numerous epidemics, such as Ebola, SARS, Zika, Influenza H1N1, and now COVID-19. The coronavirus (COVID-19) began as a viral outbreak on 31 December 2019, in Wuhan city, situated in China's densely populated central Hubei province (Holshue *et al.* 2020). Some 40 patients reported symptoms of fever, shortness of breath, and dry cough. Some of them were visitors, while others were vendors in Wuhan's Huanan seafood wholesale market. The WHO and Chinese authorities started working on these unknown etiology cases and confirmed a new virus named Novel Corona Virus (2019-nCoV). This new virus was separated from biologic samples and classified as genus *betacoronavirus*, connecting it with previously known Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS) (Zhu *et al.* 2020). The first type of coronavirus, known as Severe Acute Respiratory Syndrome (SARS), started in November 2002 in Southern China. At the end of the SARS epidemic, China announced about 8,000 infected cases and 774 deaths. (Anderson *et al.* 2004). The second coronavirus was MERS reported in Saudi Arabia in 2012, emerging as a major public health crisis globally. Since 2012, there were 2,220 confirmed cases and 790 deaths by this Acute Respiratory Syndrome (Al-Omari *et al.* 2019). Subsequently, over less than two months, this recent contagious novel Coronavirus has spread in more than 180 countries. As no proper cure has yet been invented, global health experts are experimenting with the combination of mitigation and confinement strategies, such as self-isolation and lockdown (Abbas, 2020). The information related to novel coronavirus is unfolding day by day, and data about symptoms, transmission, reservoirs, incubation period, and survival rate are being collected around the globe regularly (Corman *et al.* 2020). Many people have lost their lives due to the COVID-19 pandemic, and people are under immense psychological pressure. Following are a few possible psychological outcomes discussed in past literature.

### 2.2 | Stress and anxiety

Hans Selye, "father of stress research", was the first person who used the term stress in biomedical and physiological research in 1936 (Koolhaas *et al.* 2011). He referred to stress as an indifferent response of the body to any demand for change made upon the person (Selye, 1976). In psychology, stress refers to the mind-body connection, in which the self-realised situational demands are higher than the available resources to fulfill those demands (Lazarus, 1999). Selye (1956) claimed that as one's stress response amplifies, it can cause tissue damage and other diseases, such as increased heart rate and high blood pressure. Furthermore, studies have concluded that long-term stress can result in depression and anxiety (Bergdahl and Bergdahl, 2002; Basu *et al.* 2016). Anxiety is a state of excess worrying, which is hard to control and associated with at least three symptoms: excessive fears, irritability, muscular tension, uneasiness, and respiratory distress (Koo *et al.* 2017). Scholars have discussed different anxiety types in literature, like social anxiety, generalised anxiety, and health anxiety. Anxiety cause stimulation in the nervous system, resulting in a subjective feeling of fear, tension, worry, and nervousness (Aritzeta *et al.* 2017). These conditions substantially affect one's mood, attitude, and behavior and may cause physical problems like stomach aches, headaches, muscle tension, and tiredness (Shiel, 2018). Anxiety may also result in agitation and the severity of agitated behaviors (Gerdner, 2012). If anxiety prolongs and intrudes on an individual's quality of life and productivity at work, then it becomes a disease that needs to be treated medically (Gundersen, 2012).

Stress and anxiety are frequently reported psychological issues during epidemics and pandemics. Hawryluck *et al.* (2004) conducted a study on 129 quarantined people during the SARS outbreak in Toronto, Canada. They confirmed that 31.2 per cent of people were having depression symptoms,

whereas 28.9 per cent of people were facing post-traumatic stress disorder (PTSD) symptoms. In Korea, Jeong *et al.* (2016) researched 1,656 quarantined individuals who had been in contact with MERS patients for two weeks and reported 7.6 per cent showed severe anxiety symptoms. Given the above discussion, the recent COVID-19 pandemic has forced many countries to take unprecedented measures, like social distancing, to curb the spread of this contagious virus. According to Brooks *et al.* (2020), although self-isolation is crucial to limiting the spread of the virus, it may lead to severe psychological affects, as loneliness and higher stress (Hawkley *et al.* 2003). Lebni *et al.* (2020) also emphasised in their study that global lockdown for a long time may lead to numerous psychological issues, such as depression, anxiety, hypertension, stress, lethargy, and exacerbation. Additionally, a recent cross-sectional study by Wang *et al.* (2020) shows that most of the researched participants reported a severe psychological effect from the COVID-19 outbreak.

### 2.3 | Obsessive-compulsive disorder (OCD)

Obsessive-compulsive disorder (OCD) is a psychiatric disorder characterised mainly by invasive, obstinate, and upsetting obsessions or compulsions (Eisen *et al.* 2006). In the start, patients may complain of having repeated intrusive thoughts and irresistible behaviors. When inclinations of these obsessions and compulsions become undue, and their quality of life is diminished, it becomes OCD. OCD is the sixth most impeding psychiatric disorder, which is unexpectedly quite common in the general population (2.5 to 3 per cent), with lifetime primacy of 1.9 to 3.3 per cent that comprises a critical health–economic burden on society (Akhtar *et al.* 1975). According to Hasanpour *et al.* (2017), researchers believe that OCD is a heterogeneous condition, as patients with OCD often display their symptoms in several different ways. Moreover, both obsessions and compulsions are varieties of cognitive inflexibility presented by patients with OCD (Lapidus *et al.* 2014). The most common problems faced by patients of OCD are fear of dirt and being contaminated, excessive handwashing and cleaning (Khanna *et al.* 1990).

As COVID-19 is a contagious virus, most of the WHO's advisories are related to handwashing, sanitiser use, and regular use of disinfectants. Every media channel and celebrity is urging people to follow precautionary measures. These recommendations, although useful in curtailing the virus, also develop a persistent fear of contaminations that is similar to that mostly experienced in individuals diagnosed with OCD, as concluded by various previous studies during the spread of communicable virus H1N1 influenza (Abramowitz *et al.* 2010; Wheaton *et al.* 2012). Shuja *et al.* (2020) also emphasised in their study that mental health experts should be vigilant about the surge of psychological disorders, such as OCD, during the COVID-19 outbreak and deal with them with utmost care.

### 2.4 | Delusion

There is extensive scholarship on delusion in psychiatric research concerning its etiology, causes, classification, diagnosis, treatment, and management. Delusions are usually an indicator of either a neurological or mental disorder. According to Mojtabai (2000), since the sixteenth century, delusions have been contemplated as beliefs, judgments, and pathologically incorrect and impossible ideas. Sedler (1995) asserted that delusions are false beliefs and imply an abnormality in a person's thought content. Furthermore, Westermann *et al.* (2018) elaborated that delusions are an adaptive attempt to protect and comfort psychological needs, like a need for self-esteem. Some studies have claimed that the intensity of delusions changes over time. Garety and Hemsley (2013) posited that the degree of conviction, belief, and obsessions could change in a week significantly. There are associated conditions with delusions like bipolar disorder, schizophrenia, delusional disorder, and specific personality disorders (American Psychological Association, 2015).

During the COVID-19 pandemic, people may complain about the delusional thoughts of getting infected because of the excessive information (sometimes fake news) widely spread all over the

internet (Moukaddam and Shah 2020). As a previous study by Lee *et al.* (2004) confirmed, some patients reported acute psychotic symptoms during the SARS pandemic, including delusional thoughts. The concerning feature about delusional thoughts is they may involve other family members, therefore requiring serious clinician attention (Moukaddam and Shah, 2020)

## 2.5 | Religiosity

History shows that religion has always remained a topic of interest due to its deep-rooted relationship with humankind. World civilization and human history is intertwined with religious beliefs that are considered an important pillar of societal customs and traditions. Religiosity has always impacted the numerous aspects of human life, especially psychosocial factors. The researchers have used several terms in literature for the concept of religiosities, such as religious orientation, religious involvement, religious commitment, and religiousness. (Khenfer and Roux, 2012). According to Holdcroft (2006), religiosity is a gauge to measure the faith, knowledge, fundamentalism, spirituality, views, and devoutness of persons and how much intensity they practice religion in their daily lives. Researchers have defined it as the intensity of attachment of a person to a specific religious group (Patel, 2012). Researchers have found significant effects of religion on attitudes and human behaviors (Du *et al.* 2016), as Weaver and Agle (2002) claim that religion can impact individuals' morals and ethical values and choices.

Pargament asserted that people using religion to deal with their predicaments are understandable as religious coping theory suggests that people often use religion to overcome vagueness and adversity. While according to Bentzen (2019), people worldwide practice their religion with more intensity to cope with the adversity prevailing due to the natural disaster. A recent study by Bentzen (2020) claimed that with the increase in the death rate due to COVID- 19, religious devotion would increase as it's human nature to rely more on religion during a crisis.

Since the novel coronavirus is declared a threat to the global population, thousands of scholarly studies have been conducted worldwide, especially from China, the United States, and European countries. Tran *et al.* (2020) mentioned in their study that low- to middle-income countries should also highlight the financial, physical, and mental implications of the COVID-19 outbreak on their population. Hence, this study is an attempt to investigate the psychological outcomes of the COVID-19 pandemic on the general public of Pakistan. Mounting research shows that numerous modes of information about the COVID-19 disease and death rate are also adversely affecting mental health and resulting in psychological complications among affected individuals (Su *et al.* 2021). In the subsequent sections, we have also listed the multiple sources of information related to the COVID-19 outbreak. The following sections discuss the research methodology and data analysis of the reported information.

## 3 | METHODOLOGY

### 3.1 | Objective

The aim of this research is to investigate the psychological effects of the COVID-19 pandemic on the general public of Pakistan. Stress, anxiety, OCD, delusion, and religiosity are investigated in this research.

### 3.2 | Data collection

We adopted the cross-sectional research design to assess the psychological responses of the COVID-19 outbreak on Pakistan's general public. Considering the strict advisories issued by the

government and health organisations to avoid face-to-face interaction, we designed an online survey for the data collection. We disseminated the survey through the Google Form application and circulated it among Pakistan's general public following the snowball sampling technique. Following this technique, the subjects of the study refer and recruit other participants with the target characteristics for the research (Johnson, 2014). Other researchers such as Wang *et al.* (2020) have also adopted the snowball sampling technique to collect data from the general public about the mental health consequences of the COVID-19 outbreak. Initially, we sent the questionnaire to the academic fraternity, and they were requested to pass it on among their contacts. Over two weeks, we received 356 valid responses. We recorded the participants' sociodemographic information, such as their gender, occupation, locality (urban, suburban, rural), education, and age, maintaining their confidentiality. We further asked respondents to report the sources of information they use to keep themselves updated about the COVID-19 outbreak. In the additional comment section, we asked the respondents if they wanted to highlight any other crucial psychological outcomes of COVID-19 that have affected their lives. We analyzed the data through two software programs: SPSS (Statistical Package for the Social Sciences) version 22 and SmartPLS version 3.3.1. We conducted factor analysis, descriptive analysis, and inferential analysis to make sense of raw data.

### 3.3 | Measurement

To design the questionnaire, we adopted authentic scales from the reliable studies. We measured the stress and anxiety variable through the seven-item Generalised Anxiety Disorder scale (GAD-7) proposed by Spitzer, Kroenke, Williams and Löwe (2006). It includes items such as "I feel nervous, anxious or on edge". Yale-Brown Obsessive-Compulsive Scale by Goodman *et al.* (1989) has been used to assess the OCD level of the research participants. An example of the OCD items is: How much control do you have over your obsessive thoughts? Delusional effects of getting infected by SARS-CoV-2 were measured using delusion dimension items of Psychotic Symptom Rating Scales (PSYRATS) (Haddock *et al.* 1999). It includes five items, such as "Amount of distress due to the delusion that you are infected with Coronavirus". The scale of religiosity was adapted from the study of Joseph and DiDuca (2007). It includes items such as "Now a days, I try to follow the principles and laws laid down by my Holy Book and my religion". The past researchers have already established the validity and reliability of the adapted scales.

## 4 | RESULTS

### 4.1 | Demographic analysis

We collected sociodemographic information of the respondents in order to know their personal attributes. The demographical analysis shows that 40 per cent of the respondents were females, while 60 per cent were males. The majority of the respondents fell in the age group of 21 to 40 years. Around 72 per cent of the respondents were from the urban region. As the snowball sampling technique was used, and the survey was circulated in the education sector first, most respondents are either students or educators. Table 1 includes the details of respondents' demographics.

### 4.2 | Factor analysis

We conducted the confirmatory factor analysis to evaluate the observed variables' validity and measure latent variables. We also calculated the goodness of fit indices and factor loadings to validate the scale. Only one item from the anxiety, delusion, and religiosity scales was deleted due to low factor loadings.

**TABLE 1** Demographical information

Demographical information		Frequency	Percentage
Gender	Female	143	40%
	Male	213	60%
Age	Less than 20 years	29	8%
	21–30 years old	164	46%
	31–40 years old	99	28%
	41–50 years old	49	14%
	51–60 years old	10	3%
	Above 60 years	5	1%
Qualification	Metric or below	3	1%
	Intermediate	9	3%
	Undergraduate	118	33%
	Masters	153	43%
	Above masters	73	20%
Locality	Urban	255	72%
	Rural	50	14%
	Sub-urban	51	14%
Occupation	Student	127	21%
	Educationist	74	12%
	Banker	17	3%
	Healthcare professionals	22	4%
	Accountant	9	2%
	Self employed	30	5%
	Civil servants	32	5%
	Others	23	4%
Unemployed	22	4%	

For the rest of the items, factor loading ranged from 0.724 to 0.874. The goodness of fit indices such as NFI, GFI, CFI, and RMSEA were also in the acceptable range after deleting the low regression weights.

### 4.3 | Reliability and validity analysis

To evaluate the data's validity and reliability, Cronbach Alpha, Composite Reliabilities, and Average Variance Extracted (AVE) were computed. Each test score fell under the acceptable range suggested by Hair *et al.* (2010). Table 2 highlights the reliability and validity statistics of the studied variables.

### 4.4 | Level of anxiety, OCD, delusion, and religiosity during COVID-19 outbreak

We computed mean values of anxiety, OCD, religiosity, and delusion to assess the population's average responses. Moderate levels of anxiety, OCD, delusional effects were found among Pakistan's general

**TABLE 2** Reliability and validity statistics

Variables	Cronbach's alpha	rho_A	Composite reliability	Average variance extracted (AVE)
Anxiety	0.857	0.878	0.892	0.58
Delusion	0.867	0.919	0.904	0.703
OCD	0.902	0.917	0.921	0.594
Religiosity	0.934	0.954	0.945	0.683

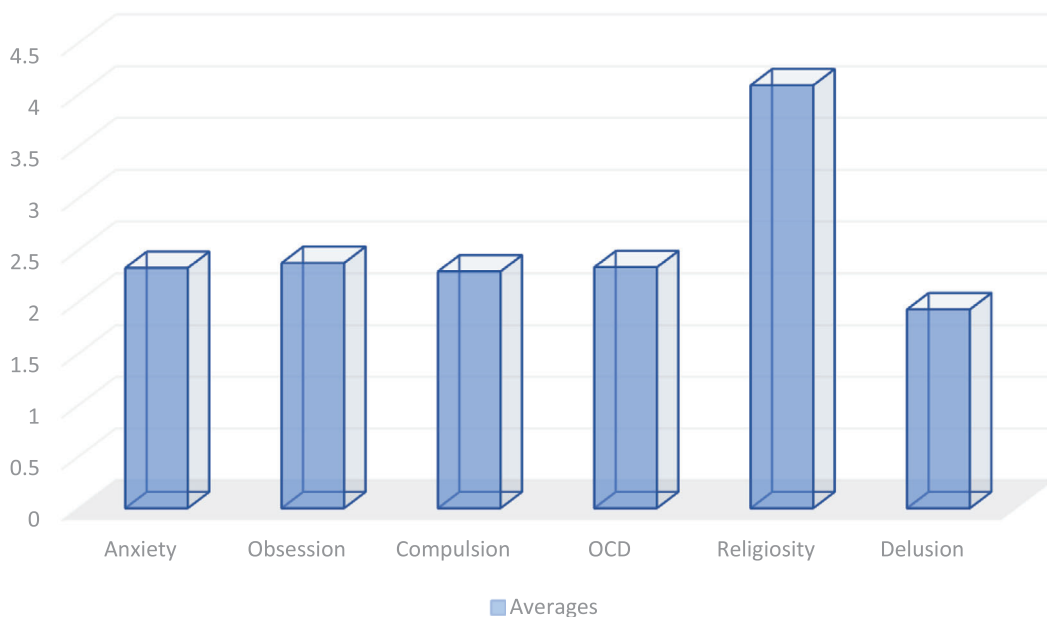
**TABLE 3** Descriptive statistics

Variables	Averages	Std. deviation
Anxiety	2.3278	.87972
Obsession	2.3757	.80568
Compulsion	2.2935	.76329
OCD	2.3346	.73799
Religiosity	4.0914	.83402
Delusion	1.9281	.89001

public due to the COVID-19 outbreak. However, the level of religiosity was significantly high among the population. Table 3 shows the descriptive information of the respondents. Averages of the studied variables are also projected in figure 1.

As in Table 3, we divided the OCD variable into two dimensions – obsession and compulsion. Furthermore, we asked the respondents to list the main OCD-related behaviors in the context of COVID-19. Table 4 shows the summary of their responses.

Furthermore, we also evaluated if the gender, occupational groups, locality, education, and age factors affected the respondents' anxiety, OCD, delusion, and religiosity levels. We tested the difference between means through an independent sample test and one-way ANOVA. However, insignificant F

**FIGURE 1** Averages of the variables [Colour figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]



**TABLE 4** Symptoms of OCD

Variables	N	%
The concern with dirt, germs, certain illnesses	244	69%
Concerns or disgust with bodily waste or secretions	86	24%
Excessive concern with environmental contaminants	137	38%
Excessive concern with household items (e.g., cleaners, solvents)	125	35%
Excessive concern about animals/insects	86	24%
Excessively bothered by sticky substances or residues	82	23%
Concerned will get ill because of contaminant	144	40%
Concerned will get others ill by spreading contaminant (aggressive)	145	41%
Excessive or ritualised handwashing	225	63%
Excessive or ritualised showering, bathing, toothbrushing, grooming, or toilet routine	114	32%
Excessive cleaning of items, such as personal clothes or important objects	146	41%
Other measures to prevent or remove contact with contaminants	190	53%

**TABLE 5** Mean comparison statistics

Variables	Gender		Occupation		Locality		Age		Education	
	t	Sig.	F	Sig.	F	Sig.	F	Sig.	F	Sig.
Anxiety	1.295	.196	1.054	.395	.913	.402	.923	.466	.904	.462
Obsession	1.113	.266	1.154	.326	1.138	.322	.946	.451	.880	.476
Compulsion	.909	.364	1.460	.171	1.282	.279	.702	.622	.355	.840
Religiosity	1.861	.064	3.094	.002	.623	.537	1.175	.321	1.485	.206
Delusion	-.957	.339	1.426	.184	.324	.724	1.006	.414	.535	.710
OCD	1.078	.282	1.337	.224	1.260	.285	.863	.506	.473	.756

values show no significant difference in the mean values of variables due to demographic characteristics. Table 5 shows the independent sample t-test for gender and one-way ANOVA results for other demographical variables.

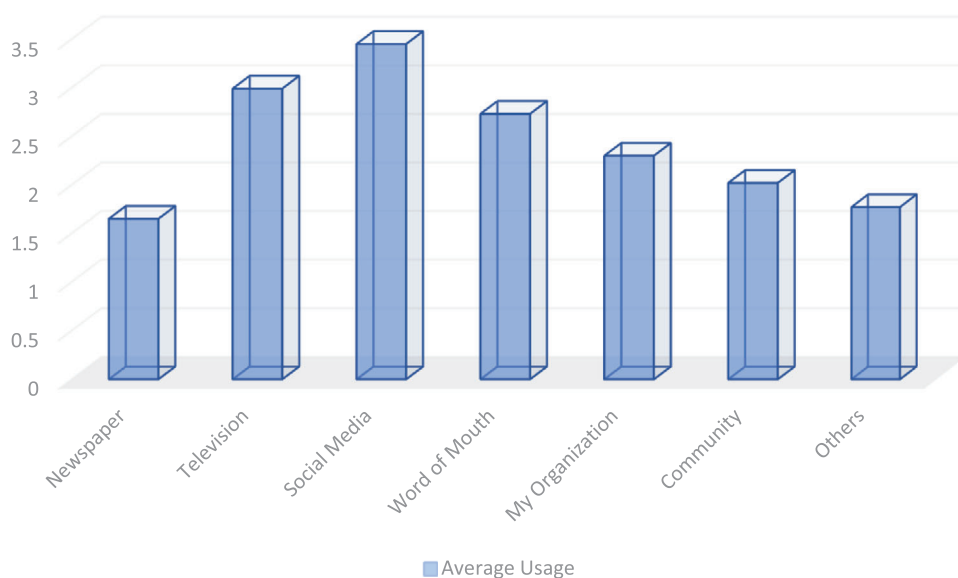
## 4.5 | Effects of sources of information on anxiety, OCD, delusion, and religiosity

To evaluate COVID-19 related information's primary sources, we asked the respondents how they are keeping themselves updated related to COVID-19 information. We measured their response about each source against a five-point scale that shows how often they have consulted the respective source, i.e., never, rarely, sometimes, often, or very frequent. Table 6 shows a summary of the responses. We can see that social media and television were the most widely used channels of COVID-19 information. The newspaper was the least utilised source of information. Figure 2 shows the graphical representation of the sources of COVID-19 related information.

We have assessed the effects of different sources of COVID-19-related information on anxiety, OCD, delusion, and religiosity during the current pandemic situation. Path analysis was conducted on SmartPLS software to run multiple regression. Findings show that none of the sources of information caused significant effects on psychological factors. Table 7 sums up the findings of regression analysis.

**TABLE 6** Source of information

Sources of information	Mean	Std. deviation
Newspaper	1.65	1.077
Television	2.99	1.514
Social media	3.45	1.438
Word of mouth	2.73	1.357
My organization	2.30	1.363
Community	2.02	1.241
Others	1.77	1.166

**FIGURE 2** Average sources of information to assess COVID-19-related information [Colour figure can be viewed at [wileyonlinelibrary.com](http://wileyonlinelibrary.com)]

## 5 | DISCUSSION

History shows that pandemics have huge psychological impacts on patients, the family and friends of the patients, healthcare workers, and the general public. This study attempted to assess the psychological effects of the COVID-19 pandemic on Pakistan's general public. After an extensive literature review, we shortlisted four possible psychological factors to study in Pakistan: anxiety, OCD, delusion, and religiosity. Results show that respondents have shown signs of anxiousness every few days that indicate a moderate level of anxiety. OCD and delusions are psychotic disorders. Respondents have reported that they have felt the symptoms of OCD occasionally. However, most of the respondents have shown their severe concerns towards dirt, illness, and contamination. Respondents have highlighted that they follow the excessive ritual of handwashing and other measures to prevent themselves from contamination. Respondents have also shown minimal delusional effects of getting infected by the COVID-19. Delusions and hallucination are considered high-level symptoms of psychotic disorders caused during extreme circumstances; therefore, a low level of delusion is understandable in the context of this study.

**TABLE 7** Effect of sources of information on psychological variables

	<b>Anxiety</b>		<b>Delusion</b>		<b>OCD</b>		<b>Religiosity</b>	
	$\beta$	Sig.	$\beta$	Sig.	$\beta$	Sig.	B	Sig.
Newspaper	-0.006	0.935	-0.014	0.83	-0.012	0.87	-0.01	0.896
Television	0.066	0.342	0.01	0.882	0.032	0.647	0.158	0.007
Social media	-0.003	0.971	-0.034	0.641	-0.051	0.539	-0.032	0.669
Word of mouth	0.119	0.144	0.021	0.772	0.022	0.79	-0.045	0.6
My organization	-0.109	0.143	-0.058	0.417	-0.01	0.902	-0.014	0.862
Community	-0.079	0.421	-0.051	0.563	-0.032	0.725	0.102	0.339
Other sources	0.136	0.077	0.206	0.01	0.168	0.034	0.005	0.996

Similarly, Hao *et al.* (2020) reported that respondents with no prior psychiatric illness reported the moderate psychological impact of lockdown and the COVID-19 outbreak, such as suicide ideation, insomnia, and depression. Mak *et al.* (2009) asserted that psychological effects might not be documented immediately due to the unavailability of health services during the active stage of a pandemic; it might take numerous months, as reported in previous outbreaks such as influenza and Middle-East respiratory syndrome (Banerjee, 2020). However, there are many other reasons for the moderate level of anxiety, OCD, and delusions among the Pakistani population. First and foremost is the lack of awareness about the severity of the COVID-19 outbreak. The prevailing view among the general public of Pakistan is that “death is inevitable, and it can be caused by any reason, anywhere” (Shams, 2020). The argument was further strengthened by the advisories from the Government of Pakistan on the COVID-19 issue, asking people not to panic as Pakistan’s conditions are as severe as those of Italy, the United States, and Europe (Express Tribune, 2020). The government of Pakistan decided to take a relaxed stance on dealing with the COVID-19 outbreak, and it was decided to impose a graded or smart lockdown in the country to support the country’s poor people (Business Today, 2020). Due to the rampant poverty in the country, where people can hardly make their ends meet, COVID-19 is the least of their concerns (Shams, 2020). Our findings support these claims; as we asked the respondents about any other psychological effects due to the COVID-19 outbreak, many reported distress due to the economic situation emerging from COVID-19, people are afraid of losing their jobs rather than getting infected from the disease. Others reported their concern about the wave of poverty in their surroundings when they see people wandering on the road begging for food.

Furthermore, respondents showed their irritability and frustration due to not being able to leave home, isolation, and loneliness. However, one factor that emerged as a vital outcome of COVID-19 is religiosity. People have shown their strong inclination towards religion during the current situation. The present scenario further supports these findings in Pakistan. Despite the government’s arduous efforts, Ulema of Pakistan could not agree on shutting down the mosques and religious gatherings (Gannon, 2020). On the contrary, religious countries such as Saudi Arabia suspended the country’s congregational prayers, including the two holiest mosques in Mecca and Medina cities (Al Jazeera, 2020). This shows the public’s unawareness of the severity of the situation and, on the other end, reflects the stringent and over-brimming fervor of Pakistan’s general public towards religion.

## 5.1 | Psychological interventions during COVID-19 outbreak

We will conclude our article with a few recommendations and tips suggested by psychologists and psychiatrists worldwide to cope with psychological problems due to the COVID-19 outbreak. However, if any psychological issue becomes long-term and severely affects routine matters, it is recommended to

**TABLE 8** Recommendations to cope with psychological issues

Psychological factors	Recommendations
Stress and anxiety	<ul style="list-style-type: none"> <li>- Get information about COVID-19 from the trusted sources only (World Health Organization)</li> <li>- Limit unnecessary exposure to news coverage (Sullivan 2020)</li> <li>- Plan daily activities and include self-care activities (Saltzman <i>et al.</i> 2020).</li> <li>- Meditation and mindfulness: sit quietly and focus on breathing and senses (Behan, 2020)</li> <li>- Do regular exercise and stretches, sleep at the proper time, eat healthy and well-balanced meals, do not smoke, do not take alcohol or drugs (Center for Disease Control and Prevention, 2020; World Health Organization)</li> <li>- Virtually communicate with family and friends regularly, talk with trusted people, and ask for help if one ever feels overwhelmed (Nitschke <i>et al.</i> 2020)</li> <li>- Pen down feelings, maintain a journal (McGuire, 2020)</li> </ul>
OCD	<ul style="list-style-type: none"> <li>- Get help from a therapist related to a safety plan concerning washing, cleaning, social contact (Tanir <i>et al.</i> 2020)</li> <li>- Limit the frequency and duration of watching COVID-19 news (Fineberg <i>et al.</i> 2020)</li> <li>- Remember that we are more resilient than we think (Wilson <i>et al.</i> 2020)</li> <li>- Keep one's compulsions and obsessive thoughts in check</li> <li>- Talk to the therapist if one thinks he/she is overthinking or involving in excessive rituals (Michigan Psychiatry Resources, 2020)</li> </ul>
Delusion	<ul style="list-style-type: none"> <li>- Have a conversation with supportive family and friends about the felt symptoms, get tested for SARS-CoV-2, as a medical evaluation can reject the delusional thoughts (Leão <i>et al.</i> 2020)</li> <li>- Psychotherapy in case of severe symptoms, cognitive behavioural therapy (CBT), antipsychotic treatment (Harvard Medical School, 2019).</li> </ul>
Isolation and loneliness	<ul style="list-style-type: none"> <li>- Do physical activity (yoga, exercise, dance, or household chores); do creative activities such as painting, playing guitar, or trying out new recipes; stay virtually connected with the family, friends, and colleagues (Borresen, 02 April 2020)</li> <li>- Pick new hobbies; try to learn something; students can enroll themselves in free online courses; engage in interactive platforms on social media; pen down feelings and thoughts (Hiremath <i>et al.</i> 2020).</li> </ul>

get medical help. Table 8 sums up the suggestions of the psychologists to overcome the psychological outcomes of the COVID-19 pandemic.

## 5.2 | Implications of the study

The study has considerable social and scholarly implications. This research is an effort to highlight the severity of the current pandemic that is deteriorating the global population's physical health and strongly affecting mental health. The current study helps mental health experts understand the psychological issues that may emerge from the current pandemic. Research has also summarised the psychological experts' tips and suggestions to overcome the problems related to anxiety, stress, OCD, delusion, and loneliness. Readers of the research would be able to understand how to cope with highlighted psychological issues effectively if needed. Many researchers investigated the social, psychological, and economic impact of a pandemic, especially on the public of the developed nations like Europe, China, and the United States (Tran *et al.* 2020). However, there is insufficient research about less developed countries like Pakistan, investigating the effects of the current pandemic on mental health. This research can serve as a beacon for other researchers to focus on the mental health challenges that emerged from the current pandemic and lockdown situation.

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