

## Effect of Gender and Stream on Depression among Adolescents

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**Abstract:** The current study was attempted to examine the effect of gender and stream on depression among adolescents. A sample of 300 adolescents (150 boys and 150 girls studying in XI class pursuing science, arts and commerce streams) was taken from Government Model Senior Secondary Schools of Chandigarh by using stratified random sampling technique. Beck Depression Inventory-II was used for data collection. For the analysis of data 2X3 ANOVA was used and t-test was employed wherever F-ratio was significant. The results demonstrated that gender and stream had significant interaction effect on depression among adolescents. Both were dependent on each other to affect the depression score of students. Also, gender and stream differences emerged on depression. Girls showed higher score on depression as compared to boys, and arts students were more depressed as compared to science and commerce students. Further, it was observed that science, arts and commerce stream boys were not differed significantly on depression but girls in science, arts and commerce streams showed significant difference on depression and it was favoured by arts girls. In case of science and commerce streams no significant gender differences occurred. But in arts stream, significant gender differences were observed on depression with preponderance of girls over boys. Results of the study indicated a clear effect of gender and stream on depression among adolescents.

**Key words:** Depression, gender, stream and adolescents.

### I. INTRODUCTION

Depression is the “common cold of mental disorders”; it is widespread, complex and multifaceted disorder that is difficult to describe concisely [1]. It is a condition in which one feels blue or sad. But these feelings are usually for a short period of time. Depression interferes with daily life activities of an individual. It is a common but serious illness [2]. According to Academic Dictionary of Psychology, “Depression is a mood disorder characterized by intense feelings of sadness that persist beyond a few weeks. Two neurotransmitters-natural substances that allow brain cells to communicate with one-another are implicated in depression: serotonin and norepinephrine” [3].

Depression during the teen years comes at a time of great personal change when boys and girls form their identity apart from their parents, grappling with gender issues and emerging sexuality, and make their own independent decisions for the first time in their lives. Depression in adolescence frequently co-occurs with other disorders like anxiety, eating disorders, substance abuse and increased risk for suicide [4] [5]. The process of career exploration and decision-making can be particularly stressful time in an adolescent’s life [6]. High school can be a turbulent time for youth, which causes an enormous amount of stress and confusion, and may lead to academic and emotional concerns during high school [7]. Making the right career choice requires effort and thought. Some individuals seem to make this choice easily, at least apparently, while others experience problems and difficulties in it [8]. A number of studies have assessed symptom related concepts such as general symptom distress, depression and anxiety in the context of vocation related thoughts in more general populations.

Review of literature demonstrated that adolescent girls exhibited more level of depression as compared to boys [9] [10] [11] [12] [13] [14] [15] [16]. Another study showed boys scoring higher than girls on depression [17]. Some studies

showed that boy and girl adolescents did not differ on depression [18] [19]. Also, in a study it was found that science, arts and commerce stream adolescents showed significant difference on depression and it also demonstrated that arts stream adolescents were more depressed as compared to science and commerce stream [20]. However, the literature reviewed in the current study showed that some results are consistent but some contradicting each other. Also, no Indian studies are found on effect of gender and stream on depression. Thus, the current study is an attempt to find out the effect of gender and stream on depression among adolescents.

### II. OBJECTIVES

For the current study following objectives were framed:

1. To examine the effect of gender on depression among adolescent.
2. To examine the effect of streams on depression among adolescents.
3. To examine the interaction effect of gender and stream on depression among adolescents.

### III. HYPOTHESES

On the behalf of above stated objectives following hypotheses were formulated:

1. There is no significant difference between boy and girl adolescents on depression.
2. There is no significant difference among science, arts and commerce stream adolescents on depression.
3. There is no significant interaction effect between gender and stream to yield a difference in depression scores of adolescents.

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- There is no significant difference among science, arts and commerce stream boy adolescents on depression.
- There is no significant difference among science, arts and commerce stream girl adolescents on depression.
- There is no significant difference between boys and girls of science stream on depression.
- There is no significant difference between boys and girls of arts stream on depression.
- There is no significant difference between boys and girls of commerce stream on depression.

#### IV. DELIMITATIONS

The current study was delimited to the following:

- The present study was delimited to Government Model Senior Secondary Schools (co-educated) of Chandigarh only.
- The study was delimited to XI standard students only.

#### V. METHODOLOGY

##### Design of the Study

For the present study descriptive survey method was used to find out the effect of gender and stream on depression among adolescents.

##### Sample

For the current study, a sample of 300 adolescents (150 boys and 150 girls studying in XI class having science, arts and commerce streams) was drawn from Government Model Senior Secondary Schools of Chandigarh by employing stratified random sampling technique. There was no clinical history of adolescents.

##### Tools

For the collection of data Beck Depression Inventory-II was used to measure depression among adolescents aged 13 year or older [21]. It has 21 items. Each item is rated on a 4-point scale ranging from 0 to 3. Content validity and construct validity was established. The test-retest reliability for BDI-II was 0.93.

##### Procedure

For data collection a prior permission was taken from the school principals. Investigator explained the purpose of the present study to adolescents. The subjects were assured that their responses and information given about them will be kept confidential and used for research purpose only. After assurance the Beck Depression Inventory-II was administered to adolescents with a time period of ten minutes.

##### Statistical Techniques to be used

2X3 Analysis of variance was used to check the effect of gender and stream on depression among adolescents. Further, t-test was used wherever F-ratios were found to be significant.

#### VI. RESULTS

Interpretation of results has been given hypothesis-wise:

**Table -1 Summary of Analysis of Variance on the Variable of Depression among Adolescents in Relation to Gender and Stream**

Source of Variation	Type III Sum of Squares	Df	Mean Square	F-ratio	Sig.
Gender (A)	528.013	1	528.013	5.21*	0.023
Stream (B)	770.687	2	385.343	3.80*	0.023
Gender X Stream (AXB)	708.487	2	354.243	3.50*	0.032
Error	29777.480	294	101.284		
Total	115786.000	300			
Corrected Total	31784.667	299			

\*p<0.05

Table 1 represents the summary of analysis of variance on the variable of depression among adolescents in relation to gender and stream.

##### A: Gender Difference

**Table 2 Comparison of Boy and Girl Adolescents on Depression**

Variable	Boys			Girls			t-ratio	Sig.
	N	Mean	S. D.	N	Mean	S. D.		
Depression	150	15.41	9.90	150	18.06	10.58	2.24*	0.03

\*p<0.05

From the Table 1 it was observed that the F-ratio for gender was found to be 5.21, significant at 0.05 level which demonstrated that boys and girls differed significantly on depression. Also Table 2 showed that t-ratio was found to be 2.24 (p<0.05) and indicated that girls (M = 18.06) exhibited more depression as compared to boys (M = 15.41). Thus, the null hypothesis, "There is no significant difference between boy and girl adolescents on depression" stands rejected.

##### B: Stream Differences

**Table 3 t-ratio for Science, Arts and Commerce Stream Adolescents on Depression**

Streams	Science N =100 M = 15.61 S. D. = 9.67	Arts N =100 M = 19.00 S. D. = 11.53	Commerce N =100 M = 15.59 S. D. = 9.32
Science	-	2.25*	0.02
Arts		-	2.30*
Commerce			-

\*p<0.05

From Table 1, it is observed that F-ratio for stream was found to be 3.80 (p<0.05) and showed that science, arts and commerce stream adolescents exhibited different level of depression. Thus, the null hypothesis, "There is no significant difference among science, arts and commerce stream adolescents on depression" stands rejected. Further t-ratios were calculated as shown in Table 3. It showed that science and arts students differed significantly on depression (t-ratio = 2.25, p<0.05) and it indicated that arts students (M = 19) were more depressed as compared to science students (M = 15.61). Arts and commerce stream adolescents showed significant difference on depression (t-ratio = 2.30, p<0.05) and it is favoured by arts group. But science and commerce

students did not show any significant difference on depression (t-ratio = 0.02). The results demonstrated that arts group exhibited more level of depression as compared to science and commerce groups.

**AXB: Interaction between Gender and Stream**

From Table 1 it was found that F-ratio for the interaction of gender and stream on the variable of depression was significant (F-ratio = 3.50, p<0.05). It showed that gender and stream were dependent on each other to affect the mean score of students on depression. Thus, the null hypothesis, “There is no significant interaction effect between gender and stream to yield a difference in depression scores of adolescents” was rejected. Further, gender-wise comparison of science, arts and commerce streams and stream-wise comparison of boys and girls was done and presented ahead.

**Table 4 Gender-wise Analysis of Variance of Science, Arts and Commerce Streams on Depression**

Gender	Source of Variation	Sum of Squares	Df	Mean Square	F-ratio	Sig.
Boys	Between Groups	200.413	2	100.207	1.02	0.362
	Within Groups	14391.780	147	97.903		
	Total	14592.193	149			
Girls	Between Groups	1278.760	2	639.380	6.11**	0.003
	Within Groups	15385.700	147	104.665		
	Total	16664.460	149			

\*\*p<0.01

**Table 5 t-ratios for Science, Arts and Commerce Stream Girl Adolescents on Depression**

Streams	Science	Arts	Commerce
	N = 50 M = 14.86, S. D. = 8.41	N = 50 M = 21.92, S. D. = 12.11	N = 50 M = 17.40, S. D. = 9.83
Science	-	3.39**	1.39
Arts		-	2.05*
Commerce			-

\*\*p<0.01, \*p<0.05

From the Table 4 it was found that science, arts and commerce stream boys were not differed significantly on depression (F-ratio = 1.02). But girls in science, arts and commerce streams were differed significantly on depression (F-ratio = 6.11, p<0.01). Hence, the null hypothesis, “There is no significant difference among science, arts and commerce stream boy adolescents on depression” was accepted but the null hypothesis, “There is no significant difference among science, arts and commerce stream girl adolescents on depression” stands rejected. Further t-test in Table 5 showed that science stream girls differed significantly from arts girls on depression (t-ratio = 3.39, p<0.01) but not with the commerce girls (t-ratio = 1.39). This demonstrated that science stream girls (M = 14.86) were less depressed as compared to arts girls (M = 21.92). Also, it was found that arts and commerce girls differed significantly on depression (t-ratio = 2.05, p<0.05) and it indicated that arts girls (M = 21.92) exhibited more depression as compared to commerce girls (M = 17.40)

**Table 6 Stream-wise Comparison of Boys and Girls on Depression**

Variable	Streams	Boys			Girls			t-ratio	Sig.
		N	Mean	S. D.	N	Mean	S. D.		
Depression	Science	50	16.36	10.82	50	14.86	8.41	0.77	0.44
	Arts	50	16.08	10.22	50	21.92	12.11	2.61*	0.01
	Commerce	50	13.78	8.49	50	17.40	9.83	1.97	0.05

\*p<0.05

Table 6 represents the stream-wise comparison of boys and girls on depression. In case of science and commerce streams no significant gender differences were observed. But in arts stream, boys and girls showed significant difference on depression (t-ratio = 2.61, p<0.05) with preponderance of girls (M = 21.92) over boys (M = 16.08). Hence, the null hypotheses, “There is no significant difference between boys and girls of science stream on depression” and “There is no significant difference between boys and girls of commerce stream on depression” were accepted but the null hypothesis, “There is no significant difference between boys and girls of arts stream on depression” stands rejected.

**VII. DISCUSSION**

The results of the present study showed that significant gender difference was observed on depression and girls exhibited more depression as compared to boys. Previous studies showed similar results [9] [10] [11] [12] [13] [14] [15] [16] [22] [23]. Also, it was found that science, arts and commerce stream adolescents showed significant difference on depression and arts stream adolescents exhibited more level of depression as compared to science and commerce stream adolescents. Similar result has been found in one study [21].

**VIII. MAJOR FINDINGS OF THE STUDY**

- Boys and girls showed significant difference on the variable of depression with preponderance of girls over boys.
- Science, arts and commerce stream adolescents exhibited different level of depression. Also, it was found that arts students were more depressed as compared to science and commerce students.
- Gender and stream had significant interaction effect on depression among adolescents. Both were dependent on each other to affect the mean score of students on depression.
- Science, arts and commerce stream boys were not differed significantly on depression but girls in science, arts and commerce streams were differed significantly on depression and it demonstrated that arts stream girls were more depressed as compared to science and commerce stream girls.
- In case of science and commerce streams no significant gender differences were observed. But in arts stream, significant gender differences were observed on depression with preponderance of girls over boys.

## IX. CONCLUSION

The results of the current study showed that gender and stream have significant interaction effect on depression among adolescents. Both gender and stream were dependent on each other to contribute depression among adolescents. It was found that girls in three streams differed significantly on depression but boys did not. Also, girls in arts stream exhibited more depression than the arts boys. Along with this, significant gender and stream differences were observed on depression. The results of current study showed a clear effect of gender and stream on depression among adolescents. It is suggested that parents should give freedom to children to choose career according to their interests, needs, capacities and capabilities. Also, teachers should help students whenever they are in need. School counseling should be started at secondary stage. Thus, it is the duty of parents and teachers to provide bias free environment to adolescents for their well being.

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