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# An insight into the mental health needs of the common public of Tamil Nadu, India, subjected to COVID-19 lockdown, a rare unprecedented crisis



**Annales Médico** 

Un aperçu des besoins en santé mentale de la population du Tamil Nadu, en Inde, soumise au confinement COVID-19, une crise rare sans précédent

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## ABSTRACT

*Purpose.* – COVID-19, a major "*Public Health Emergencies of International Concern*", had sought greater attention among researchers to study its pathogenesis, associated complications and management. However, there are only few studies that had studied its potential impact on mental health of general public, who are subjected to social distancing, community lockdown and restrictions in their routine activities.

*Objectives.* – The aim of this study is to assess the prevalence of psychological distress and mental health needs among general public in Tamil Nadu subjected to lockdown, social distancing amidst COVID-19 crisis. Tamil Nadu is one of the worst affected states of southern India.

*Methods.* – A self-administered, web-based application study using "*WHO-Self Reported Questionnaire-*20", in bilingual version, both English and Tamil, is used to screen the public for the level of distress. The study is done while the state is under extended lockdown and restricted movement.

Key findings. – A total of 918 respondents participated in the survey and it is found that about more than one third of the respondents ( $\sim$ 35%) are under psychological distress. A significant association between younger age group, female gender, unmarried, people with children are found to be under distress. The lockdown had increased the frequency of smoking and quantity of cigarettes among smokers, also has increased the frequency of drinking among alcohol consumers. Of the SRQ-20 items recorded, stress related neurotic symptoms (>70%) was observed more than the depressive mood. About 33% of those scored > 7, had suicidal tendency. The districts declared red zones had significantly reported a greater number of respondents under distress.

*Conclusion.* – Besides effectively mitigating the COVID-19 crisis, in terms of prevention, control and treatment strategies, it is prerogative to effectively manage fear, distress due to the COVID-19 and associated anxiety and depression among the public.

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## RÉSUMÉ

*But.* – Le COVID-19, une importante « Urgence de santé publique de portée internationale », a demandé une plus grande attention des chercheurs pour étudier sa pathogenèse, les complications associées et la prise en charge. Cependant, rares sont les études qui ont étudié son impact potentiel sur la santé de la population, qui est soumise à l'éloignement social, au confinement communautaire et à des restrictions dans ses activités courantes.

*Objectifs.* – Le but de cette étude est d'évaluer la prévalence de la détresse psychologique et des besoins de santé mentale dans la population du Tamil Nadu soumise au confinement, à la distanciation sociale au milieu de la crise du COVID-19. Le Tamil Nadu est l'un des États les plus touchés du sud de l'Inde.

*Méthodes.* – Une étude d'application auto-administrée en ligne utilisant le « WHO-Self Reported Questionnaire-20 », en version bilingue, en anglais et en tamoul, est utilisée pour dépister le niveau de détresse. L'étude est effectuée alors que l'État est sous confinement prolongé et mouvements restreints.

*Principales conclusions.* – Sur les 918 répondants qui ont participé à l'enquête, on constate qu'environ plus d'un tiers des répondants (~35%) sont en détresse psychologique. Les plus jeunes, les femmes, les célibataires, les personnes avec enfants se trouvent en situation de détresse de façon significative. Le confinement a augmenté la fréquence du tabagisme et la quantité de cigarettes chez les fumeurs, a également augmenté la fréquence de consommation d'alcool chez les consommateurs d'alcool. Parmi les items SRQ-20 enregistrés, les symptômes névrotiques liés au stress (> 70 %) ont été plus observés que l'humeur dépressive. Environ 33 % des sujets, ayant obtenu un score supérieur à 7, avaient une tendance suicidaire. Les districts déclarés zone rouge avaient notablement signalé un plus grand nombre de répondants en détresse.

*Conclusion.* – En plus d'atténuer efficacement la pandémie du COVID-19, en termes de stratégies de prévention, de contrôle et de traitement, il est capital de gérer efficacement la peur, la détresse due au COVID-19, l'anxiété et la dépression associées et d'étendre le soutien psychosocial au public.

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## 1. Abbreviations

Mots clés ·

Confinement

COVID-19

Dépression

Pandémie

SRO-20

Stress

Anxiété

Analyse factorielle

AAPOR	American Association for Public Opinion		
	Research		
Chinese CDC (CCDC)	Chinese Centre for Disease Control and Prevention		
CMD	Common Mental Disorder		
COVID-19	Corona Viruses Diseases-2019		
DHR	Department of Health Research		
GHQ-12	General Health Questionnaire-12		
ICMR	Indian Council of Medical Research		
IQR	Inter Quartile Range		
MOHFW	Ministry of health and welfare		
NDMA	National Disaster Management Agency		
NIMHANS	National Institute of mental Health and neurosciences		
RO	Reproductive number		
SRQ-20	Self-Reported Questionnaire-20		
WHO	World Health Organization		

#### 2. Introduction

Corona Viruses Diseases-2019 (COVID-19), the Public health emergencies of International concern (PHEIC), as declared by the World Health Organization (WHO) [18], is one of the unprecedented "Pandemics" for the state of Tamil Nadu, in the Indian Union. With confirmed human to human transmission, deaths, no curative medicines and no vaccines and reports of at least 100 confirmed cases by 15th March, an official lockdown was declared pan India on 25th March, 2020 [2] so as to effectively implement the non-pharmacological preventive interventions such as social distancing and self-isolation to bring down the reproductive number ( $R_0$ ) and flattening of the curve and control the community spread of COVID-19. Quarantining of cases and contacts; contact tracing was done aggressively to prevent the community spread and reduce the burden on the health care facility and reduce the mortality. In spite, India still continued to rank 3rd globally and 1st among the South-East Asian regions.

Pandemics like COVID-19 are not just a medical phenomenon; they affect individuals and society on many levels, causing disruptions in the normalcy [8]. In the era of information, the influence of infodemic could always result in panic, stress and masshysteria, evident from panic buying, collection of masks and other essential and medical supplies [17]. Stigma and Xenophobia are two aspects of the societal impact of pandemic infectious outbreaks [9]. Leave alone the stress from getting diseased and quarantined, the ongoing pandemic has a huge impact on economy, closure of business, loss of wages and salary, financial implications, rise in inflation and loss of employment and the uncertainties associated with all these cumulatively adds up to the effects of widespread panic and even a healthy individual would not be spared. Man being a social animal, isolation and separation from the friends and families and non-availability of favorite food and comforts all can possibly lead to psychological distress, anxiety and depression.

The present scenario under the grip of COVID-19 makes the general public more prone to stress, anxiety and depression, resulting in altered behavioral traits, increased rage and violent tendency, crime against child and women and pushing few into the other end of the array like depression, suicidal thoughts, hopelessness and stress associated somatic illness and physical ailments [8]. The objective of study was to estimate the prevalence of psychological distress – Stress, Anxiety and Depression among the people who were quarantined and under lockdown due to the Corona virus outbreaks and also to counsel participants who are under distress to seek further help.

#### 3. Methods

A web application-based online survey, was conducted utilizing WHO – Self-Reported Questionnaire-20, (SRQ-20). A bilingual version in both English and Tamil is used to screen psychological distress among the public who was under COVID-19 lockdown. Along with the 20 items in SRQ-20, the web application also comprised of the basic sociodemographic variables and personal habits. A web link of this application was made accessible at, "The Tamil Nadu Dr. MGR Medical University" – institution's website and was widely circulated among the general population through social media like WhatsApp, Telegram or an Electronic mail.

The participants were explained about the study and was categorically stated that the participation is fully under volition; for the individuals above the age of 25 years; and participation warrants the implied consent. Participants need to fill each and every question, without which the form cannot be submitted, so as to avoid incomplete responses. The participants after submission get to know their scores at the result page. Those who had obtained scores equal and above the cut-off score -7 (out of 20) would be clearly notified that they are under probable distress and an advisory note would be displayed to seek help from the Tamil Nadu State health and family welfare department – district wise designated centers, closer to their residence, by providing telephone helpline numbers. An arrangement also had been made

to co-ordinate the same with the official concerned. Volunteers earmarked to assist and their contact number is displayed in the result page. Besides these, the last page of the survey form also carried Education material: WHO, advisory – Coping with Stress during COVID-19.

#### 3.1. Sampling method

A non-probability, convenient, river sampling according to American association for public opinion research (AAPOR) [22] respondent driven method was adopted in. General public, who are above the age of 25 years from Chennai and other parts of Tamil Nadu, participants who are literate and have an access to electronic mail and social media and apps like WhatsApp and Telegram were selected. Any participants lesser than 25 years of age are categorically excluded in the survey for the accuracy of the study. A total of 918 response (110 from the pilot study and 808 from the actual survey) were obtained, the district wise breakup of the participants is as per the Fig. 1.



Fig. 1. Sampling distribution - Number of respondents: district wise (Posteriori).

#### 3.2. Sample size estimation

Daniel and Macfarlane formula for sample size calculation, as given below is used to estimate the sample size,  $n = DEff \times \frac{z^2(P)(Q)}{E^2}$  where, D Eff is Design effect and is 2, as it is a non-probability sampling, *P* is the proportion likely to observed and *Q* is (1–P).

As there is no previous study available, the sample size estimation is done assuming: 50% of the entire population (P = 0.05), are possibly under stress, anxiety and depression, level of significance ( $\alpha$ ), 5% and level of precision E, 5%. Z variate, when  $\alpha = 5\%$  is 1.96. Thus, it is computed to be 770.

#### 3.3. Piloting

The web-application customized for this study was designed using a pre-validated instrument, SRQ-20, yet was decided to subject for a pilot testing to at least 60 participants, as the mode of survey was online, there were 110 respondents in almost two days, for the pilot study, initial analysis of the results obtained were analyzed, in order to limit the sampling within the state of Tamil Nadu, a separate variable, District was added. Data of the pilot study viz., final tool minus district are also clubbed together with the actual survey and the results are analyzed. So, a total of 918 recorded respondents are accounted.

#### 3.4. Self-Reported Questionnaire-20 (SRQ -20)

SRO-20 was designed by the WHO, as self-administered questionnaire and scale as an easily accessible tool for developing countries, to be used in a primary health care setup during emergency. It comprises of 20 items to detect the probable caseness and non-case-ness in detecting common mental disorders and associated symptoms of lethargy, decreased energy, depressive thoughts, anxiousness, depressive mood, somatic symptoms and suicidal thoughts. It is rather simple, easy to understand by the participant and is better than GHQ-12, as an indicator of severity [16]. It is also highly specific and can objectively measure and thus helpful to the researcher [6]. SRQ-20 is also effectively used in screening of Common Mental Disorder (CMD) in primary care setting [20] A Chinese version has also been validated to be used in Community Setting [10]. It has been effectively tested in comparison with many gold standard tools available in Indian community and local languages. A local language (Tamil) version of SRQ-20, which has been widely tested and validated at NIMHANS was used in the survey.

Factor structure of the SRQ-20 varies from two to seven factors, with the variance being attributed to population, gender, and setting. Cut-off scores also vary widely depending on the population and setting [3,4,5,7]. In this study, a cut-off score of 7 or greater to identify presence of CMDs based on the literature evidence. The Cronbach's alpha for the reliability found to be > 0.85 [20].

#### 3.5. Analysis

The demographic details of the participants are analyzed and the proportion of individuals under each category is expressed in percentage. The Individual scores are computed and categorized into two groups at the cut-off score (>7/20). Each variable is analyzed for the test of significance using Chi<sup>2</sup> statistic test for association. The analysis of all the twenty items in the questionnaire are grouped into four factors as is established in WHO selfreporting guide for each of the ensuing categories – Decreased energy, Somatic symptoms, Anxiety and depressive thoughts and depressive moods. A reliability index Cronbach's alpha for the tool is also ascertained. All the statistical analysis was done using IBM-SPSS 17.0.

#### 3.6. Ethical considerations

As stated already, the first page of the survey is designed to serve as a participant information sheet, that also clearly stated the participation in the survey as an implied consent, in itself. As no name, email id or mobile numbers were not collected to ensure anonymity and ethical clearance was obtained from the IEC, The Tamil Nadu Dr. MGR Medical university, vide proposal No. ECMGR0309134 dated 18 June 2020.

## 4. Results

#### 4.1. Sociodemographic variables: percentage wise distribution

Of the respondents (n = 918), 59% (544) were males and 41% (374) were females. Median age of the respondents is 32 years (IQR-14 years). The percentage distribution among the marital status is as follows 63% were married, 2% were separated and 35% were singles; 54% of the respondents had children. Results of the rest of variables summarized in Table 1.

#### 4.2. Scoring

The results of the SRO-20 scores are analyzed as per the scoring criteria and cut-off, seven is used to ascertain, the probable case*ness* (scoring result > 7) and *non-case-ness* (scoring result < 7). Of the 918 respondents, 315 respondents scored > 7, thus, it is found that about more than one third of the respondents  $(\sim 35\%)$  are under psychological distress, refer below Table 2. Among the respondents 36% of the total female respondents over 34% of the total male respondents are under distress; 40% and 31% respectively are in the age groups 25 years to 34 years and 35 years to 44 years; the prevalence of psychological distress, as found, is more among the unemployed followed by IT professionals and the students. Though the proportion of healthcare workers to respond to the survey is relatively larger yet only 10% of them were under distress. People who were single are relatively under more stress than the married lot. Also, among smokers and among people who consumes alcohol about 50% has admitted that the frequency of smoking and alcohol intake has increased following lockdown. Also 100% of the people who consumed more than 10 drinks of alcohol were under stress amongst others.

Chi<sup>2</sup> test for association of each variables taken into considerations in the survey: age, occupation, marital status, number of children, smoking habits, smoking frequency all were found to be statistically significant. The rest of the variables does not have statistical significance. The Chi<sup>2</sup> test statistics against each variable is also mentioned in the Table 2 below.

#### 4.3. District wise responses

Of the 808 (from the total 918 respondents) respondents, whose districts were recorded, 282 respondents have scored more than the cut-off scores (> 7). The percentage-wise details are displayed in the Fig. 2. It is inferred that the districts Chennai (26%), Coimbatore (8%), Tiruvallur (6%), Madurai (6%), Chengalpattu (4%), Salem (4%) that had maximum percentage of respondents, scoring > 7 corresponds to that of government declared red zone of containment. The results of the remaining districts are represented in the Fig. 2.

#### Table 1

Percentage wise distribution of socio-demographic variables.

Demographic variables – category	Total sample (n=918)	
	Number	(%)
Age (in years)		
25–34	532	(58%)
35–44	223	(24%)
45–54	112	(12%)
55-64	43	(5%)
65-74	7	(1%)
75–84	1	(0%)
>84	0	(0%)
Gender		
Male	544	(59%)
Female	374	(41%)
Occupation		
Government	73	(8%)
Health care	225	(25%)
Housewife	64	(7%)
IT professional	86	(9%)
Others	56	(6%)
Police	6	(1%)
Private	194	(21%)
Self employed	72	(8%)
Student	110	(12%)
Un-employed	32	(3%)
Marital status		
Married	583	(63%)
Separated	15	(2%)
Single	320	(35%)
Number of children		
0	429	(46%)
1	239	(26%)
2	235	(26%)
>2	15	(2%)
Are you a smoker?	70	(0%)
Yes	/9	(9%)
Among smokers: how many cigarettes do you smoke?	039	(91%)
No. of smokers = 79		
1–5 cigarettes	55	(66%)
5–10 cigarettes	14	(18%)
> 10 cigarettes	10	(13%)
Among smokers: has your smoking frequency increased during this lock-down period? No. of smokers = 79		
Yes	25	(32%)
No	54	(68%)
Do you consume alcohol?		
Yes	85	(9%)
No	833	(91%)
Has your alcohol consumption increased during this		
	12	(14%)
No	73	(86%)
Quantity of alcohol consumed per-week. No. of alcohol	1.5	(00%)
consumers = 85		
1–2 drinks	62	(73%)
3–4 drinks	17	(20%)
5–6 drinks	4	(5%)
>10 drinks	2	(2%)

#### 4.4. Interpreting the SRQ-20 results

The reliability analysis of the SRQ-20 (bilingual tool), *Cronbach's alpha is 0.892*. Each item in the questionnaire, when compared with the scoring, the chi-square statistic for association,  $\kappa^2 = 0.0001$ , was found to be significant. The items in the tool are grouped into various factors like decreased energy, somatic symptoms, depressive moods, depressive thoughts as established from the existing literature evidence [4,6], the mean score for each factor are displayed in the Table 3.

# 5. Discussion

A result of about 35% of the general public are under psychological distress during an extended lockdown due to COVID-19 is alarming and is one of the greatest burdens on the existing health care arrangement, as evident from the various studies conducted among the general public of various nations including China, Spain, Italy and Germany [4,5,14,15,19,21,24,25]. Here in this study, an effort is also made to ensure that people under distress detected during the survey had been advised and encouraged to seek further help at designated centers closed to their locality, which is quite a thoughtful attempt, made.

In confluent with other studies, the female predilection is observed in this study - 36% female over 34% male [23]. Comparison to the other groups, active, younger and economically productive age group between the 25-44 years of age are relatively under more stress. Under the Occupation category, unemployed followed by IT professionals, students are relatively under stress. The disruption and mounting pressure on economy, trade and the job cuts, could possibly explain the enhanced stress among the unemployed. Mandatory house confinement and the pressure of work from home and missed classes and examinations could be attributable reasons in case of IT professionals and students. Also, it is to be noted a considerable proportion of housewives are under distress. Among the respondents, 53% had children, the prevalence of stress among respondents with children is 60% which corresponds to the WHO, IEC material. Also, among the people with substance use like smokers and alcohol consumers, the frequency of smoking and alcohol consumption has increased by 50%.

Various studies that had been conducted on frontline health care workers on other nations [11] including India during the initial outbreak, in this study though the proportion of healthcare workers to respond to the survey is relatively larger than other lots, yet only 10% of them were under distress. A positive attitude among the health care workers is appreciable, especially in the graving situation like COVID-19. However, adequate resources, rotation in duties, shift breaks, quarantine breaks, quality family time should be ensured, if not may increase the distress in long run, as there is a fear of second wave.

District wise predilection, as observed from the survey is in congruence with the containment areas of red, orange, yellow regions – districts among red zones like Chennai, Coimbatore, Kanchipuram, Villupuram, Madurai, Ranipet, Thiruvallur, Theni, Chengalpattu, Erode and Trichy have recorded more than 35% (as recorded in this survey), above the average proportion of people under distress observed in here.

Among the questions, posed in the SRQ-20: feeling tired, feeling unhappy, lost interest in things, unable to carry routine daily activities, feeling of not playing useful part in life have obtained maximum votes, all of which corresponds with community lockdown, confinement related. Also, to the Question: has the thought of ending your life been on your mind? 33% of the total respondents, who have scored more than 7, has answered Yes, in contrast only 2% have answered Yes, among the respondents who have scored less than 7. Of the four factors, grouped above, in the Table 3, the mean score is more for decreased energy and depressive thoughts, likely to have caused due to Stress as observed in many studies.

The current crisis, unprecedent confinement, community lock down is relatively new and is one of the newer experiences for the state like Tamil Nadu in India. Unlike other nations like China, Africa, United States, which had experienced outbreaks like A(H1N1), EBOLA, ZIKA. The hot and dry climatic conditions of India, has always been natural environmental protection in limiting the transmission. An outbreak of NIPAH virus though

#### Table 2

Scoring results and test of significance.

Demographic variables category		Proportion under each category of scoring <sup>a</sup>	
	Scored < 7 n = 603	Scored > 7 n = 315	P-value <sup>b</sup>
Age (in years)			
25–34	60%	40%	0.0001
35-44	69%	31%	
45–54	78%	22%	
55-64	84%	16%	
65-74	100%	0%	
75–84	100%	0%	
>84	0	0	
Gender			
Male	67%	33%	0.509
Female	64%	36%	
Occupation			
Government services	66%	34%	0.002
Health care	68%	32%	
Housewife	63%	38%	
IT professional	53%	47%	
Others	70%	30%	
Police	83%	17%	
Private	73%	27%	
Self employed	75%	25%	
Student	54%	46%	
Un-employed	50%	34%	
Marital status			
Married	71%	29%	0.0001
Separated	53%	47%	
Single	57%	43%	
Number of children			
0	60%	40%	0.0001
1	68%	32%	
2	73%	27%	
>2	87%	13%	
Are vou a smoker?			
Yes	53%	47%	0.044
No	67%	33%	
Among smokers: how many cigarettes do you smoke? No. of smokers = $79$			
1–5 cigarettes	54%	46%	0.158
5-10 cigarettes	57%	43%	
> 10 cigarettes	60%	40%	
Among smokers: has your smoking frequency increased during this lock-down period? No. of smokers = 79			
Yes	48%	48%	0.037
	56%	46%	01007
Do you consume alcohol?	50,0	10,0	
Ves	62%	38%	0 794
No	66%	34%	0.751
Has your alcohol consumption increased during this lockdown? No. of alcohol consumers = 85	00/0	3 1.0	
Yes	50%	50%	0.49
No	64%	36%	
 Quantity of alcohol consumed per-week No. of alcohol consumers = 85	0.00	30.0	
1-2 drinks	66%	34%	0 389
3-4 drinks	59%	41%	0.303
5 - 6 drinks	50%	50%	
> 10 drinks	0	100%	

<sup>a</sup> All data expressed in percentage.

<sup>b</sup>  $\varkappa^2$  test, *P*-values less than 0.05 is found to be significant.

occurred in the neighbouring state, Kerala, in, the magnitude is miniscule and the Government of Kerala was effective in contact tracing and curbing the disease spread, at the earliest [1].

Besides, the Union Ministry of health, India launching free 24/7 helpline to offer mental health support following nationwide lockdown at National Institute of mental Health and neurosciences (NIMHANS) Bangalore [13], many institutions like PGIMER Chandigarh, AIIMS Delhi, Tamil Nadu State Government – Institute of Mental Health – District wise have come up with helpline numbers, to provide psychosocial support, the reach among the general public is not satisfactory. China, a country as populous as India, has better surveillance, public health services and contact tracing mechanism and Chinese Centre for disease control and prevention in line with United States, established with inputs from the United States. It has claimed to have minimum 2120 staff with 1876 technical professionals (accounting for 89%), 133 managerial staff (accounting for 6%), and 111 logistic staff (accounting for 5%) exclusively trained and appointed (*Chinese Center for Disease Control and Prevention*, [12]). Its time, India should come up with a separate public health agency exclusively for *Health security*, working 24/7. Ministry of health and welfare (MOHFW), Department of Health



**Fig. 2.** District wise percentage of respondents, who have scored > 7.

Research (DHR), Indian Council of Medical Research (ICMR) and National Disaster Management Agency (NDMA) should establish an exclusive interagency network to collaborate with autonomous functioning health care institutes – State public health departments for better surveillance, training staff and earmarking them as a reserve pool, for better crisis management. Besides the disease surveillance, prevention planning, control and monitoring, a room for the provision of catering better psycho-social support and mental health services should be made.

# 6. Strength and limitations of the study

Like any other study, the study is conducted online, which highly relied on participants response, where the *face validity* was not able to be ascertained. The sampling was non-probabilityconvenience – snowball technique/river sampling and included only literates and who had access to internet; there is an inherent *sampling bias* and *selection bias*; hence, the generalisation of the findings should be cautioned. Nevertheless, considering social isolation, restriction in movement and extended lockdown, it is one of the feasible ways to conduct the study and as the study assessed mental health status, which is still a taboo for the stigma and discrimination associated, snowball sampling is still a better shot. The timing of the study, a state-wide survey at times of lockdown is considered to be much relevant. Besides assessing the probable case-ness and non-case-ness, it did motivate the participants to seek mental health support and helped in publicising the helpline numbers and advisory note to cope with mental stress, as an IEC measure.

#### Table 3

SRQ-20 Factor wise mean (SD) scores of the respondents who scored  $\geq$  7.

Decreased Energy (total score 6)				
Decreased Energy (total score $-6$ )				
Q-20 Are you easily theu?	4.08 (+1.314)			
Q-18 Do you leer thed all the time?				
Q-12 Do you find it difficult to make decisions?				
Q-13 Is your daily work suffering?				
Q-8 Do you have trouble thinking clearly?				
Q-11 Do you find it difficult to enjoy your daily activities?				
Somatic symptoms (total score $-5$ )				
Q-19 Do you have uncomfortable feelings in your stomach?	1.60 (+1.282)			
Q-7 Is your digestion poor?				
Q-2 Is your appetite poor?				
Q-1 Do you often have headaches?				
Q-5 Do your hands shake?				
Depressive moods and anxiety (total score $-5$ )				
Q-10 Do you cry more than usual?	1.85 (+0.90)			
Q-9 Do you feel unhappy?				
Q-6 Do you feel nervous, tense or worried?				
Q-3 Do you sleep badly?				
Q-4 Are you easily Frightened?				
Depressive thoughts (total score $-4$ )				
Q-16 Do you feel that you are a worthless person?	2.40 (+1.158)			
Q-14 Are you unable to play a useful part in life?				
Q-17 Has the thought of ending your life been on your mind?				
Q-15 Have you lost interest in things?				
	,			

#### 7. Conclusion

From the survey results, it is evident more than one-third of the population who are subjected to lockdown and restricted movements are under constant distress and needs mental health care and support: to re-assure of the present condition and give hopes on future. Following Globalisation and in the era of Information, knowledge of disease outbreaks, social distancing, lockdown should be made aware to the younger lots through schools and college. Existing health care, should always cater for psycho-social support and mental health support at times of such nation-wide crisis and disasters. Existing 24/7 national helpline centres like the one in NIMHANS and the district wise centres, operational under Institute of Mental Health should be widely publicised. Independent assessment on utilisation of the existing care and feedback and any scope for improvement should be recommended to the authorities for the better nation's pandemic preparedness in near future.

#### **Ethical Approval**

The study was planned with inputs from Institutional review board, necessary ethical clearance was obtained from IEC.

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Nil.

#### Disclosure of interest

The authors declare that they have no competing interest.

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