



ASSESSMENT OF CRITICAL THINKING LIFE SKILL AMONG ADOLESCENTS

KEYWORDS

Non cognitive skills, soft skills, analysis, inference, self-regulation, evaluation

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ABSTRACT

The present study was undertaken with the specific objectives (i) to find out the critical thinking skills of adolescents and (ii) to compare these skills of both male and female adolescents. The data were collected from two randomly selected blocks (Bajjnath and Panchrukhi) of Kangra district of Himachal Pradesh, India. A total of 120 adolescents (60 male and 60 female) in the age group of 15-18 years were selected from the three schools of each block. To collect the required data, an interview schedule, covering the dependent and independent variables was prepared. The data was analyzed statistically using frequency, percentages and t-test. The results of the study revealed that maximum respondents possessed medium level of critical thinking skills. Non-significant differences were found in critical thinking between the male and female respondents. Similarly, in all the subscales of critical thinking namely, analysis, inference, self-regulation and evaluation, non-significant differences were found among male and female respondents.

INTRODUCTION

Adolescence is characterized by rapid physiological changes and psychological maturation. This becomes complex as the adolescent has more situations to contend with.

Many critical issues reach their culmination at this stage such as puberty, dealing with sexuality, and gender issues, tackling emotional upheaval, and facing responsibilities as an individual. It is important to equip the adolescents with the necessary skills to adopt the developmental changes and deal effectively with challenges of everyday life. Through life skill education one can move towards more positive and holistic approaches in order to educate the new generations (Mithiya and Velumani, 2010). Life skills are essentially those abilities that help to promote mental well-being and competence in young people as they face the realities of life.

Critical thinking, in general, refers to a higher-order of thinking that questions assumptions. It is an ability to analyze information and experiences in an objective manner. It includes the component skills of analyzing arguments, making inferences using inductive or deductive reasoning, judging or evaluating, and making decisions or solving problems. Expressed in most general terms, critical thinking is a way of taking up the problems of life. It is considered important in academic fields because it enables one to analyse, evaluate, explain, and restructure one's thinking, thereby decreasing the risk of adopting, acting on, or thinking with a false belief. Some educators believe that schools should focus on teaching their students critical thinking skills and cultivation of intellectual traits. Empirical research suggests that people begin developing critical thinking competencies at a very young age.

Critical thinking helps the individual to improve the decision making skill, problem solving skills, ability to take everything in the right sense and also improve the individual's contributions to the society. It aims to provide students with strategies to make healthy choices that contribute to a meaningful life. Critical thinking development can play a very vital role to increase the awareness among the youth about all social problems and how to cope when issues arise. Hence keeping in view the importance of critical thinking life skill in the life of adolescents, the present study has been planned with the following objectives:

1. To investigate the critical thinking skills of adolescents.
2. To compare this skill among male and female adolescents.

Methodology

Kangra district of Himachal Pradesh, India was purposively selected for the study because it is the largest district of Himachal Pradesh in

population. For the selection of the blocks, a list of all the development blocks falling in the district of Kangra was procured from the latest concerned documents and two blocks were selected at random. Accordingly, Panchrukhi and Bajjnath were selected for the purpose of the study. A list of total Senior Secondary Government Schools falling in these selected blocks was procured from the relevant documents available in the concerned Block Development Office and three schools from each selected block were chosen randomly. A list of all adolescents in the age group of 15-18 years was prepared with the help of the principal of the concerned school. From each school, a sample of 10 males and 10 females was chosen randomly making it a total of 120 (60 males and 60 females) adolescents. Various crucial factors influencing the empathy skill of adolescent were studied as personal (age and class), social variables (caste and religion), familial variables (family type, family size, education of parents and parental occupation) and economic variable (family income). Critical thinking life skill was studied under categories namely, analysis, inference, self-regulation and evaluation.

To collect the required data from the intended school students, an interview schedule was prepared keeping in view the objectives of the study. It consisted of 29 questions, each containing multiple choice questions, 1 mark each was assigned for the right answer. The critical thinking subtest included four subtests namely, analysis, inference, self-regulation and evaluation. The data was collected personally with the help of the self-structured interview schedule after making a good rapport with the students and the principal of the concerned school.

After collection of data from the respondents, all the questionnaires were scored. The scores were then categorized in three levels (i.e. low, medium and high). Frequency and percentages were calculated for preparing personal, socio-economic profile and distribution of adolescent's critical thinking life skill. 't-test' was used to test the differences between the male and female respondents on critical thinking skill at 5 per cent level of significance.

Results and Discussions of the Study

The present study was conducted to assess the empathy life skill of adolescents in Bajjnath and Panchrukhi blocks in Kangra District of Himachal Pradesh. The collected data were analyzed to achieve the objectives of the study and results have been discussed under the following sections and subsections.

1. Background information of the respondents

Approximately the sample was distributed equally among the two age groups 15-16 (48.33%) and 17-18 (51.6%). More than one third of

respondents (35%) belonged to scheduled caste category followed by other backward classes (30%), general (23.33%) and scheduled tribe (11.67%), respectively and all the respondents were Hindu by religion. Majority of respondents (65.00%) belonged to joint family and were from medium sized family comprised of 4-6 members. More than one third of the respondents' fathers (39.17%) and mothers (35.83%) were high school pass. More than one third of respondents' fathers (38.33%) were engaged in private job and majority of the respondents' mothers (89.17%) were housewives. Regarding monthly income, highest percentage of respondents (38.33%) families were having monthly income between ₹ 5000-1000. There were only 8.34 per cent respondents' parents with monthly income above ₹ 30,001.

2. Levels of critical thinking life skill among adolescents: Results in table 1 showed that majority (71.67%) of male and (81.67%) female respondents had scored medium level of critical thinking ability and equal percentage (18.33%) of both male and female respondents were at high level of critical thinking. One tenth of male and no female respondents had attained low level of critical thinking ability. Overall data revealed that 5.00 per cent, 76.67 per cent and 18.33 per cent respondents were at low, medium and high level of critical thinking ability, respectively.

Table: 1 Levels of overall critical thinking ability of the respondents

Category	Male (n=60)	Female (n=60)	Total (N=120)
Low	06 (10.00)	00 (00.00)	06 (05.00)
Medium	43 (71.67)	49 (81.67)	92 (76.67)
High	11 (18.33)	11 (18.33)	22 (18.33)
Total	60 (100.00)	60 (100.00)	120 (100.00)

Note: Figures in parenthesis indicate percentage of respondents

Levels of sub scales of critical thinking skills of male and female respondents:

The critical thinking skills of both male and female respondents have been discussed under four subheads as below:

a) Analysis: It is revealed from the table 2 that 68.33 per cent males were at medium level followed by 26.67 per cent were at high level and only 5.00 per cent of them were at low level of analysis. Similarly, 63.33 per cent of females were at medium level followed by one fourth of female respondents and remaining 11.67 per cent had scored low level of analysis. Overall data showed that 65.83 per cent were at medium level and 25.83 per cent respondents had attained high level, whereas only 8.33 per cent respondents were at low level of analysis.

b) Inference: The table further shows that half of male respondents were at medium level followed by (41.67%) who had scored low level and rests (8.33%) were at high level of inference. In case of female respondents, 68.33 per cent, 30.00 per cent and only 1.67 per cent of them were at medium, low and high level of inference, respectively. Out of the total data majority of the respondents (59.17) had attained medium level followed by low (35.83%) and high (5.00%) level of inference.

Table: 4.8 Levels of subscales critical thinking skills of male and female respondents

Category	Male (n=60)	Female (n=60)	Total (N=120)
Analysis			
Low	03 (05.00)	07 (11.67)	10 (08.33)
Medium	41 (68.33)	38 (63.33)	79 (65.83)
High	16 (26.67)	15 (25.00)	31 (25.83)
Total	60 (100.00)	60 (100.00)	120 (100.00)
Inference			
Low	25 (41.67)	18 (30.00)	43 (35.83)
Medium	30 (50.00)	41 (68.33)	71 (59.17)
High	05 (08.33)	01 (01.67)	06 (05.00)
Total	60 (100.00)	60 (100.00)	120 (100.00)

Self-Regulation

Low	14 (23.33)	06 (10.00)	20 (16.67)
Medium	28 (46.67)	42 (70.00)	70 (58.33)
High	18 (30.00)	12 (20.00)	30 (25.00)
Total	60 (100.00)	60 (100.00)	120 (100.00)

Evaluation

Low	04 (06.67)	08 (13.33)	12 (10.00)
Medium	29 (48.33)	38 (63.33)	67 (55.83)
High	27 (45.00)	14 (23.33)	41 (34.16)
Total	60 (100.00)	60 (100.00)	120 (100.00)

Note: Figures in parenthesis indicate percentage of respondents

c) Self-regulation: The results further show that the majority of male (46.67%) and female (70.00%) respondents were at medium level of self-regulation followed by 30.00 per cent male and 20.00 per cent female respondents who had attained high level and 23.33 per cent male and 10.00 per cent female respondents had scored low level of self-regulation. On studying the overall data, 58.33 per cent respondents were at medium level, 25.00 per cent were at high and remaining 16.67 per cent had scored low level of self-regulation.

d) Evaluation: The results depicted in table 2 showed that 48.33 per cent and 45.00 per cent of male respondents were at medium and high level of evaluation, respectively. Only 6.67 per cent respondents had attained low level of evaluation. On the other hand 63.33 per cent were at medium level, 23.33 per cent had attained high level and remaining 13.33 per cent female respondents were at low level of evaluation. Out of the total data, 55.83 per cent respondents were at medium level, 34.16 per cent respondents had scored high level and remaining one tenth of respondents (10.00%) had scored low level of evaluation.

3. t-test showing the mean value differences of variables between male and female respondents:

The t value was calculated to find out the mean difference between male and female respondents on different sub skills of empathy and has been discussed under the following subheads in table.

I) Overall critical thinking of the respondents: The mean value of male respondents was found to be 14.91 and the mean value of female respondents found to be 15.21 with the standard error of difference of mean 0.67. The difference of critical thinking skills between male and female respondents was found to be non-significant at 5 per cent level of significance. Hence, the present study indicates that there are no gender differences in critical thinking among adolescents.

Supporting to it, Fatma et al. (2007) identified the impact of several important factors on the development of critical thinking ability in adolescents and stated that the impact of gender was not statistically significant and Neil Thalagala (2004) reported, in general life skills improved with increasing age and socio-economic status. No gender differences were seen in life skills.

Contrary to the study, when Godwa (2013) investigated the impact of gender, intelligence and study habits on critical thinking skills, different results were found. The main effect of gender was analyzed, the F-value for gender was found to be significant at 0.01 level of confidence (F=7.33 & df =1 and 140). Gender had a significant effect on critical thinking skills with the mean scores of boys and girls differed significantly.

Table 3: Mean differences between male and female respondents on overall critical thinking ability

	Male	Female	Standard	T -
	Mean	Mean	error of	value
	Standard	Standard	differenc	e
	Deviation	Deviation	of mean	
Critical thinking	14.91	15.21	0.67	0.44

*Significant at 5% level, Non-significant (NS)

ii) Mean differences between male and female respondents on subscales of critical thinking: The differences in critical thinking ability of the respondents on t test have been discussed under following subheads in table.

a) Analysis: In analysis subscale of critical thinking, the mean of male respondents was found to be 4.63 and the mean value of female respondents found to be 4.55 with the standard error of difference of mean 0.27. The difference between the mean for analysis between male and female respondents was found to be non- significant at 5% level.

b) Inference: In case inference, the mean value of skill of male respondents was found to be 3.00 and the mean value of female respondents found to be 3.28 with the standard error of difference of mean 0.26. The difference between the mean values of male respondents was not significantly different.

c) Self-regulation: In self-regulation measure of critical thinking, the mean value of male respondents was found to be 2.78 and the mean value of female respondents found to be 2.65 with the standard error of difference of mean 0.22. The difference between the mean value of self-regulation ability among male and female respondents was non-significant.

d) Evaluation: The mean value of evaluation skill of male respondents was found to be 4.93 and the mean value of female respondents was found to be 4.53 with the standard error of difference of mean 0.29. The difference on evaluation subscale of critical thinking ability between male and female respondents was found to be non-significant at 5% level.

However, Athari and Sharif (2011) in comparing the mean scores of students (girl and boy) from the whole of Isfahan University reported boys' mean scores from deductive reasoning domain was higher than girls', and it showed a significant difference ($p < 0.05$). But there was not any significant difference between boys and girls in other domains (analysis, evaluation, inference, and inductive reasoning).

Table 4: Mean differences of variables between male and female respondents on critical thinking skills.

	Male		Female		Standard error of difference of mean	t-value
	Mean	Standard deviation	Mean	Standard deviation		
Analysis	4.63	1.27	4.55	1.67	0.27	0.29 NS
Inference	3.00	1.68	3.28	1.09	0.26	1.07 NS
Self-regulation	2.78	1.39	2.65	0.95	0.22	0.59 NS
Evaluation	4.93	1.69	4.53	1.57	0.29	

*Significant at 5% level, Non-significant (NS)

CONCLUSION

It can be concluded from the present study that the majority of respondents were at medium level of critical thinking life skills. Overall critical thinking as well as all the subscales of critical thinking were non-significantly different on the basis of gender. Knowing the extent to which early adolescents use critical thinking skills in making real life decisions would help parents, educators and other adults provide experiences for early adolescents that enhance and build on their existing thinking.

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