Relationship Between Perceived Stress & Locus of Control in Indian Young Adults

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Abstract

Stress as a factor has a major impact on the human life. The Mental Health Foundation's (UK) 2018 study with 4,619 participants showed that 74% people experienced overwhelming stress that affected their lives significantly at psychological and behavioral levels. Past literature indicates of a relation between perceived stress and locus of control orientation. The present study is an attempt to investigate this relationship in Indian young adults aged 18-30 years. The sample consisted of 107 participants and the tools used were Perceived Stress Scale (PSS-10) (Cohen et al., 1983) and Levenson's Locus of Control Scale (Levenson, 1973). The results revealed that there is a positive relationship between higher levels of perceived stress and greater external locus of control in young adults.

Keywords: Perceived Stress, Locus of Control, Internal, External, Young Adults

Introduction

Stress is as any type of change that causes physical, emotional, or psychological strain and is a natural bodily response to stimuli that requires attention or action. Stress has both a mental component as well as a physiological manifestation. All organisms in order to survive and maintain a stable internal environment or homeostasis, need to manage stress successfully. Stressors can upset the delicate equilibrium of the body and to counter them, several physiological and behavioral adaptive responses are deployed. Research has illustrated that a said 'stress system' helps in countering any disruption of the homeostasis. It is mainly present in the central nervous system (hypothalamic hormones like arginine, vasopressin, corticotropin-releasing hormone and pro-opiomelanocortin-derived peptides and the locus ceruleus and autonomic norepinephrine centers in the brainstem) and peripheral organs of the human body (Chrousos, 2009).

Stress is also a major contributor to psychosocial and physical pathological conditions in humans (Chrousos, 2009). The perception of stress is of equal importance as it shapes the individual's current plan of action in resolving stress and overall stress management. Stress has been seen to enhance memory formation during the process of learning, while at the same time it hinders memory retrieval.

It was discovered that there exists a huge distinction in the apparent degree of stress related with understudy learning in different learning conditions; learning through just web-based educational materials and course content versus same learning materials in a conventional classroom setting (Lazarevic & Bentz, 2021). Stress can be a positive or negative contributor to the overall health of an individual and how one perceives stress further decides the trajectory that it will take.

Locus of Control (LOC), as a concept entails, the extent to which people believe that they are in charge of their lives. The generalized expectancies that people have are either external or internal in orientation (Rotter, 1966). An individual with an internal LOC tends to believe that reinforcements are based on his/her own behavior, actions taken, relatively permanent characteristics, etc. An individual with external LOC tends to believe that reinforcements are a result of factors that are outside their control, like luck, chance, fate and powerful others. LOC as a concept is based on Rotter's general theoretical framework of social learning theory (1960). It has been studied as a mediating factor in a wide range of situations concerning health, motivation, etc.

Review of Literature

A number of past studies have found a link between stress and locus of control. Stress has often been seen as one of the causes of various cardiovascular and other illnesses. A study with 159 college students revealed that participants with higher stress levels also had greater external locus of control and the structural equation modeling indicated that locus of control also seems to

play a mediating role between stress and illness (Roddenberry & Renk, 2010). Heydari et al. (2015), using descriptive-correlative and cross-sectional study with 100 asthma patients in Tehran found a negative significant relationship amongst perceived stress, a dimension of external control (chance) and asthma control.

Apart from ill health, other stress causing factors can be the loss of a job or financial crunch. A study examined the psychological profile of 201 Greek unemployed people (age range: 20 to 64 years) during an economic crisis (Brouskeli & Markos, 2013). The results showed that individuals who were dismissed from their jobs and had an external LOC experienced more stress and only physical activity related to LOC orientation as well as perceived stress (Brouskeli et al. 2013). The stress levels also seem to affect optimism levels of a person. The external LOC and elevated perceived stress levels were seen to taint their optimism towards the pursue of a job search for earning livelihood (Brouskeli et al. 2013).

Perceived stress and LOC have been positively correlated to one another in past researches. One such study with 100 lecturers employed in junior and senior college was carried out, employing measures like Rotter's Locus of Control Scale and Perceived Stress Scale. The results established a moderate positive correlation amongst LOC and perceived stress (Paranjpe, 2014). The mental health correlates of stress and locus of control paint a clear picture of how the two factors affect minds. A 2014 study with female inmates in U.S. prisons showed that 'perceptions of higher stress, a higher degree of external LOC and inadequate social support correlated with greater symptoms of depression and hopelessness and lower self-esteem' (Asberg & Renk, 2014).

In a study with 3,306 university students, it was found that students with stronger internal LOC displayed healthy nutrition and a higher level of physical activity, while, a higher score on the dimension measuring beliefs in luck or chance showed a higher likelihood of current smoking, lower physical activity and poor nutrition (Helmer et al. 2012).

The current study is aimed to investigate the relation between perceived stress and locus of control in daily life of Indian young adults (age range: 18-30 years). The Independent variable is Locus of Control (External/Internal) and the Dependent variable is Perceived Stress. It is hypothesized that a higher score on external orientation of the locus of control scale is positively correlated with a higher score on the perceived stress scale. Hence, an individual with an external orientation on LOC will have elevated perceived stress levels.

Methodology

Sample and Sampling technique

The sample of 107 young adults was selected based on Convenience and Snowball Sampling methods. The age range was 18-30 years. This was a correlational study using survey method for data collection.

Tools used

● The Perceived Stress Scale (PSS-10) was developed originally in 1983 by Sheldon Cohen, Tom Kamarck and Robin Mermelstein. It consists of 10 items (items 4, 5, 7 and 8: reverse scored) with a 5-point Likert rating system (0 = Never to 4 = Very Often). The Internal Consistency reliability of the scale is 0.754 and the criterion validity ranges between 0.65 to 0.73. It requires at least a junior high school education for valid participation.

● The Levenson's Locus of Control Scale developed by Hanna Levenson in 1973 has 24 items with a 6-point Likert rating system ranging from −3: strongly disagree to +3: strongly agree. The Split-half reliabilities (Spearman-Brown) range from 0.60 to 0.70. The validity showed that the P and C scales are usually correlated slightly to moderately (0.23 to 0.59, significantly) with each other while being unrelated to the I scale.

Procedure

For data collection, a google form containing consent form, demographic details form and two standardized questionnaires with a debriefing was sent out to the participants using various social media platforms. The participants were assured of confidentiality and that use of their responses was for the study only. Their voluntary consent to participate in the study was also registered. The language of the entire form was English. At the end of the survey the participants were thanked for their time and were provided with a written debriefing. The participants were also provided with the research candidate's email ID for doubt clearing or result availing.

Ethical Considerations

The Google form had the informed consent form disclosing basic information about the research candidate, eligibility criteria, time required to fill the form, the confidential and voluntary nature of the study. The participants were informed prior to the filling of the responses that all the data collected was to be used solely for academic purposes and their anonymity would be ensured.

Results

The data analysis was done using Statistical Package for the Social Sciences version 28 (SPSS 28.0).

Table 1 Descriptive Statistics

	N Statistic	Range Statistic	Minimum Statistic	Maximum Statistic	Sum Statistic	Mean Statistic	Std. Deviation Statistic	Variance Statistic	Skewness		Kurtosis	
									Statistic	Std. Error	Statistic	Std. Error
PSS-10	107	30	6	36	2327	21.75	6.745	45.492	-.110	.234	-.480	.463
LOC_Internal	107	33	13	46	3641	34.03	5.809	33.744	-.609	.234	1.047	.463
LOC_Pwrfl_Others	107	36	2	38	2115	19.77	8.409	70.709	.069	.234	-.668	.463
LOC_Chance	107	43	1	44	2538	23.72	8.505	72.336	-.039	.234	-.359	.463
Valid N (listwise)	107											

Table 2 Correlation between scores on PSS-10, LOC_Pwrfl_Others and LOC_Chance

		PSS-10	LOC_Pwrfl_Others	LOC_Chance
Pearson Correlation	PSS-10	1.000	.361	.144
	LOC_Pwrfl_Others	.361	1.000	.602
	LOC_Chance	.144	.602	1.000
Sig. (1-tailed)	PSS-10	.	<.001	.070
	LOC_Pwrfl_Others	.000	.	.000
	LOC_Chance	.070	.000	.
N	PSS-10	107	107	107
	LOC_Pwrfl_Others	107	107	107
	LOC_Chance	107	107	107

Table 3 ANOVA (Regression Analysis)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	670.480	2	335.240	8.398	<.001[b]
	Residual	4151.707	104	39.920		
	Total	4822.187	106			

a. Dependent Variable: PSS-10
b. Predictors: (Constant), LOC_Chance, LOC_Pwrfl_Others

Table 4 Coefficients (Regression Analysis)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	17.093	1.889		9.049	<.001			
	LOC_Pwrfl_Others	.346	.091	.431	3.781	<.001	.361	.348	.344
	LOC_Chance	-.092	.090	-.116	-1.016	.312	.144	-.099	-.092

a. Dependent Variable: PSS-10

Table 1 shows the mean values and the standard deviations for PSS-10 as (M= 21.75, Sd= 6.745), for LOC_Internal it is (M= 34.03, Sd= 5.809), for LOC_Pwrfl_Others it is (M= 19.77, Sd= 8.409) and for LOC_Chance it is (M= 23.72, Sd= 8.505), for the total population i.e., N= 107.

Table 2 shows the correlation between the variables perceived stress (PSS-10) and Locus of Control (External: Powerful Others and Chance). There is a significant moderate positive correlation between the levels of perceived stress and powerful others scores, significant at the 0.001 confidence level. However, there is a non-significant low positive correlation between the levels of perceived stress and chance scores. The hypothesis that a higher score on external orientation of the locus of control scale is positively correlated with a higher score on the perceived stress scale is partially accepted.

Table 3 shows that for df= 2, the F statistic= 8.398 at α = 0.001 level. From the f distribution table for α = 0.001 level it is clear that the model is significant. The hypothesis that a higher score on external orientation of the locus of control scale is positively correlated with a higher score on the perceived stress scale is accepted.

Table 5 shows the correlation between the variables perceived stress (PSS-10) and Locus of Control (Internal). There is a non-significant low negative correlation between the levels of perceived stress and scores on the Internal scale of LOC, significant at the 0.001 confidence level. The hypothesis that a higher score on external orientation of the locus of control scale is positively correlated with a higher score on the perceived stress scale is accepted.

Table 5 Correlation between Internal LOC and PSS-10 scores

		PSS-10	LOC_Internal
PSS-10	Pearson Correlation	1	-.138
	Sig. (1-tailed)		.078
	Sum of Squares and Cross-products	4822.187	-574.243
	Covariance	45.492	-5.417
	N	107	107
LOC_Internal	Pearson Correlation	-.138	1
	Sig. (1-tailed)	.078	
	Sum of Squares and Cross-products	-574.243	3576.916
	Covariance	-5.417	33.744
	N	107	107

Discussion

The results of this study indicate a significant moderate positive correlation between the levels of perceived stress and powerful others, however, there is a non-significant low positive correlation between the levels of perceived stress and chance scores. The F-statistic value clearly shows that the null can be rejected. To bolster these findings, there is also a non-significant low negative correlation between the levels of perceived stress and scores on the Internal scale of LOC. The overall results are in line with the hypothesis to a certain extent. This study goes onto partially support previously conducted research work where researchers found a moderate positive correlation amongst external LOC and perceived stress. This is an important line of study as it has been seen that a greater external LOC is indicative of unhealthy lifestyle practices like smoking, lower physical activity and poor healthy nutrition (Helmer et al. 2012) along with elevated stress levels, in contrast with an internal LOC.

Limitations

Due to the ongoing pandemic the research was conducted virtually via the means of google forms. A tete-a-tete administration of the questionnaires could have resulted in more stringently collected data. Also, the population sample was age restricted. Hence, the generalizability of the results to populations outside the one selected is not possible, but this can be taken up by future researchers.

References

[1]. Asberg, K., & Renk, K. (2014). Perceived stress, external locus of control, and social support as predictors of psychological adjustment among female inmates with or without a history of sexual abuse. International journal of offender therapy and comparative criminology, 58(1), 59–84. https://doi.org/10.1177/0306624X12461477

[2]. Brouskeli, V., & Markos, A. (2013). The role of locus of control and perceived stress in dealing with unemployment during economic crisis. Research on Humanities and Social Sciences, 13(21), 05-103. https://www.iiste.org/Journals/index.php/RHSS/article/view/9538

[3]. Chrousos, G. P. (2009). Stress and disorders of the stress system. Nature Reviews Endocrinology, 5(7), 374-381. https://doi.org/10.1038/nrendo.2009.106.

[4]. Helmer, SM, Krämer, A & Mikolajczyk, RT, (2012), 'Health-related locus of control and health behaviour among university students in North Rhine Westphalia, Germany', BMC Research Notes, 5, 703. https://doi.org/10.1186/1756-0500-5-703.

[5]. Heydari, H., Dolatshahi, B., Mahdaviani, A., & Eslaminejad, A. (2015). Asthma control on the basis of perceived stress, locus of control, and self-efficacy in patients with adult asthma. https://jpcp.uswr.ac.ir/article-1-261-en.html

[6]. Lazarevic, B., & Bentz, D. (2021). Student perception of stress in online and face-to-face learning: the exploration of stress determinants. American Journal of Distance Education, 35(1), 2-15. https://doi.org/10.1080/08923647.2020.1748491.

[7]. Mental health statistics: Stress, Mental Health Foundation, https://www.mentalhealth.org.uk/statistics/mental-health-statistics-stress#:~:text=51%25%20of%20adults%20who%20felt,had%20suicidal%20thoughts%20and%20feelings.

[8]. Paranjpe, V. (2014). The relationship between locus of control and perceived stress. Indian Journal of Mental Health, 1(1), 64-70. https://doi.org/ 10.30877/IJMH.1.1.2014.64-70

[9]. Roddenberry, A & Renk, K (2010), 'Locus of control and self-efficacy: potential mediators of stress, illness, and utilization of health services in college students' Child Psychiatry and Human Development, 41, 353-370. https://doi.org/10.1007/s10578-010-0173-6.

[10]. Rotter, JB (1960), 'Some implications of a social learning theory for the prediction of goal directed behavior from testing procedures', Psychological Review, 67, 301-316. https://doi.org/10.1037/h0039601.

[11]. Rotter, JB (1966), 'Generalized expectancies for internal versus external control of reinforcement', Psychological Monographs, vol. 80 (1, Whole No 609), 1-28. https://doi.org/10.1037/h0092976.