



Original Research Article

A COMPARATIVE STUDY ON MOTHERS' EMPLOYMENT STATUS TO MEASURE THE LEVEL OF SCIENCE MOTIVATION AMONG COLLEGE STUDENTS

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Abstract:

Science is an exceedingly challenging subject. Science learning has the principle of expansion of scientific literacy in all students to apply their knowledge into their lives. Motivation is the fundamental and vital tool for science learning. It can be effective and successful with motivation towards science learning. Approach to science learning in students is influenced by motivation. The current study is done to explore the motivation level among Junior College and Degree College Science Students towards science learning. The objective of present study is examining the extent of motivation towards learning science on the basis of gender, parental employment status, age. The research survey was conducted by descriptive method. The study consisted of 140 students. Analysis of the results revealed that students of employed mothers had higher motivation as compared to the students of unemployed mothers.

Keywords: Motivation, Scientific Literacy, Parental Employment.

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Introduction:

The main aim of science education is to increase scientific literacy among all students'; that is, to help students' understand essential science concepts, and the nature of science, to acquire the purpose of science and technology to their lives, and to voluntarily continue their science study in school, or beyond school (National Research Council [NRC] 1996). Hence, research in science teaching and learning should address both student cognition, and the affective component to cognition. According to Lee (1989), Lee and Brophy (1996), Pintrich et al. (1993) in the affective components, motivation is main because students' motivation plays a significant role in their conceptual change processes, critical thinking, learning strategies (Garcia and Pintrich 1992, Kuyper et al. 2000, Wolters 1999) and science learning achievement (Napier and Riley 1985).

Science learning is a key to cognitive development as it enhances the thinking capability of the students. Through science an individual builds the ability to solve problems and also build up scientific attitude in an individual. Learning science is foremost in life. In the process of learning, motivation plays an eminent role and is vital tool in a learning domain. An individual motivation is gained through interest in the specific field and curiosity to know and an individual's belief to act in a way that, can reach their specific goal. Also the decisions that students takes are a reflection of motivation. Motivation in students goals to achievement in their career. Students having motivation is accepted to achieve high academic success. science is found to be a very challenging subject according to many observations (Mahanti & sarkar,2018). Motivation works as a basic element in learning (Jurisevic & M.et al,2015). Students' science learning process is impacted by motivation (Pintrich & Schunk,2002). So, desire for learning science may be defined as motivation towards learning science (Bolat, 2007). Science learning in students can be operative and effective with



motivation towards learning science (Saribiyik, Altuncekcic & Yaman,2004). The purpose of this study is to explore and find out the effectiveness of motivation in students for science learning.

Literature Review:

Mattern, N. & Schau, C., (2002) found that different gender and class level have different perspective towards science learning, the higher class level of student showed better attitude than lower class level students towards science learning. Chan Y. L. & Norlizah C. H (2017) studies found that females students have comparatively showed more motivation towards learning science than male students. And the qualification of parents does not impact on students' science learning motivation. They also stated that home environment also plays a significant role in students' science learning motivation. Libao, N. J. P., et. Al. (2016) have correlated science learning motivation and students' Academic performance and found that their degree of motivation did not differ across their sex, age, and curriculum year. Moreover the respondents had good academic performance in science. From the literature review of Yamtinah, Masykuri, Ashadi, Shidiq (2017) it is found that both male and female students shows similar attitude toward science process skill indicators. However, Male students have better results on the basis of indicators of observation, controlling variable and making the conclusion. On the contrary, female students are better on conceptual knowledge and interpreting data.

Other research studies stated that motivation is an important predictor of students' achievement (Beal & Stevens, 2007; Skaalvik & Skaalvik, 2006; Zhu & Leung, 2011). Lawson, Banks & Logvin, (2007) found that Self-efficacy refers to students' persuasion that they can do well and achieve the required results in science. Self-efficacy shows students' view on his own capacity and capability to learn a new task and perform it successfully which enhances his mental ability, plan action and behaviour (Bandura, 1997). Moreover studies have shown a relationship between self-efficacy and achievement (Kan & Akbas, 2006; Zushou, Pintrich, & Coppola, 2003). However, no study has been found in regarding motivation towards science learning in comparison of junior college science students' and degree college science students's in recent studies. That is why the researcher intends to assess the motivation towards science learning among Junior College and Degree College Science Students.

Methodology and Sample of the Study:

A Descriptive survey was carried out in order to study the impact of motivation towards learning science among Junior and Degree College Science Students. Convenient sampling technique was used for data collection. For the purpose of this study data was collected from 140 students belonging to Junior and Degree College Science Students. A questionnaire designed by Tuan, Chin and Shieh (2005) was used to collect data students which consist of 35 items which was scored on a 5 point rating scale from Strongly disagree, Disagree, No opinion, Agree to Strongly Agree. Out of which items no's; 2,4,5,6,7,21,22,23,24 were reversely scored from Strongly Agree, Agree, No opinion, Disagree, Strongly Disagree. Out of total students, mothers of 39 students were employment and 101 were unemployed.. The following table depicts the sample size.

Table 1.1: Sample Size for Present Study

Employment status of mother	Total N	Percentage
All students	140	100
Employed	39	28
Unemployed	101	72

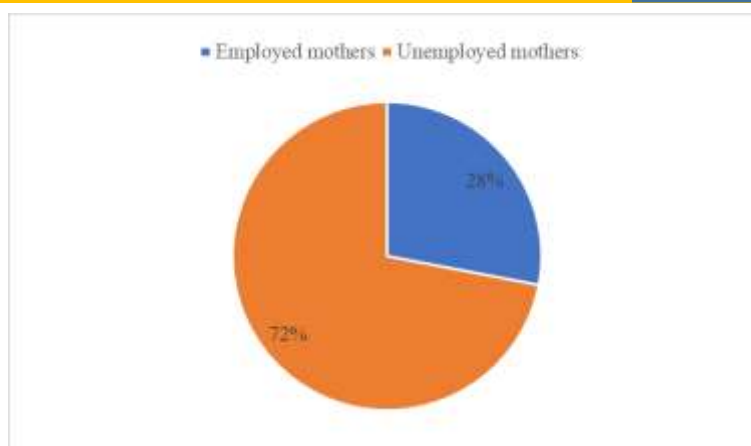


Figure 1.1: Pie-Chart Depicting Students Mothers employment status for present study

The total sample consisted of 140 students out of which 28% students mothers were employed and 72% students mothers were unemployed.

Scope And Delimitations of the Study:

The proposed study was conducted and the data was collected from Junior College and Degree College students. Students belonging to Science stream were considered, those belonging to School and other college streams were not considered. The present study took the motivation of students towards science learning into consideration, motivation towards other subjects was not considered. The impact of employment status of mother on motivation in science learning was studied in the present study, other variables impacting motivation in science learning and only English medium College were considered. A descriptive survey method was adopted, other methodology of research like observation, interviews, case-study was not carried out.

Hypothesis Testing and Interpretation of Data:

1. There is no significant difference in the level of Science Motivation among College Students
2. There is no significant difference in the level of Science Motivation among College Students based on their mother's employment status.

Table 1. 2: Relevant Descriptive Statistics

	N	Mean	Median	Mode	Standard Deviation	Skewness	Kurtosis
All Students	140	127.18	130	137	18.67	-0.41	-0.53
Employed Mothers	39	136.20	138	141	13.98	-0.72	1.24
Unemployed Mothers	101	123.70	125	105	19.15	-0.20	-0.75

The above table shows relevant descriptive statistical measures that were used to test Hypothesis.

Hypothesis 1: The Mean for all students was found to be is 127.18, Median was found to be 130, Mode was found to be 137 and Standard Deviation was found to be 18.67. The Skewness is found to be -0.41, which is negative, hence the data is negatively Skewed. The Kurtosis is found to be -0.53 which is negative and thus the distribution is Platykurtic.

Table 1.3: Inferential Data Analysis

	N	Mean	t value	p value	LoS
Employed Mothers	39	136.20	3.71	0.0003	S
Unemployed Mothers	101	123.70			

The above table shows relevant inferential statistics that was used to test Hypothesis 2.

Hypothesis 2: The t value of all students based on employment status of mother was found to be 3.71 and the p value was found to be 0.0003 which is lesser than 0.01 and 0.05, thus it is significant. Therefore, null hypothesis is rejected. There is significant difference in the level of motivation in science learning among college going students based on employment status of mothers. The Mean scores for students whose mothers are employed was found to be 136.20 and for the Mean score for unemployed mothers was found to be 123.70. Therefore, students whose mothers are employed shows more motivation level than students whose mothers are unemployed.

Discussion and Conclusion:

The result of present study showed that there is significant difference in the level of motivation in science learning among college going students based on employment status of mothers. This indicates that employment status of mothers impact on motivation level in college going students among science learning. The result of the present study is similar with the other studies done by Mahanti & Sarkar, (2018) they found that educational qualifications of parents plays a important role in motivation towards learning. Studies done by Dandona, (2016) revealed that children of employed mothers had higher motivation level as compared to the children of homemakers. Mothers are considered to be the role model of their children therefore in reference to the mother-as-a-role-model theory (Hoffman, 1998), which states that children build their achievement level by getting aspire to be like their mothers, which results in better academic achievement and set their motivation goal as compared to unemployed mothers. The result of present studies revealed that employment status of mother impact on students motivation towards science learning. Reason behind this result may be the employed mothers gives extra financial well-being and provide good home environment, which forces the students to enhance their motivation towards science learning.

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