Hope and General Self Efficacy as buffers of Psychological Distress during the COVID-19 Pandemic: A study from North East India

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The Coronavirus disease(COVID-19) spread so quickly across the globe causing loss of lives and leaving many terrified and grief stricken. Psychological distress in the form of depression, anxiety and stress experienced by the general population during the COVID-19   have been reported from different countries including from parts of India. The study aimed to assess psychological distress amongst the people of the North East(NE) India during the COVID-19 pandemic and to examine how such experiences are related with hope and GSE. The role of socio-demographic factors including gender, age, education, chronic illness and economic loss were also examined. Sample comprised of 827 adults recruited online from the eight states of NE India. Materials used included the Depression, Anxiety, and Stress Scale-21,the Herth Hope Index, and the Generalized Self Efficacy Scale. Data was analyzed using descriptive statistics, Mann-Whitney and Kruskal Wallis tests, and Spearman's Rank Difference Correlation. Psychological distress in the form of depression, anxiety and stress were observed in a good number of the participants. Hope and GSE were both found to be negatively correlated with experiences of psychological distress during the pandemic. Significant differences were observed by gender, educational level, marital status and age. Psychological distress was also found to be higher amongst people having chronic illness and /or those having encountered economic loss during the pandemic.

Keywords: Psychological distress, COVID-19, Hope, General Self Efficacy, North East India.

The Coronavirus disease(COVID-19) caused by SARS-CoV-2 virus which was declared as a pandemic by the World Health Organization (WHO) on 11 March, 2020 ,spread so quickly across the globe causing loss of lives and leaving many terrified and grief stricken. Psychological distress in the form of depression, anxiety and stress experienced by the general population have been reported from different countries including from India (Banna et al.,2020; Khademian et al., 2021; Roy et al., 2020; Solomou & Constantinidou,2022; Shah et al., 2021; Verma &Mishra,2020; Wang et al.,2020; Xiong et al., 2020) .There are, however, very little research on the role of positive psychological factors such as hope and general self efficacy (GSE) in coping with such experiences during the pandemic. Hope, which refers to one's perception that a desirable positive outcome is probable in the near or distant future, is a character strength that has been found to be negatively correlated with psychological distress in various non-pandemic traumatic conditions (Rawdin at al., 2013; Rustoen at al., 2010). GSE refers to individuals' belief that they can cope with a variety of difficult demands in life. The COVID-19 pandemic was a time when people were faced with unprecedented demands and challenges in life. The researchers hypothesized that both hope and GSE will have inverse relationship with psychological distress during this difficult period.

Different studies conducted during the COVID-19 pandemic have also examined the role of socio-demographic factors in the psychological distress experienced by people during the period. Some of these studies have reported that females (Banna et al.,2020; Gualamo et al., 2020; Kamal & Othman, 2020; Khademian et al., 2021; Solomou & Constantinidou,2022; Shah et al., 2021; Wang

et al.,2020) younger people (Mautonget al., 2021;Solomou & Constantinidou,2022; Shah et al., 2021; Varma et al., 2021) , the unmarried (Shah et al., 2021),having an acquaintance/ family member infected (Mazza et al., 2020) and those having history of stressful situation and medical condition(Mazza et al., 2020), are at greater risk for developing psychological symptoms such as depression, anxiety and stress. Other factors such as economic factors, education etc. have also been studied and it has been reported that family affluence is negatively correlated with psychological symptoms(Rehman et al., 2021). While all these studies have highlighted the factors that can act as predictors of psychological distress among people during a pandemic situation, still more needs to be done in the area to strengthen our understanding of the role of socio demographic factors in the experiences of psychological distress such as depression, anxiety and stress during times of pandemic.

The North East (NE)region of India includes the states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura. Considered as one of the economically backward regions of India, the region however, is culturally vibrant with over 220 ethnic groups(Tribal groups in Assam and Northeast India).The impact of the first wave of the pandemic in India was relatively less in the region in terms of casualty. However, this was not so during the second wave that swept over India in 2021. By the month of May 2021, the region was also already reeling with large numbers of casualties (The Economic Times). With limited medical infrastructure and human resource in the region, there was considerable reason for anguish among the people in general. While there are many studies on psychological distress during COVID-19 pandemic reported from different parts of the world, including other parts of India, very little empirical study report is available on the psychological distress experienced by people in the NE region of India. This study,therefore, also attempted to highlight the levels of psychological distress reported by people of NE India during the pandemic.

Method

Sample and Procedure

The sample comprised of 827 participants belonging to NE India. Participants were 18 years and above in age and were sampled through an online survey using Google Forms. The link to the questionnaire was initially shared through watsapp with relevant individuals who were in the contact lists of the researchers who were then asked to share the link with relevant individuals in their respective contact lists who in turn were also asked to pass the link to relevant others. Thus data was collected through a combination of convenience and snowball techniques. Altogether 855 responses were received out of which 28 were rejected for failure to meet inclusion criteria and /or giving double responses. The final 827 participants included in the study were from the eight states of NE India. Data was collected in the month of May-June 2021. Informed consent was obtained from all the participants.

Tools

The survey tool consisted of items from the following scales:The Depresssion, Anxiety, and Stress Scale-21 (Lovibond & Lovibond,1995) was used as a measure of psychological distress. The DASS-21 has three subscales - Depression scale, Anxiety Scale and Stress scale, each having seven statements. A score of zero to nine on the depression scale is considered normal while scores ten and above are taken as indicative of depression (10 to13- Mild; 14 to 20-Moderate; 21to27-Severe; 28 and above –Extremely Severe). On the anxiety scale, scores zero to seven is normal and eight and above indicate anxiety (8 to9:Mild; 10 to14-Moderate;15 to 19-Severe; 20 and above-Extremely Severe). Scores on the stress scale zero to 14 is considered normal, 15-18 as mild, 19 to 25 moderate, 26 to 33 severe, and 34 and above Extremely severe. The Herth Hope Index (Herth,1990) was used for assessing levels of hope in the participants.The scale has 12 statements that are presented on a four-point Likert scale ranging from one(strongly disagree) to four (strongly agree). Higher scores on the scale represent higher hope. The Generalized Self Efficacy Scale (Schwarzer &

Jerusalem,1995) was used for assessing GSE. The GSES is a ten-item scale that assesses how strongly individuals believe they can deal with obstacles or setbacks. There are four response options for every statement on the scale, the scores for which range from one (Not at all true) to four (Exactly true).The higher the score obtained on the scale, the greater is the GSE.

Questions for seeking information regarding participant's age, gender, educational level, marital status, employment status, whether having any chronic illness or not and whether the participant or their family encountered economic loss during the pandemic were also included.

Results

Data was analyzed using SPSS-21 software. Descriptive statistics were worked out and non-parametric statistics were employed as data did not meet assumptions for parametric statistics. Mann-Whitney and Kruskal-Wallis tests were performed wherever appropriate to compare groups and Spearman's Rank Difference method was used for examining correlation.

Socio-demographic information of the sample

The study sample was constituted by 65% females(n=538) and 35% males(n=289); 46.6%(n=385) were in the ages 18 to 25,42% (n=347) were in the ages 26 to 35 and 11.4%(n=95) were 36 years of age and above; 61%(n=512) were from towns, 21.2%(n=175) were from cities and 16.9%(n=140) were from villages;60.2% (n=498) had education upto graduate level and 39.8%(n=329) had education up to postgraduate/above; 16.8%(n=139) were married, 83.2%(n=688) were unmarried; and in terms of employment status, 44.01%(n=364) were students, 21.07%(n=145) were government employees, 17.53%(n=145) were private sector employees, 8.10%(n=67) were self employed, and 12.82%(n=106) were unemployed

Psychological distress among people of NE India during COVID-19 pandemic

Psychological distress was assessed by examining the levels of depression, anxiety and stress reported by the participants. Majority of the participants (66%) reported some level of depression ranging from mild to extremely severe - 27.4% (f=227) mild, 29.1% (f=241) moderate, 6.2% (f=52) severe and 3.3% (f=27) extremely severe. More than half the participants (57.7%) reported some level of anxiety ranging from mild to extremely severe -12.1% (f=100) mild, 28.8%(f=238) moderate, 7.7%(f=64) severe and 9.1%(f= 75) extremely severe. Majority of the participants (70.7%) reported normal level of stress while 29.3% reported some level of stress ranging from mild to extremely severe. Respectively 14.9% (f=123), 9.8% (f=81), 3.6%(f=30) and 1.0 %(f=8) reported symptoms indicative of mild, moderate, severe and extremely severe stress.

Association of Hope and GSE with psychological distress during COVID-19 pandemic

Hope was found to have a significant negative correlation with depression, r (825)= -.46, p=.000 and anxiety, r (825)= -.30, p=.000, but not with stress, r (825) = -.06, p=.10.

GSE was found to have a significant negative correlation with depression, r (825)= -.35, p=.000 and anxiety, r (825)= -.25,p=.000, but not with stress, r (825)= -.02,p=.48.

Association of socio-demographic factors with psychological distress during COVID-19 pandemic

Gender, education and marital status: Mann Whitney test showed significant effects of gender, educational qualification and marital status on both depression and anxiety but not on stress (Table 1). Females as compared to males, participants with lower levels of education, ie.,upto graduation as compared to those with higher levels of education, and unmarried individuals as compared to married individuals reported significantly higher levels of depression as indicated by their higher mean ranks (Table 1). Similarly, with respect to anxiety, females as compared to males, those with lower levels of education as compared to those having higher levels of education and the unmarried as compared to the married reported significantly higher levels of anxiety as indicated by their higher mean ranks(Table 1).

Age: The Kruskal-Wallis tests showed significant age effects for depression and anxiety

but not for stress (Table 1). Mean rank(MR) of depression scores is highest for individuals in the age group 18-25 years (MR=468, median=12) followed by those in the age group 26-35(MR=380, median=10) and is least for those above 35 years of age(MR=313,median=10). Pair wise comparisons showed significant differences in all paired comparisons (between 18-25 years and above 35 years, H= 156.47, p=.00; between 18-25 years and 26 -35 years, H=89.34, p=.00; between 26-35 years and above 35 years, H=67.13, p=.04).Mean rank of anxiety scores is also highest for 18-25 years group (MR=479,median=10) followed by 26-35 years (MR=374,median=6) and is least for those above 35 years (MR=298,median=6). Pair wise

comparisons showed significant differences in all paired comparisons (between 18-25 years and above 35 years, H=181.21, p=.00; between 18-25 years and 26-35 years, H=105.19, p=.00; between 26-35 years and above 35 years, H=76.01, p=.02).

Place of residence and employment: Differences in the levels of depression, anxiety and stress by place of residence-village/town/city- and employment status were not found to be significant(Table 1).

Presence of chronic illness: A small proportion of participants ,ie., around six percent, reported having chronic illnesses at the time of the COVID-19 pandemic. Presence of a chronic

Table 1. Mean Rank,Median,Mann-Whitney U/Kruskal-Wallis H scores for Depression(D), Anxiety(A) and Stress(S)

Variable	Category	n	Mean Rank D/A/S	Median D/A/S	Statistic D/A/S	P value D/A/S
Gender	Male	289	390/389/416	10/8/12	70792[a]/ 70637 [a]/ 76614 [a]	.03*/.029*/.792
	Female	538	427/427/412	12/8/12		
Age	18-25	385	469/479/425	12/10/12	45.27[b]/ 61.42[b]/1.72[b]	.000**/.000**/.423
	26-35	347	380/374/405	10/6/12		
	Above 36	95	313/298/399	10/6/12		
Place of residence	Village	140	426/431/420	12/8/12	0.44[b]/ 0.87[b]/ 2.25[b]	.802/.647/.423
	Town	512	412/410/420	12/8/12		
	City	175	411/411/390	12/8/12		
Education	Upto Graduate	498	439/441/414	12/10/12	69670[a]/ 68674[a]/ 44832[a]	.000**/.000**/.253
	Post Graduate & above	329	377/374/413	10/6/12		
Marital status	Married	139	346/357/434	10/8/12	38359[a]/39903 [a]/44832[a]	.001**/.002**/.253
	Unmarried	688	428/425/409	12/8/12		
Employment status	Student	364	423/423/400	12/10/12	6.05[b]/ 4.40[b]/ 4.21[b]	.196/.354/.379
	Govtemployee	145	379/398/409	10/8/12		
	Pvt .employee	145	442/409/447	12/8/14		
	Self employed	67	402/454/423	10/10/14		
	Unemployed	106	401/387/413	10/8/12		
Chronic illness	Yes	47	496/561/482	14/12/14	14470 [a]/ 11421[a]/ 15074 [a]	.015*/.000**/.041*
	No	780	409/405/409	12/8/12		
Economic loss	Yes	251	458/467/404	12/10/12	61300 [a]/ 58853[a]/ 69773[a]	.000**/.000**/.446
	No	576	395/391/418	10/8/12		

[a] Mann-Whitney U, [b] Kruskal-Wallis H, *P<.05, **P<.01

illness during the pandemic was found to have a significant effect on all three measures of psychological distress- depression,anxiety and stress(Table 1).Those suffering from chronic illnesses reported higher levels of depression, anxiety and stress as indicated by their higher mean ranks (Table 1).

Encountering economic loss: A considerable number of participants in the study (30%) reported to have been a victim of economic losses during the pandemic. Mann-Whitney showed significant effects of economic loss on depression and anxiety but not on stress (Table 1). Participants who had experiences of economic loss during the pandemic had higher mean ranks for both depression and anxiety (Table 1).

Discussion

Consistent with research findings from other countries and other parts of India(Banna et al.,2020; Khademian et al., 2021; Roy et al.,2020; Solomou & Constantinidou,2022; Shah et al., 2021; Verma&Mishra,2020; Wang et al.,2020; Xiong et al., 2020),experiences of psychological distress such as depression and anxiety were observed in a large number of participants and stress in a considerable proportion of the participants . The finding indicates that the COVID-19 pandemic has negatively impacted the psychological well-being of the general population in the NE region of India as it did in other parts of the world.

Hope and GSE were both found to be negatively correlated with measures of psychological distress such as depression and anxiety, indicating that these positive psychological factors can moderate the negative impact of the pandemic on mental health. The finding partially corroborate with findings from a similar study reported by Casali et al.(2021) that hope as a buffering character strength can have strong positive association with mental health outcomes.As Casali et al have stated, building hope can give individuals "the energy and determination to face challenging situations" such as the COVID-19 pandemic and together with their belief that they can cope with such situations, it is possible that people can experience lesser distress and better

mental health during difficult times such as the COVID-19 pandemic.

It is a well documented fact that females are more vulnerable to depression, anxiety and post traumatic stress disorders than men are. It is therefore unsurprising that females in the study reported higher levels of depression and anxiety during the unprecedented times of the COVID-19 pandemic. Similar to this finding, other research works had also reported that being female has higher risk for psychological distress during the pandemic (Banna et al.,2020; Gualamo et al.,,2020; Kamal & Othman,2020; Khademian et al.,2021; Mautong et al.,2021;Ramirez et al.,2020; Solomou & Constantinidou,2022; Shah et al.,2021; Wang et al.,2020). Another observation was that the lesser educated individuals as compared to those with higher levels of education also reported higher levels of both depression and anxiety. Chevalier and Feinstein (2006) had noted that education has a direct protective effect on mental health. Moreover, as Jalovaara (2006) had observed, education is also associated with reduced risk factors for depression and anxiety and thus could have played a role in moderating the experiences of distress during the pandemic. Younger individuals as compared to older ones and the unmarried as compared to the married individuals also reported higher levels of psychological distress in the form of depression and anxiety. One reason for this could be the disruptions in various areas such as academics, career, home and personal life that particularly affected young people most, many of whom are unmarried. Several other studies conducted during the current pandemic have also indicated   younger people and the unmarried as at risk groups for experiences of psychological distress during the COVID-19 pandemic(Mautong et al.,2021; Ramirez et al., 2020; Solomou & Constantinidou,2022; Shah et al.,2021;Verma & Mishra,2020).

Participants having chronic illness during the pandemic have shown higher levels of depression, anxiety and stress. This is in line with findings provided by Mazza et al.(2020) from their study on an Italian sample.While the presence of a chronic illness can be distressing in itself, having co-morbidities with COVID-19 has

also been said to have poorer prognosis in terms of recovery from the infection. Fear of getting infected with the virus while having a known potential co-morbidity added with perceived negative outcomes could well have contributed towards higher levels of psychological distress amongst those afflicted with chronic illness during the pandemic.

The lockdown measures adopted to curb the spread of the COVID-19 pandemic also meant loss of economic means for many. A good number of participants in the study reported having encountered economic loss during the pandemic. These participants showed higher levels of depression, anxiety and stress than those who did not report such losses. Ramirez et al.(2020) had also observed loss of income as positively correlated with psychological distress during COVID-19 pandemic on a Mexican sample. In general, as Sugiyama et al.(2016) reported, socio economic status is negatively correlated with psychological distress, and such a relationship could become more prominent under times such as the COVID-19 pandemic.

Conclusion

The study is one of the few empirical studies that have attempted to assess psychological distress among people of NE India during the pandemic. An important observation is the moderate to high prevalence of depression and anxiety in the general population of the region during the pandemic. The finding that hope and GSE had inverse relationship with psychological distress can be used in advocating such positive psychological factors as important coping mechanisms during pandemic situations. Roles of demographic factors, situational factors like economic loss and having chronic illness at the time of the pandemic were also highlighted. These findings can serve as important additional information in enhancing our understanding about the experiences of psychological distress in times such as the COVID-19 pandemic and in planning and implementing mental health related policies during times of pandemic in general. Caution must be taken in generalizing the findings of the study as these are based on a sample drawn using non-random techniques.

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