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## Locus of control and depression: Relationship and impact: An empirical study on Indian students

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#### **Abstract**

*Background: There is a clear connection between external locus of control and depression, according to research. There has been little if any, research is available on locus of control and depression in Indian socio-cultural background.*

*Aim: This study investigates the relationship between locus of control and depression among Indian undergraduate students.*

*Methods: A self-administered questionnaire with the Levenson's multidimensional locus of control scale, the Beck Depression Inventory-II, and demographic questions was given to a sample of 192 students. Descriptive statistics, standard multiple regression analysis were used in the data analysis.*

*Results: 47.3 percent of the 192 participants had low (minimal) depression, 23.4 percent had mild depression, 18.0 percent had moderate depression, and 11.3 percent had extreme depression. Students who believed they had control over their lives were less likely to have depressive symptoms, while students who believed their lives were influenced by chance ( $r = 0.45, p = 0.000$ ) or influential others ( $r = 0.40, p = 0.000$ ) were more likely to have high depression scores. Internal and external locus of influence and age explained 31% of the variation in depression scores; gender had no significant impact on depression levels.*

*Conclusion: The findings of the study highlight locus of control as one of the cognitive variables linked to depression. More research is required to figure out how to resolve locus of control in the treatment and prevention of depression in the university setting*

## Introduction

There has been much research done on mental health issues among university students. University life can be stressful for students due to possible stressors such as adjusting to a new climate, being away from the comfort and encouragement of the parental home, living on a tight budget, completing assignments within tight deadlines, and dealing with romantic relationship fluctuations. [1]. While the pressures of university life may provide opportunities for personal development for some students, but for some students, depression. [2]. Whether or not university life leads to students experiencing depression can be determined by various genetic, neurobiological, and psychosocial factors<sup>5,6</sup>, but it may also be affected by students' perceptions that they have little to no control over events in their lives. The term "locus of influence" refers to such convictions. [3,4]

Individuals' generalized expectations or assumptions of whether their behavior and abilities (internal locus of control) or external factors such as powerful others, chance, fate, or luck control events in their lives are referred to as locus of control (external locus of control). Although the degree to which people expect themselves or external forces to control events varies depending on the circumstance and case, people tend to have a more generalized locus of control when analyzing events in their lives. [6,7]

Locus of control and depression are related, according to some studies. Internal locus of control is more likely to present with depression, according to Peterson, because depressed people tend to blame themselves for failure. Research has consistently shown that external locus of control (rather than internal locus of control) is positively correlated with depression, despite such predictions.[8,9,10,11]

In student studies from around the world, associations between locus of control and depression were also discovered. An American study, for example, discovered that college students with an internal locus of control had lower depression scores than those with an external locus of control. [12,13,14]. [15] External locus of control predicted variation in depression scores in a more recent study with American undergraduate students, while internal locus of control did not. [16] Depression was negatively correlated with an internal locus of control in a study of female college students in India, but it was positively associated with students' expectations that powerful others and chance can control events. [17] Similarly, a Jordanian study of undergraduate students found a negative link between depression and internal locus of influence, but a positive link between depression and the assumption that events are controlled by chance. High levels of external locus of influence were linked to low levels of general well-being in a South African sample of local and foreign graduate students. While it is natural to believe that cultural differences would moderate the impact of locus of control on depression, a meta-analysis of various locus of control studies found that studies conducted in collectivist societies revealed just as much of a positive relationship between external locus of control and depression as studies conducted in so-called individualistic societies.

The locus of control theory can help explain, at least in part, why some students can effectively adjust to the demands of university life while others become depressed. When confronted with a threat, students who believe they have a significant amount of influence over their lives will be motivated to take action. Students who feel they have no influence over their lives and that their fate is in the hands of significant others or chance are more likely to experience emotional distress and become passive in their actions. The perception that one has little to no influence over events in one's life tends to affect a person in the same way that absolute lack of control does, causing feelings of helplessness, passivity, loss of interest, and hopelessness [19], all of which may render a person vulnerable to depression.

A literature review revealed no studies that looked into the relationship between locus of control and depression in the Indian socio-cultural context. The prevalence and distribution of depression in India are not statistically proved, but previous research has found a high prevalence of depression among university students. [20]. The study aimed to see if there was a connection between locus of control and depression in a group of Indian undergraduate students. The research followed Levenson's [21] suggestion of treating internal and external locus of control as two distinct variables and paying attention to whether people assume events in their lives are under their control or are controlled by external powers.

Levenson [21] proposed a distinction between beliefs in significant others and beliefs in chance in relation to the latter. Higher levels of internal locus of control, referring to powerful others and chance, were

associated with lower levels of depression. In contrast, higher levels of external locus of control, referring to powerful others and chance, were associated with higher levels of depression. Given that women are more vulnerable to depression than men[22] and that younger people are less depressed than older people in some developed countries, the study hypothesized that locus of influence and gender and age would predict depression levels. The research adds to our understanding of the role of cognitive factors in developing depressive symptoms, focusing on India's social ecology.

### **Methodology**

The researchers used a convenience sampling approach to assign a self-administered questionnaire to undergraduate students from different disciplines at the University of Indian. In the lecture halls, the participants completed the questionnaires individually and returned them to the researchers in the class. There were 335 questionnaires distributed in total, with 303 being returned. Twenty-four questionnaires were omitted from data collection because they were incomplete in large parts; twenty-four questionnaires were not considered because the respondents were under the age of 18, and no informed consent was obtained from their parents. As a result, there were 192 people in the final study.

The self-administered questionnaire included two scales to measure locus of control and depression and questions to ascertain the gender and age of the participants. Additional questions about participants' year of study, faculty enrolment, and parents' level of education as a measure of participants' socio-economic status were asked to explain the sample's characteristics. The multidimensional locus of control scale developed by Levenson was used to determine the locus of control. [23] Unlike the Rotter scale, which measures locus of control as a one-dimensional construct, this scale measures locus of control as a multidimensional construct. The Levenson scale assesses whether people believe events in their lives are influenced by them (internal locus of control) or by chance and significant others (external locus of control) (external locus of control). This scale has 24 items divided into three subscales (each with eight items), one measuring internal locus of control, one measuring the 'chance' dimension of external locus of control, and one measuring the 'risk' dimension of external locus of control.

The Beck Depression Inventory-II (BDI-II) was used to gauge depression (BDI-II). [24] This inventory can be used in a non-psychiatric population, such as university students<sup>25</sup>, and it scans for depressive symptoms for two weeks before and after the administration date. The BDI-II has 21 symptoms (for example, sadness), each of which has four statements ranging from I can not bear it (3) to I do not feel sad (0). The magnitude of depression is shown by a total score ranging from 0 to 63. Minimal depression is indicated by a score of 0 to 13, mild depression is indicated by a score of 14 to 19, and a score of 20 to 28 indicates moderate depression, and extreme depression is indicated by 24. For non-clinical samples, the BDI-II has been shown to have high convergent and discriminant validities, as well as high reliability of  $\alpha = 0.93$ . [24] The BDI-II has been used in the Southern African context<sup>26</sup> and Indian<sup>3,20</sup>, so it was deemed suitable for this research.

### **Investigation of the data**

Descriptive statistics, independent samples t-tests (to determine gender differences), Pearson's product-moment correlation coefficient (to determine relationships between locus of control, age, and depression), and standard multiple regression analysis were used to analyze the data (to determine whether the internal and external locus of control [powerful others, chance], gender and age predicted depression).

### **Concerns on ethics**

Participants were told that they could stop filling out the questionnaire at any time if they wish to stop. The Ethics Board for Student Research at the University of Indian's Department of Psychology provided ethical approval. Since the researchers were concerned about the students' emotional distress due to filling out the BDI, they debriefed all participants and provided details about where they could obtain therapeutic assistance if they thought the questionnaire had caused them distress. Despite the researchers' warnings in class that students under 18 could not participate in the study, seven students under 18 completed the questionnaire. The researchers were unable to classify these seven students to

provide them with additional assistance due to the anonymity of the participants. On the other hand, the seven participants were included in a debriefing about seeking therapeutic assistance.

## Results

A total of 192 people were involved in the study. The majority of them were female students, with an average age of 20.10 years (mean; standard deviation [s.d.] = (2.84). (80.2 percent). First-year (42.5%), second-year (30.8%), third-year (12.8%), and fourth-year (13.9%) undergraduate students enrolled in the Faculties of Social Sciences (69.9%), Business (23.8%), Humanities (2.2%), Education (2.2%), Health Sciences (1.5%), and Science (1.5%) were among the participants (0.4 percent). Almost half of the participants' mothers or female guardians (45.7%) had completed tertiary education, while 44.9 percent of their fathers or male guardians had done so.

Internal consistency reliability for the internal locus of control subscale (= 0.44) was poor but sufficient for the external locus of control subscales measuring the 'chance' dimension (= 0.69) and the 'powerful others' dimension (= 0.70). The BDI-II had a Cronbach's alpha of 0.90, indicating a high level of internal consistency.

Table 1 shows the gender and age-related averages for the locus of control and depression. The internal locus of control received an average score of 34.85 (s.d. = 6.69). The mean scores for external locus of control (chance) were 18.33 (s.d. = 9.77) and 20.23 (s.d. = 8.93) respectively (powerful others).

The mean depression score was 15.23 (standard deviation = 10.42); 47.3 percent of participants had mild depression, 23.4 percent had moderate depression, and 11.3 percent had extreme depression.

The participants' locus of control scores were unaffected by gender or age. Participants' depression scores were also unaffected by their gender. On the other hand, age was found to have a mild but statistically important negative relationship with depression. ( $r = 0.20$ ,  $p = 0.001$ ; Table 1), higher depression ratings are higher in younger participants.

The links between locus of control and depression are shown in Table 2. The findings indicate that internal locus of control was negatively correlated with depression ( $r = -0.29$ ,  $p = 0.000$ ), while both external locus of control (chance) and external locus of control (powerful others) were positively associated with depression ( $r = 0.45$ ,  $p = 0.000$  and  $r = 0.40$ ,  $p = 0.000$ , respectively).

**Table 1:** Depression and locus of control scores by age and gender.

**TABLE 1:** Average locus of control and depression scores by gender and age.

Variable	Mean	s.d.	Gender		Age	
			<i>t</i>	<i>p</i>	<i>r</i>	<i>p</i>
Internal locus of control	34.85	6.69	0.430	0.667	-0.04	0.549
External locus of control (chance)	18.33	9.77	1.104	0.273	-0.07	0.265
External locus of control (powerful others)	20.23	8.93	0.138	0.890	0.08	0.220
Depression	15.23	10.42	1.380	0.169	-0.20	0.001

s.d., standard deviation.

**Table 2:** Depressive symptoms and locus of control.

**TABLE 2:** Associations between locus of control and depression.

Dimensions of locus of control	Depression	
	<i>R</i>	<i>p</i>
Internal locus of control	-0.29	0.000
External locus of control: chance	0.45	0.000
External locus of control: powerful others	0.40	0.000

**Table 3:** Depression predictors: locus of influence, gender, and age.

**TABLE 3:** Locus of control, gender and age as predictors of depression.

Variable	<i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	Beta	<i>F</i>	<i>df</i>	<i>p</i>
Model	0.307	0.285	-	18.19	5.211	0.000
Internal locus of control	-	-	-0.25*	-	-	-
External locus of control (chance)	-	-	0.28*	-	-	-
External locus of control (powerful others)	-	-	0.20*	-	-	-
Gender	-	-	-0.07	-	-	-
Age	-	-	-0.17*	-	-	-

\**p* ≤ 0.05

A typical multiple regression analysis was used to see if the locus of control is a predictor of depression. Internal locus of control, external locus of control (chance), external locus of control (powerful others), gender, and age as predictor variables were all evaluated (Table 3).  $R^2 = 0.307$ , modified  $R^2 = 0.285$ ,  $F[5, 211] = 18.19$ ,  $p = 0.000$ , this model clarified 30.7 percent of the variances in depression ratings. The most special contribution (beta = 0.28) came from the external locus of control (chance). External locus of control (powerful others) (beta = 0.20), internal locus of control (beta = -0.25), and age (beta = -0.17) all played a role in depression, but gender was not.

### Conclusion

This research aimed to see if there was a connection between locus of control and depression in a group of Indian university students. Internal locus of control was found to be inverse relation to depression in the study. The two dimensions of external locus of influence (chance and strong others) were both found to be positively related to depression. Internal locus of control had a mild and lower relationship with depression than the two external loci of control dimensions.

Low internal and external locus of control predicted depression, accounting for 31.0 percent of the variance in participants' depression scores when combined with age. While various genetic, neurobiological, and psychosocial factors all play a role in depression, the findings highlight that a significant role in depression is played by locus of control. According to the findings, students who feel they have control over their lives are less likely to exhibit depressive symptoms. It is reasonable to believe that such conviction helps students deal with stressful situations head-on, preventing them from thinking negatively about themselves, the environment, and the future<sup>11</sup>, feeling powerless, and being passive and indecisive.

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