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LOW ACHIEVERS PERCEPTIONS IN BIOLOGICAL SCIENCES, THEIR PARENTS AND TEACHERS TOWARDS CAUSES OF LOW ACHIEVEMENT IN BIOLOGY IN DIFFERENT DIVISION SECONDARY SCHOOLS OF CHITTOOR DISTRICT

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ABSTRACT:

The main aim of this study to determine the causes of low achievement in secondary school students from different division schools of Chittoor district, Andhra Pradesh. The factors include students' negative attitude towards the subject, lack of teaching/learning resources and inadequate staffing. Stratified random sampling was used to select sample size. The Likert 3-point scale was used as a research tool. The data collected was coded, categorized and then analyzed using descriptive and inferential statistics with the help of SPSS. The null hypothesis was tested at 0.05 and 0.01 levels of significance. Results found that achievement level significantly influenced their perceptions of low achievers.

KEYWORDS: Achievement in Biology, Secondary School Students.

INTRODUCTION:-

Science and Technology have contributed to individual fulfilment, the well-being of communities and the health of nations. Problems of society today are related to the rapid decline in the quality of the global environment, depletion of natural resources, increasing poverty, hunger and illiteracy in many countries and regions of the world. Solutions based on science and technology is likely to provide remedial measures to some of these problems.

Human beings are eager to success and achievement in their scientific and practical lives at all levels. Still, lasting success cannot be achieved constantly because human trust in trying in their lives and the consequences of this attempt is sometimes failing. In most of the secondary schools, the syllabus of biological sciences is overloaded, teachers using the lecture method to deliver a large amount of information in a short span of time. Lack of proper teaching materials, poor teaching methods, lack of evaluation instrument, especially those used for international purposes creates a gap between learning achievement and what is required by society.

OBJECTIVES OF THE STUDY

- To enlist causes of low achievement in biological sciences of the students as perceived by low achievers in biological sciences, their teachers and parents.
- To enlist the causes of low achievement in biological sciences of low achievers' students from three divisions of Chittoor district (Tirupati, Chittoor, Madanapalle) perceived by low achievers in biological sciences, their teachers and parents.
- Advised/recommended solutions for low achievement in biological sciences in secondary schools.

HYPOTHESES

1. Perceptions of low achievers in biological sciences, their teachers and parents are different regarding the causes of low achievement in biological sciences.
2. There is a significant difference in causing the achievement in biological sciences from three divisions of Chittoor district perceived by their teachers and parents.

PARTICIPANTS

Secondary school low achiever students from Tirupati division 112, low achiever students from Chittoor division 254 and from Madanapalle division 145 low achievers were randomly selected from Chittoor district. Secondary school low achiever parents from Tirupati division were 112, low achievers' parents from Chittoor division 254 and low achievers' parents from Madanapalle division 145 were randomly selected for the study. Biological science teachers from Tirupati division schools were 23, biological science teachers from Chittoor division schools were 46 and biological science teachers from Madanapalle division were 20 selected randomly for the study.

Tools

This study was guided by Likert type 3-point scale. For each item in the tool, t-value was calculated by the Cronbach's alpha method. Secondary school students who got below 50 marks in the summative assessment were taken as low achievers in biological sciences subject, their biology teachers and low achiever parents randomly selected for the study.

DATA ANALYSIS

Table 1: F-values with respect to Three Divisions in Chittoor District from the Biology Teachers Point of View

	Division	N	Mean	SD	F	p-value
School	Tirupati	23	74.04	7.84	21.782**	0.000
	Chittoor	46	61.04	8.37		
	Madanapalle	20	62.95	6.44		
	Total	89	64.83	9.52		
Personal	Tirupati	23	72.52	6.33	11.094**	0.000
	Chittoor	46	63.93	8.10		
	Madanapalle	20	63.75	7.64		
	Total	89	66.11	8.40		
Family	Tirupati	23	45.35	5.02	6.634**	0.002
	Chittoor	46	41.59	7.81		
	Madanapalle	20	38.15	4.07		
	Total	89	41.79	6.89		
TOTAL	Tirupati	23	191.91	16.11	16.251**	0.000
	Chittoor	46	166.57	20.64		
	Madanapalle	20	164.85	16.91		
	Total	89	172.73	21.78		

From Table-1,

Taking school as a factor, the means of Tirupati, Chittoor and Madanapalle biology teachers are 74.04, 61.04 and 62.95 respectively. The obtained F-value 21.782 is significant at 0.01 level.

Taking personal factor, the means of Tirupati, Chittoor and Madanapalle biology teachers are 72.52, 63.93 and 63.75 respectively. The obtained F-value 11.094 is significant at 0.01 level.

Taking family factor, the means of Tirupati, Chittoor and Madanapalle biology teachers are 45.35, 41.59 and 38.15 respectively. The obtained F-value 6.634 is significant at 0.01 level.

If we look up the ratings given by biological science teachers, school causes have been rated no.1, then personal cause's no.2 and family factors have been rated at no.3. It can be stated that there are certain school causes for their low achievement in biological sciences. At school lack of facilities in the laboratory, lack of library facilities, lack of internet facilities at school, lack of sufficient lab equipments, lack of well-trained teachers in science and technology, overcrowded classrooms etc. may cause low achievement in biological sciences at secondary school level in schools.

Table 2: Causes of Low Achievement in Biological Sciences Perceived by Low Achievers in Three Divisions of Chittoor District

	Division	N	Mean	SD	F	p-value
School	Tirupati	112	68.04	10.26	8.050**	0.000
	Chittoor	254	65.45	8.00		
	Madanapalle	145	68.79	8.28		
	Total	511	66.97	8.74		
Personal	Tirupati	112	68.03	8.22	2.423	0.090
	Chittoor	254	66.28	8.51		
	Madanapalle	145	68.10	10.86		
	Total	511	67.18	9.20		
Family	Tirupati	112	41.47	7.19	5.376**	0.005
	Chittoor	254	39.25	5.79		
	Madanapalle	145	40.18	5.45		
	Total	511	40.00	6.09		
TOTAL	Tirupati	112	177.54	22.41	5.710**	0.004
	Chittoor	254	170.98	19.61		
	Madanapalle	145	177.08	22.50		
	Total	511	174.15	21.28		

From Table-2,

Taking school as a factor, the mean scores of low achievers in Tirupati, Chittoor and Madanapalle divisions are 68.04, 65.45 and 68.79 respectively. The F-value 8.050 is significant at 0.01 level.

Taking personal factor, the mean scores of low achievers of Tirupati, Chittoor and Madanapalle divisions are 68.03, 66.28 and 68.10 respectively. The F-value 2.423 is not significant at 0.05 level.

Taking family factor, the mean scores of low achievers from Tirupati, Chittoor and Madanapalle divisions are 41.47, 39.25 and 40.18 respectively. The F-value 5.376 is significant at 0.01 level.

From Table-2, it is observed that ratings are given by Tirupati and Madanapalle division low achieving students in causing low achievement as no.1 and we look up the ratings given by low achievers, Chittoor division low achievers in causing low achievement students have been rated no.2 from all the three factors school factor, personal and family factor.

Table 3: F-Values of Low Achieving Student Parents from Three Division's Tirupati, Chittoor and Madanapalle of Chittoor District

	Division	N	Mean	SD	F	p-value
School	Tirupati	112	70.92	8.42	17.608**	0.000
	Chittoor	254	67.11	9.60		
	Madanapalle	145	73.32	12.66		
	Total	511	69.71	10.67		
Personal	Tirupati	112	69.27	7.12	13.103**	0.000
	Chittoor	254	67.60	7.50		
	Madanapalle	145	72.73	13.77		
	Total	511	69.42	9.86		
Family	Tirupati	112	44.14	6.12	26.096**	0.002
	Chittoor	254	40.00	6.40		
	Madanapalle	145	44.32	7.41		
	Total	511	42.14	6.96		
TOTAL	Tirupati	112	184.33	18.04	20.572**	0.000
	Chittoor	254	174.72	21.00		
	Madanapalle	145	190.37	32.09		
	Total	511	181.27	25.05		

From Table-3,

Taking school as a factor, the mean scores of Tirupati, Chittoor and Madanapalle division parents are 70.92, 67.11 and 73.32 respectively. The corresponding F-value 17.608 is significant at 0.01 level.

Taking personal factor, the mean scores of Tirupati, Chittoor and Madanapalle division parents are 69.27, 67.60 and 72.73 respectively. The corresponding F-value 13.103 is significant at 0.01 level.

Taking family as a factor, the means of Tirupati, Chittoor, Madanapalle divisions mean scores are 44.14, 40.00 and 44.32 respectively. The corresponding F-value 26.096 is significant at 0.01 level.

Form Table-3, it is concluded that Madanapalle division parents influence more to cause low achievement in biological sciences compared to Tirupati and Chittoor divisions considering all the factors (school, personal, and family).

CONCLUSION

The present concluded that biological science teachers and low achiever students believe that the main cause of low achievement was school factor. Parents of low achievers believe that family factor plays the major role in causing low achievement in biological sciences.

Jazmawi (2008) the problem of low achievement is a global problem. To use attractive techniques and educational activities by the biology teachers to motivate students for learning. Proper planning in subject develops scientific attitude the indicated goals achieved by proper planning. lack of motivation towards success. Parental state of confusion, comparing children, high expectation of parents towards children. Students, parents, teachers and school environment were responsible for low achievement of students.

The parents should be aware of their children's problems and enquire achievement regularly.

RECOMMENDATIONS

Some recommendations can be made on the basis of the implication to enhance the achievement in science subject. These are:

- Student should be encouraged to use library books, magazines and newspapers to develop study habits.

- Guidance and counseling with regards to the achievement should be made an integral part in teaching learning process so that students may become aware of importance of biology.
- Teachers can help students to frame time table for studying biology at home and motivate them to study according to the time table.
- Parents should monitor daily to ensure that their children take serious in their efforts of biology.
- Parents- teacher meeting should be regularly held to elicit feedback about the study behavior of the students.

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