

Psychological Impact of COVID-19: Stress & Resilience

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Abstract

The Coronavirus Disease 2019 (COVID-19) having its origin in China has rapidly spread throughout the world to become pandemic. The infection has profound effect on various aspects of the society, including mental & physical health and also the economy of the society. To mitigate its impact, countries all over the world have adopted various measures such as social distancing, use of protective masks, hand washing, containment of people by implementing lock down in phases. As the pandemic may further weaken the health systems, resources, socio-economic status of the developing & underdeveloped countries, the strategies to halt pandemic becomes a real challenge. This study attempted to assess the psychological impacts & their resilience in terms of their perceived stress and coping ability towards it among the Indian population during the pandemic. An online survey using a snowball sampling technique was undertaken with the help of a semi structured questionnaire. A total of 278 responses were received. A total of 83% of the participants reported of moderate stress and almost 6% had high level of perceived stress. The respondents who were directly impacted by COVID-19 expressed that approx. 10% had loss of job, 21.2% experienced workloads at job, due to half attendance of the staffs & reduced working hours along with multitasking. About 29.5% of respondents stated to have better resilience during pandemic, 1.4% were not able to cope with the stress perceived and almost 69.1% were confident enough to sail through the catastrophe. With the years of lived experience, the resilience was found to be better. 7.1% of the people responded of not being able to hold on to the situation, with 5% having suicidal ideation. Mental health care needs were found in nearly 80% of the participants. Finding a resolute for the problem doesn't limit to the governing bodies but the community participation too. Highly efficient individual based psychological rehabilitative measures require to be implemented by early intervention to the existing psychosocial problems.

Keywords: Coronavirus • Mental health • Psychological impact • Stress • Resilience

Introduction

COVID-19 came on lime lights in the month of Dec 2019 and the New Year geared with the official declaration of it becoming a pandemic. Now that people have rediscovered the Spanish Flu of 1918 that engulfed 50 million and 100 million people across the world. Comparisons are being made because pandemics spook people. The viruses that cause flu and COVID-19 belong to two different families. Sars-CoV-2, which causes COVID-19 belongs to the coronavirus family and have greater similarities with SARS which originated in China in 2002 and MERS, which began in Saudi Arabia in 2012 [1]. Containment measures were effectively futile in many countries. Flattening the COVID-19 curve was achieved by locking down public spaces & transport, closing schools, cancelling conferences, sporting event & social events and on an individual level washing hands with soap regularly, disinfection and avoids gatherings, among other measures.

First COVID-19 case can be traced back to November last year in China's Hubei province which became its epicentre as it rapidly spread at home and abroad before Chinese health officials could identify virus [1]. COVID-19 arrived in the last teen year, but began 2020 with a bang and bans. Hopefully pandemic will end with a whimper. In this war too, truth is the first casualty. Facts are now scarier than sanitizers, and panic is spreading faster than virus. The outbreak of COVID-19 puts the international community in front of an

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Received 24 September, 2020; **Accepted** 04 November, 2020; **Published** 12 November, 2020

unprecedented global challenge, one that knows no boundaries. With limited time at hand we need to prepare both for crisis and recovery. As of 30 March 2020, Indian Govt. has registered a total of 1250 cases (1117 active cases, 101 cured or discharged and 32 deaths) due to COVID-19 infection [2]. With the surge in the cases day by day, many countries worldwide enforced restrictions to curb the contagion.

Prime Minister of India observed a one-day Janata curfew on 22 Mar 2020 and declared nationwide 21 days lockdown on 25 March 2020 midnight to break the spread of the infection cycle with the essential supplies available [3]. But with some of the most crowded cities on the planet, there were fears that numbers could skyrocket and overwhelm shaky healthcare systems. Then it began the extended locking of the nation with certain relaxations region wise [4]. According to a survey conducted by Indian Psychiatry Society, within a week of enforced lockdown the reported cases of mental illness in India raised by 20% [5]. Indians may suffer from massive mental health crisis due to economic hardship, domestic violence, unemployment, substance abuse and the vulnerable & marginalized group will be the most affected ones. Third phase of nationwide lockdown began with considerable relaxation from 3 May 2020 considering the pros & cons of the containment thus balancing the economy and the health & safety as per the geographic risk profiles [6]. As on 26 May 2020, India accounts for 144,950 cases and 4,172 deaths Worldwide total number of confirmed cases were 5,588,356 and deaths accounted to 347,873 as on 26 May 2020, out of which 53,167 cases were critical [7,8]. Continuance with the fourth phase, India has entered into phase five of lockdown from 01 June in containment zones and issuing guidelines for resuming restricted activities in other areas [1]. A total confirmed cases in India were 381,000 as on 18 June 2020 with 12,881 new cases and worldwide 8,609,451 cases with 3,592,838 currently infected patients around the world [9,10].

As the Coronavirus infection continues to spread across the globe, people are getting increasingly worried of getting exposed to the virus as they go about their daily routine. Experts say that the chances of getting infected this way is rather slim, and the best bet to avoid infection is WHO recommended social distancing & hygiene measures [2]. As people become wary of touching suspect

surfaces, from door handles to currencies, disinfecting surfaces frequently and washing hands regularly but the fact is the difficulty immobilizing yourself out of fear. Much of the fear that has gripped the world stems from the fear of unknown, and the fact that there is no cure yet for the contagion. Moreover, the lockdown put everything into a standstill including schools, colleges, board exams, travel, religious congregations to halt, majority of people adopted work from home policy, bank, Defence services, police & medical professionals had half of the attendees on list, vacations were locked up and social events were either postponed or ended with a silent family affair with the permission of the legalities, event registers were wiped clean except disruption in the supply of essentials. In some states the leave of the health professionals was cancelled in the spurt of contagion, to serve the public. Pay of the Govt. employees was cut off at state & centre jurisdictions. More extreme forms of social distancing were practised physically though the science & technology at its best, kept the international world interconnected as never before.

Due to fear the Citizens even cancelled their routine health check-ups for reluctant to visit hospital amidst contagion worries. The pandemic fear made India's traditional 'Namaste' the preferred form of salutation in many parts of the world. Self-isolation, self-quarantine other than social distancing made people ran away from the quarantine facilities as it's a state of panic. Fear and anxiety about a disease often leads to social stigma and this was a stressful time for the public. Phobia & obsessions became a routine in many lives. On the other hand, the lock down created a havoc of panic buying of things due to uncertainty of supplies.

Psychiatrists were seeing patients of low to severe risk of anxiety on a regular basis ever since the infection cropped up in the country. A survey conducted in India during second phase of lockdown states, incidences of anxiety, panic attacks, apprehension, phobia, stress, agitation, withdrawn features were most likely seen among the public during the pandemic outbreak or while in quarantine. The chances of Post-Traumatic Stress Disorders are also high [11]. As research into COVID-19 continues many facts keep on changing and many fake news are being circulated in social media which creates havoc among the public and keeps on disturbing them. Government and WHO are urging people not to share the news or related activities on COVID-19 without confirming the authenticity of the source. More over the short supply of personal protective equipment's endangers the health care professionals worldwide [12]. The uses of masks and sanitizers have made the exhaustion of resources in their supplies. Many informative, educative materials for making the public aware of the facts of corona virus, its mode of transmission, precautionary measures to prevent it are being disseminated by the Government, police, health care workers, media and other stakeholders of the society. With surging uncertainty among the public about the epidemic and the lockdown phase mental health issues are of major health concerns, which are expected to rise day by day. Fear of getting contracted with the infection, continued isolations, social distancing, quarantine, social stigma, start working after the lockdown amidst the contagion, reopening of educational institutions or higher-grade children, commuting in public transport to earn their livelihood continuing to stock the household supplies makes people jittery and wary. All the above factors been considered, it was aimed to evaluate the psychological impact and the resilience of the community during the pandemic in India & abroad.

Materials and Methods

This was a cross-sectional, observational survey carried out in India & abroad. A snowball sampling technique was used. An online semi structured questionnaire developed using Google forms; consent form was appended to it. The link of the questionnaire was circulated through WhatsApp, e-mails and other social media to the contacts of the investigator. The participants were encouraged to roll out the survey to as many people as possible. The online survey tool had information about the study and informed consent. Participants with access to internet, having smart mobile phones, aged above 15 years, able to understand English and willing to give informed consent were included in the study. It was an online study. The data was collected across various states of India & abroad from 17 March 2020 at 10AM IST -23 May 2020 at 20

PM IST. The online tool developed by the investigator had three sections which were filled by the participants one by one as they were auto directed.

The online self-reported questionnaire contained the following three sections: Section-I related to socio demographic profile consisting of 13 semi structured items, Section-II had 23 items regarding perceived stress, of which were four MCQ's, one was closed end and 18 items were to be rated on a 4 point Likert scale. The section-III was pertaining to Resilience which had ten items to be rated on a 5- point Likert scale and one item was an open ended. Descriptive and inferential statistics have been used in the study to analyse the findings.

Results

An online survey, related to perceived stress and resilience among the population during the coronavirus pandemic was conducted in India and abroad. A total of 278 responses of 15 years & above age were recorded. The mean age of the participants was 22.19+8.83 years. Among the participants, 70.9% were female and 29.1% males. The lowest educational qualification level in this study was observed to be standard 10th and the highest qualification of >69% of the population was graduation & above. The participants belong to India and abroad. Majority of respondents were Indians (87.8%) and other countries represented only 12.2%. Maximum representation of Indians was from Maharashtra, followed by Kerala, Haryana, Punjab, Uttarakhand, Tamil Nadu and Andhra Pradesh. Participants from other countries included UAE (7.6%), Australia (1.4%), US (1.4%) and Kuwait, Russia, New Zealand, Canada & Oman (1.8%). Near to half (46.7%) respondents were healthcare workers, 5% teachers, 3.6% were Défense personnel's and 44.6% were of various professions. Out of total respondents more than half (52.2%) were students, followed by private employees & servants of Government (38.8%), self-employed (4.7%) and unemployed were 4.3%. More than 80% of participants were urban inhabitants. Single respondents were above 60% with 5% suffering from existing mental /physical illness. Nearly 45% were earning <2.5 Lakh per annum with 70% having their own house/dwelling.

Perceived stress

As shown, more than half of the participants spent less than half an hour daily for viewing news on COVID-19 whereas 40% spent more time on entertainment media. 83% of respondents revealed moderate stress experienced and 6% perceived high stress during epidemic and lockdown. Amidst this havoc created by the epidemic, the respondents who were directly impacted by COVID-19 expressed that approx. 10% had loss of job, 21.2% experienced workloads at job, due to half attendance of the staffs & reduced working hours along with multitasking. Extended families reported to have more stress. Nearly half were affected by shortage of basic household supplies, almost 80% had to cancel their vacations, social events cancelled. Moreover 9% themselves were confirmed cases of COVID-19. Use of psychoactive substance was reported by 5% of which 3% of respondents' revealed increase in its use during the pandemic period. Stress experienced by the respondents is tabulated in the Table 1.

Resilience

As shown in Table 2, for about 29.5% of respondents stated to have better resilience during pandemic, 1.4% was not able to cope with the stress perceived and almost 69.1% were confident enough to sail through the catastrophe.

On assessing each aspect of holding self throughout the difficult situation, 7.1% of the people responded of not being able to hold on to the situation, with 5% having suicidal ideation. Almost 20.4% respondents felt depression, were worried about which they had no control over (18.8%) and 17.4% blamed themselves or the public for the spread of the pandemic. Only 17.7% strongly agreed of remaining calm throughout the roller coaster ride of the nature and 27% felt they were not being victim to the calamity. Though 55.7% held high in self-belief, 27% were able to find alternatives to their problems and almost 30% adopted flexibility to their life challenges so that they do not end up succumbing to the nature's fury.

Table 1. Perceived stress related to COVID-19 pandemic.

| S. No. | Items | % of responses of perceived stress | |
|--------|---------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|----------|
| | | High | Moderate |
| 1 | Extent of concern about being infected with COVID-19 of self/loved ones | 34.4 | 31.2 |
| 2 | Getting COVID-19 infection may cause loss of community support | 33.7 | 19.1 |
| 3 | Do you feel having COVID-19 may cause others to devalue/discriminate you/family | 25.5 | 16 |
| 4 | Basic household supplies are stocked up adequately (like food, medications, sanitizers, cleaning supplies) | 7.1 | 23.4 |
| 5 | Currently you stay in a safe location | 4.6 | 16.3 |
| 6 | Are you stressed of personally practising social distancing to prevent COVID-19 | 68.8 | 25.5 |
| 7 | Do you feel restrictions on your work, housing & other social obligations during pandemic make it difficult | 24.8 | 36.5 |
| 8 | Govt. response in your country to contain COVID-19 is satisfactory | 42.9 | 35.5 |
| 9 | Do you feel community is working together to cope with & prevent spread of COVID-19 | 6.4 | 11.3 |
| 10 | Are you satisfied with your sleep during the pandemic | 5 | 25.5 |
| 11 | Any changes in your religious beliefs/spirituality felt during the pandemic | 7.4 | 14.2 |
| 12 | Do you feel pandemic made changes in pattern of your internet/mobile usage and playing video games | 24.8 | 37.9 |
| 13 | During spread of COVID-19, did you feel nervous/tensed/worried | 12.2 | 32.6 |
| 14 | During spread of COVID-19, did you feel overwhelmed | 6.5 | 18.6 |
| 15 | Have you felt depression, during spread of COVID-19 | 5 | 15.4 |
| 16 | Any time did you feel suicidal ideation during spread of the pandemic | 2.2 | 2.9 |
| 17 | During spread of COVID-19, did you feel headache, poor appetite or digestion problems | 5.4 | 8.6 |
| 18 | You felt difficulty in decision making at any time of the pandemic | 16.2 | 4.3 |
| 19 | Difficult enjoying your daily activities during the pandemic | 9 | 28.1 |
| 20 | During spread of COVID-19, did you feel unable to control emotions | 3.6 | 14.4 |
| 21 | During spread of COVID-19, did you feel uncertain about finances, job stability, household supplies, and health of self & loved ones? | 17.3 | 27 |

n=278

Table 2. Resilience related to COVID-19 pandemic.

| S. No. | Items | % of responses for resilience | |
|--------|----------------------------------------------------------------------------|-------------------------------|----------------|
| | | Agree | Strongly agree |
| 1 | In difficult situations I turn at once to finding ways to put things right | 45 | 22 |
| 2 | I don't worry about which is not in my capacity | 41 | 14 |
| 3 | I don't criticize self or others for the pandemic | 33 | 30 |
| 4 | I feel confident & secure in my position during hard times | 36.5 | 28 |
| 5 | I remain calm in stress | 37.9 | 17.7 |
| 6 | I can influence my life situations rather than being victim to it | 46.5 | 27 |
| 7 | I rely on my own potentials & resources in difficult times | 49.6 | 28.7 |
| 8 | I am able to find solution to my problems | 51.4 | 27.3 |
| 9 | I adapt flexibility to changes occurring in my life | 52 | 29.8 |
| 10 | I believe in myself | 36.5 | 55.7 |

Discussion

Pandemics and epidemics have ravaged humanity throughout its existence, often changing the course of history from prehistoric to modern times. The impact of these diseases is devastating. Governing bodies of each country around the world are struggling hard to meet the challenges by taking appropriate measures of containment, social distancing, and reinforcement to public to abide by the precautionary measures. A planned phase wise lock down for containment is implemented in India too as adopted by the Health & welfare ministry of the centre & state. Now, we are in fifth phase with various relaxations in the daily living.

The impact of the pandemic on the mental well-being is intense in forms of fear, anxiety, uncertainty among the community. Moreover, on lack of adoption of appropriate coping strategies will further devastate one to an extent of succumbing life to the pandemic. Hence, this study attempted to evaluate the psychological impact and resilience of COVID-19 in the society.

Increased worries and apprehensions among the public in regard of contracting COVID-19 infection demands higher perceived needs to deal with the mental health difficulties. Many studies on the knowledge, attitude has taken place but the impact on mental health is few [9]. This study reveals

that almost participants were graduates & post graduates (98%), a mixed group of professionals of which 46% were health care workers of which majority were students, with a stress score of 56.21+ 7.96, which shows the mental health needs in the professionally inclined people. The participants had awareness of the pandemic still the anxiety, fear of contracting the infection and thus losing the social support and facing discrimination contributed to the adverse psychological impact. The resilience mean score was 40 +5.51 which shows their coping ability is moderate and can be strengthened by adopting adequate measures.

The study participants reported suicidal ideation during the spread of pandemic. 2.9% felt moderately and 2.2% had severe suicidal ideations. Social distancing, fear, anxiety, depression, loosing job, increased workload at workplace with few at work & less working hours, cancelling of the social events & vacations, contraction of the infection & isolation along with treatment at medical facility all paved the way to feel suicidal. A similar study conducted in India on suicide incidence due to COVID-19 reveals the need for extensive mental health services in the country. The analysis for causal factors out of 63 suicide's in India revealed fear or anticipation of infection was the most prominent. The stress of not being in job, finance, feelings of hopelessness, helplessness, inability to provide support to the family due to the pandemic, loneliness & psychological distress of containment simplified the way of having persistent suicidality and committing suicide [13].

The term social distancing itself diminishes the well-being. During confinement it's very important to maintain meaningful, affective social links. The state of uncertainty due to pandemic along with mobility restrictions, isolation, increases the feelings of insecurity, anxiety and a general tension which may impair quality of life. Urgent need for discovery & evaluation of the psychological and social impacts of the pandemic on population exists [14]. In our study too the social distancing, restrictions imposed as part of pandemic was the reason of concern, worry, stress, anxiety, inability to make decisions, somatic problems and overwhelms among 70% of the respondents. As a result, the patterns in spiritual beliefs and technology usage increased.

Individuals, especially young adolescents & adult age group are going through a crisis situation and feeling lack of control on their lives due to fear of infection and lockdown restrictions. Levels of anxiety, stress and depression are the high and hence psychological interventions to deal with them should be developed and imparted among the public [15]. Nearly half of respondents of the study were young adults who expressed their concern about the pandemic, fear of losing community support (52.8%), discrimination of their families on getting infected (41%), restrictions felt on work, housing & other social obligations (60%)

Ensuring the availability of essential services, commodities, financial assistance, are essential to prevent psychological impact. Mental health providers need to adopt online free counselling therapies, grief therapies, trauma focussed CBT, trauma narration, affective expression and emotional handling therapies like REBT in order to win the current war against COVID-19 [16]. More than half of the study participants (68%) felt basic household supplies, sanitizers, cleaning materials, groceries were not stocked up adequately, more than half were somewhat satisfied with the response of Government body to contain pandemic & assisting the public, and 68% were satisfactory with the community participation to curb the infection. The supply of essential services, assistance and the role of civic bodies play an important role in mental well-being of the common people.

Infodemic phenomena has direct impact on and fragment social responses and result in increased anxiety, stress and panic among public, health care providers and pose threat to public authorities. As a result, WHO called for minimizing watching, reading or listening to COVID-19 news and recommended to selectively take only the preventive measures to manage self & loved ones. A psychological support strategy is required to help the psychologically impacted of the pandemic. Resilient practices like 'stress mitigation visualisation strategy' needs to be implemented during a long-term pandemic [17]. In our study, approximately 53.6% viewed the news regarding pandemic for duration of less than half an hour as to avoid the anxiety, stress & restlessness felt as a consequence rather preferred to see entertainment media.

Repeated media exposure to community crisis can lead to increased anxiety, heightened stress responses which may downstream health, misplaced help seeking behaviours that can burden health care facilities and further cause potentially severe public health repercussions. Receiving and providing effective communications during a public health crisis is of prime importance which may help in improving resilience among public [18].

Traumatic stress and care is to be addressed in the community during the pandemic. To be resilient, the people should be able to adapt, coordinate and mobilize the effort taken by public health services to break the chain and close the gaps between health services and the self-practice [16]. Strategies to improve resilience during the community crisis are to increase social support, deep human interconnectivity, build distress tolerance, adopting goal directed actions, acceptance-based coping, mindfulness practice, loving-kindness practice for overcoming post-traumatic stress and recovery. Social distancing, isolation, quarantine, containments, fear of having infections, adversities, loosing loved ones are a constant hinderance to resilience [17]. The study participants reported that though rebounding at once to alternatives during pandemic was somewhat possible but 9% of them were not able to do so. Almost 18% were worried of the situation not in their capacity and ended up in criticizing self/others for the pandemic. 7% did not feel secured 40% were just agreeing of being so. 5% were still unsure about their resources & 7% not able to find solutions to it. Only 55% agreed to believe in themselves strongly,

flexible to the sudden changes in the surroundings. Though they found work from home as a qualitative time for being with family, living with minimal things & coping abilities tested, technology served as a boon with entertainment & connectivity, socially interconnected with friend and family and enhanced self-inspection. Though self-reliance is been found among the respondents but a strong requirement of maintaining it and improving the existing coping strategies & inculcating new ones are the significant facts of the reality which common people are facing. Psychological reactions during pandemic include emotional distress, maladaptive behaviours and defensive responses. Especially in this emergency situation mental health is neglected at our peril and to our long-term detriment. Targeted psychological interventions for affected communities, improved access, enhanced awareness and diagnosis of mental disorders can prevent future psychiatric morbidity [18].

Limitations

The study is limited to the people who were literate, had smart phones, e- mail IDs. The psychological impacts of the pandemic & resilience may be different among the uneducated population which is not included in the study.

Conclusion

It is evident that the common man is aware of the pandemic, preventive measures, need for social distancing. They are satisfactory with the Government initiatives in providing assistance in curbing the infection. Though the direct and indirect psychological and social effects of the pandemic are pervasive and effect mental health now and in the future. Reequipping of the public with the post trauma effects of the pandemic by improving the resilience and adopting efficient, effective coping strategies and its implementation using the technology is of prime importance which cannot be neglected. More research works on uneducated, migratory populations and their psychological impact will help in promoting the planning, integrating and policy making strategies of the civic bodies of the country.

Financial Support

The authors have no funding to disclose.

Compliance with Ethical Standards

The procedures performed in the study involving human participants were in accordance with the ethical standards as set forth in the 1964 Declaration of Helsinki and its later amendments. But no ethical approval taken from any Institutional Research Committee by the author, as this study is purely a survey in which the participant's informed consent is taken to participate in it and subjective data is collected using Google Forms during pandemic.

Conflict of Interest

The authors declare they have no conflict of interest.

Informed Consent

Informed consent was obtained from all individual adult participants included in the study.

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How to cite this article: Sumitha, G, and Ajee KL. "Psychological Impact of COVID-19: Stress & Resilience". *Int J Pub Health Safety* 5 (2020)