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Are We Done Yet? Psychological and Remedial Impact of Optimism on COVID-19 Fear and Perceived Stress

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Abstract

This inquiry explores how optimism affects COVID-19 fear and feelings of stress among young Indian women after the pandemic. The sample consisted of the test scores of 199 young women between the ages of 18 and 21. All of them lived in the Noida area of UP, India, and were first-year students at a private university. The study used reliable and valid psychometric tools to evaluate how stressed, afraid of COVID, and optimistic they were. Based on the sample's parameters, Spearman's association was used to analyse the relationship between the study variables, followed by linear regression, which was deployed to understate impact. The correlational analysis showed that optimism, stress, and fear associated with COVID were all strongly linked. Furthermore, optimism was identified as a significant predictor of COVID fear and stress, explaining about 3.3 per cent and 25.6 per cent of the negative variance, respectively. The findings recognised a positive role for optimism in reducing stress and pandemic-associated fear or apprehension, which can be a base for further analysis to ensure better mental health service delivery.

Keywords: COVID-19 fear, stress, optimism, young females, mental health, pandemic.

1. Introduction

While it seems very peaceful these days, lockdown amid the COVID outbreaks left a long-lasting imprint nationwide. The wellbeing of Indian students was a big concern during those days, and due to the lockdown, the country experienced a severe educational crisis. Resiliency was achieved, but the losses were already great in terms of the educational crisis. A rise in stress, physiological issues, and student suicide cases were also observed during those times (Lathabhavan & Griffiths, 2020). Besides having adverse physiological effects, stress affects the health behaviors of students, which can have an overall effect on their physical health. It affects mental health too, and the impact on cognitive abilities can affect overall academic performance (Shankar & Park, 2016), consequently worsening the situation. A constant increase in tension and apprehension because of the crisis impairs a person's internal capacities, resulting in disturbances, issues with decision-making, and nervous exhaustion. Research became one of the best options for analysing these mental health and neuropsychiatric repercussions, which are crucial for addressing mental health care, treatment, and the adoption of inhibitory measures (Fofana et al., 2020).

During the pandemic, most people became obsessed with COVID and were compelled to use sanitizer and gloves. Many participants had trouble sleeping, were worried about getting sick, and were upset about social media, and most importantly, more than eighty per cent of participants reported perceived mental healthcare needs (Roy et al., 2020). A study of 403 people in India (Rehman et al., 2020) found that students and people who work in health care experience stress, anxiety, and depression more than people in other jobs. Verma and Mishra (2020) found that about eleven per cent of the 354 Indians who took part in the study were moderately to very stressed. Enquiries during the pandemic have shown a direct impact of COVID on men in terms of infection, mortality, etc., but women are more likely to face greater economic and mental health impacts than

men (Burki, 2020). Based on a recent study by J. Dymecka et al. (2023), women chalked up higher than men on measures of COVID fear and stress. It was clear that women experienced more psychological consequences of the pandemic, and using positive coping strategies is a good way to lessen this stress and fear.

According to the literature, optimism is an essential component of positive psychological capital. It significantly predicted fear and hope immediately after laboratory-induced stress among students (Kimhi et al., 2013). By advocating a healthy lifestyle, it can also affect physical and mental health. Some older research indicates that optimism involves behavioral adaptations and cognitive reactions, which are associated with increased versatility and problem-solving ability. (Conversano et al., 2010), and it plays a vital role in health-enhancing behavior (Mulkana & Hailey, 2001), making it an essential protective factor. A Chinese study found that depression, anxiety, insomnia, and somatization occur frequently among employees. Significant risk factors for mental health were worries about unemployment, while protecting components were resiliency and optimism (Song et al., 2020). Jovančević and Milićević's research (2020) on 412 participants revealed that optimism predicted an elevated degree of regard for measures taken to prevent the spread of COVID.

COVID has been spreading at a faster pace in China ("China Expected to Witness Fresh Covid Wave With 65 Million Cases per Week: Report," 2023) and concerns have been raised by the WHO's chief ("Deadlier Than COVID. . ., WHO Chief Warns Threat of 'Another Pandemic' Emerging," 2023, "'Next Pandemic Will Be Deadlier': WHO Chief Urges Preparedness for Next Big Health Crisis," 2023), epidemiologists, and researchers ("UN General Assembly Hears Call for Worldwide Pandemic Warning System," 2023). Hence, mental health services must be ready to act as an effective support system at any time for any potential pandemic.

Drawing a link among the available literature, a critical discussion can be started to pull out some key points for the current study. First, the pandemic was more likely to have psychological effects on women. Second, education was affected a lot, and the students were affected more. Third, optimism may be a key part of dealing with the stress and worries that come with COVID. Finally, a post-pandemic investigation that considers all the preceding arguments is required. Therefore, the purpose of the present study is to examine the connections between optimism, fear of COVID, and a sense of stress among Indian undergraduate women. While acknowledging the four key points, the following null hypotheses were framed:

$\mathbf{H_0^1}$: Optimism, COVID fear, and stress share no significant association.

$\mathbf{H_0^2}$: Optimism is not a significant predictor of COVID fear and stress.

2. Methodology

The potential participants were approached and informed about this project and its goals through face-to-face interactions. Participants were also explained that this study would pose no more than minimal risk to them (Committee on Revisions to the Common Rule for the Protection of Human Subjects in Research in the Behavioural and Social Sciences et al., 2014). Once agreed upon, consent was taken from the interested participants after explaining their rights.

2.1. Sample

For this study, only a few element selection criteria were used, and the participant's representation basis was nonprobability; hence, the design is purposive sampling (Kothari, 2004). One hundred and ninety-nine undergraduate females between eighteen and twenty-one years old (mean age = 18.91, SD = 0.49), residing in the Delhi (117 participants) and Noida (89 participants) regions of northern India for more than ten years, finally completed the survey from the pool of two hundred and sixteen potential participants. All the participants had at least been through a coronavirus infection during the pandemic and had been fully vaccinated. Their family income was between four and six lakhs INR per annum.

2.2. Tools

2.2.1. Fear of COVID scale.

This tool has seven questions that measure the apprehension associated with COVID. It has an acceptable level of internal consistency (about 0.82), test-retest reliability (about 0.72), and validity. It uses a Likert response scale (five point) ranging from 1 for strongly disagreeing up to 5 for strongly agreeing. The tool has been found

to have consistency in results across participants from multiple cultures and geographical regions (Ahorsu et al., 2020).

2.2.2. Life orientation test revised.

This questionnaire has ten questions that measure subjective differences in optimism. Four items out of ten are filler items, and the rest six items have an acceptable level of internal consistency (about 0.78), test-retest reliability (about 0.79), and validity. It also uses a Likert scale (five point) with responses ranging from 0 for strongly disagreeing up to 4 for strongly agreeing. Items three, seven, and nine are negative items. This tool has also been found to have consistency in results across participants from multiple cultures and geographical regions (Scheier et al., 1994).

2.2.3. Perceived stress scale (10).

This tool, which measures an individual's perception of stress, has good internal consistency (about 0.78) for ten items. The test-retest correlation of the fourteen-item version was 0.85, and it also has a fair level of validity for both versions. It uses a Likert scale (five points), with responses ranging from 0 for strongly disagreeing to 4 for strongly agreeing. Items numbers four, five, seven, eight have negatively scoring. This tool has also been found to have consistency in results across participants from multiple cultures and geographical regions (Cohen et al., 1988).

2.3. Data Analysis

Microsoft Excel was used for scoring the variables to avoid any errors. SPSS-Statistics was used for normality testing, computing correlation coefficients, and linear regression analysis.

3. Result

3.1. Normality

Table 1 Normality test of the psychological variables.

	Statistic	d. f.	Sig.	Skewness	S. E.	Kurtosis	S. E.
Fear of COVID	0.947	199	0.00	0.547	0.172	-0.602	0.343
Optimism	0.984	199	0.02	-0.176		0.163	
Perceived stress	0.986	199	0.04	-0.218		0.264	

The variables optimism, perceived stress, and fear of COVID weren't normally distributed (table 1). The Shapiro-Wilk's test ($p < 0.05$) (Shapiro & Wilk, 1965; Razali & Wah, 2011) revealed that all variables in the sample did not have a normal distribution for the optimism scores (skewness of -0.176, kurtosis of 0.163), COVID-19 fear score (skewness of 0.547, kurtosis of -0.602), and stress scores (skewness of -0.218, kurtosis of 0.264) (Cramer, 1998; Cramer & Howitt, 2004; Doane & Seward, 2011).

3.2. Correlation Analysis

Table 2 Association between the psychological variables.

		1	2	3
1	Fear of COVID	-		
2	Optimism	-0.16*	-	
3	Perceived stress	0.25**	-0.52**	-

**Sig. at 0.01 level, *Sig. at 0.05 level

The analysis demonstrated that all the variables displayed a significant association with each other (table 2). Spearman's coefficient of correlation between optimism and fear of COVID was statistically significant inversely ($\rho = -0.166$, $p < 0.05$). The association between stress and optimism was inversely significant as well ($\rho = -0.522$, $p < 0.01$). Furthermore, the coefficient was statistically significant and positive between fear of COVID and perceived stress ($\rho = -0.251$, $p < 0.01$).

3.3. Regression Estimates

Table 3 Linear regression for predicting stress and COVID fear using optimism.

Predictor: Optimism								
Criterion:	B	S. E.	β	t	R^2	Adj R^2	F	α
Perceived stress	-0.751	0.091	-0.506	8.233**	0.256	0.252	67.787**	33.251
Fear of COVID	-0.280	0.108	-0.182	2.593**	0.033	0.028	6.722**	20.364

**significant at 0.01 level

Table 3 presents the model that holds optimism as a predictor, and fear of COVID ($F = 6.722$, $p < 0.01$) and stress ($F = 67.787$, $p < 0.01$) as a criterion. Optimism had a statistically significant negative impact on fear of COVID, with an unstandardized regression weight (B) of -0.280 explaining about 3.3 per cent of the variance in the criterion ($R^2 = 0.033$). A statistically significant negative impact on stress was observed, with an unstandardized regression weight (B) of -0.751 explaining about 25.6 per cent of the variance in the criterion ($R^2 = 0.256$).

3.4. Equation

The model fits well, with optimism being a predictor of COVID fear and perceived stress, and both the criterion (dependent variables) can be derived through two equations for the population that is characteristically like the study sample. First, for predicting perceived stress, the equation frames: perceived stress = 33.251 – 0.751 (optimism). Second, for predicting fear of COVID, the equation frames: COVID fear = 20.364 – 0.280 (optimism).

4. Discussion

Optimism is an essential psychological capital and an effective coping mechanism. The current study provides evidence by explaining its role in explaining COVID-19 fear and perceived stress. Our first objective was to understand the association between the study variables, as it was essential to unveil the nature of the relationship and the potentials of further analysis. Positive and statistically significant correlations were observed between COVID fear and stress, according to the findings, suggesting an increase in one of the variables if another one increases. Furthermore, optimism shared an inversely significant relationship with fear associated with COVID and stress. It means if optimism increases, there will be a noteworthy reduction in stress perception and COVID fear. As a result, we can reject the first null hypothesis stating that optimism, COVID fear, and stress share no significant association while accepting the alternative. Our second objective was to determine the nature of the variance accounted for by optimism on the two variables. Findings suggested that optimism was a significant predictor of COVID fear and stress, explaining about 3.3 per cent and 25.6 per cent of the negative variance in COVID fear and perceived stress, respectively. Therefore, for each unit boost in optimism, there will likely be approximately a 3.3 per cent reduction in COVID fear and a 25.6 per cent reduction in perceived tension. As a result, we can reject the second null hypothesis, stating that optimism will not be a significant predictor of COVID fear and perceived stress, while accepting the alternative. Altogether, the findings present a strong relationship between stress and COVID fear with respect to optimism, and the findings fall parallel to the previous evidence.

It is essential to build strategies to uplift the population's spirits while lowering anxiety and stress. Previous literature associated with the situation (the COVID pandemic) in India revealed that out of 992 adult participants, more than 90 per cent of respondents were aware of the COVID and associated guidelines like isolation or social distancing, with about 98 per cent adherents. Approximately 78 per cent of participants were positive and thought that the problem could be eradicated collectively. (Kochar et al., 2020). Access to information with questionable credibility is easy in this technological age, making updates to facts a curse. Evidently, India was one of the most affected countries by media rumours during the pandemic (Islam et al., 2020). This can contribute to an increase in unhealthy fear. Such unhealthy fear, anxiety, or worry associated with a pandemic can increase stress, resulting in a chain reaction of problems and vulnerabilities for students.

Hence, mental health professionals must recognise this relationship to ensure the well-being of the students, and researchers must investigate further into this relationship to provide a more comprehensive and goal-directed methodology for psychological first aid. With the help of this study, the value of optimism for mental health can be made more widely known, as it can offer insightful knowledge regarding the connections with mental health during a pandemic. Creating interventions that can aid female students in grappling with the psychological effects of the pandemic and enhancing their mental health can be beneficial. While we might have studied the less complex level of relationship between variables, more complex modelling is required as early as possible to ensure preparedness in any similar future condition.

5. Conclusion

Optimism is a powerful coping skill and a psychological asset. It can aid in lowering the anxiety and stress associated with COVID. According to the study, stress and fear are negatively connected with optimism. This implies that a person is less likely to experience fear and stress the more optimistic they are. Optimism was found to be a major predictor of both fear and stress in the study. Thus, even after accounting for other variables like age, gender, and educational attainment, optimism can still contribute to a reduction in anxiety and stress. It may be a useful technique for overcoming COVID's psychological impacts. People can develop more optimism by learning coping mechanisms and receiving support from mental health specialists. Researchers may also create interventions that encourage optimism in people. Overall, the study findings suggest that optimism could be a crucial positive psychological resource to aid individuals in controlling the psychological consequences of COVID.

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References

[1] Ahorsu, D. K., Lin, C. Y., Imani, V., Saffari, M., Griffiths, M. D., & Pakpour, A. H. (2020). The Fear of COVID-19 Scale: Development and initial validation. International Journal of Mental Health and Addiction, 1–9. Advance online publication. https://doi.org/10.1007/s11469-020-00270-8

[2] Burki, T. (2020, August). The indirect impact of COVID-19 on women. The Lancet Infectious Diseases, 20(8), 904–905. https://doi.org/10.1016/s1473-3099(20)30568-5

[3] China expected to witness fresh Covid wave with 65 million cases per week: Report. (2023, May 26). Retrieved from https://indianexpress.com/article/world/new-covid-wave-china-65-million-casesus-discusses-chinas-second-covid-wave-allies-partners-5-key-points-8630107/

[4] Cohen, S., Kamarck, T., and Mermelstein, R. (1983). A global measure of perceived stress. Journal of Health and Social Behavior, 24, 386-396.

[5] Committee on Revisions to the Common Rule for the Protection of Human Subjects in Research in the Behavioral and Social Sciences; Board on Behavioral, Cognitive, and Sensory Sciences; Committee on National Statistics; Committee on Population; Division of Behavioral and Social Sciences and Education; National Research Council (2014). Proposed Revisions to the Common Rule for the Protection of Human Subjects in the Behavioral and Social Sciences. Washington (DC): National Academies Press (US). DOI: 10.17226/18614

[6] Conversano, C., Rotondo, A., Lensi, E., Vista, O. D., Arpone, F. & Reda, M. A. (2010). Optimism and Its Impact on Mental and Physical Well-Being. Clinical Practice & Epidemiology in Mental Health, 6, 25-29. DOI: 10.2174%2F1745017901006010025

[7] Cramer D. (1998). Fundamental Statistics for Social Research Step-by-Step Calculations and Computer Techniques Using SPSS for Windows (First Edition). Routledge: London.

[8] Cramer, D., & Howitt D. L. (2004). The SAGE Dictionary of Statistics: A Practical Resource for Students in Social Sciences. SAGE Publications Ltd: London.

[9] Deadlier than COVID. . ., WHO chief warns threat of 'another pandemic' emerging. (2023, May 24). Retrieved from https://www.livemint.com/news/world/deadlier-than-covid-who-chief-warns-threat-of-another-pandemic-emerging-11684895630062.html
[10] Doane, D. P., & Seward, L. E. (2011). Measuring skewness: a forgotten statistic? Journal of statistics education, 19(2), 1-18. Retrieved from: http://jse.amstat.org/v19n2/doane.pdf
[11] Dymecka, J., Gerymski, R., Machnik-Czerwik, A., & Rogowska, A. M. (2023, January 11). Does Positive Thinking Help during Difficult Pandemic Times? The Role of Positive Orientation in the Relationship between Fear of COVID-19 and Perceived Stress. European Journal of Investigation in Health, Psychology and Education, 13(1), 151–160. https://doi.org/10.3390/ejihpe13010011
[12] Fofana, N. K., Latif, F., Sarfraz, S., Bilal, Bashir, M. F., & Komal, B. (2020). Fear and Agony of the Pandemic Leading to Stress and Mental Illness: An emerging crisis in the novel coronavirus (COVID-19) outbreak. Psychiatry research, 291, 113230. DOI: 10.1016/j.psychres.2020.113230
[13] Islam, M. S., Sarkar, T., Khan, S. H., Mostofa Kamal, A. H., Hasan, S., Kabir, A., Yeasmin, D., Islam, M. A., Amin Chowdhury, K. I., Anwar, K. S., Chughtai, A. A. & Seale, H. (2020). COVID-19-Related Infodemic and Its Impact on Public Health: A global social media analysis. The American Journal of Tropical Medicine and Hygiene, 103(4), 1621–1629. DOI: 10.4269/ajtmh.20-0812
[14] Jovančević, A. & Milićević, N. (2020). Optimism-pessimism, conspiracy theories and general trust as factors contributing to COVID-19 related behavior – A cross-cultural study. Personality and Individual Differences, 167, 110216. DOI: 10.1016/j.paid.2020.110216
[15] Kimhi, S., Eshel, Y. & Shahar, E. (2013). Optimism as a predictor of the effects of laboratory-induced stress on fears and hope. International Journal of Psychology, 48, 4, 641–648. DOI: 10.1080/00207594.2012.676181
[16] Kochhar, A. S., Bhasin, R., Kochhar, G. K., Dadlani, H., Mehta, V. V., Kaur, R. & Bhasin, C, K. (2020). Lockdown of 1.3 Billion People in India During Covid-19 Pandemic: A survey of its impact on mental health. Asian Journal of Psychiatry, 54, 102213. DOI: 10.1016/j.ajp.2020.102213
[17] Kothari, C.R. (2004) Research Methodology: Methods and Techniques. 2nd Edition, New Age International Publishers, New Delhi
[18] Lathabhavan, R. & Griffiths, M. (2020). First case of student suicide in India due to the COVID-19 education crisis: A brief report and preventive measures. Asian Journal of Psychiatry, 53, 102202. DOI: 10.1016/j.ajp.2020.102202
[19] Mulkana, S. S. & Hailey, B. J. (2001). The Role of Optimism in Health-enhancing Behavior. American Journal of Health Behavior, 25(4), 388-395. DOI: 10.5993/ajhb.25.4.4
[20] Razali, N. M., & Wah, Y. B. (2011). Power Comparisons of Shapiro-Wilk, Kolmogorov-Smirnov, Lilliefors and Anderson-Darling Tests. Journal of Statistical Modeling and Anlytics, 2(1), 21-33. Retrieved from: https://www.nrc.gov/docs/ML1714/ML17143A100.pdf
[21] Rehman, U., Shahnawaz, M. G., Khan, N. H., Kharshiing, K. D., Khursheed, M., Gupta, K., Kashyap, D. & Uniyal, R. (2020). Depression, Anxiety and Stress Among Indians in Times of Covid-19 Lockdown. Community mental health journal, 1–7. Advance online publication. DOI: 10.1007/s10597-020-00664-x
[22] Roy, D., Tripathy, S., Kar, S. K., Sharma, N., Verma, S. K., & Kaushal, V. (2020). Study of Knowledge, Attitude, Anxiety & Perceived Mental Healthcare Need in Indian Population During COVID-19 Pandemic. Asian Journal of Psychiatry, 51, 102083. DOI: 10.1016%2Fj.ajp.2020.102083
[23] Scheier, M. F., Carver, C. S., Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A reevaluation of the life orientation test. Journal of Personality and Social Psychology, 67(6), 1063-1078. DOI: 10.1037/0022-3514.67.6.1063
[24] Shankar, N. L. & Park, C. L. (2016). Effects of Stress on Students' Physical and Mental Health and Academic Success. International Journal of School & Educational Psychology, 4, 1, 5-9, DOI: 10.1080/21683603.2016.1130532
[25] Shapiro, S. S., & Wilk., M. B. (1965). An analysis of variance test for normality (complete samples). Biometrika, 52(3-4), 591-611. DOI: 10.2307/2333709

[26] Song, L., Wang, Y., Li, Z. L., Yang, Y. & Li., H. (2020). Mental Health and Work Attitudes among People Resuming Work during the COVID-19 Pandemic: A cross-sectional study in China. International journal of environmental research and public health, 17(14), 5059. DOI: 10.3390/ijerph17145059

[27] "Next pandemic will be deadlier": WHO chief urges preparedness for next big health crisis. (2023, May 24). Retrieved from https://www.businesstoday.in/latest/trends/story/next-pandemic-will-be-deadlier-who-chief-urges-preparedness-for-next-big-health-crisis-382554-2023-05-24

[28] UN General Assembly hears call for worldwide pandemic warning system. (2023, February 9). Retrieved from https://news.un.org/en/story/2023/02/1133342

[29] Verma, S. & Mishra, A. (2020). Depression, Anxiety, and Stress and Sociodemographic Correlates Among General Indian Public During COVID-19. International Journal of Social Psychiatry, 66(8), 756-762. DOI: 10.1177/0020764020934508