

Full Length Research Paper

Study of problem solving ability of adolescents in relation to parenting styles and resilience

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In this study, the investigator wants to make an important contribution to the literature by demonstrating that resilience and parenting styles made a significant effect on the problem solving ability of adolescents. Problem solving ability test was constructed by the investigator. Parenting scale developed and standardized by Bharadwaj, Sharma and Garg (1998), Resilience Scale (RS-14) for Adolescents by Wagnild (2011) was used by the investigator. Random and purposive sampling technique was employed for data collection from 500 adolescents grouped in ≤ 17 and > 17 age group (< 17 include 16-17 age group, > 17 include 17+ to 19 age adolescents). Significant differences were found in Problem solving ability and Parenting styles of adolescents. No significant difference between the Resilience of adolescents with ≤ 17 and > 17 age group were found. Interaction between parenting styles and resilience with regard to problem solving ability was found significant to some extent from the results of analysis of variance.

Key words: Problem solving ability, parenting styles, resilience.

INTRODUCTION

India has approximately 225 million adolescents in the age group of 10 to 19 years, the largest group of young people to make a shift to adulthood (NACO, 2008). It is really a challenging task to provide parental care for children. Parents need to follow a steady approach to discipline, moral behaviour, support for education, love, positive regard and respect for members of the family. This early developmental experience sets a foundation for future positive experiences in child's life (Kaplan and Owens, 2004). It is also necessary for adolescents to be resilient enough to face this period of life.

Problem solving includes utilisation of concepts and abilities to get over the amazing complete situations.

Solving a problem requires to find answer to the problems (Mayer and Wittrock, 1996). Parenting is the style of upbringing of a child. It is the responsibility of both mother and father, to prepare their children for the society and also for culture (Veenes, 1973 a) which provides lots of opportunities to a child to find his roots, and a sense of belongingness (Sirohi and Chauhan, 1991) and it also serves as a source of socialization for the child. It is clear that child's impression of parental attitude towards himself should be of great importance in the act of behaviour and it may open new generation of research for deep analyses in the field of parent-child relationship (Bhardwaj, 1996). Resilience is viewed more

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as a continuous process, an interaction between person and environment that can protect him/her against psychological and physical trauma (Blum, 1998; Bogar and Hulse-Killacky, 2006). Students can be directed to become more resilient and cope efficiently in the case of stress, difficulties and trauma. Burnham (2009) found that resilience helped students to get less effected by stressful events and resilience to be identified in and taught to adolescents in order to help them to face difficult situations.

Review of studies

Kanevsky and Colleagues (2012) studied the impact of museum-based intervention which was designed to develop the resilience of third and fourth grade students at a school. Researchers compared the academic resilience (academic resilience means ability to deal with stress and pressure in academic settings) and personal development of children participating in the study with those who did not participated in it after a gap of two years. Participation groups had reported higher levels of academic resilience, both participants' students and non participants' students reported same levels of character, self-efficacy and attitudes towards their school.

Tripathi et al. (2013) studied learning environment in relation to problem solving ability of senior secondary level. A sample was collected from 120 senior secondary schools. Random sampling technique was used to collect data from Jaipur city, Rajasthan. The study revealed that the effect of learning environment of both government and private schools place impact on the problem solving ability of students at senior level.

Girdhar (2014) conducted a study to see the influence of locus of control, gender, and locality on problem solving ability of adolescents. 50 males and 50 females with the age group of 13 to 15 years were chosen for the study. The study showed that there exists no significant difference in internally controlled (internal locus of control) males and internally controlled females. No significant difference was found in externally controlled males (males with external locus of control) and externally controlled females, similarly between urban males and rural males, urban females and rural females. There was a significant positive relation between problem solving ability and locus of control. Internally controlled students had higher problem solving ability than externally controlled students. No significant difference was found in males and females and urban and rural adolescents on problem solving ability scores.

Objectives of the study

- To study problem solving ability, parenting styles and resilience among adolescent.
- To study interaction between parenting styles and

resilience with regard to problem solving ability.

Hypotheses of the study

Hypothesis-1: There is no significant difference between the problem solving ability of adolescents with ≤ 17 and >17 age.

Hypothesis-2: There is no significant difference between the Parenting styles of adolescents with ≤ 17 and >17 age.

Hypothesis-3: There is no significant difference between the Resilience of adolescents with ≤ 17 and >17 age.

Hypothesis-4: There is no significant interaction between parenting styles and resilience with regard to problem solving ability.

Tools used

1. Problem Solving Ability test was constructed by the investigator.

Six dimensions were finalised after being reviewed by experts and after carrying out item analysis. They were Lateral thinking, logical problems, Abstraction analysis, verbal reasoning, Analogy, Number series. Product moment coefficient of correlation was carried out to find reliability of the test. The correlation was found to be 0.658. The test was validated against the criterion of content validity; content validity is concerned with adequacy of sampling of specified universe of content. 98% experts agree with the content of the test. Percentile norms were calculated.

2. Parenting scale developed and standardized by Bharadwaj, Sharma and Garg (1998).

3. Resilience Scale (RS-14) for Adolescents by Wagnild (2011).

SAMPLING AND METHODOLOGY

Random and purposive sampling technique was employed for data collection. The sample of the study includes adolescents from Mohali district. A total of 500 adolescents was selected randomly both from government and private school. The sample was taken from 11 different types of schools and colleges to obtain a uniform sample. The investigator has tried to collect data from adolescents of different streams, that are arts, science, commerce, engineering, nursing. The sample was collected from students of rural and urban area. The sample was split in two age groups of below and equal to 17 and more than 17 years to find the difference in results based on different age groups. The data was collected after seeking permission from the heads of institutions personally by the investigator. Students were allowed codes instead of their names on demographic sheet to maintain confidentiality of data. Descriptive statistics such as Mean, Median, Mode, SD were used to ascertain the nature of distribution of scores of problem solving ability, parenting style and resilience of male and female adolescents. t-ratios were calculated to know whether there are differences in the

Table 1. Difference between age of adolescents on the basis of parenting styles, problem solving ability and resilience.

	Age	N	Mean	Std. Deviation	t-test
Parenting styles	<= 17	283	749.0883	85.54607	
	>17	217	771.6221	48.26600	3.725**
Problem solving ability	<= 17	283	12.0247	3.40152	
	>17	217	13.5668	2.44503	5.895 **
Resilience	<= 17	283	72.0813	8.70174	
	>17	217	72.1382	10.19755	.066ns

** Significant at 0.01 level; Ns- non significant.

mean scores of parenting style and resilience at different levels of problem solving ability. Analysis of variance was used to study the main effects and interaction effects of parenting style, resilience on problem solving ability.

Statistical analyses and discussion of results

From Table 1, it was clear that, for problem solving ability, mean scores and standard deviation for adolescents with <=17 age group were 12.02 and 3.40 and mean scores and standard deviation for adolescents with >17 age group were 13.56 and 2.44 respectively. When mean scores were compared, it was found that problem solving ability of adolescents with >17 age group are better as compared to problem solving ability of adolescents with <=17 age group adolescents. Therefore, Hypothesis-1 which shows that "There is no significant difference between the problem solving ability of adolescents with <=17 and >17 age" is not accepted.

Based on t- ratio ($t=3.725$), Table 1 revealed that there is significant difference in the Parenting styles of adolescents with age of <=17 and >17 at 0.01 level. For Parenting styles, mean scores and standard deviation for adolescents with <=17 age group were 749.08 and 85.54 and mean scores and standard deviation for adolescents with >17 age group were 771.62 and 48.26 respectively. When mean scores were compared, it was found that Parenting styles of adolescents with >17 age group is better as compared to Parenting Styles of adolescents with <=17 age group adolescents. Therefore, Hypothesis-2 which shows that "There is no significant difference between the Parenting Styles of adolescents with <=17 and >17 age." is not accepted.

For Resilience (Table 1), mean scores and standard deviation for adolescents with <=17 age group were 72.08 and 8.70 and mean scores and standard deviation for adolescents with >17 age group were 72.13 and 10.19 respectively. When mean scores were compared, it was found that there is no significance difference between Resilience of adolescents with >17 age group and adolescents with <=17 age group.

Therefore, Hypothesis-3 which shows that "There is no

significant difference between the Resilience of adolescents with <=17 and >17 age" is accepted. It can be concluded from the results that age is not the determining factor for resilience.

Analysis of variance (F test) was carried out to find the interaction effects. From Table 2a and b, it was clear that there was insignificant mean difference, parenting styles and problem solving ability ($F=.058$), and resilience and problem solving ability (1.868). Interaction between parenting styles and resilience with regard to problem solving ability was found insignificant ($F=.205$). Interaction between gender, parenting styles and resilience with regard to problem solving ability was found significant at 0.05 level of significance ($F=3.83$).

Therefore, the hypothesis 4 which shows "There was no significant interaction between parenting styles and resilience with regard to problem solving ability" was partially accepted and partially rejected.

FINDINGS OF THE STUDY

1. Problem solving ability of <=17 and >17 age group adolescents differ significantly.
2. Parenting styles of adolescents differ with age group (<=17 and >17)
3. There is no effect of age on resilience of adolescents.
4. Problem solving ability is affected by parenting styles and resilience of adolescents to some extent.

Conclusion

Problem solving ability is a very important part of education. It is an important part of everyone's life. A good problem solver can achieve success in life. Students should try to increase their problem solving ability by using lateral thinking skills, abstraction analysis, logical thinking, and numerical reasoning more than using rote memory. The study shows that a good problem solver should have all of these qualities. These problem solving abilities can be very useful for adolescents during entrance examination in various courses. Exams of IAS,

Table 2a. Interaction between gender, parenting styles and resilience with regard to problem solving ability.

Between-subjects factors		Value label	N
Gender	1	Male	284
	2	Female	216
Parenting styles	1	Low	144
	2	High	356
Resilience	1	Low	291
	2	Moderate	118
	3	High	91

Table 2b. Tests of between-subjects effects, Dependent Variable: problem solving ability

Source	Type III sum of squares	df	Mean square	F-value	P-value
Gender	8.076	1	8.076	.845	.358ns
Parenting_Styles	.553	1	.553	.058	.810ns
Resilience	35.707	2	17.854	1.868	.156ns
Parenting_Styles * Resilience	3.911	2	1.955	.205	.815ns
Gender * Parenting_Styles *					
Resilience	73.278	2	36.639	3.834	.022*

PCS, engineering and architect have some part of problem solving ability in them. CBSE have also started problem solving ability test from class ninth onwards.

Therefore parents and Teachers' should try to inculcate problem solving abilities in their students. Career counselling can be given to students in accordance with their problem solving ability. There is interaction between parenting styles, resilience with regard to problem solving ability. Home is first school of the child. A good parenting style can lead to development of a successful individual. So it is duty of parents, teachers, administrators and society to deal with adolescents in a proper way. Schools should organise activities that is extracurricular activities for their students. Mock tests to enhance problem solving ability can be taken. Reasoning, abstract and logical thinking should be encouraged in the classroom. Seminars on development of resilience should be organized by the schools. Parent teacher meetings should be organised regularly where feedback should be given to the parents.

Conflict of Interests

The authors have not declared any conflict of interests.

REFERENCES

Bharadwaj RL, Sharma H, Garg A (1998). Manual for Parenting Scale.

- Bal Niwas Taj Basai, Agra- 282001.
- Blum RW (1998). Improving the health of youth: A community health perspective. *J. Adolescent Health*, 23: 254-258. In Model Development For Measurement Of Resilience In Adolescents retrieved from <https://mospace.umsystem.edu/xmlui/bitstream/handle/10355/10957/SmileyModDevMea.pdf?sequence=1> on 7 jan2012 at 8:30 pm
- Bogar CB, Hulse-Killacky D (2006). Resiliency determinants and resiliency 138 processes among female adult survivors of childhood sexual abuse. *J. Couns. Dev.* 84: 318-327. In Model Development For Measurement Of Resilience In Adolescents. retrieved from <https://mospace.umsystem.edu/xmlui/bitstream/handle/10355/10957/SmileyModDevMea.pdf?sequence=1> on 7 jan2012 at 8:30pm.
- Burnham JJ (2009). Contemporary fears of children and adolescents: Coping and resiliency in the 21st century. *J. Couns. Dev.* 87: 28-35. In Model Development For Measurement Of Resilience In Adolescents Rachel Kirkpatrick Smiley (2011), retrieved from <https://mospace.umsystem.edu/xmlui/bitstream/handle/10355/10957/SmileyModDevMea.pdf?sequence=1> on 7 jan2012 at 8:30 pm
- Girdhar M (2014). Problem Solving Ability Of Adolescents With Respect To The Locus Of Control, Gender, And Locality, Department of Educational studies, Faculty of Education, Jamia, Milia Islamia, New Delhi, India, Impact factor 1.393, ISSN-2320-5083, 1-12, <http://www.jiarm.com/jan/paper9932.pdf> on 22-8-14 at 12:19p.m.
- Kanevsky and Colleagues (2012). "Why Resilience?" A Review of Literature of Resilience and Implications for Further Educational Research Ryan S. Santos Claremont Graduate University and San Diego State University Qualifying Paper for Professor Philip Dreyer Claremont Graduate University retrieved from [https://go.sdsu.edu/education/doc/files/01370-ResiliencyLiteratureReview\(SDSU\).pdf](https://go.sdsu.edu/education/doc/files/01370-ResiliencyLiteratureReview(SDSU).pdf)
- Kaplan CA, Owens J (2004). Parental influences on Vulnerability and Resilience. In: Hoghugh. M. and Long.N. handbook of parenting: They and Research for practice SAGE publications, 2003105476.
- Mayer RE, Wittrock MC (1996) Problem Solving Transfer. In D.C. Berliner and R.C. Calfee (Eds.) Handbook of Educational Psychology (7-62) New York. retrieved from <http://www.isrj.net/>

- UploadedData/44.pdf 22-8 -2014 at 12:10pm.
- NACO (2008). Adolescence education programme and life skill development retrieved from <http://www.naco.gov.in/upload/NACOinAction/AEP%20-%20Teachers%20Workbook.pdf>
- Sirohi A, Chauhan NS (1991). Parenting in Child Socialization. A study of fathering in multivariate setting. *Indian J. Psychol.* 66 (1- 4): 29-35.
- Tripathi A, Shukla G, Yadav N (2013). A Study of Learning Environment in Relation to Problem Solving Ability of Senior Secondary Level Students. *Int. J. Basic Adv. Res.* 2(5):121-123, 2278-7143. Retrieved <http://ijbar.in/pdf/vol.2/issue 5, Article 4.pdf> on 22-8-14.
- Wagnild GM (2011). The Resilience Scale User's Guide TM. Version-3.20 www.resiliencecentre.com