

Association of critical thinking and problem solving among rural adolescent girls

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■ **ABSTRACT** : Critical thinking is the ability to analyze information and experiences in an objective manner. It can help us to recognize and assess the factors that influence our attitude and behaviour, such as media and peer pressure influence. Problem solving enables us to deal constructively with problems in our lives. Significant problems that are left unresolved can cause mental stress and give rise to accompanying physical strain. The study was undertaken to study the association of critical thinking and problem solving among adolescent girls. The sample was comprised of 132 rural adolescent school going girls from five different villages like Hassanpur, Mohie, Gahaur, Bhanaur and Mansuran. The girl students were enrolled in VIIIth and IXth classes. Results revealed that there is significant association between critical thinking and problem solving among rural adolescent girls. Problem solving ability can be improved with the improvement of critical thinking and the reason for improvement in critical thinking is the interventions provided in the form of mental games, puzzles and storytelling. With the help of these interventions adolescent's girls can cope up with stress and they can deliberately engaged in problem solving.

■ **KEY WORDS**: Problem solving, Critical thinking, Adolescents

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Life skills are the abilities for adaptive and positive behaviour that enable individuals to deal effectively with the demands and challenges for everyday life-WHO.

Life skills are a group of psycho-social competencies and interpersonal skills that help people make informed decisions, communicate effectively and develop coping and self-management skills to lead a healthy and productive life. Adaptive means that a person should have the flexibility to adjust according to the situation. For positive behaviour, a person needs to have positive thinking and look at opportunities even in difficult situations, in order to cope with the situation (Facilitator Manual, 2009). These skills are manifested in our day to day actions and decisions like what to do, when to do and how to do it. Education related to life skills is instrumental in providing empowerment to an individual. Life skills enable adolescent boys and girls to utilize better the other skills such as functional, vocational /

livelihood and literacy skills.

Critical thinking is the ability to analyze information and experiences in an objective manner. It can help us recognize and assess the factors that influence our attitude and behaviour, such as media and peer pressure influence.

Critical thinking is considered important in the academic fields because it enables one to analyze, evaluate, explain and restructure their thinking, thereby decreasing the risk of adopting, acting on, or thinking with, a false belief. However, even with knowledge of the methods of logical inquiry and reasoning, mistakes can happen due to a thinker's inability to apply the methods or because of character traits such as egocentrism. Critical thinking includes identification of prejudice, bias, propaganda, self-deception, distortion, misinformation, etc. Business education directly addresses work ethic and the preparation for skilled employment as well as critical thinking and problem solving. Yet many teachers continually struggle to engage students in critical

thinking activities (Tempelaar, 2006) and students seldom use critical thinking skills to solve complex, real-world problems (Bartlett, 2002; Rippin *et al.*, 2002).

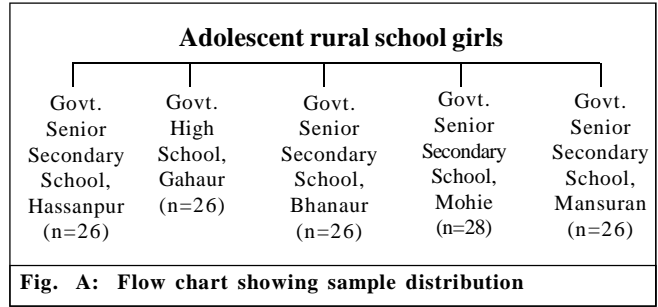
Problem solving and critical thinking refers to the ability to use knowledge, facts, and data to effectively solve problems. This doesn't mean you need to have an immediate answer, it means you have to do efforts to find alternatives to your problems. The ability of a well thought-out solution within a reasonable time frame, however, is a skill that every one seeks in other especially in their employees. The present study was undertaken with the following objectives:

- To study critical thinking among adolescent girls.
- To study problem solving among adolescent girls.
- To find out the relationship of critical thinking with problem solving among adolescent girls.

RESEARCH METHODS

Sample selection:

For the present study 132 rural adolescent school going girls from village Hassanpur, Gahaur, Mohie, Mansuran and Bhanaur were selected. The girl students enrolled in VIIIth and IXth classes were included in the sample. Detail of sample selection is shown in Fig. A.



Research tools:

Self- structured schedules were used for measuring life skills of rural adolescent school going girls.

RESEARCH FINDINGS AND DISCUSSION

Table 1 presents the mean scores regarding life skill "Critical thinking" of rural adolescent girls. The "critical thinking" mean scores of respondents belonging to village Hassanpur, Bhanaur and Mohie (mean scores-34.3, 34.1 and 34.2, respectively) were almost similar and comparatively higher than the mean scores of respondents belonging to village Gahaur and Mansuran. Post testing evaluates

Table 1: Comparison of mean scores of life skill- "Critical thinking" among rural adolescent girls during pre-testing and post-testing					
Sr. No.	Villages	Mean scores ± S.D.		t-value	Differences in mean scores
		Pre-test	Post-test		
1.	Hassanpur	34.3±2.3	41.3±1.1	13.8*	7
2.	Gahaur	33.4±3.0	38.0±1.4	6.9*	4.6
3.	Bhanaur	34.1±3.0	35.8±2.2	2.3	1.7
4.	Mohie	34.2±3.1	36.2±1.9	2.8*	2
5.	Mansuran	33.6±3.7	39.1±1.8	6.0*	5.5

*indicate significance of value at P=0.05

Table 2: Comparison of mean scores of life skill- "Problem solving" among rural adolescent girls during pre-testing and post-testing					
Sr. No.	Villages	Mean scores ± S.D.		t- values	Differences in mean scores
		Pre-test	Post-test		
1.	Hassanpur	38.5±2.5	41.4±1.7	4.65*	2.9
2.	Gahaur	37.6±1.7	40.1±1.3	5.81*	2.5
3.	Bhanaur	37.3±1.9	40.0±1.5	5.7*	2.7
4.	Mohie	38.8±2.61	40.7±1.6	7.18*	1.9
5.	Mansuran	36.8±1.4	39.5±1.2	7.3*	2.7

* indicate significance of value at P=0.05

Table 3 : Relationship between critical thinking and problem solving among adolescent girls					
Variables	Mean scores ± S.D.		Pre-test	Post-test	
	Pre-test	Post-test	r	r	
Critical thinking	33.93±1.5	38.04±1.32	-0.072	0.164*	
Problem solving	37.87±1.09	40.35±0.8			

* indicate significance of value at P=0.05

differences in the mean scores of critical thinking reflecting that respondents of village Hassanpur showed more improvement in their life skill “Critical thinking” than their counterparts (Fig. 1). The reason for improvement in critical thinking in the respondents belonging to different villages is the intervention provided in the form of mental games and puzzles and storytelling.

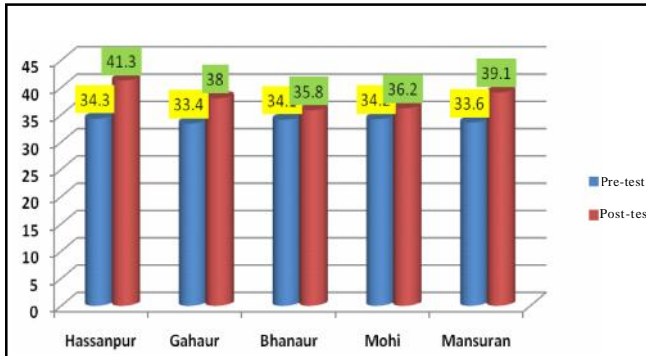


Fig. 1 : Comparison of mean scores of life skill- “Critical thinking” among rural adolescent girls during pre-testing and post-testing

Table 2 and Fig. 2 depict the mean scores regarding life skills “Problem solving”. It shows that the respondents of village Mohie scored more than the respondents belonging to other villages mentioned in the present research. Post-test scores of respondents showed that the adolescent girls belonging to village Hassanpur scored comparatively higher than their counterparts (mean scores=41.4). Respondents belonging to village Gahaur, Bhanaur and Mohie had almost similar mean scores (ms=40.1, ms=40.0, ms=40.7). Differences in the mean scores showed that the intervention had almost similar impact on all respondents belonging to different villages specifically in relation to life skill”

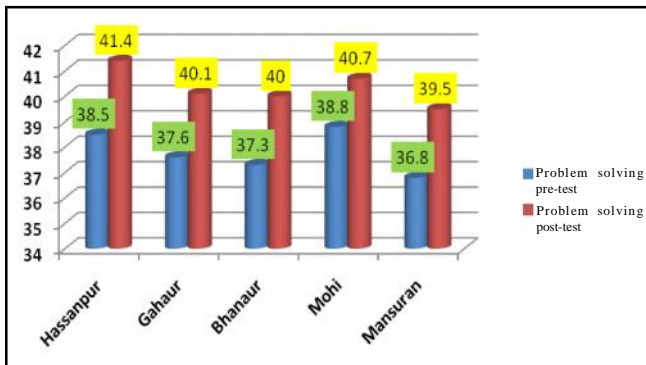


Fig. 2 : Comparison of life skill- “Problem solving” of rural adolescent girls during pre-testing and post-testing

Problem solving”.

Table 3 represents the relationship between critical thinking and problem solving among adolescent girls. During pre-testing, it was found that critical thinking was negatively and non - significantly correlated with problem solving. But during post-testing, a significant relationship between critical thinking and problem solving was found, indicating that with increase in critical thinking among adolescents, problem solving also increases and this increased level of critical thinking leads to improved decision making among adolescents girls. According to Shakirova (2007) critical thinking skills are important because they enable students “to deal effectively with social, scientific and practical problems” simply but, students who are able to think critically are able to solve problems effectively. Critical Skills Survey by the American Management Association (2010) Employers say they need a workforce fully equipped with skills beyond the basics of reading, writing, and arithmetic to grow their businesses. These skills include critical thinking and problem solving.

Conclusion:

Results revealed that reason for improvement in critical thinking and problem solving is the interventions provided in the form of mental games, puzzles and storytelling. With the help of interventions adolescent’s girls can cope up with stress and they can deliberately engaged in creative problem solving. Critical thinking and problem solving is designed to support adolescents in increasing the skill and confidence with which they can apply best practices to foster critical thinking and problem solving.

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