

Effect of Self-Efficacy and Achievement Motivation on Academic Performance of High School Students

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Abstract

Self-efficacy refers to an individual's belief in their ability to successfully accomplish a specific task or goal. Achievement motivation, on the other hand, is the drive or desire to attain success and excel in one's endeavors. Both concepts are interconnected, as a person with high self-efficacy is likely to exhibit stronger achievement motivation. This combination often leads to increased effort, persistence, and overall better performance in various areas of life.

Motivation is identified as the fundamental aspect of learning —To be motivated means to be moved to do something. Components of Motivation are excitement, interest and enthusiasm towards learning. It is argued by Self-Determination Theory that motivation is of various types based on the reasons or goal made for any action.

The Social Cognitive Theory, (SCT; Bandura, 1986) postulates that human behavior is a dynamic and reciprocal interaction of personal factors, behavior, and the environment. SCT also states that a person's behavior is influenced by both personal and environmental factors. In addition, SCT posits that individuals observe consequences of engaging in similar behavior both themselves and by others and form expectations of the outcomes of their behavior. The social cognitive career theory (SCCT; Lent, Brown, & Hackett, 1994) postulates that the "person variables" of self-efficacy beliefs, vocational interests, performance goals and outcome-expectancies help to develop an individual's academic and vocational choices. Extant vocational psychology literature has demonstrated that these elements are key to the development of academic and vocational choices (e.g., Betz & Hackett, 1997; Lent, Lopez, & Biescke, 1991, 1993; Sax & Bryant, 2006), and of academic and career performance (e.g., Lent et. Al., 1993; Swanson, 1993). This study builds on Bandura's social cognitive theory (Bandura, 1986) and SCCT.

Traditionally, some occupations such as medicine and law have been male-dominated, and certain other occupations such as teaching, nursing, dental hygienist etc. have been predominantly female-dominated (Betz, 2004). Vocational researchers are aware of the small numbers of women operating within many areas within the science, technology, engineering, and mathematics (STEM) career fields (e.g., Fitzgerald & Harmon, 2001; Scott & Mallinckrodt, 2005). While in the United States, more and more women are now entering the previously male-dominated professions (Fitzgerald & Harmon, 2001), the progress towards occupational desegregation remains painfully slow, and men still dominate the STEM occupations. It is of great significance therefore, to understand these trends better with an aim to increase the proportion of women within these fields.

Betz (2004) considers mathematics as the 'critical filter' that women might tend to ignore, thus shutting out the opportunities to qualify for some of the most lucrative jobs available. The choice of women to enter nontraditional careers depends on several environmental and contextual factors (e.g. Bleeker & Jacobs, 2004; Gottfredson, 1996; VanLeuvan, 2004). The self-efficacy and interests of women might have significant influences on their performance and persistence in science, technology, engineering, and mathematics (STEM) related career fields.

Key words: self-efficacy, achievement motivation, cognitive development,

INTRODUCTION

The Social Cognitive Theory, (SCT; Bandura, 1986) postulates that human behavior is a dynamic and reciprocal interaction of personal factors, behavior, and the environment. SCT also states that a person's behavior is influenced by both personal and environmental factors. In addition, SCT posits that individuals observe consequences of engaging in similar behavior both themselves and by others and form expectations of the outcomes of their behavior. The social cognitive career theory (SCCT; Lent, Brown, & Hackett, 1994) postulates that the "person variables" of self-efficacy beliefs, vocational interests, performance goals and outcome-expectancies help to develop an individual's academic and vocational choices. Extant vocational psychology literature has demonstrated that these elements are key to the development of academic and vocational choices (e.g. Betz & Hackett, 1997; Lent, Lopez, & Biescke, 1991, 1993; Sax & Bryant, 2006), and of academic and career performance (e.g. Lent et. al., 1993; Swanson, 1993). This study builds on Bandura's social cognitive theory (Bandura, 1986) and SCCT.

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However, most of the existing research is based on the U.S. population. Very little such research has been conducted in other countries and research along these lines for the population of the Indian subcontinent is virtually non-existent. India's traditionally patrifocal culture typically affords limited career choices and educational opportunities to women (Gupta & Sharma, 2003). While some research exists that examines gender differences in education and career opportunity (Gupta & Sharma, 2003; Indresan, 2002), and some literature exists that speculates about possible reasons (e.g. Bannerjee, 2002; Handy & Kassam, 2004) for the stark difference between male and female representation within higher education, there is almost no empirical research that investigates the career development of Indian women. This only highlights the need for additional vocational psychology research with this population, especially with a focus on the career development of Indian women within the STEM fields.

Motivation is identified as the fundamental aspect of learning —To be motivated means to be moved to do something. Components of Motivation are excitement, interest and enthusiasm towards learning. It is argued by Self-Determination Theory that motivation is of various types based on the reasons or goal made for any action. The most basic distinction is made between Intrinsic and Extrinsic motivation according to the Self Determination Theory. Intrinsic motivation is the undertaking of any task because the individual finds it interesting and enjoyable. Intrinsically motivated students are persistent in their efforts and learn from their mistakes. They also integrate their existing knowledge with new knowledge and form a deeper perception of their learning. Honkimaki distinguishes deep learning from surface learning. The researcher describes deep learning to intrinsic motivation and surface learning to extrinsic motivation. Since intrinsically motivated students are able to concentrate better and longer on the task, they develop the ability to use a series of strategies to face challenges. They work with concentration and hard work and achieve the goal of mastery. This state is known as —flow, which is arrived at through doing any activity, knowing and applying the required skills and being able to perceive challenges of the activity. This exercise further enhances and reinforces the ability to concentrate and achieve. Moreover, students who are intrinsically motivated exercise better self regulation. Self regulation is the ability to change one's behavior as required. It depends upon the accuracy and consistency of their self-observation and self-monitoring of their actions, choices, and attributions. Flow is seen as the ultimate of self-regulated learning.

LITERATURE REVIEW

According to Zimmerman and Clearly (2006) although student motivation is an important issue, the bottom line often entails improving a student's academic skills and maximizing their overall performance in school. It is widely accepted that a student's academic success is influenced primarily by their cognitive abilities. That is, students with great intellectual potential will often succeed at a higher level than will students with lower ability. However, given that correlation between I.Q. and achievement is typically only in the moderate range.

Schraw and Brook (1993) reveal two important patterns regarding self-efficacy. One is that as self-efficacy increases, so does the students' willingness to engage and persist in challenging tasks. Self-efficacy increases the likelihood that a student's tough-out a difficult task that they might otherwise abandon. High self-efficacy appears to sustain students until they acquire the knowledge and strategies they need to succeed at a task. Second, increased self-efficacy directly increases academic performance by increasing the quality of information processing as well as the quantity. Percept of ability is formed as individuals attempt and complete tasks.

However Miller, Pajares (1994) argued that people are more influenced by how they interpret their experiences than does past experience. Prior experience influences subsequent behavior largely through its effect on self-efficacy beliefs and these can influence performance.

According to Duffield (2000) people with high self-efficacy believe they can meet particular challenges posed and that people like this they ooze confidence and are ready to take change as if it were an adventure and that may come from

skills training, but it is a basic belief in their ability to make things happen. It is not concerned with the specific skills one has, but with the judgment about what one can do with those skills and those who doubt their capabilities shy away from difficult tasks. They have low aspirations and weak commitment to the goals they choose to pursue.

Egunsola (2014) in the study investigated the influence of home environment on academic performance of senior secondary students in Adamawa State. The results showed all the independent variables of home environment have significant influence on students' performances in Agricultural Science at the secondary school. The study recommended that parents and other significant persons should make students' homes conducive and stimulatory to learning not only the school subjects but education in general.

Obeta (2014) on the home environmental factors affecting the academic performance of the students of secondary schools in Abia state in Nigeria. The findings of the study indicated that a number of home environmental factors can enhance the academic performances of students like provisions of adequate educational materials to the students, teaching, and supervision of the students work at home by parents, Enrolment of the students in a good school, the existences of cordial relationship, love and care in the student's family, the academic level of the students' parents and positive attitude towards education, provision of modern gadgets at home and good communication network in the home among others, all contributes immensely to the students' academic performances.

Yunus et al. (2014) on the effect of family environment on student's academic performance and adjustment problems among year one students of School of Health Technology Keffi, Nasarawa State ranging between the ages of 16 - 20 years. The results of the study revealed that the family environment has no effect on Academic performance of the student; also there is no gender difference in school adjustment and academic performance of the participants. However, it was found that the family environment has some effect on school adjustment. The study further suggested the need for parents to pay attention on their relationship with their children.

Ogbemudia and Aiasa (2013) studied the influence of home environment on the academic performance of primary five pupils' in English Language in Orhionmwon Local Government Area of Edo State. Four variables were considered which include parental academic background, parental economic status, parental marital status and parental home location. The result obtained from the study at 0.05 level of significance shows that parental academic backgrounds, parental economic status, parental marital status and parental home location have significant influence. 109 primary five pupils academic performance in English Language hence the null hypotheses were rejected while the alternative hypotheses were retained. The results implied that the home environment has a significant influence on the academic performance of primary five pupils in English Language. Roksa and Potter (2011) defined social background as a combination of parents' current class location and their own family backgrounds. Using data from the Panel Study of Income Dynamics and its Child Development Supplement, the authors examined how different categories of social background are related to parenting practices and children's academic achievement. The results offer novel insights into the transmission of class advantage across generations and inform debates about the complex processes of cultural reproduction and cultural mobility.

Parveen, (2014) carried out an investigation on the effects of study habits on the academic performance of students, using some selected senior secondary school in Ijebu-Ode Local Government Area of Ogun State as a case study. The results indicated that family background, peer group pressure, personality type of the students and the school environment, all affect the reading habits of the students in secondary schools. Based on the findings, the study suggested that an appropriate parental counselling programme needs to be organized for parents that will educate them on how to motivate their wards to cultivate good study habits in order to enhance their academic achievement (p. 64). Similarly,

Williams (2011) attempted to explore the ways in which the family, school, and community environments contribute to the academic success of urban, African American

high school graduates from low-income, single-parent families. Findings of the study revealed that protective factors across multiple contexts of students' lives contributed to their academic success despite adversity. Eight themes emerged from participants' responses:- education specific parenting practices, non-traditional ways of supporting education, maintained kinship networks, school as an agent of families, resilience promoting features of schools, supportive relational networks within the community, promoting ecological resilience to improve student outcomes, and relational strategies to promote educational resilience.

RATIONALE OF THE STUDY

Self efficacy beliefs also affect thought patterns and emotional reactions for example —Self-efficacy is also a much stronger predictor of how effectively people will perform a given task than either their self confidence or their self-esteem. A high degree of self-efficacy leads people to work hard and persist in the face of setbacks. In a dynamic work context, where ongoing learning and performance improvement is needed, high self-efficacy helps individuals to react less defensively when they receive negative feedback. In areas where their self-efficacy is low, people often see a negative outcome as conforming the incompetence they perceive in themselves. This can set up a vicious cycle,

whereby ambiguous results are considered as evidence of perceived inability, further lowering an individual's self-efficacy, effort, and subsequent performance. When people have low self-efficacy, they also tend to blame either the situation or another person when things go wrong. Denial of any responsibility for poor performance inhibits the chance that an individual will learn how to perform more effectively in the future.

Since Self efficacy constructs our feelings and thinking for the way we act it is essential to look into the way it works. In terms of thinking, a strong sense of competence facilitates cognitive processes and performance in a variety of settings, including quality of decision-making, goal-setting and academic achievement.

People with high self efficacy beliefs indulge in activities in a relaxed peaceful manner. In terms of act, self- related cognition is a major ingredient of motivation. Self efficacy will also determine the effort and perseverance they will exert in pursuing their goals. Students with high self efficacy will engage in activities in which they feel competent. They will participate in these activities with deeper interest and will recover quickly from setbacks. Self-efficacy beliefs motivate students to learn through their self-regulatory processes for making choices in goal setting. Self-regulation is the ability to change according to the conditions.

OPERATIONAL DEFINITIONS

Academic performance: It is the result of the efforts exerted by the students. It represents outcomes that indicate the extent to which a person has accomplished specific goals.

Self-efficacy: allow for greater understanding and means to measure self-efficacy. A theoretical definition of self-efficacy includes the belief that an individual has the ability to create change by personal actions.

Achievement Motivation: Achievement motivation, also referred to as the need for achievement (and abbreviated n Achievement), is an important determinant of aspiration, effort, and persistence when an individual expects that his performance will be evaluated in relation to some standard of excellence. Such behavior is called achievement oriented.

OBJECTIVES OF THE STUDY

- To explore the impact of self-efficacy on academic performance of school students.
- To explore the effect of achievement motivation on academic performance of school students.
- To investigate the relationship between self-efficacy and achievement motivation among school students

HYPOTHESES OF THE STUDY

1. Self-efficacy will have a significant effect on the academic performance of school students.
2. Achievement motivation will have a significant effect on academic performance of school students.
3. There will be significant positive relationship between self-efficacy and achievement motivation among school students

RESEARCH METHODOLOGY

This section will be structured in the following manner. We will first describe the participants of this study, including information about their demographics, followed by a description of the curricular tracking system used in Indian post-secondary education, and its relevance to the current study. Next, we will discuss the instruments used to measure the various constructs of interest in this study.

Method

We will get the result based on samples, and data collection and finally analysis the sample data for result, some parameters or tools used for measurement of data.

SAMPLE

We will be collecting samples from different schools in Delhi. 80 participants will be considered for this study. The age group will be between 16-18 years.

1. Selection of 10th, 11th and 12th grade schools in Delhi, randomly.
2. Selection of normal samples from public and private schools by a random stratified sampling technique.

Inclusion criteria:

- High school students only
- Both genders (males and females) In regular schools
- Exclusion criteria:
- No mental health conditions No medications
- No dropouts

TOOL USED

In addition to a demographic questionnaire, this study uses the self-efficacy scale, the Sources of Social Self-Efficacy Expectations Scale (Anderson & Betz, 2001). In addition, the students' last examination scores will be used. Detailed information about these measures is presented below.

1. Demographic Questionnaire: All participants in this study will complete a demographic questionnaire. Participants will be asked to indicate their sex, age, educational aspirations, religion, caste, household income, parental educational attainment level (for both father and mother), parents' occupation (for both father and mother), and the number of hours they spent studying. They will also be asked about their career aspirations, and what educational and career aspirations their parents had for them.

2. Sources of Social Self-Efficacy Expectations Scale (Anderson & Betz, 2001), measures experiences related to the development of self-efficacy in a person's social skills. This 40-item measure is divided into four scales of 10 items each. These four subscales are Emotional Arousal (anxiety), Social Persuasion, Vicarious Learning and Past Performance (performance attainment). Each item is reported on a five-point Likert-type scale ranging from (strongly disagree) to 5 (strongly agree). The reliability and validity evidence provided here is reported by Anderson & Betz (2001) for the Social Sources of Self-Efficacy Scale. For a Delhi schools' sample, internal consistency reliability of the Social Sources Scale is demonstrated by the following coefficient alphas: Vicarious Learning, (.77), Emotional Arousal (.91), and Social Persuasion (.87). For this study, the internal consistency reliability coefficient alphas for the three subscales were: Vicarious Learning, (.39), Emotional Arousal (.93), and Social Persuasion (.60). Table 2 describes the internal consistency reliability for this scale.

3. Previous academic performance will be measured by the students' cumulative annual examination scores (finals of the previous year). Both the sampled schools will be contacted in order to obtain these examination scores. The parental consent and informed consent forms contained permission to access the participant's academic records for the purpose of obtaining these scores.

4. To assess academic motivation a questionnaire developed by Vallerand's (1989) Achievement Motivational Scale (AMS) will be used. This instrument was created after extensive research done in the realm of self-determination theory which is based on three subscales i.e., intrinsic, extrinsic and amotivation. The Scale assesses 7 types of constructs: Intrinsic motivation towards knowledge, towards accomplishments, and to experience stimulation. It also assesses external motivation as introjected and identified regulations. The subscale to assess Amotivation there are 28 questions, 4 questions per subscale, assessed on a 7-point scale, which has been tested and generally accepted as a valid instrument that accurately examines motivation. Reliability of the scale on Cronbach's Alpha: ranged from .76 to .90, with the majority in the high .80s.

Statistical methods

Following statistical methods will be students in the present investigation.

- Descriptive analysis
- Pearson correlation coefficient
- Regression
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