IJBS

10.30491/ijbs.2020.229741.1263

International Journal of Behavioral Sciences

Original Paper

Potential Predictors of Psychological Distress During Nationwide Covid-19 Quarantine: An Exploratory Study

Nandini Jagadeesan [1] (MA)

1. Faculty of Psychology, M.O.P.Vaishnav College for Women, Chennai, India

Submitted: 19 June 2020
Accepted: 28 July 2020

Int J Behav Sci. 2020; 14(2): 91-95

Corresponding Author:
Nandini Jagadeesan,
Faculty of Psychology,
M.O.P.Vaishnav College for Women,
Chennai,
India
E-mail: nandinij857@gmail.com

Abstract

Introduction: As the world is navigating unchartered territories on account of the Coronavirus disease (COVID-19), mental health professionals face grimmer challenges. In line with this, the present study aims to explore the potential risk factors that may exacerbate psychological distress among quarantined residents of Chennai city (Tamil Nadu, India).

Method: A descriptive correlational research design was employed. The sample comprised of 231 individuals. Five standardized tools were employed to capture different psychological variables: (i) Body Vigilance Scale (ii) Disgust Propensity and Sensitivity Scale- Revised (iii) Fatalism Scale (iv) Death Anxiety Scale- Revised and (v) Kessler Psychological Distress Scale.

Results: It was found that nearly 42% of the population was experiencing mild to severe psychological distress due to the COVID-19 quarantine. Exploration of various psychological variables showed that death anxiety, disgust sensitivity, and perception of luck are significant predictors of psychological distress in the prevailing situation.

Conclusion: The results of the present study emphasize the need to move beyond the obvious factors that impair well-being during nationwide shutdowns to subtler, personality related factors such as sense of control and anxiety that can worsen mental health.

Keywords: COVID-19, Psychological Distress, Body Vigilance, Disgust, Fatalism, Death Anxiety

Introduction

History reveals that epidemics have usually been restricted to developing countries except for Human Immunodeficiency Virus and seasonal flu pandemics, resulting in a lack of research interest on the psychiatric and psychosocial impact of infectious diseases. However, the recent outbreaks of Zika virus, Middle East Respiratory Syndrome (MERS), EBOLA hemorrhagic fever, H1N1, and Severe Acute Respiratory Syndrome (SARS) has managed to draw global attention to the possibility of sinister pandemics in the 21st century [1]. While much research has been undertaken to combat future pandemics through R&D blueprints that maintain and update the list of identified priority diseases, negligent attention has been directed towards understanding the psychological distress that is bound to ensnare the human civilization. Pandemics have been bookends of nascent human societies in the past and COVID-19 marks one of the greatest decimations of human life and economy in the 21st century. Though our species have endured grimmer scenarios with limited resources and advancements, the aftermath following COVID-19 could be puzzling. The digitalized and emotionally burdened population of the 21st century may experience repercussions that could be unnatural and warrant novel interventions [2]. In line with this, the present study aims to explore the prevalence and possible predictors of psychological distress during the COVID-19 quarantine in Chennai. The objective is to understand individual differences in risk factors that may exacerbate the already adverse situation, disposing people to poor outcomes.

Pandemics disrupt our sense of a just and orderly world. The capricious nature of the condition stirs existential angst, raising questions about the truth in organized religion and nature. Acknowledging this discomfort requires metabolizing memories and experiences in an objective manner disengaged from sentiment and common rules. But as social beings are driven by the need for communion, a need to thrive and actualize, and an evolutionary need to propagate our genes, the human psyche is left in an overburdened and vulnerable state [3]. Based on a review of the limited literature available, several risk factors can be identified that predispose individuals to experience psychological distress (characterized by anxiety and depressive symptoms) during pandemics. A few of these potential predictors are, history of mental illness, lack of social support, financial instability, poor level of education, lack of factual knowledge about the pandemic, being located in a high-risk zone, lack of supplies, stigma, history of substance abuse, loss of a relation to the illness and psychological variables such as contamination cognition, disgust sensitivity, body vigilance, anxiety-sensitivity related physical concerns, and general health anxiety [4-10]. The potential predictors of psychological distress during pandemics are as follows:

Body vigilance refers to the deliberate direction of attention towards internal and external body sensations and perturbations. High levels of body vigilance has been significantly implicated in panic disorder and hypochondriasis. In the context of COVID-19, hypervigilance of bodily changes is likely to create false alarms in response to trivial changes in body equilibrium. This may induce sympathetic arousal which in turn exacerbates the existing symptoms such as breathlessness, cough, fatigue, febricity, etc., that lead to greater fear and autonomic arousal, maintaining the vicious cycle [11]. This is highly likely to deteriorate the quality of life of individuals, especially during quarantine when seeking medical help may pose further stress.

The experience of disgust has been involved in the development and maintenance of various phobias such as arachnophobia, blood injection injury phobia, and contamination based obsessive- compulsive safety behaviors [12]. The construct of disgust can be bifurcated into 'disgust sensitivity' which is the perceived harmful consequences of experiencing disgust and 'disgust propensity' which is the frequency of experiencing disgust in various common and uncommon contexts. Disgust sensitivity has been strongly linked with contamination cognition (exaggerated beliefs about the prevalence and contraction of contagion) which in turn has been linked to excessive health and checking behaviors [13]. In the face of COVID-19 pandemic, media vectors have been spreading 'Safety Behavior Messages' across all possible venues, resulting in constant reminders and reinforcement of perceiving disgust which is likely to cause anxiety and distress in vulnerable individuals with a history of verminophobia [14].

Fatalism in the context of health behavior is defined as a 'belief that death is inevitable when a serious disease is present'. It is the passive denial of personal control during tumultuous times. Fatalistic attitudes have been strongly linked to poor preventive and rehabilitative behavior among patients with cancer, cardiovascular diseases, and HIV/AIDS [15]. It has also been linked to self-destructive habits such as smoking, substance abuse, and unsafe sexual practices especially among low- income groups that suffer from health care disparities. With the World Health Organization (WHO) asserting that social distancing, self-quarantining, and safety behaviors (such as frequent disinfection of hands, use of facial mask, personal hygiene, etc.) can prevent the spread of coronavirus, fatalistic individuals are unlikely to follow public regulations and safety measures [16]. They pose a threat to themselves and others around by refraining from seeking timely help and being negligent of symptoms.

Death is a powerful motivator of human behavior. It is the one thing that is inevitable and its unpredictability causes terror and anxiety. Human beings have a general tendency to use distal terror management defenses to deal with such anxieties [17]. During global crises such as the COVID-19 outbreak where thousands of individuals are losing their lives, one's sense of worthiness and sustainability is threatened. This unveils the repressed fear of death that heightens distress and unrest [18].

All of the above variables may be strongly implicated in the development and maintenance of psychological distress. It is an umbrella term that can range from feelings of vulnerability, anxiety, persistent worrying, negative thoughts, and isolation to more debilitating symptoms such as panic and depression [19]. During the current COVID-19 crisis, it can act as a catalyst for poor outcomes by promoting nonadherence, recklessness, elevated stress levels (which might negatively impact immune functioning), disturbed sleep, physical and cognitive dysfunctions, disruptive social and dyadic relationships, etc. Therefore, it is of paramount importance to discern the predictors of psychological distress to design and implement interventions that can aid vulnerable individuals to cope better with changing demands [17]

Method

A descriptive correlational research design was used as the study aimed to describe the state of affairs as they exist with no control or manipulation of variables involved. The sample comprised of 231 individuals with a mean age of 25.70 years. The sample was highly heterogeneous with individuals ranging from 17 to 80 years of age. The majority of the sample comprised of late adolescents between 17-20 years of age (59%) which was followed by young adults between 20-29 years of age (16.7%). Gender was not equally represented with 89.60% being females and only 10.4% being males. Purposive sampling was used to collect data from individuals during the 21-day COVID-19 quarantine period (March 22nd to April 14th, 2020). The questionnaires used in the study were typed out in Google forms and circulated via online communication portals such as WhatsApp, Facebook,

Surveymonkey.com, and other social media platforms. Informed consent was sought from the subjects taking the survey. The researcher relied on the 'Snowballing effect' to reach out to diverse populations across the country. The following five standardized tools were used to collect data.

Body Vigilance Scale (BVS)

This self-report inventory captures the degree of attentional focus deployed towards internal bodily sensations. There are a total of four items rated on a ten-point Likert scale (0-Not at all like me, 5-Moderately like me, 10- Extremely like me). The first three items assess the level of absorption with changing bodily sensations. The fourth item focuses on 15 separate bodily sensations (e.g., Heart palpitations, Hot flashes) that encompass the signs of panic disorder as outlined by DSM-IV. The BVS is a unidimensional inventory with good internal consistency (Cronbach's Alpha= .83) and an adequate test-retest reliability over a 5-week period (.67) in nonclinical sample [11].

Disgust Propensity and Sensitivity Scale-Revised (DPSS-R)

This self-report inventory is comprised of 16 items. It has two sub-scales: disgust propensity, which assesses the frequency of experiences characterized by disgust; and disgust sensitivity, which assesses the emotional impact of disgust experiences. Items are rated on a five-point Likert scale (1-never, 5-always). Both of the sub-scales have high level of internal consistency as measured by Cronbach's Alpha (.78, .77). Principal component analysis confirmed the two-factor structure. The scale has good convergent validity as both the sub-scales correlate significantly well with anxiety disorder symptom measures (.07-.37). It also has good divergent validity as noted by the non-significant relationship with positive affect [12].

Fatalism Scale

This 20 item self-report inventory assesses beliefs that individuals harbor about health and illness. It has three subs-scales (Predetermination (10), Luck (4), and Pessimism (6)). Items are rated on a five-point Likert scale (1- Strongly Disagree to 5- Strongly Agree). The tool has well-established psychometric properties. Confirmatory factor analysis supports the stable three-factor structure. All three subscales have adequate internal consistency as measured by Cronbach's Alpha (.86, .80, .82). Construct validity was established by correlating scores of the subscales with genetic determinism, perceived benefits of behavioral change, and behavioral intention [20].

Death Anxiety Scale-Revised (DAS-R)

This self-report inventory is comprised of 15 items that assesses the person's thoughts and feelings associated with the act of dying, the finality of death and corpses, and their burial. The DAS has undergone several revisions and has well-established psychometrics. A three-week test- retest reliability was found to be 0.83. Internal consistency was found to be 0.76. The test has good construct validity as it is distinguished between the clinical sample who spontaneously verbalized death anxiety concerns from the control group [21].

Kessler Psychological Distress Scale (K10)

This 10-item self-report inventory provides a global measure of distress by accessing depressive and anxiety symptoms which a person has experienced over the past four weeks. Items are rated on a five-point scale (1- None of the time to 5- All of the time). The scale has well-established construct validity as noted by its ability to distinguish between clinical and non-clinical anxiety and depressive disorders [22].

The statistics employed in this study were:

Pearson's Product Moment Correlation: To establish the relationship between body vigilance, sub-scales of fatalism, death anxiety, disgust sensitivity and propensity, and psychological distress.

Forward Linear Regression: To examine the best predictors and exclude non-significant predictors from the model.

Results

Descriptive analysis of data revealed that 42% of the population have experienced mild to severe psychological distress during the COVID- 19 quarantine. While only 14% have experienced severe psychological distress, 58% of the sample have reported psychological well-being which raises questions about individual risk and protective factors that may help understand the heterogeneity in outcome.

Table 1 reveals that psychological distress is significantly correlated with all the independent variables of interest. At least one sub-scale from each of DPSS-R and Fatalism scale are correlated indicating the limited yet significant role they play in the relationship.

Table 1. Internal correlation of research variables

Variables	1	2	3	4	5	6	7
1.Body Vigilance		.51	.52	.17	.15	.16	.15
2.Disgust Sensitivity	.51		.81	.37	.39	.38	.38
3.Disgust Propensity	.52	.81		.23	.30	.27	.35
4.Predetermination	.16	.37	.23		.69	.78	.41
5.Luck	.15	.39	.30	.69		.66	.44
6.Pessimism	.16	.38	.27	.78	.66		.37
7.Death Anxiety	.15	.38	.35	.41	.44	.37	
8.Psychological Distress	.21	.34	.32	.25	.34	.22	.36

Table 2. The models of forward linear regression analysis

Model	R^2	Adjusted R^2	R^2 Change	SE	Df 1	Df 2	Sig of F Change
1	.13[a]	.12	.12	6.90	1	2	.01
2	.18[b]	.17	.05	6.71	1	2	.01
3	.20[c]	.19	.02	6.63	1	2	.01

a. Predictors: Death anxiety
b. Predictors: Death anxiety, Disgust sensitivity
c. Predictors: Death anxiety, Disgust sensitivity, Luck

Table 2 reveals that among the seven variables under consideration (Body Vigilance, Disgust sensitivity, Disgust Propensity, Predetermination, Luck, Pessimism, and Death Anxiety), the best fitting model includes only three variables: death anxiety, disgust sensitivity, and luck. Death anxiety has emerged as the strongest predictor (ß = 4.76, p<.01). Adding disgust sensitivity (ß = .26, p<.01) to the model brings about a 5% increase in explanatory power. Model 3 witnesses the addition of variable of luck (ß = .37, p<.05) that brings about a marginal yet significant increase of 2% in the predictive power. Together, the three variables account for 19% of variance in psychological distress. All the other variables are excluded implying that their addition does not bring about any significant change in the predictive capacity of the model.

Discussion

The relationship between psychological distress and the research variables are in the expected direction and are clearly supported by the complex nature of the COVID-19 Quarantine. Idle time compounded with media propaganda about the escalating conditions can be troubling. Introspection of the self and body is a common response to repetitive messages about the signs and symptoms of the illness distributed by multiple online and offline sources [23]. With minor bodily changes appearing to be of paramount importance in the current times, the relationship between body vigilance and psychological distress is salient. Since prevention from contracting the contagion is the primary concern for the general population, heightened measures of personal and public hygiene are evident and may contribute to greater perceived repugnance, explaining the role of disgust sensitivity [24]. According to a synthesis model of disgust, it is an evolved response to aid in behaviors that prevent infectious diseases. Disgust is underappreciated as a source of suffering in many mental health conditions such as Obsessive-Compulsive Disorder (OCD), social phobias, Post-Traumatic Stress Disorder (PTSD), and panic disorders. During the COVID-19 pandemic, disgust sensitivity maybe exploited to force social distancing, promote obsessive hand washing, and influence moral behavior through its link with xenophobia and politics of exclusion [24]. Thus post COVID-19, interventions that focus on safety and checking behavior may have to be developed and disseminated at large scales.

Despite a nationwide shutdown, India appears to be facing fluctuation in reported cases which may create a sense of helplessness. For individuals with a poor internal locus of control, the situation is likely to aggravate their faith in 'chance factors' and 'fate' contributing to a sense of anxiety or passive resignation. This can support the relationship between fatalism sub-scales and psychological distress. Death anxiety has the strongest relationship with the dependent variable. Graphic and alarming media messages that force one to confront the possibility of untimely death can elucidate the obtained results. Also, thoughts about loved ones suffering a similar fate can instill terror and separation anxiety explaining the high levels of distress that some of them have reported [25]. The concept of 'Mortality Salience' from the Terror Management theory can help understand the strong contribution of death anxiety to psychological distress. Mortality salience is the awareness that death is inevitable. Our instinct to avoid death on one hand and the intellectual knowledge we possess about its ultimate nature on the other, sets in stage a constant battle that is manifested as defenses and denial. Cultural and social buffers allow us to seek meaning in an otherwise absurd reality. However, during times such as this when social order is disrupted, panic and repressed fear occur and individuals become completely helpless [17].

Finally, if people perceive chances of survival during this pandemic as a 'chance factor', it is likely to hinder the implementation of public regulations. With the backward sections of society experiencing an economic crisis, perception of luck can promote reckless behavior such as boycotting the shutdown, refusal to adhere to basic safety and hygiene measures. Feeling of having lost control over one's survival can trigger anxiety and in extreme cases, aggressive behavior [26].

Conclusion

The results of the present study reveal that a significant portion of the population (42%) has experienced mild to severe psychological distress during the COVID-19 quarantine. This distress is significantly related to facets of body vigilance, disgust sensitivity and propensity, fatalism, and death anxiety. Death anxiety has been emerged as the strongest predictor, followed by disgust sensitivity and perception of luck. Accordingly, designing interventions that go beyond the obvious factors that contribute to maladjustment and focus on less explored yet significant psychological variables is necessary to address mental health issues during the COVID-19 quarantine.

Acknowledgement

The author wishes to extend gratitude to all the participants who took part in the survey.

References

1. Taylor S. The Psychology of Pandemics: Preparing for the next

global outbreak of infectious disease. United Kingdom: Cambridge Scholars Publishing; 2019
2. Scheidel W. The Great leveller: Violence and the history of inequality from the stone age to the twenty-first century. Princeton University Press. 2017; ISBN 978-0691165028.
3. Wang C, Pan R, Wan X, Tan Y, Xu L, Ho CS, Ho RC. Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. International Journal of Environmental Research and Public Health. 2020; 17(5). https://doi.org/10.3390/ijerph17051729
4. Horesh D, Brown AD. Traumatic stress in the age of COVID-19: A call to close critical gaps and adapt to new realities. Psychological Trauma: Theory, Research, Practice, and Policy. 2020;12(4): 331-335. http://dx.doi.org/10.1037/tra0000592
5. Sibley CG, Greaves LM, Satherley N, Wilson MS, Overall NC, Lee CH. Effects of the COVID-19 pandemic and nationwide lockdown on trust, attitudes toward government, and well-being. American Psychologist. Advance online publication. 2020; http://dx.doi.org/10.1037/amp0000662
6. Blakey SM, Abramowitz JS. Psychological Predictors of Health Anxiety in Response to the Zika Virus. Journal of Clinical Psychology in Medical Settings. 2017; 24(3): 270-278. doi:10.1007/s10880-017-9514-y
7. Thompson RR, Garfin DR, Holman EA, Silver RC. Distress, Worry, and Functioning Following a Global Health Crisis: A National Study of Americans' Responses to Ebola. Clinical Psychological Science. 2017; 5(3): 513–521. doi:10.1177/2167702617692030
8. Mohammed A, Sheikh TL, Gidado S, Poggensee G, Nguku P, Olayinka, Obiako RO. An evaluation of psychological distress and social support of survivors and contacts of Ebola virus disease infection and their relatives in Lagos, Nigeria: a cross sectional study − 2014. BMC Public Health. 2015;15(1). doi:10.1186/s12889-015-2167-6
9. Kissler SM, Tedijanto C, Goldsteein E, Grad YH, Lipsitch M. Projecting the transmission dynamics of SARS-CoV-2 through the postpandemic period. Science. Advance online publication. 2020; 368 (6493):860-868. doi: 10.1126/science.abb5793
10. Huffington A. Interview by Fareed Zacharia. Global Public Square. 2020
11. Schmidt NB, Lerew DR, Trakowski JH. Body Vigilance in Panic Disorder: Evaluating Attention to Bodily Perturbations. Journal of Consulting and Clinical psychology. 2008; 65(2): 214-220.
12. Olatunji BO, Cisler JM, Deacon BJ, Connolly K, Lohr JM. The Disgust Propensity and Sensitivity Scale-Revised: Psychometric properties and specificity in relation to anxiety disorder symptoms. Journal of Anxiety Disorders. 2007; 21(7): 918–930. doi: 10.1016/j.janxdis.2006.12.005
13. Ojserkis R, Taboas W, McKay D. Disgust in Psychopathology. Treatments for Psychological Problems and Syndromes. 2017; 480-503. doi:10.1002/9781118877142.ch30
14. Badour C, Feldner M. The Role of Disgust in Posttraumatic Stress: A Critical Review of the Empirical Literature. Psychopathology Review. 2016; doi:10.5127/pr.032813
15. Hayes J, Clerk L. Fatalism in the Fight against COVID-19: Implications for Mitigation and Mental Health. 2020; doi: 10.31219/osf.io/t6zmv.
16. UNICEF. Key Messages and Actions for COVID-19 Prevention and Control in Schools UNICEF/UNI220408/Pacific. 2020
17. Pyszczynski T. The Role of Death in Life: Exploring the Interface Between Terror Management Theory and Evolutionary Psychology. In Evolutionary Perspectives on Death. 2019; 1-24
18. Cable D. Coping with 'Death Awareness' in the COVID-19 Era. Scientific American. 2020. https://www.scientificamerican.com/article/coping-with-death-awareness-in-the-covid-19-era/
19. Farley H. Promoting self- efficacy in patients with chronic disease beyond traditional education: A literature review. Nursing Open. 2019; 1-12. doi: 10.1002/nop2.382
20. Shen L, Condit CM, Wright L. The psychometric property and validation of a fatalism scale. Psychology & Health. 2009; 24(5): 597–613. doi:10.1080/08870440801902535
21. Templer DI. The Construction and Validation of a Death Anxiety Scale. The Journal of General Psychology.1970 (revised and republished 2016); 82(2), 165–177. doi:10.1080/00221309.1970.9920634
22. Kessler RC, Andrews G, Colpe LJ, Hiripi E, Mroczek DK, Normand SL, et al. Short screening scales to monitor population prevalences and trends in non-specific psychological distress. Psychological Medicine. 2002; 32: 959-956
23. Hussain W. Role of Social Media in COVID-19 Pandemic. The International Journal of Frontier Sciences. 2020; doi: 4.10.37978/tijfs.v4i2.144.
24. McKay D, Yang H, Elhai, J, Asmundson G. (2020). Anxiety Regarding Contracting COVID-19 Related to Interoceptive Anxiety Sensations: The Moderating Role of Disgust Propensity and Sensitivity. Journal of Anxiety Disorders. 2020; https://doi.org/10.1016/j.janxdis.2020.102233
25. Dasson B. Deaths, Fear of Covid-19 Creating Anxiety, But There is Social Support: NIMHANS Director. News 18. 2020 April 30
26. Rajagopalan RP. The danger of China's maritime aggression amid COVID-19. Observer Research foundation. 2020; https://www.orfonline.org/research/the-danger-of-chinas-maritime-aggression-amid-covid-19-64423/