



Mental Health Challenges Faced During Covid-19 Pandemic: A Review

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Abstract

Objective: The precautionary actions taken to control the spread of the novel coronavirus made people stay at their houses for a longer period than usual. Although these precautions are meant for limiting the spread of the disease, the majority of the population has been negatively impacted mentally. We therefore, focus on the psychological impact on various peer groups in the general population.

Study design: This is a systematic review and meta-analysis.

Methods: PubMed and Scopus databases were reviewed, in addition to searches in Google Scholar. The methodology of systematic search (completed in October 2020) has been performed according to the Preferred Reporting Items for Systematic Reviews (PRISMA).

Results: Nine studies which included longitudinal, cross-sectional, self-reported and web-based surveys were selected. It was found that individuals varying with age and work established different patterns of psychological impact.

Conclusion: It was found that the negative thoughts were provoked due to the decline in the economy, loss of a job, uncertainty about the plans, and the constant updates of the disease. Hence, self-coping strategies along with the support teams from government authorities and NGO's is crucial in helping the public to manage their mental health.

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Introduction

“No health without mental health” stated by the World Health Organisation (WHO) is a holistic approach that gives importance to the psychological well-being of an individual. Both the communicable and non-communicable diseases are contracted by an individual who correlates their mental and behavioural well-being to a certain extent. The disease prevalence, longevity, severity, side effects, and somatic symptoms [1] are related to mental health status. Mental illness may also result in higher rates of mortality than the others with no mental illness detected.

The outbreak of the new coronavirus which resulted in a pandemic is the topic that has been talked about and acted upon since December 2019. After the Influenza outbreak, the Covid-19 outbreak has spread to all the continents and had already fetched about 37,833,070 confirmed and 1,082,547 deaths updated on October 12, 2020, stated by WHO. The common symptoms of the disease are fever, cough, fatigue, headache, and dyspnea [2].



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The novel coronavirus SARS-CoV-2 which was discovered in December 2019 in Wuhan, China has spread to European countries and the rest of the world causing a great epidemic [3]. There were primary guidelines stated by WHO to limit the spread of the disease like washing hands, wearing a mask, social distancing, and home quarantining. Since no one was prepared for such an epidemic, it led to various confusion and misperception in the information produced in the social media platforms spreading rumors on the disease. This epidemic has also led to the destruction of the economy, made more people jobless and families face financial injury as a result of salary reduction at this crucial period. Students on the other side have to cope with their studies through online platforms and face the uncertainty of their future. While the front liners keep providing utmost care and time to the covid-19 infected patients, long hours of work are of physical and mental strain [4]. And not to forget the homeless people who are already isolated face no place for living as the majority of public places are shut down and face the shortness of daily meals [5].

In this review article, we focus on the various forms of psychological impact on different peer groups of the general population (see Figure 2). The importance of mental health in the times of such an epidemic should be addressed and taken with utmost care since mental distress leads to long term effects. Awareness among people is necessary and hence this review will provide the information of surveys conducted on mental health worldwide and outline the most vulnerable groups among the population.

Methodology of the systematic search

Search strategy

A systematic search was performed on PubMed, Scopus, and Google scholar using the following search terms: “pandemic” AND “mental health” AND (“mental disorders” OR “psychiatric illness”). This search strategy was built by identifying additional original reports aligned with the objectives of this paper by tracking citations from reference lists of included articles.

Identification of eligible studies

We included studies evaluating the primary outcomes of interest that were categorized in any of the following domains: (i) pandemic, (ii) mental illness, (iii) psychiatry. Articles were independently reviewed for eligibility by all authors. If an article was deemed potentially eligible based on title/abstract review, a full-text review was completed. Decisions for the inclusion of the studies in the full-text review were made by consensus. Only original research articles were included. The methodology of systematic search (completed in October 2020) has been performed according to the Preferred Reporting Items for Systematic Reviews (PRISMA) is illustrated in (Figure 1).

Psychological impact on homeless

Homeless people face a great challenge during a global crisis like pandemic [6]. The majority of homeless people are aged, mentally affected already, and are isolated, marginalized, and are prone to abuse. In most cases, homeless people lack personal hygiene and are mal-nourished which may pave the way to contract the infection more easily [6]. The activities such as the quarantine, lockdowns, and shut down of public places have affected their life [5]. It is difficult for them to take care of the basic needs, shelter, and food and hence leads to the emotional

and physical drain. They usually have very minimal access to public health-related news and are prone to anxiety, fear, hopelessness, depression, sleep issues, and loneliness [7].

Psychological impact on children

During home quarantine, children are affected immensely due to boredom, conflicts in the family, frustration, and lack of connection with their friends [8,9]. These stressors incorporate psychological damage in children causing confusion and improper behaviour. Moreover, changes in their lifestyle such as missing their caregivers may have an impact on them. Parents have to engage with their children on the current situation in the terms of their understanding and share their own feelings and emotions [10]. Going to school would have been difficult for some children earlier but prolonged closure of schools may cause extreme boredom and sadness [11]. Hence the online mode of education would fill the gap.

Psychological impact on students

Pandemics and epidemics impact students in various prospects. They may experience post-traumatic stress, anxiety, and panic disorders. In a recent study conducted in China among college students with 7143 respondents, 0.9% was suffering from severe anxiety, 2.7% moderate anxiety, and 21.3% with mild anxiety [12]. In another survey conducted among the undergraduate students, it was reported that the students experienced depression and anxiety due to the academic gaps [13]. The lock-downs and quarantine have postponed various exams and academic schedules, which could be one of the main reasons for depressive symptoms occurred in students.

Psychological impact on adults

The unprecedented situations during the epidemics impose a greater impact on mental health for adults in terms of finance and worrying about their family's health. Financial damage, quarantine, uncertainty about employment, loss of a job, and no preparation for such stressors lead to psychological problems in adults [3]. Due to work from home situation along with taking care of their family and home schooling has led people to work with distractions and hence creates guilt of productivity [14]. A recent survey showed that people responded with the symptoms of stress due to the pandemic situation, worrying about their health, family's health, and scared of leaving the house to buy essentials [8]. In one of the surveys demonstrated, 75.2% were possessing psychological impact due to constant worrying about their family getting contracted with the infection, 50.9% worried about children younger than 16 years getting infected [15]. Overall anxiety in women was found higher than the anxiety issues found in men [16].

Psychological impact on old aged people

The physical effects of Covid-19 in elderly people are observed to be severe than that of the others and hence confined to their houses and face drastic levels of stress and loneliness. While younger people have the opportunity to connect with their family and friends through social media, elderly people who have less knowledge about the technological world seem to be left alone. Their daily activities which included social interaction are now on the stake and hence have led to depression, anxiety, and pessimism [17]. It was noted from a study that female seniors suffered a lot from the male seniors during the pandemic [18].

Psychological impact on psychiatric patients

During the times of pandemic, psychiatric conditioned people are left out with no access to their psychiatrist feeling helpless and stressed out. The feeling of loss of connection with their psychiatrist or their mental health advisor will be so immense. Hence, they would be more prone to unusual behaviour and are affected mentally. Psychosocial services have been diverted to telemedicine rather than the conventional means of counselling so it is also crucial to encounter the patient's mental health with respect to Covid-19 related stressors [19].

Psychological impact on healthcare workers

The frontline healthcare workers who put in effort day and night to help people fight the Covid-19 epidemic are the ones who keep treating patients and face tough time spending time with their loved ones. Hence, they are impacted psychologically due to the pandemic and need at most support to keep going. In a survey conducted in Singapore, it was reported that 14.5% of healthcare workers were affected by anxiety, 8.9% by depression, 6.6% by stress, and 7.7% by Post-Traumatic Stress Disorder (PTSD) highlights the risk for negative psychological impact [20]. These frontline workers face difficulty in maintaining the quality of sleep [16]. It is very important to prepare healthcare staff for the challenging crisis and explain to them thoroughly regarding the confronts and encourage managers to sustain a healthy relationship with their co-workers [4]. Staff also reported extreme tiring due to long hours of work [21].

Psychological impact on new moms and moms to be

On top of existing medical conditions, hormonal fluctuations, and mood swings, new moms and pregnant women feel anxious and stressed due to the new normal life. Experiencing overpowering stress during trying times like global crisis, financial constraints, emergency situations may risk the life of the pregnant women and the foetus [22]. Pregnant women have severe complications if contracted with the disease and most importantly increased the number of deaths are reported which may lead to strict guidelines in the hospitals like not allowing husbands or any known individual of the pregnant women to attend the delivery. These factors may cause psychological problems that may again affect the mother and child in both the short and long runs.

Results of the systematic search

A review of the collected articles has been articulated and the main findings have been discussed (see Table 1). It was found that individuals varying with age and work established different patterns of psychological impact.

Qiu and collaborators [23] put forth four findings of the survey conducted which insists on concentration on the vulnerable population such as the women, the young, elderly, and migrant workers. Secondly, access to healthcare systems and management. Thirdly, along with the healthcare settings provided for Covid-19, mental health care systems shall also be provided to help people to cope up with the outbreak. Lastly, separate settings for crisis situation and management systems shall be created.

A study [24] conducted from January 31 to February 2, 2020, showed about 53.8% psychological impact in the study partici-

pants from moderate to severe which shows the steep increase in the impact on mental health just 2 weeks after the outbreak. The finding suggests to give attention to high-risk and vulnerable groups of people. Secondly, healthcare workers shall give psychological support to patients with symptoms of Covid-19. Thirdly, government officials shall give appropriate information regarding the progress of Covid-19 in a way that even people with no formal information can understand. Fourthly, approachable ways of treatment shall be given such as using online platforms and telemedicine to help people combat mental impact due to the pandemic. Lastly, the finding shows lower rates of anxiety and depression in people who wear a mask.

A study [15] conducted from February 28 to March 1, 2020, is the second survey that is continuous to the previously stated survey. The DASS- stress scale for this survey has increased [7.86 (7.93)] in comparison to the previous [7.76 (7.74)]. The mean IES-R score was however lower [30.76 (16.34)] was than the previous survey [32.98 (15.42)]. There were no significant changes with respect to the psychological impact in comparison to the previous survey which stresses that irrespective of the time of the pandemic, the psychological impact had no difference.

Another study [16] included healthcare workers, teachers, students, institution workers, and others in which healthcare workers were about 43.6%. The highest rates of poor sleep quality were found in healthcare workers (23.6%), depressive symptoms were also high among healthcare workers. However, anxiety was more prominent among teachers and students.

Moreover, another survey [25] was based on social media exposure with respect to the psychological impact of Covid-19. About 82% of the participants were frequently exposed to social media in which 48.3% had depressive symptoms, 22.6% had anxiety symptoms, and 19.4% experienced a combination of anxiety and depression.

Furthermore, different surveys [26] focussed on the impact on social and family support and lifestyle changes. About 76.8% reported that they did not experience financial stress, 74.5% reported that they did not experience stress at home.

A study [7] conducted among the young homeless people showed hopelessness (48%), anxiety (44%), loneliness (38%), sleep problems (34%), and depression (36%), and people who had the habit of substance use showed an increase in usage 16% reported increased alcohol use, 20% increased tobacco use, and 28% increased marijuana use.

Another study by [27] compared the psychological impact of Covid-19 between healthy individuals and psychiatric patients which revealed that people who were already under medications for psychiatric illness showed surpassed symptoms like anxiety (25%), stress (9.2% moderate), insomnia (sub-threshold 26.3%), suicidal thoughts (3%), depression (16%), and PTSD (33%) than the healthy participants.

The survey [28] pointed various negative mental impact on women experiencing pregnancy and post-pregnancy that reported 40.7% experienced depression, 72% high anxiety, 64% reduced physical activity due to the pandemic. Self-harming was also reported by the respondents.

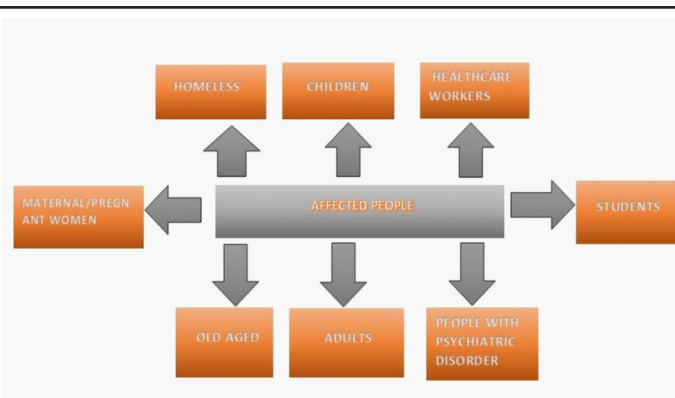
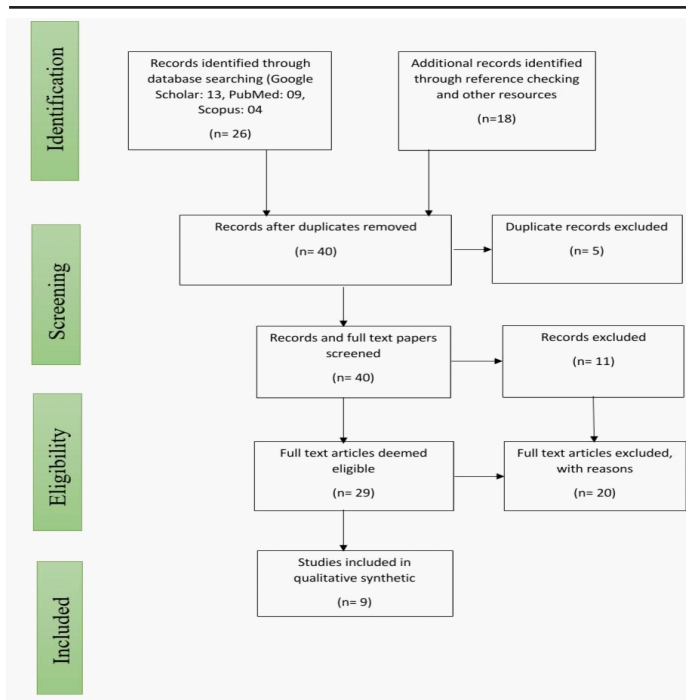


Figure 2: Shows the various cohorts of people affected psychologically due to Covid-19.

Figure 1: PRISMA diagram.

Table 1: Summary of findings of the studies included in the systematic review.

Year	Reference	Study design	Materials and methods	Study instruments	Survey results	Findings
2020	Ref [23]	52730 responses	Online survey	COVID-19 Peritraumatic Distress Index (CPDI)	35% experienced psychological distress	Women are more vulnerable to stress,
2020	Ref [24]	1210 responses	Cross-sectional online survey	Impact of Event Scale-Revised (IES-R), Depression, Anxiety and Stress Scale (DASS-21)	75.2% worried about their family member getting infected	Higher depression found in people with no formal education
2020	Ref [15]	1738 responses	Longitudinal online survey	Impact of Event Scale-Revised (IES-R), Depression, Anxiety, and Stress Scale (DASS-21), SPSS statistics	Second survey responders believed to survive Covid-19.	Non-significant results obtained between the first and second surveys.
2020	Ref [16]	7236 responses	Web-based cross-sectional survey	Generalized anxiety disorder (GAD-7), Center for Epidemiology Scale for Depression (CES-D), PSQI (Pittsburgh Sleep Quality Index), Statistical Package for Social Sciences (SPSS)	35.1% with anxiety, 20.1% with depression, 18.2% with lagging sleep quality	Healthcare workers faced poor sleep quality
2020	Ref [25]	4872 responses	Cross-sectional study	Generalized anxiety disorder scale (GAD-7), The Chinese version of WHO-Five Well-Being Index (WHO-5), χ^2 / trend tests for statistical analysis	48.3% depression, 22.6% anxiety, 19.4% combination of the two	>80% frequent exposure to misinformation in social media
2020	Ref [26]	263 participants	Cross-sectional study	Impact of Event Scale (IES)	52.1% were horrified	64.2% took time to relax, 59.7% spent time exercising
2020	Ref [7]	90 individuals	Self-reported data	Ongoing clinical trial	Hopelessness (48%), anxiety (44%), loneliness (38%), sleep problems (34%), and depression (36%)	Increased behavioural health-related issues and less access to service systems.
2020	Ref [27]	76 psychiatric patients and 109 healthy controls	Online questionnaire	Impact of Event Scale-Revised (IES-R), Depression, Anxiety, and Stress Scale (DASS-21), Insomnia Severity Index (ISI)	59% mixed anxiety and depressive disorder, 25% anxiety disorders, 16% major depressive disorder in psychiatric patients	People with psychiatric complications demonstrated higher exposure to anxiety, depression, insomnia, and PTSD.
2020	Ref [28]	520 respondents	Online survey-self reported	Edinburgh Postnatal Depression Survey (EPDS), State Trait Anxiety Inventory (STAI-State)	40.7% depression, 72% high anxiety, 64% reduced physical activity	Involving in physical activities showed to lower the impressions on anxiety and depression.

Discussion

On the whole, mental health awareness is needed for all people irrespective of their ages during a crisis situation since their regular life has been reverted questioning their future life. The major concerns which were discussed in the published surveys were mainly focused on negative thoughts developed due to social media exposure (all cohorts of people), constant worrying about family members contracting the disease (in case of adults), stress developed due to the confinement at home orders by the government (all people), financial crisis, long hours of works and less psychological support (in case of frontline workers). These are the major problems stated in the cited articles.

Psychological impact in homeless people may vary from country to country, their entry-level of homelessness whether they are recently or already homeless, the type of homelessness if they have a family and friends to contact, homeless people who live in hotels, vehicles, or abandoned buildings if they have psychiatric conditions, etc., The study conducted by [7] focussed only on the young homeless people in the US and their mental health and access to the updated of the pandemic. In places like India, homeless people have a completely different lifestyle from the US and hence different strategies have to be implemented for homeless people.

School going children are affected psychologically due to the new lifestyle in several ways. Firstly, they lack physical games played with their friends which were once a daily routine. Hence, home confinement can lead to inappropriate behaviours. Secondly, the expression of a particular feeling is not similar to the adults so parents have to take care of them well. And lastly, even when online classes offer a routine base of studies to the children during the pandemic, they pose a separate set of disadvantages such as constant viewing of lectures through mobile and laptop screens, irregular patterns of sleeping, and lack of physical movement.

In the case of college-going students, worrying about the postponed exams, online mode of assessment, and destruction of their future plans like cancelled training, lectures, internships, projects, higher studies, jobs, and other career-related activities brings about stress, anxiety, and depression. Even though the online mode of education gives proper feed of knowledge, practical and hands-on experience of the specialized subjects is at stake.

When it comes to the psychological impact of Covid-19 on adults, they have various listed causes such as the health of their family which is considered the first priority, the financial restriction, and loss of jobs, continuous exposure to updates of the disease, the work from the home culture which poses guilt of productivity due to the improper work setting at home, loss of a proper routine, lack of physical exercise and the primary or secondary contact with a person infected with Covid-19. Hence, adults should take self-care seriously and find ways to combat the stress felt due to the situation.

Old aged people who feel isolated without contact with their fellow friends, lack of physical activity, and sudden virtual change of life creates a sense of fear. These groups of people should be given special attention and extra care. The time spent with family members in the house can be increased and learning to use gadgets can also aid in fighting with negative mental health status.

The healthcare workers who are working day and night to help people heal physically from the disease should be monitored in their psychological behaviour. Since they stay at the workplace for more hours visiting patients, it is important to develop a healthier relationship with co-workers and the management authority has to conduct various sessions of counselling as most of the healthcare workers would have the fear of contracting the disease themselves and that of their family. Hence, support has to be given and alternating shift routines can be followed.

On the other hand, there are not many surveys or research carried out on already existing psychiatric patients during the Covid-19 pandemic. Hence, their mental health status during and after the pandemic has to be studied in detail. However, based on the existing literature the patients suffer severely from anxiety, stress, depression, insomnia, suicidal thoughts, anger, worries about physical health, and discrimination.

Pregnant and breastfeeding women are at higher risks of contracting the disease which may itself be one of the causes of worries. The women contracted with the disease might not breastfeed due to the fear. Other activities such as not able to attend pregnancy and lactation guiding classes, and may create fear among the moms to be. Proper mental support has to be provided by the family, telemedicine and virtual mode of such pregnancy-related classes could be conducted.

Conclusion

The government authorities can provide various psychological support teams and monitor the mental health of the population through several online surveys and help them in overcoming the negative impact by offering counselling sessions, guiding them to cope up with their new lifestyle. The non-governmental organizations (NGO's) can also come up with new ideas in creating awareness about mental health during critical times. Above all, self-coping strategies such as meditation, physical activity, spending time with the family can also provide necessary solutions. It is definitely a strange situation for all the groups of people whether they are rich or poor, healthy or unhealthy, young or old, mentally stable or not. Hence, various treatment options according to one's own convenience can be chosen to fight against the psychological impact created by the Covid-19 pandemic.

Author contribution

HB wrote the first draft of the manuscript and performed the review. HSRR conceptualized the study, co-wrote the draft of the manuscript, and critically revised the text. YS critically revised the text. VF supervision. All authors have seen and approved the submitted version of this paper.

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