



Intelligence and Study Habits of Adolescents in Relation to Gender and Socio-Economic Status

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Abstract

The present study focuses on intelligence and study habits among adolescents in relation to gender and socio-economic status. Adolescence is an important developmental period in which cognitive abilities, learning patterns and academic behaviours develop rapidly. Intelligence is an important cognitive factor associated with learning, problem-solving and adaptation, whereas study habits represent the behavioural patterns through which students organise and engage in academic activities. The present study aims to understand these variables among adolescents aged 13–16 years.

The proposed study includes 101 adolescent students from Mumbai. Intelligence and

study habits are considered the major psychological variables, while gender and socio-economic status are considered demographic variables. The study proposes to examine the relationship between intelligence and study habits and to explore differences across gender and socio-economic-status groups. The findings may contribute to a better understanding of cognitive and behavioural factors associated with adolescent learning and may have implications for teachers, parents, counsellors and educational institutions.

Keywords-Intelligence, Study Habits, Adolescents, Gender, Socio-Economic Status, Academic Behaviour

Introduction

Adolescence is a significant stage of human development characterised by changes in cognitive, emotional, social and behavioural functioning. During this period, adolescents gradually develop more complex reasoning abilities, greater independence and new approaches to learning. Academic demands also increase considerably, making effective learning strategies and appropriate study habits particularly important.

Intelligence is one of the important psychological variables associated with learning. It generally refers to an individual's capacity to learn from experience, reason, solve problems, understand relationships and adapt effectively to changing situations. In the educational context, intelligence may influence how students understand academic material, process information and deal with challenging learning tasks.

However, intelligence alone does not determine academic functioning. Students also differ in the manner in which they approach their studies. Study habits refer to regular patterns of behaviour associated with learning. They may include concentration, comprehension, recording information, revision, task orientation, language-related study behaviour, interaction and the use of academic support. A student with effective study habits may be able to organise learning activities, manage available time and approach academic tasks systematically. Conversely, ineffective study habits may create difficulties in maintaining attention, understanding material and completing academic tasks.

Gender is another variable frequently considered in studies of adolescent learning. Boys and girls may differ in certain learning behaviours because of individual, educational, social and environmental experiences. Such differences, however, should be examined empirically rather than assumed.

Socio-economic status is also relevant to adolescent development. Family resources, educational opportunities, parental education, learning facilities and the broader home environment may influence students' educational experiences. Consequently, examining intelligence and study habits in relation to socio-economic status can provide a broader understanding of adolescent learning.

Adolescence is the onset of social reality (when more of what is wanted must be earned or won) as the young person grows, getting what one wants in life becomes increasingly competitive. As for academics, while in early grades, the same entry curriculum was taught to all; at some point, ability tracking based on academic performance begins as more advanced material is provided for higher achievers.

Now, academic performance can influence instructional treatment. Classroom education is partly a grading system. Students must compete with each other to do well, understanding how on any given test, not everyone will get an 'A.' Then, as they grow older, secondary students understand how school performance is associated with future educational and occupational opportunities.

In today's generation, parents have become very competitive regarding their child's growth. Setting certain expectations for the child is creating pressure for the child. This will be affecting the Intelligence of the adolescents. Since the children have access and exposure to many things, for example- the internet, school counsellors this can help them develop good study habits for an improvement in their academic achievement. Covid has also affected the socio-emotional learning of the child. The students have shown withdrawal symptoms from education, which has highly influenced their study habits.

This is a feature of growth that becomes ever more difficult in a world where all our attention is focused on academic excellence. Having lower Intelligence skills can lead to a number of potential pitfalls that can affect multiple areas of life including work and relationships

The present study therefore proposes to examine Intelligence and study habits among adolescents in relation to gender and socio-economic status.

Need and Significance of the Study -

Academic development during adolescence depends on several interacting factors. Intelligence represents an important cognitive component, while study habits represent observable patterns of academic behaviour.

Studying these variables together may help clarify whether differences in cognitive ability are associated with differences in study behaviour. It may also help educational professionals understand whether gender and socio-economic background are associated with variations in these areas.

The findings may be useful for:

Teachers: to understand individual differences in learning behaviour.

School counsellors: to identify areas requiring academic guidance.

Parents: to encourage appropriate study routines at home.

Educational institutions: to develop study-skills and academic-support programmes.

Researchers: to conduct further investigations into adolescent cognitive and academic development.

Objectives of the Study -

The study has the following objectives:-

- 1) To study intelligence among adolescents.
- 2) To study the study habits of adolescents.
- 3) To examine the relationship between intelligence and study habits among adolescents.
- 4) To examine gender differences in intelligence.
- 5) To examine gender differences in study habits.
- 6) To examine differences in intelligence among adolescents belonging to different socio-economic-status groups.

7) To examine differences in study habits among adolescents belonging to different socio-economic-status groups.

Hypotheses -

- 1) There will be a significant relationship between intelligence and study habits among adolescents.
- 2) There will be a significant difference in intelligence between male and female adolescents.
- 3) There will be a significant difference in study habits between male and female adolescents.
- 4) There will be a significant difference in intelligence among adolescents belonging to different socio-economic-status groups.
- 5) There will be a significant difference in study habits among adolescents belonging to different socio-economic-status groups.

REVIEW OF LITERATURE –

Pet ride & Turnham (2000) undertook a study to examine the gender differences in the Intelligence of 260 mostly white samples. Fifteen facets of Intelligence were analyzed. The results demonstrated that females were higher than males in social skill. Nevertheless, on total Intelligence score males showed higher Intelligence than females. The results cannot be generalized as the sample was predominantly white and therefore it does not take into account the cultural differences.

Katyal & Awasthi (2005) conducted a study to find out gender difference in Intelligence among adolescents of Chandigarh. The study was conducted on 150 adolescents (75boys&75girls) aged 15 years, studying in tenth class randomly selected from three schools of Chandigarh. Intelligence Test (2001) developed by Codaty was used as a tool for collecting data. For analyse the data, percentage distribution was used to find out percentage distribution of subject with regard to Intelligence, 't' test was applied to find out gender differences in Intelligence. Finding of the study revealed that majority of boys, girls and the total sample had good followed by low Intelligence. Girls were found to have higher Intelligence than that of boys.

Methodology

5.1 Research Design

A quantitative research design is proposed for the study. The design will permit examination of the relationship between intelligence and study habits and differences associated with gender and socio-economic status.

5.2 Sample

The proposed sample consists of 101 adolescents between 13 and 16 years of age from Mumbai.

The sample includes adolescents belonging to different socio-economic backgrounds and both genders.

Variables

Psychological Variables

Intelligence

Study habits

Demographic Variables

Gender

Socio-economic status

Tools

An appropriate standardised Intelligence Test will be used to assess the intelligence of the participants.

A standardised Study Habits Inventory will be used to assess study behaviour. The study-habit dimensions may include areas such as concentration, comprehension, recording/study sets, drilling, language, task orientation, interaction and supports, depending on the instrument used.

Procedure

The participants will be selected according to the inclusion criteria of the study. The purpose of the research will be explained to the participants, and the necessary consent and cooperation will be obtained.

The intelligence test and study-habits inventory will then be administered according to the standard instructions of the respective tools. Participants' responses will be scored according to the prescribed scoring procedures.

The obtained data will be organised and subjected to appropriate statistical analysis.

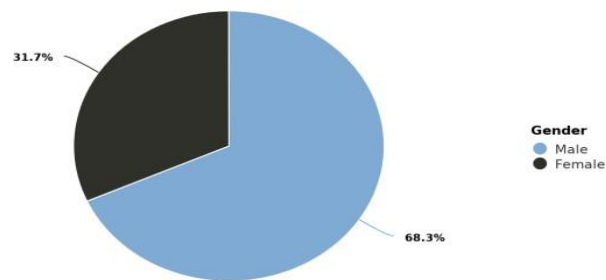
For examining relationships between intelligence and study habits, an appropriate correlation technique may be used. For examining gender differences, an independent-samples t test may be employed. Differences among socio-economic-status groups may be examined using one-way ANOVA

Result & Interpretation:**RESULTS****Descriptive Statistics Table 1**

Gender

Variable	<i>n</i>	%
Gender		
Male	69	68.32
Female	32	31.68

Gender



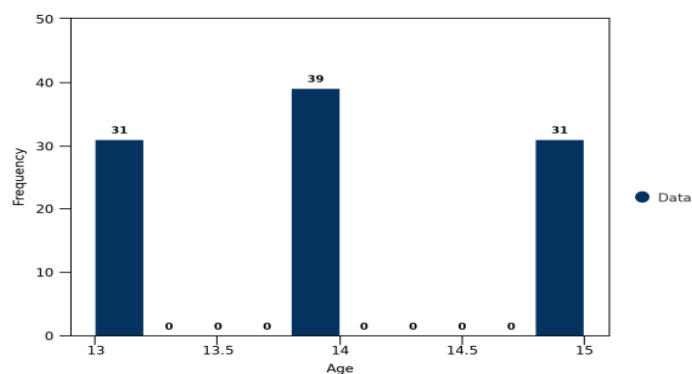
To study the Intelligence and study habits of adolescents in relation to gender and economic status, 101 responses were collected ($n = 101$). Of the 101 responses, 68.32% were male ($n = 69$) and 31.68% were female ($n = 32$) as shown in Table1, Figure 1.

Table 2

Summary Statistics: Age, Occupation of Head of the Family, Education of the Head, Total Monthly Income of the Family, Socio-Economic Status

Variable	<i>M</i>	<i>SD</i>	<i>n</i>	<i>SE_M</i>	Min	Max	Skewness	Kurtosis
Age	14.00	0.79	101	0.08	13.00	15.00	0.00	-1.37
Socio-Economic Status	21.43	6.53	101	0.65	11.00	29.00	-0.73	-1.17

Figur 2 - Ag



According to Table 2, age had an average of 14.00 ($SD = 0.79$, $SE_M = 0.08$, Min = 13.00, Max = 15.00, Skewness = 0.00, Kurtosis = -1.37) (Figure 2). The observations for socio-economic status score had an average of 21.43 ($SD = 6.53$, $SE_M = 0.65$, Min = 11.00, Max = 29.00, Skewness = -0.73, Kurtosis = -1.17). When the skewness is greater than 2 in absolute value, the variable is considered to be asymmetrical about its mean. When the kurtosis is greater than or equal to 3, then the variable's distribution is markedly different than a normal distribution in its tendency to produce outliers (Westfall & Henning, 2013)

Table 3

Socio-EconomicStatus Category

Variable	<i>n</i>	%
Socio-EconomicStatus Category		
Upper	40	39.60
Upper Middle	32	31.68
Lower Middle	29	28.71
Missing	0	0.00
<i>Note.</i> Due to rounding errors, percentages may not equal 100%.		

Figure3

Socio-Economic Status Category

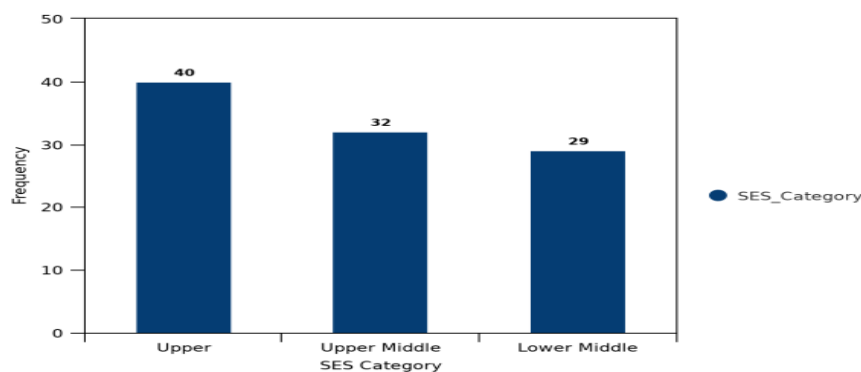


Table 3 & Figure 3 shows the socio-economic status category breakup of the participants. Of the 101 participants, 39.60% belonged to upper class (n= 40), 31.68% belonged to uppermiddle class (n=32) and 28.71% belonged to lower middle class (n=29).

Table 4

Summary Statistics: Study Habits (Drilling, Recording, Comprehension, Concentration, Study Sets, Interaction, Task Orientation, Language, Supports)

Variable	<i>M</i>	<i>SD</i>	<i>n</i>	<i>SE_M</i>	Min	Max	Skewness	Kurtosis
Drilling	9.69	2.40	101	0.24	3.00	16.00	-0.02	-0.04
Recording	5.48	1.06	101	0.11	0.00	7.00	-1.34	6.41
Comprehension	28.90	4.97	101	0.49	0.00	38.00	-2.25	9.55
Concentration	18.59	3.34	101	0.33	11.00	36.00	2.57	8.81
StudySets	16.35	2.92	101	0.29	8.00	20.00	-0.47	-0.51
Interaction	7.18	1.41	101	0.14	3.00	9.00	-0.79	-0.28
Task Orientation	15.61	4.30	101	0.43	6.00	33.00	1.72	3.94
Language	2.21	1.04	101	0.10	0.00	4.00	-0.10	-0.55
Supports	52.00	6.78	101	0.67	19.00	63.00	-2.69	10.05
Socio-Economic Status Category								

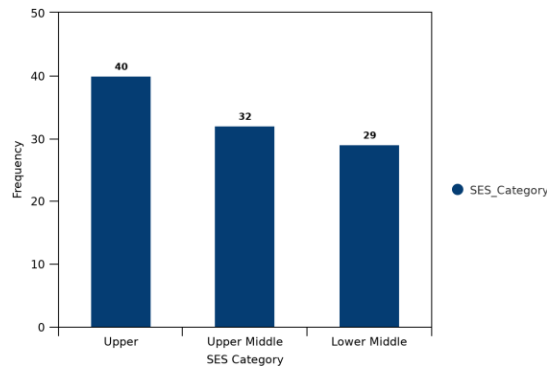


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Concentration had an average of 18.59 (SD=3.34,SE_M

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Drilling	9.69	2.40	101	0.24	3.00	16.00	-0.02	-0.04
Recording	5.48	1.06	101	0.11	0.00	7.00	-1.34	6.41
Comprehension	28.90	4.97	101	0.49	0.00	38.00	-2.25	9.55
Concentration	18.59	3.34	101	0.33	11.00	36.00	2.57	8.81
Study Sets	16.35	2.92	101	0.29	8.00	20.00	-0.47	-0.51
Interaction	7.18	1.41	101	0.14	3.00	9.00	-0.79	-0.28
Task Orientation	15.61	4.30	101	0.43	6.00	33.00	1.72	3.94
Language	2.21	1.04	101	0.10	0.00	4.00	-0.10	-0.55
Supports	52.00	6.78	101	0.67	19.00	63.00	-2.69	10.05

Table 4 represents the summary statistics for the key variable- study habits. Drilling had an average of 9.69(SD=2.40,SE_M=0.24,Min=3.00,Max=16.00,Skewness= -0.02, Kurtosis = -0.04). Recording had an average of 5.48 (SD = 1.06, SE_M = 0.11, Min = 0.00,Max=7.00,Skewness=-1.34,Kurtosis=6.41).Comprehensionhadanaverageof28.90 (SD = 4.97, SE_M= 0.49, Min = 0.00, Max = 38.00, Skewness = -2.25, Kurtosis = 9.55).

Table 5

Pearson Correlation Matrix among Study Habits (Drilling, Recording, Comprehension, Concentration, Study Sets, Interaction, Task Orientation, Language, Supports) and Intelligence

Variable	1	2	3	4	5	6	7	8	9	10
1. Drilling	-									
2. Recording	* .37	-								
3. Comprehension	.24	* .48	-							
4. Concentration	- * .35	- * .45	- * .32	-						
5. Study Sets	* .44	* .45	.19	- * .41	-					
6. Interaction	.19	* .44	* .68	-.15	.26	-				
7. Task Orientation	- * .43	-.28	-.26	* .74	- * .64	- .28	-			
8. Language	.04	.07	-.14	-.28	.04	-.20	-.25	-		
9. Supports	.15	.23	.26	- * .74	.28	.23	- * .50	* .41	-	
10. Intelligence	-.09	-.18	- * .36	* .39	-.01	- .13	* .31	-.28	- * .64	-

Table 5 represents the Pearson correlation analysis conducted among study habits (drilling, recording, comprehension, concentration, study sets, interaction, task orientation, language, and supports) and emotional intelligence. Cohen's standard was used to evaluate the strength of the

relationships, where coefficients between .10 and .29 represent a small effectsize, coefficients between.30 and.49 represent a moderate effect size, and coefficients above .50 indicate a large effect size (Cohen, 1988).

Discussion

The proposed study considers intelligence and study habits as complementary aspects of adolescent academic functioning. Intelligence may influence the efficiency with which students understand, process and apply information, whereas study habits represent the behavioural organisation of learning.

If a significant relationship is obtained between intelligence and study habits, it may suggest that cognitive functioning and academic behaviour are associated in the present sample. However, the strength and direction of such a relationship must be determined from the actual statistical findings. Gender differences, if statistically significant, may indicate variations in selected cognitive or study behaviours within the sample. Such findings should be interpreted cautiously and should not be generalised to all boys or girls.

Similarly, differences across socio-economic-status groups may reflect variations in educational opportunities, learning environments and access to resources. However, socio-economic status is only one of many factors that may influence adolescent development.

The interpretation of the final results should therefore consider individual differences, family environment, educational context and other relevant factors.

Conclusion

The present research focuses on intelligence and study habits among adolescents in relation to gender and socio-economic status.

The study recognises that adolescent academic functioning involves both cognitive and behavioural components. Intelligence may contribute to learning and problem-solving, while effective study habits may facilitate systematic academic engagement.

The proposed investigation of 101 adolescents aged 13–16 years will provide an opportunity to examine these variables in relation to gender and socio-economic background.

The final conclusions regarding relationships and group differences should be based strictly on the statistical results obtained from the actual data.

Limitations

The sample is limited to adolescents from Mumbai.

The sample size is relatively limited.

The study focuses on a specific age range of 13–16 years.

Intelligence and study habits are assessed through standardised psychological measures.

Other factors such as personality, motivation, parental education and school environment are not the primary focus of the study.

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