

## INTERNAL LOCUS OF CONTROL OF UNDERGRADUATE STUDENTS WITH RESPECT TO STREAM AND GENDER

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### Abstract

*The study has been conducted for examining internal locus of control of the undergraduate students with respect to stream and gender. The sample consisted of 216 undergraduate students of two degree colleges in Chandigarh i.e. one private and one government selected randomly (using lottery method). Data was collected using the Locus of Control Scale by Nongtdu and Bhutia (2018). The raw score for internal locus of control was taken into consideration; yielded separately according to the questionnaire used in this study. The findings revealed significant influence of stream on internal locus of control. There was no significant influence of gender witnessed on internal locus of control. No significant interactional effect of stream and gender taken together was found on internal locus of control.*

**Keywords:** Gender, Internal, Interaction Effect, Locus of Control, Stream.

### Introduction

#### *Locus of control*

The concept of locus of control came into existence with the work of **Rotter's social learning theory (1966)**. It implies the degree according to which individuals presume the consequences of events that take place in their lives. Some individual try to attribute these effects to own hard work as well as efforts; these are known as individuals with internal locus of control while many others attribute it on outside forces or the environment in the form of luck, fate, chance or powerful others, etc., they are considered as individuals with external locus of control. According to **Lee-Kelley (2006)** locus of control is described "as a dimension with two opposing differentiates: 'internal' locus of control individuals interpret reinforcements they receive from their surroundings as contingent upon their own actions, while 'external' individuals perceive their actions to be externally determined by say luck, fate or unpredictable factors. The former exhibits a belief in personal control of rewards and outcomes, and the latter attributes consequences to externally imposed factors that are beyond their control." **Carrim, Basson and Coetzee (2006)** defined locus of control as "the extent to which individuals believe that what happens to them is within their control or beyond it." According to **Wise (2014)** it is described "as an individual's generalized expectancies regarding the forces that determine rewards and punishments." As per **Manichander (2014)** locus of control refers "to the notion that we each view life either as something we can control or something that controls us." **Çelik and Sarıçam, (2018)** locus of control is regarded as "an output related to the repetition of the positive or negative consequences of the behaviour in relation to the future expectations; separated into two as internal and external controls." Thus, it is an important construct for understanding the individual's belief system and the attribution either towards the internal forces or external factors.

### **Locus of control and Gender**

**McGinnies, Nordholm, Ward and Bhanthumnavin (1974)** in their study found that women had a strong belief in external control of their lives than did the males in the countries including Sweden, Japan, Australia, United States of America and New Zealand. **Sherman, Higgs and Williams (1997)** in their work concluded that both male and female became more external. On the other hand, specifically females were higher on external control as compared to males on several measures of locus of control. Gender differences in the perception of control across the behavioural domains were also observed. Two of the areas in which both male and female appear to vary were the “perception of control over interpersonal relationships” and “essentially uncontrollable life events”. **Fogel and Israel (2009)** conducted their study on college students in which they reported males had an internal locus of control for viewing the internet about health information, whereas females on the other hand had a powerful others health locus of control. Also, female college students were affiliated with chance health locus of control for communicating on internet. **Rastegar and Heidari (2013)** in their study revealed no significant differences in males and females for both internal and external locus of control. **Zaidi and Mohsin (2013)** indicated that men had an internal locus of control while women scored higher on external locus of control. So, the gender difference remained significant on locus of control. **Hasan and Khalid (2014)** in their research concluded that men had significantly lower internal academic locus of control which implied they had a strong internal academic orientation contrary to this; women were significantly high on an internal academic locus of control indicating less internal academic orientation. **Waghmare (2016)** in its study revealed a significant difference between locus of control of male and female college students. Females possessed higher internal locus of control while males had an external locus of control. No significant differences were observed between locus of control of urban and rural college students.

### **Locus of control and Stream**

**Smith (2003)** revealed a statistically significant difference in the locus of control between the subjects of high school education or less and graduate-level education or higher. The results indicated that the graduate level or higher educated subjects had more internal locus of control in comparison to the subjects of high school education or less. **Jemi-Alade (2008)** reported that business and health care administration as well as graduate students had similar comprehensive locus of control orientation scores. **Ghonsooly and Elahi (2010)** revealed that for the locus of control; engineering students had a higher mean score while a lower mean score was witnessed among humanities students. In other words, it could be concluded that students from engineering were internalizes whereas students from humanities were externalizes. Also, students from engineering obtained higher scores in the locus of control than the students from sciences and humanities. But the difference in mean scores between science and humanities was not significant. **Ghasemzadeh and Saadat (2011)** in their study observed no significant differences in the internal-external locus of control of male and female students however; females were higher on locus of chance control as compared to males. Also, the students belonging to the faculties of basic sciences, psychology and educational sciences, power and computer depicted remarkable differences on both internal and external locus of control. **Nongtdu and Bhutia (2017)** in their study found that majority of the students had an average internal and external locus of control. A significant difference was further revealed in internal locus of control between urban and rural college students, science and commerce students, science and arts students. But there was no significant difference in the internal locus of control of males and females as well as commerce and arts students. For external locus of control based on gender, locale, arts and commerce students no significant difference was observed, but a significant difference was noted between science and commerce in addition to science and arts students.

## **Need of the Study**

The construct originated from the work of **Rotter (1954)**. Locus of control represents a continuum and includes generalized expectancies for control of reinforcement predicting people's behaviour across situations. This study is significant because it might provide an outline, for improving the existing situations or creating novice services to assist individuals to have a controlled environment wherein they usually would feel better to regulate and attribute. While reading about these variables (i.e. internal locus of control, stream and gender) the investigator came across several related studies on them differently but not an amalgamated one. While further reviewing the research already done; the results didn't yield precise conclusions instead mixed results were witnessed. Thus, this motivated the investigator to take up the current survey study.

## **Objectives**

The investigation was conducted with the following objectives mentioned below:

- To study influence of stream on internal locus of control of undergraduate students.
- To study influence of gender on internal locus of control of undergraduate students.
  
- To study interaction effect of stream and gender on internal locus of control of undergraduate students.

## **Hypotheses**

Based upon the above objectives, the hypotheses that were formulated include:

- There exists no significant influence of stream on internal locus of control of undergraduate students.
- There exists no significant influence of gender on internal locus of control of undergraduate students.
- There exists no significant interaction effect of stream and gender on internal locus of control of undergraduate students.

## **Delimitation of the Study**

The study was confined to first-year undergraduate students studying in both the private and government degree colleges of the Union Territory of Chandigarh affiliated to Panjab University from commerce, humanities and vocational streams. Also, score for internal locus of control only was taken into consideration in the study.

## **Methodology**

### ***Research Method***

Descriptive survey method has been used in the study. As per **Salaria (2012)** "it is concerned not only with the characteristics of individuals but with the characteristics of the whole sample thereof. It provides information useful to the solutions of local issues (problems)." Data was collected using a questionnaire for evaluating and explaining the concepts further.

## **Tool Used**

The tool that has been used is stated hereafter:

Locus of Control Scale: As devised by **Nongdu and Bhutia (2018)** it is a five-point scale consisting of 40 questions related to dimensions i.e. internal and external.

### Sample

The population of the study was first-year undergraduate students studying at Punjab University and its affiliated colleges in Chandigarh. The sample was collected much before the announcement of the lockdown for the pilot study for comprehending the scoring and analysis of the standardized scale. With due permissions, the data was collected from a total of 216 undergraduate students studying in two-degree colleges randomly selected (using lottery method) i.e. one government and one private of Chandigarh affiliated to Panjab University. The raw score for internal locus of control has been taken into account as independently yielded in accordance with the scale used in the study. The sample of the investigation was further stratified based on gender (male and female) and stream (i.e. commerce, humanities and vocational) along with the details that have been further provided in Table 1.

### Statistical Techniques Used

Two-way ANOVA has been applied to determine the influence of both stream and gender separately on internal locus of control. The interaction of both stream and gender on internal locus of control of undergraduate students has also been depicted. Further t-test has been used to verify the significance of interaction between stream and gender

### .Result and Discussions

**Table1: Between-Subjects Factors**

	Value Label	N
<b>Stream</b>	Commerce	53
	Humanities	112
	Vocational	51
<b>Gender</b>	Male	112
	Female	104

Table 1, labelled as between-subjects factors provides the details about the number of the subjects in each level of the factors. There are 112 males and 104 females while 53 in Commerce, 112 in humanities and 51 students in vocational stream.

**Table 2: Levene's test of Equality of Variance in internal locus of control**

F	df1	df2	p-value
0.44	5.00	210.00	0.82

Table 2, reveals the value of Levene's test of equality of variance. The value comes out to be 0.44 which indicates that it is non-significant ( $p > 0.05$ ) implying that the groups have equal variances.

**Table 3: Test of Between-Subject Effects of gender and stream of study on internal locus of control of undergraduate students**  
**Dependent Variable: Internal Locus of Control**

Source	Type III Sum of Squares	df	Mean Square	F	p-value
Stream	3487.36	2	1743.68	20.11	0.00
Gender	12.81	1	12.81	0.15	0.70
Stream*Gender	210.26	2	105.13	1.21	0.30
Error	18210.76	210	86.72		
Corrected Total	21844.15	215			

Table 3, depicts the F-statistic corresponding to the stream of study is 20.11, which is significant ( $p < 0.01$ ). The F-statistic corresponding to gender is 0.15, is not significant ( $p > 0.05$ ). The interaction between gender and stream is also non-significant with  $F = 1.21$  ( $p > 0.05$ ). Hence, it indicates that there is a significant influence of stream on internal locus of control whereas no significant influence of gender on internal locus of control has been observed. Also, there is no significant interaction effect of stream and gender on internal locus of control.

For verifying the significance of interaction between stream and gender; mean and t-ratios have been worked out on sub-groups and the values are given in the table further:

**Table 4: Mean difference of Internal Locus of Control as per the stream and gender**

Groups	N	Mean	Standard Deviation	t-ratio	p-value
Commerce	53	79.77	9.96	0.81	0.42
Vocational	51	81.20	7.97		
Humanities	112	72.63	9.56	5.57	0.00
Vocational	51	81.20	7.97		
Humanities	112	72.63	9.56	4.41	0.00
Commerce	53	79.77	9.96		
Male	112	76.80	10.17	0.60	0.55
Female	104	75.98	10.01		
Commerce Male	30	78.73	10.70	0.87	0.39
Commerce Female	23	81.13	8.96		
Humanities Male	59	73.78	9.78	1.34	0.18
Humanities Female	53	71.36	9.24		
Vocational Male	23	82.04	7.78	0.68	0.50
Vocational Female	28	80.50	8.19		

Table 4, reveals the mean values of locus of control of commerce and vocational students are 79.77 and 81.20 respectively. The value of t-ratio is 0.81, which is non-significant ( $p > 0.05$ ). The mean values of humanities and vocational students are 72.63 and 81.20 respectively. The value of the t-ratio being 5.57, is significant ( $p < 0.00$ ). The mean values of humanities and commerce students are 72.63 and 79.77 respectively. The value of the t-ratio is 4.41, is also significant ( $p < 0.00$ ). This indicates a significant difference between internal locus of control of students belonging to humanities and vocational stream as well as humanities and commerce stream. It further accounts for the significant influence of stream on internal locus of control. The mean values of locus of control of male and female students are 76.80 and 75.98 respectively. The value of corresponding t-ratio being 0.60, is

non-significant ( $p > 0.05$ ). This specifies no significant difference in the internal locus of control of both female and male students. It also further justifies the non-significant influence of gender on internal locus of control. Along with this, it can be concluded that no significant interactional effect of stream and gender is being witnessed on internal locus of control. The studies in consonance with findings as hypothesized were carried out by **Knowles and Kerkman (2007)** who in their study about an online course on visual arts students depicted a higher internal locus of control also, it was further indicated that the students with external locus of control were likely to perform better in the academic courses in comparison to those having internal locus of control. **Alias, Akasah and Kesot (2012)** in their study on sixty diploma civil engineering students reported that most of the students tended to possess internal locus of control instead of external locus of control. **Grelot (1989)** depicted gender differences in personality characteristics viz. locus of control. **Gujjar and Aijaz (2014)** in their study revealed that many students were largely internal than external in their locus of control. Further, boys were higher on internal locus of control rather than girls at college level but no gender differences were found in locus of control at the University level. **Fagbohunbhe and Jayeoba (2012)** in their study on undergraduate students at two state universities in the Western states of Nigeria revealed that through the comparison of mean scores, which cannot be said to affect the outcome of the study but a high degree of internality was recorded in the sampled population. However, no significant interaction was observed between gender and locus of control in their influence upon the entrepreneurial abilities. Also, **Napowanetz (2014)** using two-way analysis of variance depicted no significant relationship between both gender and major with respect to a higher dominant locus of control orientation. It implied that both the genders were neither typically more external nor internal rather they displayed a balance between both (internal and external) the orientations. Also, STEM majors vs. non-STEM majors did not exhibit a significant difference in the mean locus of control orientation score. Particularly, no significant differences were witnessed between the academic majors, specifically STEM (science, technology, engineering and mathematics) related and a higher locus of control orientation. The hypothesis that internal locus of control could be related to STEM academic majors based upon the belief that individuals who declared STEM as an academic major would be extremely internally driven along with possessing the viewpoint that circumstances were under their control was also not supported by the study. On the other hand, contrary findings were depicted by the studies executed by **Naik (2015)** who revealed no significant differences on locus of control among males and females, science and arts as well as urban and rural college students. **Choudhury and Borooah (2017)** in their study reported that when sex and stream were taken together in context of locus of control; no significant differences existed between the groups. No significant differences were found in the means of male and female students in addition to arts and science stream students. **Bedel (2015)** stated that female students had higher mean scores on external locus of control than male students while freshman students had greater mean scores on external locus of control as compared to senior students, but, these differences were not statistically meaningful. The significant main effect for gender was located which indicated that the mean score for the females was significantly different from that of males. **Fatemi and Hoseiniyan (2016)** in their study reported that locus of control was more internalized among male students as compared to female students. It was further revealed that male students attributed their success to their own self and considered external factors responsible for their failure but the opposite was true that the female students as they would assume the responsibility for negative consequences of their actions. As per the results, males had the confidence in their abilities while females due to their inbred lack of self-confidence would desist for confirmation of their actions from their environment repeatedly. **Callaghan and Papageorgiou (2013)** revealed that female accounting students exhibited a higher locus of control in all the three categories (i.e. “beliefs about the effectiveness of agency, beliefs about chance and beliefs about networks in the contribution to the attainment of outcomes in working contexts”). **Siddiquah (2019)** depicted that gender

significantly influenced the 'external social' and 'external other' loci of control; age and grade significantly affected 'external other' locus of control lastly, subjects significantly impacted internal and external other loci of control. Also, the 'external social' and 'external other' loci of control of female students were significantly higher as compared to male students. 'External other' locus of control of younger age group (i.e. 12-14 year) and lower grade level (i.e. 9<sup>th</sup>) students was significantly greater contrary to the students of older age groups (i.e. 16-17 and 18-19 year) and higher grade level (10<sup>th</sup>) students. 'Internality' and 'other externality' of arts group students were significantly larger in comparison to science group students.

### **Conclusions**

Based upon the findings, conclusions are as follows:

- There exists significant influence of stream on internal locus of control of undergraduate students.
- There exists no significant influence of gender on internal locus of control of undergraduate students.
- There exists no significant interaction effect of stream and gender on internal locus of control of undergraduate students.

### **Educational Implications**

The individual's belief system is considered as the most crucial for assisting in identifying his/her potential as well as responsibility. It tries to imbibe a feeling of assurance in them and guides their power of attribution. Both internal and external factors provide a strong base and support for balancing one's life. The curriculum should include techniques for strengthening the self-esteem and self-confidence among students as it induces sensitivity of strong and precise attribution towards belief in oneself, integrity, alienation, ego control facilitative, luck, chance, etc. It will also empower them to deal effectively with the forthcoming situations both in their life and surroundings leading to positive outcomes. Teachers should encourage the students especially for perseverance and working through the problem thus, boosting their power of attribution in the apt direction. The practitioners and counsellors need to be cognizant about the temperaments and traits of both internally and externally oriented students. Counselling programmes and sessions should be arranged as these can better assist the students in building up a stronger belief system along with encouraging them to take responsibility and even carefully attribute their actions either on their own ability or on external forces. Students from every stream should be engaged in positive thinking and activities which will make them stronger, productive, balanced and successful in every aspect of life.

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