

Resilience As The Ability To Bounce Back And Stay Happy: A Lesson Learnt From COVID-19 Pandemic

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Abstract

Although several studies report the relationship between happiness and resilience, little is known about correlation between them during the claustrophobic situations. The present study examined level of happiness and resilience during COVID-19 pandemic among Indian population (n=151), of whom 69% are from urban areas and 30% are from rural areas. Happiness and resilience were found to be reduced among participants from rural areas as compared to participants from urban areas, suggesting COVID-19 pandemic adversely affected rural Indian population. Correlation analysis revealed, significant positive correlation between happiness and resilience during COVID-19 pandemic. This study suggests that being resilient prompted significant increase in happiness during COVID-19 claustrophobe.

Keywords: Resilience, Happiness, COVID-19

Introduction

Severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2), a novel coronavirus disease 2019 (COVID-19) affected several nations causing millions of fatalities. Many countries struggled to respond to pandemic; series of lockdowns to keep levels of mortality low also caused economic downfall. India observed four phases (25th March to 31st May, 2020) of lockdown as a fight towards first wave of COVID-19. This claustrophobic situation negatively impacted happiness of individuals which was accompanied by anxiety, loneliness and frustration. Mounting evidences suggests increase in stress, depression, anxiety and burnout during COVID-19 pandemic are due to loneliness or social isolation (Kikuchi, H., Machida, M., et al., 2020). However, positive aspects of individual psychological health such as happiness, and resilience during pandemic claustrophobe remains unclear. Happiness and Resilience are the main characteristic feature to cope with pandemic claustrophobe and stay in stable state (Vinkers, C. H., van Amelsvoort, T., Bisson, J. I., et al.,

2020). ‘Weather’ experimental paradigm by Schwarz and Clore, suggested that momentary claustrophobe adversely impacted individuals’ happiness (Schwarz, N., & Clore, G. L., 1983). Although coronavirus pandemic is new for us, timely adaptation for the situation is inevitable. Human stress system is evolved to respond to these claustrophobes in a highly adaptive way (De Kloet, E. R., Joëls, M., 2005). Importantly, these adaptive systems are dependent on various factors such as illiteracy, uncertainty, social life, living conditions, unawareness about disease, age, previous health conditions and economic stability (Southwick, S. M., & Charney, D. S., 2012). Furthermore, several studies suggest resilience as a causal factor for happiness (Aboalshamat, K. T., Alsiyud, A. O., et al., 2018; Sharma, N., 2019). Additionally, requirement of evidence-based recommendations to boost individuals’ happiness to successfully deal with pandemic claustrophobe is the need of the hour (Holmes, E. A., O’Connor, R. C., et al., 2020). Despite the clear indication of resilience being the causal factor for individuals’ happiness, very few studies have investigated the relationship

between them during claustrophobic situations in a systemic way. Here, researcher examined the association between resilience and happiness in pandemic claustrophobe, particularly in lockdown conditions (social isolation period).

Methods

Participants

Participants in study were 151 (88 F, 63 M). Ages ranged from 15 to 60 years. Participants self-identified as urban ($n = 105$, 69%) and rural ($n = 46$, 30%) (Fig1a). Collected using Convenience sampling.

Measures

The dependent variables for this study focused on state of happiness, as well as resilience. The exploratory items used for investigations were participants living location; one who are living in urban areas (showed higher scores of happiness and resilience during pandemic claustrophobe), and one who are living in rural areas (showed lower scores of happiness and resilience during pandemic claustrophobe). Prior to the random assignment to condition, a survey assessing traits such as health condition, belief system and income was included for other investigations and were not analysed for this study.

Happiness questionnaire

The Oxford happiness questionnaire (OHI, Argyle, Martin, & Crossland, 1989) consists of 29 questions, was used to assess the participants' happiness levels. Participants responded to 29 questions on a scale from 1 to 6 (1. strongly disagree 2. moderately agree 3. slightly disagree 4. slightly agree 5. Moderately

agree 6. strongly agree). Happiness score was calculated as indicated by OHI.

Resilience questionnaire

Nicholson McBride Resilience Questionnaire (NMRQ) developed (Leersian and Nicholson McBride, 2009) consists of 11 questions, was used to assess the participants' resilience levels. Participants responded to 11 questions on a scale from 1 to 5 (1. Strongly disagree 2. Disagree 3. Neutral 4. Agree and 5. Strongly agree). Resilience score was calculated as indicated by NMRQ.

Statistical Analysis

All comparisons between groups were performed using two-tailed unpaired student's t-test unless otherwise stated. All p-values less than 0.05 were taken as significant. All statistical analyses were performed using GraphPad Prism software. Descriptive statistics were performed using SPSS.

Results

Happiness and Resilience are gender independent

Among 151 participants, 88 were females and 63 were males. To test whether happiness and resilience are gender dependent during COVID-19 claustrophobe we performed **unpaired t test** between the happiness and resilience scores of males and females. Upon statistical analysis we found that there is no significant change in both happiness and resilience of males as compared that of females, suggesting happiness and resilience are gender independent factors during pandemic claustrophobe (Fig 1b, c).

Figure1

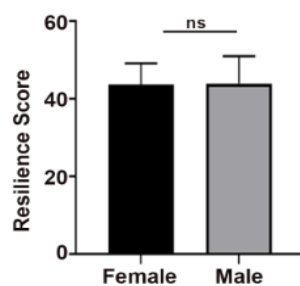
a

	N	MINIMUM	MAXIMUM	Mean	SD
Resilience	151	18	60	43.74	6.16

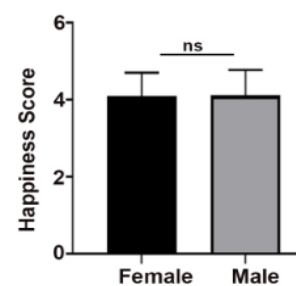
	N	MINIMUM	MAXIMUM	Mean	SD
Happiness	151	1.413	5.379	3.861	0.56

sample		
Gender	Male	Female
	63	88
Geographical	Urban	Rural
	105	46

b



c

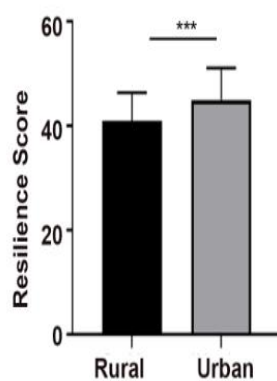


Diminished happiness and resilience in rural population during COVID-19 claustrophobe

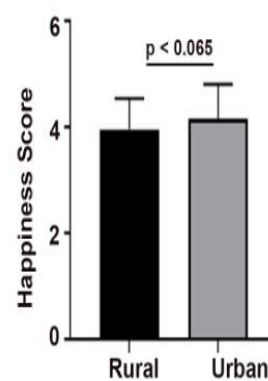
Among 151 participants, 105 were from urban area and 46 were from rural areas. To test whether happiness and resilience are dependent on urban/rural populations during COVID-19

claustrophobe we performed **unpaired t test** between the happiness and resilience scores of urban and rural populations. Upon statistical analysis we found that there is reduction in both happiness and resilience of rural population as compared that of urban population, suggesting rural population are adversely affected during pandemic claustrophobe (Fig 1d, e).

d



e

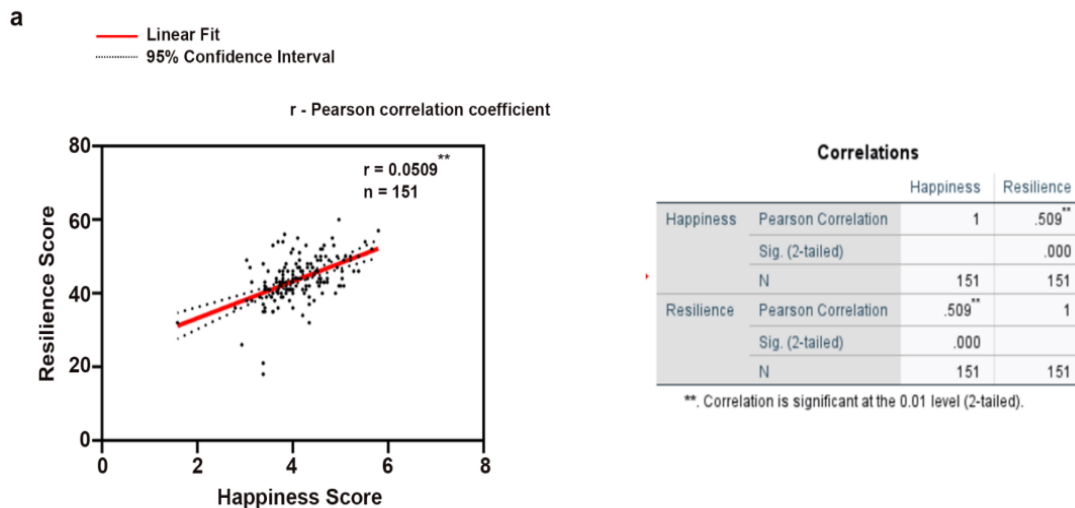


Happiness and Resilience are positively correlated during COVID-19 claustrophobe

To check the correlation between happiness and resilience we performed Pearson correlation analysis. The Pearson correlation coefficient

between happiness and resilience was 0.509, suggesting significant positive correlation between happiness and resilience (Fig 2a). Taken together these analyses suggested being resilient directly influenced happiness during COVID-19 claustrophobe.

Figure 2



Discussion

COVID-19 pandemic claustrophobe affected individuals' mental health adversely with rise in symptoms of anxiety, depression and suicidal thoughts (Gunnell, D., Appleby, L., et al., 2020). These symptoms are likely to be associated with social isolation and loneliness (Matthews, T., Danese, A., et al., 2019). Furthermore, prolonged quarantine is associated with increase in these symptoms (Brooks, S. K., Webster, R. K., et al., 2020). To inform mental health management during lockdown period, it is vital to understand the impact of lockdown policies on socioeconomically backward classes (Barr, B., Taylor-Robinson, D., et al., 2012). Our study suggests that rural population is associated with reduced resilience and happiness during COVID-19 claustrophobe than that of urban population. Approximately 65% of Indian population are from rural part, majority of them fall under socioeconomically backward classes and have very limited access to health care. These reasons might be the key factors for

reduced resilience and happiness in rural population. Also, consideration of socioeconomic status of rural population during lockdown policies can lead to achieve pandemic control both in terms of infection and poor mental health (Prieto, L., & Sacristán, J. A., 2003).

The immediate research priorities are to understand the factors influencing poor mental health during social isolations and possible interventions to overcome it (Holmes, E. A., Ghaderi, A., et al., 2018). Resilience is becoming increasingly evident in promoting mental health during social isolation and loneliness (Kalisch, R., Baker, D. G., et al., 2017). Also, being resilient is a causal factor for increased happiness (Aboalshamat, K. T., Alsuyud, A. O., et al., 2018; Sharma, N., 2019). This study confirms co-dependency of happiness and resilience is conserved even in pandemic situation. Further suggesting interventions that could enhance the resilience of an individual will help to overcome poor mental health which in-turn results in increased happiness. Given

that multiple waves of COVID-19 are inevitable, incorporation of resilience enhancing interventions will be vital to manage mental health problems due to social isolation and loneliness.

Conclusion

The findings suggested that both happiness and resilience is gender independent during COVID-19 pandemic. Both males and females are associated with similar levels of happiness and resilience. Upon investigating how COVID-19 pandemic affected the happiness and resilience of urban and rural population, researchers found that urban population was more resilient than rural population. Although non-significant an increasing trend of happiness is noted in urban population than that of rural population, also p-value is almost close to 0.05, suggesting if sample size is increased, researchers could achieve the desired statistical significance. These results suggest that urban population is more resilient and happier as compared to rural population during pandemic, further emphasizing that COVID-19 adversely affected rural population than that of urban population. Insufficient economy, lack of knowledge on COVID-19 and lack of social security could have contributed for the diminished resilience and happiness in rural population. Additionally, researcher checked the co-dependency of happiness and resilience during COVID-19 pandemic. Although several studies suggest direct correlation between happiness and resilience, the dependency might vary in pandemic situation. Upon correlation analysis we found a positive correlation between happiness and resilience during COVID-19, suggesting co-dependency of happiness and resilience is conserved even in pandemic situation.

Disclosure statement

No potential conflict of interest was reported by the authors.

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Legends

Figure 1. Happiness and Resilience scores

a. Tables describing descriptive statistics (Sample size, mean and standard deviation), **b.** Comparison of resilience score of male and female, **c.** Comparison of happiness score of male and female, **d.** Comparison of resilience score of urban and rural population, **e.** Comparison of happiness score of urban and rural population. Representative graphs for happiness and resilience. Data are presented as means $\pm$ s.d., p values were determined by a two-tailed, unpaired t test. ***, p <0. 001.ns denotes non-significant.

Figure 2. Correlation between happiness and resilience scores

a. Pearson correlation analysis suggesting positive correlation between happiness and resilience scores. Correlation analyses was performed using Graph pad and SPSS. **, p <0.01. 'r' denotes Pearson correlation coefficient.