Major Factors Affecting the Academic Achievements of Indian Students Residing in India (Kerala) and UAE.

Smitha Dev¹

Abstract

This paper is designed to explore the various factors affecting the academic achievements of high school students. The study was conducted on 210 high school students from Abu Dhabi and Thiruvananthapuram. Procrastination behavior inventory, an index of stress tolerance, and study habits scale were used to understand the various factors interfering their academic achievement. The data was analyzed using the statistical techniques such as Product-moment coefficient of Correlation-Pearson's R, and factor analysis. These results provide an insight into the numerous factors effecting students in their learning process and it is a fact that students need to get adequate support and motivation from teachers and parents to keep up their focus on the educational goal.

Key words: Academic achievement, stress, procrastination, study habits

Introduction

In earlier days’ intelligence was considered as one of the major factor for students’ academic achievements, however recent researches have emphasized the importance of many other major factors which contributes to high academic performances. Environmental factors such as family and classroom interaction plays a major role, along with personal factors like interest, intelligence, anxiety, aptitude, and study habits. Another place of influence are the social factors, which includes socio economic status and cultural influence. And finally, psychological factors like self-motivation and emotional stability are the key components which can influence students learning. Many studies have been conducted in this area by leading researchers, and according to Tarman (2010; 2016; 2017) the causes of low academic performance are low motivation, poor study habits and lack of parental involvement in their children’s education. Academic achievements of student’s manifest through their study habits. Developing a good study habit and learning to tolerate stress is very important for a students’ academic and career success. According to Shama

¹ Dr. Smitha Dev, Asst. Professor of Psychology, Abu Dhabi University, smitha.dev@adu.ac.ae
(2005, p.67) ‘academic performance is a necessary evil because, one kind of ability is rewarded economically and socially more than the other. ’Through this research, the investigators tried to explore three important factors that could influence students’ performance, and they are procrastination behavior, stress tolerance and organized study habits. Procrastination is a behavior which can be found in most of the people to a certain extent. Procrastinators have a tendency to delay tasks, and can affect their academic performance. It was noted that 95% of college students engage in procrastination (Ferrari (2001)). There are evidence that procrastination results in detrimental academic performance including poor grades and school drop outs (Balkis & Duru, 2009). Similar to procrastination, many scientists have studied about the effect of stress on academic achievement, and its effect on human being have also been reported differently. According to Westman and Eden, 2007; Keeley et al., 2008, stress and academic performance have a curvilinear relationship. However, many studies are contradicting these findings and have reported that optimum level of stress can enhance learner’s ability to perform.

Most of the researches agree that study habits are important to improve students’ performance. Study habits are the organized practices which students needs to ritually follow to improve their learning. The purpose of this study is to investigate whether procrastination behavior, stress tolerance and study habits have any major role in students’ academic achievements. It should be noted that many researches have been conducted in this area, especially with college students and most of the studies have taken place in the West. Therefore, the investigators felt that a research of this kind should help to improve the awareness among educationalist and parents, to understand and uphold the importance of creating a supportive and positive environment to develop the stress tolerance level of students and also cultivate a structured study habit among students. This research is focused on a specific demographic population and therefore the study was conducted on Indian students studying in UAE and in India. In addition, this is also a cross cultural study of students studying in UAE & India, and to perceive more about student’s adeptness between both the cultures. Studies of this kind is very essential to upgrade the ongoing changing educational stature.

**Literature Review**

The researchers tried to highlight the empirical background of the study and to summarize and evaluate the research findings relevant to the topic under investigation. An investigation done by Chandra (2010) highlighted that adolescent period frequently causes raise of stress among
teenagers which make them difficult to deal with increasing burdens and demands in later life. Stopplern (2010) also supported the fact that excessive stress has a harmful impact on both mental and physical health in later life. Approaching to academic stress Smith (2007) tried to explore the predictors of academic related stress experienced by students. The study also examined the coping strategies used by students. The finding of the study revealed that anxiety, parental and others support, problem focused coping ability are significantly important predictors of the academic stress experienced by students. Attri and Neelam (2013) in their study observed a significant difference in the academic anxiety and academic achievement of male and female secondary school students. It was also observed that girls were found to be more academically anxious and had better academic achievement than boys. As discussed earlier procrastination is a way to avoid or escape from undesirable tasks. Ferrari (2001) found that almost 20% of adult’s experience chronic procrastination, whereas academic procrastination among undergraduate students are between 70-95%. A study from Solomon and Murakami (1986) found that procrastinators attribute passing exams to external factors more than the other students. Finally, Howell et al (2011) observed a significant negative correlation between procrastination and academic control of students. Whereas a large number of studies had contradictory findings that procrastination is positively related to poor academic performance (Balkis & Duru, 2009; Beck, Koons, & Milgrim, 2000; Beswick, Rothblum, & Mann, 1988; Cetin, 2009; Fritzsche, Young & Hickson, 2003; Klassen, Krawchuk, & Rajani, 2008; Ozer, Demir & Ferrari, 2009; Wesley, 1994).

All the above studies focused on the main effect of stress and procrastination on academic achievement. To summarize, many studies revealed that stress and procrastination is widely experienced problematic behavior among students and it had a negative impact on their academic performance (Kilinc, Tarman & Aydin, 2018; Kilinc, 2014;2015; Tarman & Dev, 2018; Yigit & Tarman, 2016). Through this study we tried to explore the relation of three other major factors which contributes towards academic success. From the above literature it was also understood that further investigation was very essential in this area, and the following hypothesis were formulated to find the relationship between all the three variables:

**H1.** There is a significant positive correlation among the factors such as procrastination behavior, stress tolerance and study habits of students in India.

**H2.** There is a significant positive correlation among the factors such as procrastination behavior, stress tolerance and study habits of students in UAE.
Procrastination Behavior, Stress tolerance and Study Habits are the major factors affecting students’ academic achievement in both India and UAE.

**Method**

**Sample**

The researcher employed stratified sampling method to collect data. The data were collected from Higher Secondary Schools of India and from Higher Secondary Schools of Abu Dhabi, UAE. The participants of the study were male and female students from class X and class XII.

Table 1

**Categories of Male and Female Students in Abu Dhabi and India on the Basis of the Class in which they are Studying**

<table>
<thead>
<tr>
<th>Class</th>
<th>Total (Male &amp; Female-TVM)</th>
<th>Total (Male &amp; Female-AUH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>109</td>
<td>120</td>
</tr>
<tr>
<td>XII</td>
<td>101</td>
<td>90</td>
</tr>
<tr>
<td>Total</td>
<td>210</td>
<td>210</td>
</tr>
</tbody>
</table>

Table 2

**Students in UAE and India on the basis of their Academic Achievement**

<table>
<thead>
<tr>
<th>Achievement level</th>
<th>N</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students in Kerala</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High achievers</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>Average achievers</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Low achievers</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>Students in UAE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High achievers</td>
<td>65</td>
<td>120</td>
</tr>
<tr>
<td>Average achievers</td>
<td>92</td>
<td></td>
</tr>
<tr>
<td>Low achievers</td>
<td>53</td>
<td></td>
</tr>
</tbody>
</table>

**Materials**

All tools used in this study were adapted from another study ‘Procrastination Behavior, Stress Tolerance, and Study Habits: A Cross-Culture Analysis’ conducted by the same author. The following tools were adapted for the present investigation.

1. **Procrastination Behavior Inventory**

PBI covers five aspects of student’s procrastination behavior, including examination, assignments, sports, games, extracurricular activities and time management. Inventory has both positive and
negative items, reversed scoring was used for negative items. Split-half reliability method was used to estimate the reliability of the test. The test was split into two equal halves on the basis of odd items and even items (odd-even reliability method). A correlation coefficient between the 2 halves was found using Pearson Product-Moment Formula. Thus the half test reliability coefficient of 0.7 was estimated. The reliability of the whole test was found out using Spearman Brown Formula. Thus reliability coefficient of 0.82 was obtained. This index of reliability shows that the test is highly reliable. This value of reliability is significant of 0.01 level.

The validity of the test was estimated with the help of empirical or criterion related validity. It was found out by correlating the present scale with “Stress Tolerance Inventory” of (Balagangadharan, 1998), as reported in the manual (Sananda Raj & Reshmy, 1999). Both the tests were administered to a sample of 40 subjects and the correlation coefficient was estimated as 0.72. This index of validity shows that the test is an adequately valid, the value of validity coefficient being significant at 0.01 level.

2. An Index of Stress Tolerance (Student Version)

The stress tolerance Index was developed by the author, the test consists of 20 items, which was highly relent to measure students stress tolerance level. It consists of equal positive and negative items. Split-half reliability method was used to estimate the reliability of the test. The test was split into two equal halves on the basis of odd items and even items (odd-even reliability method). A correlation coefficient between the 2 halves was found using Pearson Product-Moment Formula. Thus the half test reliability coefficient of 0.7 was estimated. The reliability of the whole test was found out using Spearman Brown Formula. Thus reliability coefficient of 0.82 was obtained. This index of reliability shows that the test is highly reliable. This value of reliability is significant of 0.01 level.

The validity of the test was estimated with the help of empirical or criterion related validity. It was found out by correlating the present scale with “Stress Tolerance Inventory” of (Balagangadharan, 1998), as reported in the manual (Sananda Raj & Reshmy, 1999). Both the tests were administered to a sample of 40 subjects and the correlation coefficient was estimated as 0.72. This index of validity shows that the test is an adequately valid, the value of validity coefficient being significant at 0.01 level.

3. Study Habits Scale (Revised)
Study habits scale consists of 20 descriptive items which was highly relevant to measure students study habits. The scores for the separate items were then summed to obtain the Study Habits Scale score of the individual. The maximum obtainable score was 100 and minimum was 20.

The test-retest reliability of the scale is reported to be +0.92, on a sample of 75 students, with a time interval of one month. The odd even reliability was found to be +0.95 after correlation for alternation, calculation on a scale of 60 students.

Validity of the scale had been established by correlating the scores of the scale with the scales of Attitude towards Academic Work and Achievement motivation and the validity coefficient were found to be +0.84 and +0.79 respectively. This indicates that the scale is reliably and valid in measuring the study habits of students.

**Personal Data Schedule**

The variables such as class studying, sex, place of study, and percentage of marks obtained in the previous examination (to measure academic achievement) was obtained by using a personal data schedule, which was relevant to obtain some important variables. To calculate academic achievement, the sample were categorized into High, Average and Low achievers. For this purpose, the mean (M) and standard deviation (SD) of the scores on achievement were calculated. Those who obtained at or above mean plus half SD (M+1/2 SD) were designated as high achievers, those at or below (M-1/2 SD) were designed as low achievers, and those who obtained achievement scores between (M-1/2 SD) and (M+ ½ SD) were designed as average achievers.

**Results and Discussion**

**Table 3: Correlation Matrix of the Four Variables in Indian Culture**

<table>
<thead>
<tr>
<th>S.No</th>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Procrastination Behavior</td>
<td>( )</td>
<td>-0.422</td>
<td>-0.571</td>
<td>-0.238</td>
</tr>
<tr>
<td>2</td>
<td>Stress Tolerance</td>
<td>-</td>
<td>( )</td>
<td>+0.420</td>
<td>+0.060</td>
</tr>
<tr>
<td>3</td>
<td>Study Habits</td>
<td>-</td>
<td>-</td>
<td>( )</td>
<td>+0.284</td>
</tr>
<tr>
<td>4</td>
<td>Academic Achievement</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>( )</td>
</tr>
</tbody>
</table>

There existed marked or substantial negative correlation among the variables, Procrastination Behavior with Stress Tolerance, study habits and academic achievement of students in India.

There existed marked or substantial positive correlation between Stress Tolerance and Study Habits for students of India.
The correlation between Stress Tolerance and Academic Achievement of students in India was found to be not significant statistically.

i. **The Factor Structure for the India Sample:**

The Correlation Matrix presented in the Table 2; was subjected to the Factor Analysis. Factor Analysis resulted in showing there exist only one factor as significant while rotating this factor. The same result has been obtained, as there is no meaning in rotating if there is only one factor extracted by Factor Analysis.

The factor Structure obtained for the four variables for the India sample is given in table 3.

**Table 4**

**Factor Structure of variables for the India Sample**

<table>
<thead>
<tr>
<th>S. No</th>
<th>Variable</th>
<th>Factor Loading</th>
<th>Degree of presence of the variable in the factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Procrastination Behavior</td>
<td>-0.826</td>
<td>*</td>
</tr>
<tr>
<td>2</td>
<td>Stress Tolerance</td>
<td>+0.687</td>
<td>Considerable presence</td>
</tr>
<tr>
<td>3</td>
<td>Study Habits</td>
<td>+0.838</td>
<td>Very high presence</td>
</tr>
<tr>
<td>4</td>
<td>Academic Achievement</td>
<td>+0.449</td>
<td>Variable present, but low</td>
</tr>
</tbody>
</table>

Note: * -ve loading indicates absence of the variable in the factor.

The diagrammatic representation of the factor is given as Figure 1.
The factor for Indian sample had identified as STUDIOUSNESS, means the students are very serious, responsible and hard working with their studies, since the factor had very high positive loading in Study Habits, and considerable positive loading in Stress Tolerance. Also, the variable Academic Achievement is present in this factor; whereas the variable Procrastination Behavior is absent in it, as indicated by the negative loading.

It may be noted that 'studiousness' is indicated by earnest interest and concern for study. But the low factor loading on academic achievement indicates that factor is loaded by this variable only to a mediocre level.

Studious students usually have very good study habits. A student who has acquired good study habits might have developed a behavior pattern, which enables him or her to sit down and begin working on his or her assignments with maximum concentration. Habits permits him or her to attend to routine pattern conducted with settling down to work without having to give them much wastage of time and energy.

Higher level of stress tolerance is another characteristics of studiousness. Too much of workload at school, tuition classes, over expectation of parents, and teachers, tensions related to examinations to be attended, fear of not able to reach to the expectation of parents and teacher, fear of failure, fear of success etc. keep a student in stressful situation. Overcoming such stressors, with minimum anxiety can always help the students show overall academic performance.

Academic Achievement is the knowledge attained or skills developed in the school subjects, and is usually determined through test scores or through marks assigned by teacher or both. The performance in a test or examination makes a student attain a categorization as a high academic achiever, an average academic achiever, or a low academic achiever.

Procrastination behavior of a student is a negative aspect of behavior. It is the act of putting off doing something until a future date, postponing or delaying needlessly. Academic procrastination is one of the aspects of procrastination behavior. It leads to piling of books on desks, postponing school works, putting of studies etc. A procrastinator always ends up in problem with teachers. Such students tend to leave their work incomplete. The students of Kerala, in general, seem to be
very studious, having good study habits, higher level of stress tolerance, and lower procrastination behavior.

Table 5
Correlation Matrix of the Four Variables in UAE Culture

<table>
<thead>
<tr>
<th>S. No</th>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Procrastination Behavior</td>
<td>(</td>
<td>-0.386</td>
<td>-0.632</td>
<td>-0.308</td>
</tr>
<tr>
<td>2</td>
<td>Stress Tolerance</td>
<td>-</td>
<td>(</td>
<td>+0.385</td>
<td>+0.248</td>
</tr>
<tr>
<td>3</td>
<td>Study Habits</td>
<td>-</td>
<td>-</td>
<td>(</td>
<td>+0.506</td>
</tr>
<tr>
<td>4</td>
<td>Academic Achievement</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>(</td>
</tr>
</tbody>
</table>

There existed low negative correlation among the variables, Procrastination Behavior with Stress Tolerance, Academic achievement, and study habits (marked or substantial negative correlation), of students in UAE.

There existed low positive correlation between Stress Tolerance with Study Habits and academic achievement of students in UAE.

ii. The Factor Structure for the UAE Sample:

The correlation matrix presented in Table 2 was subjected to Factor Analysis. Factor Analysis resulted in showing that there exist only one factor as statistically significant. While rotating this factor, the same result has been obtained, as there is no meaning in rotating if there is only one factor extracted by factor analysis. The Factor Structure obtained for the four variables for the UAE sample is given in Table 4.

Table 6
Factor Structure of variables for the UAE Sample

<table>
<thead>
<tr>
<th>S.No</th>
<th>Variable</th>
<th>Factor Loading</th>
<th>Degree of presence of the variable in the factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Procrastination Behavior</td>
<td>-0.799</td>
<td>*</td>
</tr>
<tr>
<td>2</td>
<td>Stress Tolerance</td>
<td>+0.643</td>
<td>Considerable presence</td>
</tr>
<tr>
<td>3</td>
<td>Study Habits</td>
<td>+0.869</td>
<td>Very high presence</td>
</tr>
<tr>
<td>4</td>
<td>Academic Achievement</td>
<td>+0.672</td>
<td>Considerable presence</td>
</tr>
</tbody>
</table>

Note: * -ve loading indicates absence of the variable in the factor.
The diagrammatic representation of the factor is given as Figure 2.

Figure 2: Factors identified for UAE Students: **DILIGENCE**

**Figure 2. Diagrammatic Representation of the Factor for UAE Students.**

The factor for UAE sample has been identified as DILIGENCE, means the students have a constant and earnest effort to accomplish their goals, since the factor had very high positive loading in Study Habits, considerable positive loading in Academic Achievement, and Stress Tolerance, and very high negative loading in Procrastination Behavior. The factor indicates or is characterized by study earnest, energetic application and painstaking effort on the part of the students. The positive loadings on the variables noted above shows that the students in UAE have very good study habits, high stress tolerance, and are capable
of achieving high in academic subjects. At the same time, it is noteworthy to highlight the fact that factor is free from procrastination behavior to a high degree.

Study habits are regularity regarding academic work, which characterizes most of the high achievers, though it cannot be regarded as the general feature. In preparing for the examinations, greater reliance is placed on text books and self-prepared notes. Cramming, expect for a few key phrases, is not recommended and the subjects seem to depend more on their own powers of expression, organization, and presentation.

Stress tolerance is the ability of a person to withstand or tolerate stressful situations. Every student has to face lot many academic stress and institutional stress. Getting good marks in examination, completing day-to-day activities of the school, studying daily the study materials, and the like are some pressures a student has to face. Over expectation of the parents, and too much of demands from the teachers as well as institutional heads also put students under pressure. These factors, when overwhelmingly high can create tension and anxiety leading to stress. The ability to overcome such stressors makes the student more tolerant.

Academic achievement or good performance academically is the key to categorization of a student as a good achiever. Good academic performance is always possible with good study procedures. It can be called the progress that a learner makes in learning. Procrastination behavior means, postponing or putting off doing something until a future date, it also implies a failure to initiate or complete a task. Students who procrastinate leave their work incomplete, the failure to complete their work in the right time, creates chances of getting into trouble with teacher. All these can cause stress. A student who doesn't procrastinate can be said to achieve maximum academically. The factor 'Diligence' thus characterizes excellence.
iii. Comparison of the Factor Structure of Kerala and UAE Students:

For the interpretation and comparison of the factor structures of Kerala and UAE students, it has been recalled that the factor for Kerala students has been identified as Studiousness, and the factor for UAE students has been identified as Diligence.

‘Studiousness’ is indicated by earnest interest and concern with study, though with the moderate academic achievement level; whereas, ‘Diligence’ is indicated by study-earnestness, energetic application, and painstaking effort on the part of the students.

The factor Studiousness had very high positive loading in study habits, considerable positive loading in stress tolerance, and low positive loading in academic achievement, whereas very high negative loading in procrastination behavior. At the same time, the factor Diligence had very high positive loading in study habits, and considerable positive loadings in stress tolerance and academic achievement, whereas, as in the case of Studiousness, the factor Diligence also had very high negative loading in procrastination behavior. The main difference between the two factors is thus on the degree of loading of the variable academic achievement on the respective factors. In this context, the fact that diligent students must show very high-level academic achievement, when compared to studious students, cannot be discarded. Apart from this, the two factors have many similarities, as mentioned above. In short, in terms of similarities, both factors imply good study habits, high level of stress tolerance, and the absence of procrastination behavior.

The summary and conclusions of the above analysis and discussion are presented in the next chapter.

Conclusion

The study investigated how procrastination behavior, stress tolerance and study habits impact the ‘academic achievements of students studying in UAE and their counterparts in India. The significant contribution of this study is that, this is the first cross cultural study in this region, and will help the parent population in UAE to understand students’ tolerance level since they are living in a very protective environment, with limited exposure compared to their counterpart who live and study in India. The findings indicate that, there
existed marked or substantial negative correlation from the variable of Procrastination Behavior with Stress Tolerance, study habits, and academic achievement among students studying in India. As seen in the previous studies, this study supports the findings that, when procrastination increases, the stress tolerance level decreases and thereby lowers their academic achievement due to poor study habits. The results also observed that, there existed marked or substantial positive correlation between Stress Tolerance and Study Habits of student studying in India, and this indicates that when the stress tolerance increase, their study habits also improve. The correlation between Stress Tolerance and Academic Achievement for students studying in India, was found to be not significant statistically. Surprisingly the stress level of students studying in India was found to be not affecting their academic achievement, and this indicates that stress has no significant role in their studies. The same results were observed with students studying in UAE and it was found that by procrastinating, their study habits, academic achievements and stress tolerance level declined. Among UAE students, the study observed a low positive correlation from the variables such as stress tolerance, study habits and academic achievements. This indicates that the stress tolerance level among students in UAE had a positive impact on their academic achievement. The current study also observed a substantial positive correlation between academic achievement and study habits. The factor structure for the students in India, using the factor loading of variables Procrastination Behavior, Stress Tolerance, Study Habits, and Academic Achievement was identified as ‘Studiousness’, while the factor structure for the UAE. Students using the factor loading of variables Procrastination Behavior, Stress Tolerance, Study Habits, and Academic Achievement was identified as ‘Diligence’. It can be concluded that the students studying in India were more ‘studious’ while students from UAE were more ‘Diligence’. This study will be useful for school counsellors, educators and Psychologists to understand and help students to resolve their academic issues, and this study will also help parents and teachers to realize the importance of support required, to reduce academic procrastination and stress to develop the academic efficiency of students. Also this study emphasis the importance of conducting quarterly based special counselling sessions in schools to enhance student’s ability to tolerate stress, reduce academic procrastination and develop good study habits.
References


https://doi.org/10.1007/s11528-018-0280-y


Stopplern (2010) also supported the fact that excessive stress has a harmful impact on both mental and physical health in later life.


