

Psychological Distress in Nepalese Residents during COVID-19 Pandemic: A Community Level Survey

Dhan Bahadur Shrestha (✉ medhan75@gmail.com)

Mangalbare Hospital <https://orcid.org/0000-0002-8121-083X>

Bikash Bikram Thapa

Nepalese Army Institute of Health Sciences College of Medicine

Nagendra Katuwal

Nepalese Army Institute of Health Sciences College of Medicine

Bikal Shrestha

Nepalese Army Institute of Health Sciences College of Medicine

Chiran Pant

Nepalese Army Institute of Health Sciences College of Medicine

Bina Basnet

Nepalese Army Institute of Health Sciences College of Medicine

Pankaj Mandal

Nepalese Army Institute of Health Sciences College of Medicine

Amol Gurung

Nepalese Army Institute of Health Sciences College of Medicine

Ankita Agrawal

Gandhi International Mission Nepal, Kathmandu, Nepal

Ramhari Rouniyar

Apex Hospital, Itahari, Nepal

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Abstract

Background: COVID-19 pandemic has created unprecedented health and economic impact. Psychological stress, anxiety and depression are affecting not only COVID-19 patients but also health professionals, and general population. Restrictive measures; fear of contracting COVID-19; hardship to carry out livelihood is causing traumas to mental health. Nepal is a developing country from South Asia where the COVID-19 pandemic is yet to reach at peak. This online survey has been carried out to understand impact of COVID 19 on mental health of Nepalese community dwellers.

Methods: The COVID-19 Peritraumatic Distress Index (CPDI) questionnaire adapted from the Shanghai Mental Health Centre was used for collecting data in this online survey. Data were collected from 11 April-17 May 2020. Collected data extracted to Microsoft excel-13 and imported and analyzed using SPSS (Statistical Package for Social Sciences) version-22. An initial univariate analysis was conducted for all variables to assess the distribution and logistic regression analyses were done to estimate the odds ratios of relevant predicting variables.

Results: A total of 410 participants completed the whole self-rated questionnaires. Mean age of study participants was 34.8 (\pm 11.7) with male preponderance. Overall 88.5% of the respondents were not in distress (score less than 28) while, 11% had mild to moderate distress and 0.5% had severely distress. The prevalence of distress is higher among age > 45 years age group, female gender, and post-secondary educated. Health professional were more likely to get distressed. Respondents with post-secondary education higher odds (OR = 3.32 (p = 0.020) of developing distress as compared to respondents with secondary education or lower.

Conclusion: There is lower rate of psychological distress in city dwellers and people with low education. Adequate and timely focus should be directed to mental health awareness, psychosocial support with extra focus on vulnerable groups like health care workers, female and elderly individuals.

Background

At the end of 2019, a cluster of pneumonia cases diagnosed in city of Wuhan rapidly turn into epidemic in China. World Health Organization named this disease- 'COVID-19' (Corona Virus Disease 2019) and the novel virus- severe acute respiratory syndrome coronovirus-2 (SARS-cov-2) [1]. The outbreak was declared a 'Public Health Emergency of International Concern' on 30 January 2020. On March 11 'Pandemic' was declared when approximately 118,000 cases of the COVID-19 were reported in more than 110 countries and territories [2]. The spectrum of symptomatic infection ranges from mild to severe and critical. The epidemiology has heterogeneous socio-economic distribution and clinical presentation. Most infections are not severe. Nepal registered the index case of COVID-19 on January 23, 2020 and first mortality on May 17, 2020. After the isolation of the second case on 23 March, Nepal underwent strict restrictive measures like nationwide lockdown, social distancing, and travel restriction. Till May 27, 2020 Nepal registered 772 COVID-19 confirmed cases with four related mortality. The case fatality rate is 0.5% and recovery rate is 17.9% with no cases treated in critical care unit [3, 4]. In a study conducted in Nepal

during lockdown of COVID-19 pandemic; depression, anxiety and depression and anxiety co-morbidity was reported to be 34.1%, 31.2% and 23.2% respectively. Health professionals had 1.7 times, 2 times and 3.4 times higher odds of depression, anxiety and depression and anxiety co-morbidity respectively compared to others [5].

The COVID pandemic has forced people in social distancing and isolation; health and economic crisis; and 'infodemics', irrespective of profession, origin, and religion. Patients, health professionals, and the general public under unprecedented mental pressure may result into spectrum of short and long term psychological sequel such as anxiety, stress, depression, panic attack, and post-traumatic stress disorder [6, 7]. This study has been conducted to study the impact of COVID 19 on mental health of residents of Nepal during lockdown.

Methods

This study is the nationwide survey of psychological distress in the general population of Nepal during the COVID-19 pandemic. The COVID-19 Peritraumatic Distress Index (CPDI) questionnaire (survey questionnaire attached as Supplementary file) adapted from the Shanghai Mental Health Centre. The CPDI questionnaire incorporated relevant diagnostic guidelines for specific phobias and stress disorders specified in the International Classification of Diseases, 11th Revision. The survey data is collected through online Google Form with informed consent. The structured Google Form with CPDI question is published in social media network and sent in personal mail requesting participants to share the survey form to wider audiences. The psychological distress score is made available to respondents upon completion of the questionnaire. In addition to demographic data (age, gender, religion, education, employment status, monthly family income, nationality, ethnicity, and residence), the CPDI inquired about the frequency of anxiety, depression, specific phobias, cognitive change, avoidance, and compulsive behaviour, physical symptoms and loss of social functioning in the past week, ranging from 0 to 96. A score between 28 and 51 indicates mild to moderate distress, and ≥ 52 shows severe distress. Psychiatrists and public health physicians from Nepal verified the content validity of the CPDI. The linguistic validation of the questionnaire was done with forward translation by two independent translators, reconciliation, and again backward translated by two independent translators who are blind to the original questionnaire format. Then the approved translation was put alongside the original language questionnaire. Data were collected from 11 April (3 weeks since enforcement of nationwide lockdown) till 17 May 2020.

Exposure variable

The survey questionnaire included socio-economic and demographic variables such as age (< 30, 30–45, > 45), gender (male, female), religion (Hinduism and non-Hinduism), education (less than secondary, post-secondary and tertiary education), employment status (employed, not-employed, students), monthly family income (< NRS100900, NRS 100901-309000 and > NRS 309000), nationality (Nepali and non-Nepali), ethnicity (Brahmin & Chettri and Other), and residence (Province1; 2; 3;4;5;6;&7)

Outcome Variable

Modified version of the COVID19 Peri-traumatic Distress Index (CPDI) with 24 items used. The present study has used the e-questionnaire in Nepali version (supplemented with English version) of the CPDI, and internal consistency was assessed by using Cronbach's α . The internal reliability of the present study found to be 0.907 ($p < 0.001$). For each of the 24 items, subjects asked to measure emotional impact related to COVID-19 and frequency activities in the last week. The 5-point Likert scoring system used as follows: never-0, occasionally-1, sometimes-2, often-3, always-4. A total of the score of 0–28 is normal. A total score between 29 and 51 indicates mild to moderate distress and a score of greater than and equal to 52 indicates severe distress. Further, this category of three has modified in two groups one is healthy or no distress, and distressed (mild to severe distress as distressed score).

Statistical Analysis

Collected data extracted to Microsoft excel-13 and imported and analyzed using SPSS (Statistical Package for Social Sciences) version-22). An initial univariate analysis was conducted for all variables to assess the distribution for each variable. Categorical variables were summarized using percentages. Logistic regression analyses were used to estimate the odds ratios of relevant predicting variables. This gives how a set predictor X (exposure variables) is related to the dichotomous response variable of Y (outcome variable). For convenience, we define the response to be Y = 0 or 1, with Y = 1 denoting the occurrence of the event of interest. The outcome variable is No distress = 0 and distress = 1. The exposure variable can be continuous as well as categorical.

Research Ethics

All respondents gave their informed consent for inclusion before they participated in the study. The study was conducted in accordance with the protocol and approved by the Ethics Committee of Nepalese Army Institute of Health Sciences (NAIHS).

Results

A total of 410 participants completed the whole self-rated questionnaires. Table 1 present the socio-demographic profile of respondents who participated in the study. In our study, mean age of study participants was 34.8 (± 11.7) years ranging from 17–83 years. The Male to Female ratio is 1.84 where 64.6% (n = 265) of male participation were male. Majority of the respondents were educated (post-secondary and higher) (n = 324, 79%) and Hindu by religion (n = 369, 90.0%). Among study participants 70% were employed (n = 290); and 40.7% (n = 167) were health care workers. About two third of respondent were residing in Province 3(Bagmati) (n = 258, 62.9%) (Table 1.)

Table 1
Socio-demographic profile of the respondents (N = 410)

Socio-demographic Variables		n	%
Age (in Years)	< 30	163	39.8
	30–45	188	45.9
	> 45	59	14.4
	<i>Mean ± SD</i>	34.8 ± 11.7	
Gender	Female	144	35.1
	Male	265	64.6
	Other	1	0.2
Religion	Hinduism	369	90.0
	Non-Hinduism	41	10.0
Education	<i>Less than secondary</i>	86	21.0
	<i>Post-secondary education</i>	131	32.0
	<i>Tertiary education</i>	193	47.1
Employment status	Employment	290	70.7
	Non-employment	30	7.3
	Student	90	22.0
Monthly family income	< NRS 100900	374	91.2
	> NRS 100900–309000	21	5.1
	>NRS 309000	15	3.7
Nationality	Nepali	403	98.3
	Non-Nepali	7	1.7
Ethnicity	Bhramin and Chettri	252	61.5
	Other	158	38.5
Residence	Province 1 (Briatnagar as territorial capital)	67	16.3
	Province 2 (Janakpur as territorial capital)	37	9.0
	Province 3 (Bagmati)	258	62.9

NB: Nepal is yet to name all the provinces under the mandate of new constitution and federal People's Republic.

Socio-demographic Variables		n	%
	Province 4 (Gandaki)	21	5.1
	Province 5 (Butwal as territorial capital)	13	3.2
	Province 6 (Karnali)	4	1.0
	Province 7 (Sudurpaschim)	10	2.4
Are you a healthcare worker?	Yes	167	40.7
	No	243	59.3
Total		410	100
NB: Nepal is yet to name all the provinces under the mandate of new constitution and federal People's Republic.			

Table 2 depicts the prevalence of each symptom of CPDI. Among respondents, 50% (n = 205) were nervous, anxious at some moments and bought a lot of masks, medications, sanitizers, gloves, and other home supplies during the COVID-19 pandemic crisis. Two third (n = 271, 66.1%) of study population were worried about their families being infected and continue updating with COVID-19 related news and information (n = 248, 60.4%). Majority (n = 361, 88%), of respondents felt sympathetic to COVID 19 patients and their families.

Table 2
Presence of symptoms COVID19 Peri-traumatic distress (CPDI)

	Never n(%)	Occasionally n(%)	Sometimes n(%)	Often n(%)	Always n(%)
Question 1: Compared to usual, I feel more nervous and anxious.	200(48.8)	166(40.5)	30(7.3)	13(3.2)	1(0.2)
Question 2: I feel insecure and bought a lot of masks, medications, sanitizers, gloves and/or other home supplies.	205(50.0)	122(29.8)	64(15.6)	8(2.0)	11(2.7)
Question 3: I can't stop myself from imagining myself or my family being infected and feel terrified and anxious about it.	139(33.9)	177(43.2)	75(18.3)	14(3.4)	5(1.2)
Question 4: I feel helpless no matter what I do.	291(71.0)	82(20.0)	27(6.6)	9(2.2)	1(0.2)
Question 5: I feel sympathetic to COVID-19 patients and their families.	49(12.0)	81(19.8)	99(24.1)	58(14.1)	123(30.0)
Question 6: I feel helpless and angry about people around me, governors, and media.	133(32.4)	153(37.3)	75(18.3)	39(9.5)	10(2.4)
Question 7: I am losing faith in the people around me.	213(52.0)	113(27.6)	65(15.9)	16(3.9)	3(0.7)
Question 8: I collect information about COVID-19 all day. Even if it's not necessary, I can't stop myself.	162(39.5)	127(31.0)	68(16.6)	29(7.1)	24(5.9)
Question 9: I will believe the COVID-19 information from all sources without any evaluation.	284(69.3)	85(20.7)	32(7.8)	9(2.2)	0(0.0)
Question 10: I would rather believe in negative news about COVID-19 and be skeptical about the good news.	310(75.6)	63(15.4)	28(6.8)	7(1.7)	2(0.5)
Question 11: I am constantly sharing news about COVID-19 (mostly negative news).	276(67.3)	80(19.5)	36(8.8)	11(2.7)	7(1.7)
Question 12: I avoid watching COVID-19 news since I am too scared to do so.	281(68.5)	82(20.0)	34(8.3)	12(2.9)	1(0.2)
Question 13: I am more irritable and have frequent conflicts with my family.	294(71.7)	79(19.3)	23(5.6)	11(2.7)	3(0.7)

	Never n(%)	Occasionally n(%)	Sometimes n(%)	Often n(%)	Always n(%)
Question 14: I feel tired and sometimes even exhausted.	227(55.4)	125(30.5)	37(9.0)	19(4.6)	2(0.5)
Question 15: When feelings anxious, my reactions are becoming sluggish.	277(67.6)	97(23.7)	24(5.9)	11(2.7)	1(0.2)
Question 16: I find it hard to concentrate.	233(56.8)	121(29.5)	31(7.6)	21(5.1)	4(1.0)
Question 17: I find it hard to make any decisions.	277(67.6)	92(22.4)	31(7.6)	9(2.2)	1(0.2)
Question 18: During this COVID-19 period, I often feel dizzy or have back pain and chest distress.	317(77.3)	64(15.6)	22(5.4)	7(1.7)	0(0.0)
Question 19: During this COVID-19 period, I often feel stomach pain, bloating, and other stomach discomforts.	299(72.9)	81(19.8)	21(5.1)	8(2.0)	1(0.2)
Question 20: I feel uncomfortable when communicating with others.	311(75.9)	66(16.1)	25(6.1)	7(1.7)	1(0.2)
Question 21: Recently, I rarely talk to my family.	325(79.3)	57(13.9)	17(4.1)	9(2.2)	2(0.5)
Question 22: I have frequent awakening at night due to my dream about myself or my family being infected by COVID-19.	321(78.3)	68(16.6)	18(4.4)	2(0.5)	1(0.2)
Question 23: I have changes in my eating habits	302(73.7)	62(15.1)	31(7.6)	13(3.2)	2(0.5)
Question 24: I have constipation or frequent urination.	338(82.4)	48(11.7)	19(4.6)	3(0.7)	2(0.5)

More than two third (n = 277, 67.5%) of the participants felt helpless and angry about the people around them. One third (n = 126, 30.7%) believed COVID 19 information from all sources without validation; were irritable and have frequent conflicts with their family (28.2%. Approximately a quarter of the respondents felt dizzy, back pain, and chest distress (22.6%); and felt change in their eating habits during COVID-19 period (26.3%). More than two third of the respondents prefer not sharing negative news about COVID 19 67.3% (n = 276), not skeptical about the news (75.6%, n = 310), never avoided watching COVID-19 news because they were too scared (68.5%, n = 281) and had excellent communication with their family during the COVID-19 period (71.7%, n = 294).

Table 3 demonstrates distribution of level of distress by socioeconomic and demographic characteristics of Nepal. The prevalence of mild to severe distress in the age group < 30 years, 30–45 years and > 45 years old were 12.2% (n = 20); 9.5% (n = 18); and 15.3% (n = 9) respectively. The prevalence of mild to moderate and severe distress was higher among females than males. The prevalence of mild to moderate distress among males was 10.2% and 12.5% among females, and the severe distress prevalence was 0.4% among males and 0.7% among females.

Table 3
Prevalence of CPDI by socioeconomic and demographic characteristics, Nepal

		Normal n (%)	Mild to moderate distress n (%)	Severe distress n (%)
Age	< 30	143(87.7)	19(11.7)	1(0.6)
	30–45	170(90.4)	17(9.0)	1(0.5)
	> 45	50(84.7)	9(15.3)	0(0.0)
Gender	Female	125(86.8)	18(12.5)	1(0.7)
	Male	237(89.4)	27(10.2)	1(0.4)
	Other	1(100.0)	0(0.0)	0(0.0)
Religion	Hinduism	327(88.6)	41(11.1)	1(0.3)
	Non-Hinduism	36(87.8)	4(9.8)	1(2.4)
Education	Less than Secondary	80(93.0)	6(7.0)	0(0.0)
	Post-secondary	104(79.4)	27(20.6)	0(0.0)
	Tertiary	179(92.7)	12(6.2)	2(1.0)
Employment	Employment	258(89.0)	31(10.7)	1(0.3)
	Non-employment	29(96.7)	1(3.3)	0(0.0)
	Student	76(84.4)	13(14.4)	1(1.1)
Household's Monthly Income	<NRS 100900	331(88.5)	42(11.2)	1(0.3)
	>NRS 100901– 309000	19(90.5)	2(9.5)	0(0.0)
	>NRS 309000	13(86.7)	1(6.7)	1(6.7)
Nationality	Nepali	359(89.1)	43(10.7)	1(0.2)
	Non-Nepali	4(57.1)	2(28.6)	1(14.3)
Ethnicity	Bhramin and Chettri	217(86.1)	33(13.1)	2(0.8)
	Other	146(92.4)	12(7.6)	0(0.0)
Your State of Residence	Province 1	50(74.6)	16(23.9)	1(1.5)
	Province 2	29(78.4)	8(21.6)	0(0.0)
	Province 3	241(93.4)	16(6.2)	1(0.4)

		Normal n (%)	Mild to moderate distress n (%)	Severe distress n (%)
	Province 4	21(100.0)	0(0.0)	0(0.0)
	Province 5	11(84.6)	2(15.4)	0(0.0)
	Province 6	3(75.0)	1(25.0)	0(0.0)
	Province 7	8(80.0)	2(20.0)	0(0.0)
Are you a healthcare worker?	No	211(86.8)	32(13.2)	0(0.0)
	Yes	152(91.0)	13(7.8)	2(1.2)

Further, the prevalence of distress was higher among respondents who have post-secondary education (20.6%, n = 27) than lower education group. Similarly, the prevalence of distress was higher among student (15.6%, n = 14), who have household income of < NRS 100900 (11.5%, n = 43), Bhramin and Chettri (13.9%, n = 35), non-Nepali (42.9%, n = 3), and resident of province one (25.4%, n = 17).

Overall 88.5% (n = 363) of the participants were not distressed while, 11% (n = 45) were mild to moderate distressed and 0.5% (n = 2) were severely distressed due to COVID-19 pandemic (Fig. 1.)

Table 4 illustrates the predictor of distress using binary logistic regression. After adjusting for other factors, the participants residing at province three (Bagmati) had less chance of being distressed in COVID-19 (OR = 0.244, 95% CI: 0.111–0.539, p = 0.000) compared to participants residing at province one.

Table 4
Predictors of CPDI through binary logistics regression

		Exp(B)	95% C.I. for EXP(B)		p-value
			Lower	Upper	
Age (in Years)	< 30®				.562
	30–45	1.157	.456	2.932	.759
	> 45	1.819	.580	5.697	.305
Gender	Male®				.876
	Female	1.212	.583	2.523	.606
	Other	.000	0.000		1.000
Religion	Hinduism®				
	Non-Hinduism	.792	.265	2.365	.677
Education	<i>Less than secondary</i> ®				.007
	<i>Post-secondary education</i>	3.320*	1.208	9.124	.020
	<i>Tertiary education</i>	1.152	.358	3.710	.813
Employment status	Employment®				.300
	Non-employment	1.283	.496	3.322	.607
	Student	.237	.028	1.977	.183
Monthly family income	< NRS 100900®				.865
	> NRS 100900–309000	1.043	.200	5.443	.960
	>NRS 309000	1.654	.264	10.350	.591
Nationality	Nepali®				
	Non-Nepali	3.672	.667	20.235	.135
Ethnicity	Bhramin and Chettri®				
	Other	.510	.256	1.014	.055
Your State of Residence	Province 1®				.018
	Province 2	.882	.311	2.502	.814
	Province 3	.244*	.111	.539	.000
	Province 4	.000	0.000		.998

® Reference Category, *Significant at 5% level of significance

		Exp(B)	95% C.I. for EXP(B)		p-value
			Lower	Upper	
	Province 5	.775	.139	4.324	.772
	Province 6	1.130	.094	13.620	.923
	Province 7	.842	.139	5.098	.851
Are you a healthcare worker?	Yes®				
	No	1.120	.515	2.434	.775
	Constant	.123			.010

® Reference Category, *Significant at 5% level of significance

Participants with post-secondary education had 3.32 (95% CI: 1.208–9.124, $p = 0.020$) times higher risk of developing distress as compared to secondary education or lower. Other variables did not show relation to develop distress of COVID after adjusting other factors.

Discussion

In our study there were total 410 participants completing self-rated questionnaires, with mean age of 34.8 (± 11.7) years. Majority of respondent were male (64.6%), well educated (post-secondary and higher- 79%); Hindu (90.0%) by religion; Brahmin or Chettri by ethnicity (61.5%); of which 40.7% were healthcare worker and majority (62.9%) were resident of Province 3(Bagmati). Similar study conducted in Nepal showed comparable outcomes; where 54.2% were male with mean age of 27.8 years. 62.5% were Brahmin or Chettri ethnic group; 91.1% had completed Bachelor level in academic degree; 90.5% were Hindu and 60% of study population were health professionals [5]. Study in China showed significant differences in psychological distress based on age, marital status, other epidemic characteristics, media reports, and perception towards epidemic and outbreak impact [8].

Exact prevalence of depression, anxiety and stress disorder in population level varies from place to place and different community. A nationwide study conducted in Italian community using “Descriptive Statistics of Depression, Anxiety and Stress Scale–21 items (DASS-21)” showed average score in 67.3%, high range score in 17%, and extremely high range in 15.4% for depression. Female gender, having an infected acquaintance or family member, history of medical problems or stressful situations showed high level depression, anxiety, and stress alone or in combination [9]. Another study done among Chinese residents revealed moderate-to-severe stress in 8.1%, anxiety in 28.8% and depression in 16.5% of participants. Several protective factors against psychological distress noted were; high confidence in treating doctors, personal precaution, low risk of contracting COVID- 19 and perceived chance of survival, etc [10]. Majority (11%) of our study participants had mild psychological distress during COVID-19 pandemic that is comparable (13.6%) to the cross-sectional study done in Liaoning Province of China [11]. In comparison to two giant neighbours (China and India) the impact SARS-cov-2 in Nepal is far less. There is slow rise in

trend of total number of COVID-19 confirmed cases and mortality with peak unpredictable. The severity of psychological distress when compared with spatio-temporal distribution of the pandemic might explain the heterogeneity among different countries and regions in prevalence of psychological distress.

The psychological impact of pandemic and its other associated factor should not be neglected [12]. Half to two third of our study population were disturbed in terms of different psychological domains like nervousness, anxiousness, anger, change in health related behavior, empathy, and disease trend and impact. About one third of the respondents experienced some form of physical symptoms during this pandemic. Viral pandemic too have shown neuropsychiatric sequel among infected patient that mandates close monitoring [13]. In our study 9% of health professional was having mild-severe distress that is comparable to Israeli study (11.5%) [14]. A 'precarious healthcare system' can incite detrimental mental and physical health impact among frontline line health professionals [15]. Identification of the vulnerable groups needs special attention to mitigate long term psychological effects [16, 17].

Higher prevalence of distress was observed among health care workers in high impact countries revealing mild psychological disturbances in 34.4%, moderate disturbances in 22.4%, and severe disturbance in 6.2% [18, 19]. A meta-analysis comparing high and low risk of exposure among health care worker in different pandemics showed higher level of both acute or post-traumatic stress among staff having contact to affected patients (OR 1.71, 95% CI 1.28–2.29) and psychological distress (1.74, 1.50–2.03) [20].

The prevalence of mild to moderate and severe distress was higher among females than males and older than younger in this survey. The economically and physically active population group (education- post secondary or higher, students) have higher rate of psychological stress. People from province one, bordering India had higher (25.4%) percentage of mild to severe stress than other provinces. Respondents from province three, where most of the national and tertiary care level centre are located had 50 to 75% less chance ($p < 0.02$) of getting distressed than other province. The education level and income level showed inverse relation with level of psychological stress. Bohlken and colleagues showed severity of psychological symptoms depends on individual's age, gender, occupation, and proximity to COVID-19 patients [16]. Older population, city dwellers, people with stable income, and living with parents had less odd of anxiety, depression [21, 22]. Educated and young age populations are more likely to be connected to news and social media that has direct correlation ($R = 0.87$) to level of anxiety and panic [23]. Citizens who have contact or acquaintance with COVID-19 positive have higher odd (OR = 3.007, 95% CI = 2.377–3.804) of anxiety [21].

Limitation

A validated self-reported questionnaire was used to assess the severity of the distress along with the socio-economic predictors of psychological distress in the context of COVID pandemic in Nepal. This is an online survey done in a country where the internet penetration is 57% [24]. Availability of internet facility, education level, and responder's compliance might have influenced the number of participants in this

study. The segregation of the psychological impact in different domains (anxiety, depression, post-traumatic depression) would have given more practical approach in terms of management. The trend of pandemic inside the country is still emerging. The spatio-temporal distribution of the pandemic inside the country and its long term effect is beyond the scope of this pertraumatic stress index.

Conclusion

We have found significantly lower rate of psychological distress in city dwellers and in people with low education level. The rate of psychological distress is low (11.5%) as the pandemic is still emerging. Adequate and timely focus should be placed in larger social context emphasizing mental health awareness, psychosocial support, self- empowerment, and professional services based on local resources and pandemic trend. We recommend integrating public mental health services into national public health preparedness and emergency response plan, with extra focus on vulnerable groups like health care workers, female, marginalised, and older age co-morbid individuals.

Abbreviations

COVID-19: Coronavirus disease-19; CPDI: COVID-19 Peritraumatic Distress Index

n: number of patients; NAIHS: Nepalese Army Institute of Health Sciences; NRS: Nepalese Rupees; OR: Odds ratio; SARS-CoV-2: Severe acute respiratory syndrome coronavirus-2; SPSS: Statistical Package for Social Sciences

Declarations

Ethics approval and consent to participate

Ethics approval obtained from NAIHS-institutional ethical review committee. The survey data is collected through online Google Form with informed consent attached with survey questionnaire itself. Anyone who filled the form was understood to have given the consent.

Consent for publication

Not applicable

Availability of data and materials

The datasets analyzed during the current study are available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

DBS, BBT, NK, BS, CP and BB contributed in concept and design, analysis, and interpretation of data. PM, AG, AA and RR contributed in literature search, data collection, and review.

All authors were involved in drafting and revising the manuscript and approved the final version.

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Figures

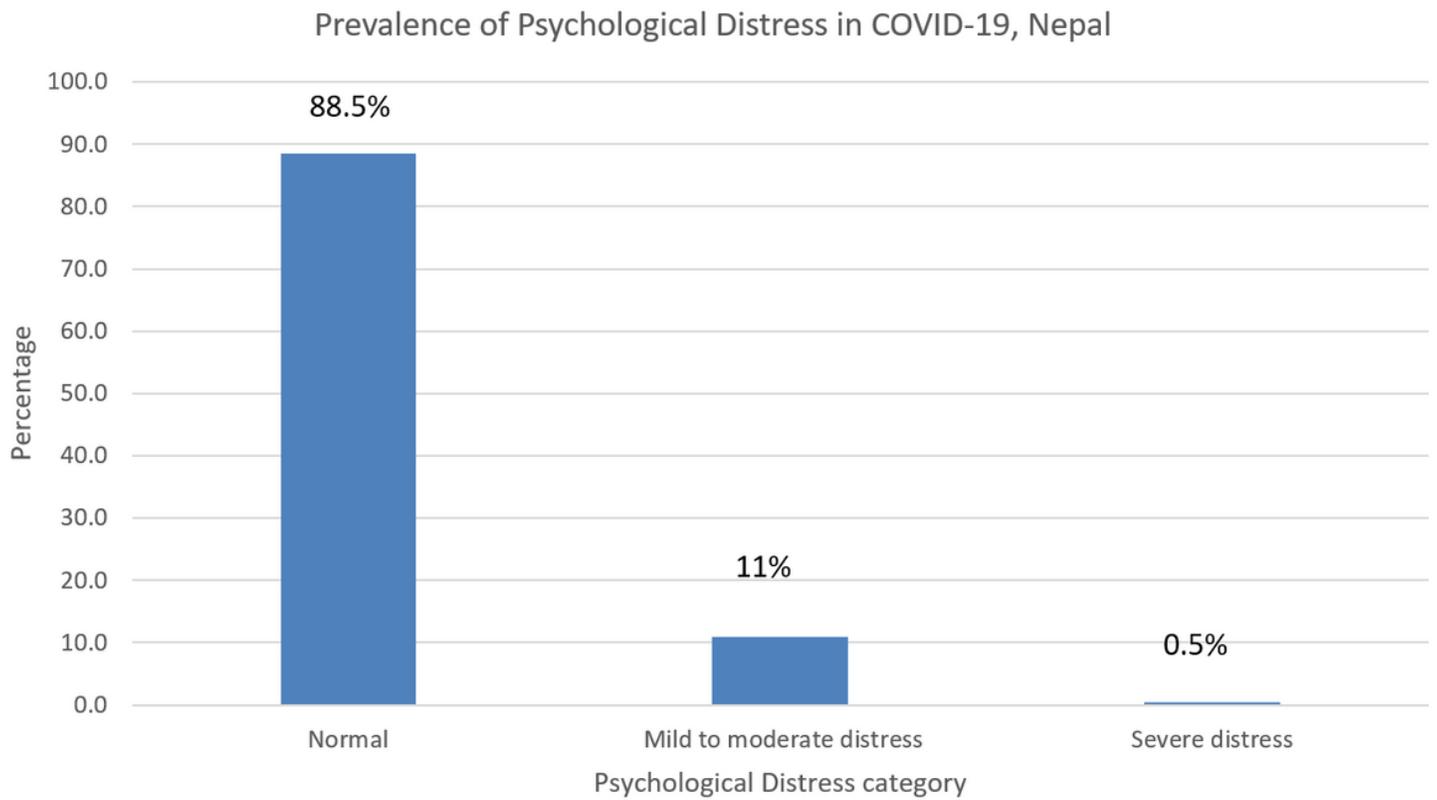


Figure 1

Prevalence of Psychological Distress in COVID-19, Nepal

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