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Research Article

A Study On Relationship Between Decision Making Dimensions Among Low And High Altruistic Science Learners

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ABSTRACT

The education, students are involved in as a whole, should have validating, meaningful opportunities to make choices about their own learning. Opportunities for decision making should involve students in solving real problems and making substantial decisions to promote critical thinking skills. Depending on the problem, the ability to choose the right choice is a matter of decision making. Understanding the individual decision making process is more important. In reality, schools socialize spaces that can foster "powers of character" including empathy, altruism, and social equity. In addition, individual practicing altruistic activities may not only minimize peer rejection, but also improve peer relationship. Altruistic behaviour plays an important role in the personal development of the students. The study was purposed to measure the levels and relationship between Decision making with its dimensions among low and high altruistic science learners with respect to types of educational institutions. Descriptive survey method was used for this study. A casual comparative method was used to find out the differences between the low and high altruistic science learners. The population for the present study consisted of science students studying 11^{th} and 12^{th} standards in Chennai and Kanchipuram Districts. From the population, the investigator selected 952 students of 11^{th} and 12^{th} grade science stream students. The top and bottom 27% of the sample with high and low scores in the Altruistic Behaviour Inventory were considered as high and low altruistic science learners. Hence in the present study, there were 257 students each in high and low altruistic group of students. The result indicated that the levels of Decision making and its dimensions among low and high Altruistic Science Learners are moderate in nature. Moreover, the high altruistic science learners studying in government aided schools are found better in their decision-making and in all the dimensions, except Spontaneous decision-making than low altruistic science learners from government aided schools. Discussion, interpretation and Educational implication of this study are mentioned.

Key words: Type of Institution, Decision making, Altruistic behavior, Decision making style, Science Learners Decision making style, Type of Institution influence Decision Making.

INTRODUCTION

A Study On Relationship Between Decision Making Dimensions Among Low And High Altruistic Science Learners

Decision making is a complex process, such as thinking, reasoning or problem-solving and executing process. It also involves various mental functions, both the working memory and long-term memory. For the post millennial, there are different ways available for learning which enhance the students' creativity, humour, and skill to a great extent. They have different ways to enhance their brain power. Brain power helps the student to take decision by thinking critically, analyzing logically and executing effectively. Low altruistic science learners have decision making skills; because they may expect reward for their immediate good deeds for that they need to take spontaneous decision making skills. High altruistic science learners make decisions in a logical and systematic way. A gradual transfer of decision making power from parents to children is believed by child development experts to be better for children than premature independence or prolonged subservience **(Dornbusch, Ritter et al. 1987).** The **Webster's dictionary (2012),** defines that decision-making involves a conscious choice or selection of one behaviour alternative from a group of two or more behaviour alternatives. According to this definition, there are two basic elements in a decision-making process; one, the matter of conscious choice and the other, of alternatives. To state it simply, to decide means to come to a conclusion.

REVIEW OF RELATED STUDY

Many studies talks about teachers, school principals and prospective teachers involvement by the way of decision making skill, process and style **(Hasan Hariri, et.al., 2014; Marlies Honingh and Edith Hooge, 2014; Feng I Feng, 2013; Jasmin Olga sarafidou and Georglos Chatztionnidid, 2013; Davide Parmigiani, 2012; Wellington Samkange, 2012; Lourdu Raj and Amaladoss, 2018; Arul Prabhakaran & Jesudoss, 2017; Sibichen, 2010)**. Career decision making among adolescents also examined by few researchers (**Rosemary R Kelly and Tim Hatcher, 2013; Bethercount, et.al., 2011; Georgia Koumoundourou, et.al., 2011; Veerle Germeijs & Karine Verschueren, 2009; Itamar Gati and Noa Sake, 2001).** Only few studies carried out to explore students and adolescents decision making skills**.** The males' decision-making was not influenced by core self-evaluations. Females' decision-making difficulties were influenced negatively only by the parents' authoritarian style **(Georgia Koumoundourou, et.al., 2011; Kathieen Commendactor M.S.N, 2007)**.There was no significant difference between male and female higher secondary students in their decision making **(Peter Alphonse and Punitha Mary, 2017; Deepa and Annaraja, 2012; Radha, 2012; Prakash & Annaraja, 2010)**. Contrast to the above statement, there was significant difference between male and female& Tamil and English medium high school students in decision making were found in their studies **(Ohm Vidya Sankari & Amaladoss Xavier, 2016; Madaselvi & Amaladoss Xavier, 2016; Junancy Shiny, 2012).** Classroom climate only marginally help as to predict altruism. The importance of including training in the development and manifestation of altruism in emotional education programmes and resilience interventions at school is highlighted **(Sophie Leontopoulou**, **2010)**. The findings indicated that locality, type of family, and type of institution were not contributors of altruism among college students **(Indu, 2013)**.

OBJECTIVES

a) To find the levels of Decision Making along with its dimensions among low and high Altruistic Science Learners.

b) To find whether there are any significant influences in the mean scores of Decision Making along with its dimensions among low and high Altruistic Science Learners with regard to

i) Students studying in Government Schools

ii) Students studying in Government Aided Schools

iii) Students studying in Self Finance Schools

HYPOTHESIS

i) The levels of Decision Making along with its dimensions among low and high Altruistic Science Learners are moderate in nature.

ii) There is no significant difference in the mean scores of Decision Making along with its dimensions among low and high Altruistic Science Learners with regard to Students studying in Government Schools

iii) There is no significant difference in the mean scores of Decision Making along with its dimensions among low and high Altruistic Science Learners with regard to Students studying in Government Aided Schools

iv) There is no significant difference in the mean scores of Decision Making along with its dimensions among low and high Altruistic Science Learners with regard to Students studying in Self Finance Schools

METHOD OF INVESTIGATION

The selection of a method depends upon the nature of the problem. As per the nature of the present study, the investigator followed the descriptive survey method and casual comparative method. So the investigator had taken much care to select the method of this research problem. Using survey method, the information was gathered from the target group of population. A casual comparative method was used to find out the differences between the low and high altruistic science learners.

TOOLS USED IN THE PRESENT STUDY

The following research tools were used in the present investigation

S.No	Research Tools	Author	
1.	Decision Making Style Instrument	Scott and Bruce (1995)	**5 Dimensions** 1. Rational 2. Intuitive 3. Dependent 4. Avoidant 5. Spontaneous
2.	Altruistic Behaviour Inventory	Investigator & S. Devasahayam Selvakumar (2018)	-

DESIGN OF THE STUDY

The population for the present study consisted of science students studying 11th and 12th standards in Chennai and Kanchipuram Districts. From the population, the investigator selected 952 students of 11th

and 12th grade science stream students. The investigator handled the stratified random sampling technique to select the sample for the present investigation. The selected sample was from rural and urban areas of Chennai and Kanchipuram districts.

The top 27% of the sample with high scores in the Altruistic Behaviour Inventory were considered as high Altruistic science learners. Similarly, the bottom 27% of the sample with low scores in the Altruistic Behaviour Inventory was taken as low Altruistic Science Learners. Hence in the present study there were 257 students each in high altruistic and low altruistic group of students.

RESULT AND INTERPRETATION OF DATA

Null Hypothesis – I

The levels of Decision Making along with its dimensions among low and high Altruistic Science Learners are moderate in nature.

Table 1

Showing the levels of Decision Making along with its dimensions among low and high Altruistic Science Learners.

Decision Making and its dimensions		Low		Moderate		High	
		N	%	N	%	N	%
Rational	**Low**	78	30.35	138	53.70	41	15.95
	High	33	12.84	205	79.77	19	7.39
Intuitive	**Low**	44	17.12	169	65.76	44	17.12
	High	38	14.79	208	80.93	11	4.28
Dependent	**Low**	63	24.51	155	60.31	39	15.18
	High	57	22.18	165	64.20	35	13.62
Avoidant	**Low**	39	15.18	182	70.82	36	14.01
	High	45	17.51	190	73.93	22	8.56
Spontaneous	**Low**	56	21.79	164	63.81	37	14.40
	High	50	19.46	176	68.48	31	12.06
Overall	**Low**	**41**	**15.95**	**173**	**67.32**	**43**	**16.73**
	High	**46**	**17.90**	**170**	**66.15**	**41**	**15.95**

Hence, Hypothesis – I stating that "The levels of Decision Making along with its dimensions among low and high Altruistic Science Learners are moderate in nature" is accepted.

Null Hypothesis – II

There is no significant difference in the mean scores of Decision-Making along with its dimensions among the Low and High Altruistic Science Students Studying in Government Schools.

Table 2

Showing the significance of the difference in the Mean Scores of Decision Making along with its dimensions among Low and High Altruistic Science Learners studying in Government Schools

Decision Making and its dimensions	Altruistic Level	N	Mean	SD	't' value	P value
Rational	**Low**	102	11.82	3.845	13.930	0.000**
	High	54	20.80	3.818		
Intuitive	**Low**	102	11.40	4.804	14.428	0.000**
	High	54	21.17	3.538		
Dependent	**Low**	102	11.95	4.018	13.122	0.000**
	High	54	19.72	3.224		
Avoidant	**Low**	102	12.41	3.569	5.940	0.000**
	High	54	16.74	4.683		
Spontaneous	**Low**	102	13.15	4.204	7.393	0.000**
	High	54	18.13	3.895		
Overall	**Low**	**102**	**60.74**	**15.593**	**7.393**	**0.000****
	High	**54**	**96.56**	**12.984**		

** Indicates that 0.01 level

* Indicates that 0.05 level

From the above table, it is inferred that the calculated 't' values are greater than the table value at 0.01 level of significance. Hence, the null hypothesis is rejected. So, there is significant difference in the mean scores of decision-making along with its dimensions among low and high Altruistic Science Learners studying in government schools. Moreover, the high altruistic science learners from government schools are found better in their decision-making and in all the dimensions than low Altruistic Science Learners studying in government schools.

Hence, Hypothesis – II stating that "There is no significant difference in the mean scores of Decision Making along with its dimensions among Low and High Altruistic Science Learners studying in Government Schools" is rejected

Null Hypothesis – III

There is no significant in the mean scores of decision making along with its dimensions among the low and high altruistic science learners studying in Government Aided Schools.

Table 3

Showing the significance of the difference in the Mean Scores of Decision Making along with its dimensions among Low and High

Altruistic Science Learners studying in Government Aided Schools

Decision Making and its dimensions	Altruistic Level	N	Mean	SD	't' value	P value
Rational	**Low**	80	14.08	4.230	12.235	0.000**
	High	91	20.84	2.725		
Intuitive	**Low**	80	13.91	4.609	11.951	0.000**
	High	91	20.96	2.728		

Dependent	**Low**	80	14.53	4.278	8.335	0.000**
	High	91	19.51	3.417		
Avoidant	**Low**	80	13.64	3.856	3.945	0.000**
	High	91	16.12	4.376		
Spontaneous	**Low**	80	17.35	3.816	5.078	0.000**
	High	91	14.34	3.913		
Overall	**Low**	**80**	**70.49**	**16.749**	**11.324**	**0.000****
	High	**91**	**94.77**	**9.967**		

** Indicates that 0.01 level

* Indicates that 0.05 level

From the above table, it is inferred that the calculated 't' values are greater than the table value at 0.01 level of significance. Hence, the null hypothesis is rejected. So, there is significant difference in the mean scores of decision-making along with its dimensions among low and high Altruistic Science Learners studying in government aided schools. Moreover, the high altruistic science learners studying in government aided schools are found better in their decision-making and in all the dimensions, except Spontaneous decision-making than low altruistic science learners from government aided schools.

Hence, Hypothesis – III stating that "There is no significant difference in the mean scores of Decision Making along with its dimensions among Low and High Altruistic Science Learners studying in Government Aided Schools" is rejected.

Null Hypothesis – IV

There is no significant difference in the mean scores of Decision-Making along with its dimensions among the Low and High Altruistic Science Learners studying in Self-Finance School Students.

Table 4
Showing the significance of the difference in the Mean Scores of Decision Making along with its dimensions among Low and High Altruistic Science Learners studying in Self-finance Schools

Decision Making and its dimensions	Altruistic Level	N	Mean	SD	't' value	P value
Rational	**Low**	75	15.56	4.551	8.305	0.000**
	High	112	20.63	3.299		
Intuitive	**Low**	75	14.85	3.992	11.839	0.000**
	High	112	21.13	2.779		
Dependent	**Low**	75	15.52	3.599	8.158	0.000**
	High	112	19.84	3.471		
Avoidant	**Low**	75	14.71	4.013	3.152	0.000**
	High	112	16.70	4.536		
Spontaneous	**Low**	75	14.89	3.274	5.716	0.000**

	High	112	17.86	3.756		
Overall	**Low**	**75**	**75.53**	**13.177**	**11.051**	**0.000****
	High	**112**	**96.16**	**11.441**		

** Indicates that 0.01 level

* Indicates that 0.05 level

From the above table, it is inferred that the calculated 't' values are greater than the table value at 0.01 level of significance. Hence, the null hypothesis is rejected. So, there is significant difference in the mean scores of decision-making along with its dimensions among low and high Altruistic Science Learners studying in self-finance schools. Moreover, the high altruistic science learners studying in self-finance schools are found better in their decision-making and in all the dimensions than low altruistic science learners from self-finance schools.

Hence, Hypothesis – IV stating that "There is no significant difference in the mean scores of Decision Making along with its dimensions among Low and High Altruistic Science Learners studying in Self-Finance School Students" is rejected.

FINDINGS OF THE STUDY

(a) High Altruistic Science learners studying in Government schools are found better in their Decision Making along with its dimensions than low Altruistic Science learners studying in Government schools.

(b) High Altruistic Science learners studying in Government Aided Schools are found better in their Decision Making along with its dimensions, except Spontaneous than low Altruistic Science learners studying in Government Aided Schools.

(c) High Altruistic Science learners studying in Self Finance Schools are found better in their Decision Making along with its dimensions than low Altruistic Science learners studying in Self Finance Schools.

DISCUSSION

Government and Self-financing schools' high altruistic science learners are found better in their decision making and in all the dimensions than low altruistic science learners respectively. But in the case of government aided schools, high altruistic science learners are found better in their decision making and in all the dimensions than low altruistic science learners, except spontaneous decision making. A key to good decision making is to express these values clearly, to create a set of alternatives that address those values, and finally to choose the best one **(Keeney, 1992).** So, the effective decision skills are beyond the capability most of higher secondary school students or that good decision making requires more introspection, thought, and analysis skills.

EDUCATIONAL IMPLICATIONS

1. Science teachers should use social modeling and collaborative-learning activities to foster low altruistic science students' motivation, self-confidence, self-reliability and self-esteem to take right decision in their career. Teachers can encourage open-ended inquiry, discussion,

debates, activities, in which students can have opportunities to take responsibility, reflect on their views accomplish challenging task, which will make them more altruistic in nature.

2. Decision making can be developed by adhering to the following: i) Control ii) Competence iii) Coping iv) Confidence v) Connection vi) Character v) Contribution. These characteristics can be trained among the low altruistic Government Aided School students by the teachers as well as parents for good decision making skills.
3. If the low altruistic science students feel stressed, while taking any decision, they may take deep, slow breath and stay calm for minutes. After that they get clear cut idea about their problem. This is called as a Relaxation Technique, which includes yoga and breathing exercises also.
4. The high altruistic science students from Government and Self-finance School, because of the good peer relationships and ability to spontaneously respond to problems, have a high level of decision making skill. It is generally asserted that, during adolescence, there is an increasing capacity for abstract reasoning, counterfactual reasoning, reasoning from premises that are not true, systematic reasoning, and a growing capacity for probabilistic reasoning. These abilities are all relevant to decision making. High altruistic science learners rarely make important decisions without consulting their family members. But most of the time, they use the advice of elder people, while making any important decisions.
5. The educational institutions should organize various programmes to improve overall General well-being, emotional well-being and social well-being, which in turn to increase decision making skills, among high and low altruistic students studying in government aided schools.
6. The teachers may help their low altruistic science learners to benefit most from such learning activities as pair work, group brainstorming, group discussion, peer tutoring, role plays, etc. Therefore, teachers may set out their classes in such a way that the students can understand their perspectives and options that are highly interrelated with decision making skill.
7. There are many ways to build resilience but one way is to try to maintain emotional well-being and this is possible only, when the schools offer a good space for the development of the same. The schools need to concentrate on physical activities and games which will help the students to reduce and manage stress, in order to improve the decision making skills of the low altruistic science learners.
8. Positive teacher student relationship also enhances the student`s emotional well-being and resilience which can promote decision making skills.
9. Teaching them about social emotional skills which will improve the peer relationships explicitly and teaching the skills of self-awareness, self-management and social awareness are responsible for decision making among low altruistic science learners.

CONCLUSION

The high altruistic science learners studying in Self-finance school students are found to be better in their decision-making in regard to all the dimensions, except spontaneous decision-making making than low altruistic last born science learners. Research suggests that students studying in self-finance schools are likely able to describe their perceptions of an event, rather than viewing the experience from different perspectives**.** The school atmosphere should create a positive environment where students have a

voice and choice and ensure that all students feel emotional and socially safe using collaborative strategies we can enhance students' relationships with society, leading to promote good decision making skills.

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