A Study of Interrelationship Of Time Management, Stress And Academic Achievement Among Secondary Level Students

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Abstract: The primary aim of this study is to elucidate the intricate interplay between time management, stress, and academic achievement among secondary students. The research sample consisted of 450 secondary students hailing from schools in the Pauri block of Uttarakhand. The evaluation of the time management proficiency of these secondary students was conducted using a meticulously crafted time management competency scale devised by D.N. Sansanwal and Meenakshi Parashar. To gauge the stress levels of the participants, an assessment was made employing a stress scale developed by the esteemed Dr. Vijay Lakshmi and Dr. Shruti Narain. Academic achievement scores were extracted from official school records. The statistical tools employed for analysis encompassed Mean, Standard Deviation, Karl-Pearson Coefficient Correlation, Multiple Correlation Coefficient, and F-ratio. The outcomes of the study revealed a compelling and statistically significant interrelationship among the time management competency, stress levels, and academic achievements of the students under examination. This research contributes valuable insights into the complex dynamics that exist between effective time management, stress mitigation, and academic success in the context of secondary education.

Keywords: Time management • Stress • Academic achievement

Introduction

Time management refers to the way that anyone organizes and plans his/her specific activities. Claessens et al (2005) explained that time management as a behavior that aims at achieving an effective use of time, while performing certain goal- directed activities. Time Management is a set of habits or learnable behavior that may be acquired through increased knowledge, training or deliberate practices. Time management includes setting goals, using time management aids, such as list making plans and effectively organizing one's time. Kelly (2002) explained time management skills as making tasks lists, organizing resource and work, setting goals, creating and reviewing schedule and breaking down large tasks into smaller pieces. Selye (1956) defined stress as 'non-specific responses that be resulted from a variety of different kinds of stimuli." Academic achievement is the educational goal that is achieved by a student, teacher, or an institution over a certain period.

Objective of study

- To study the status of time management competency of selected students with reference to their gender.

- To study the academic achievement of students on the basis of gender.
- To Study the interrelationship of time management competency, stress and academic achievement of students.

Hypothesis

- There is no significant difference in time management competency between female and male students.
- There is no significant difference in academic achievement between girls and boys.
- There is no significant interrelationship between time management, stress and academic achievement of students.

Review of related literature

Review of time management: Britton et al (1991) studied the effect of time management practices on college grades**.** A prospective study tested the hypothesis that college grade point average (GPA) would be predicted by time management practices. 90 college students completed a time management questionnaire in 1983, their high school scholastic aptitude test (SAT) scores were obtained from college records. Regression analysis showed that two time management components were significant. It is concluded that time management practices may influence college achievement.

Trockel et al (2000) studied academic achievement and variables related to health among college students of first year. Sample comprised 200 students living in campus residence halls at a large private university. The set of variables related to exercise, sleep habits, time management, social support, number of hours worked per week, gender and age. Of all the variables considered sleep habits particularly wake up times, accounted for the largest amount of variance in grade point averages. Later wake up times were associated with the first-year

students higher grade point average were strength training and study of spiritually oriented material. Number of paid hours worked per week was associated with lower average grades.

Sun and Yang (2009) studied student's pressure, Time Management and effective learning. This study aim to survey the status of the student pressure and the relationship between their daily time management and their learning outcomes in three different types of higher secondary schools at Shenyang, the capital city of Liaoning province in mainland china. An investigation is carried out in 14 higher schools both qualitative and quantitative approaches were used. The strongest pressure felt by HSS student in china was the pressure from national college entrance examination, the rank order of other pressure were pressure from parent, from society, from school, from teachers, the finding also included relationship between learning of student and time management.

Kaushar M (2013) studied impact of time management on academic performance of college students**.** Sample consists of 50 college students. The data collected for the study includes both primary and secondary data. Interview, questionnaire and case study method for collecting the primary data and secondary data was collected from various sources such as magazines, reference books, articles etc. There was a significant and positive relation between time planning and time management and academic performance of the student. There was a low and positive relation between time consumers and academic achievement. Findings reveal a moderate correlation between time management and academic achievement.

Review of stress

Alva and Ruddadelos (1999) studied Psychological stress, internalized symptoms and academic achievement of Hispanic Adolescents**.** This study examined the relationship between stressful life events, internalized symptoms of

stress and academic achievement among a sample of Hispanic students in a large urban high school. Using a paper and pencil questionnaire, students were administered the Hispanic children stress inventory and two measures of internalized symptoms. Perceived competence was measured using the Hartor perceived competence scale. A series of hierarchal multiple regression revealed main effects of stressful life events and perceived and competence on grades, anxiety and depressive symptomatology. Multiplicative interactions for perceived competence were not significant. Moderate of psychological stress on grades or internalized symptoms.

Mishra and Kean (2000) studied academic stress of college students and its relation to their anxiety, time management and leisure satisfaction. Purpose of this study is to investigate the interrelationship of academic stress, anxiety, time management and leisure satisfaction. The sample consisted of 249 university students. Findings reveal that time management behavior had greater effects on academic stress of students than leisure satisfaction activities. Significant gender differences were found in all the measures. Girls had more effective time management behavior than boys. Females experienced higher academic stress and anxiety. Boys benefited more than girls from leisure satisfaction activities. Results show that Anxiety, time management and leisure satisfaction were all predictors of academic stress. Reduction of anxiety and time management with leisure activities may be an effective strategy for reducing academic stress in students.

Misra et al (2003) studied among life stress, social support, academic stressors, and relation to stressors. The sample comprised of 143 international students structural equation modeling was used to assess the relationship among latent and measured variables in conceptual model. The result indicated no significant difference in academic and life stressors by gender. However, women exhibited higher reaction to stressor than men. Higher levels of academic stressors were predicted by higher level of life stressor and by lower level of social support. Higher academic stressor predicted greater reaction to stressors.

Rucker (2012) studied the relationship between motivation, perceived stress and academic achievement in students. The samples comprised 146 undergraduate psychology students at the University of Twente and filled an online questionnaire. The perceived stress scale by Cohen et al (1983) used in this study. The academic performance was measured with three different questions. T-test, ANOVA, Pearson correlation, Spearman correlation used in this study. Results showed that females showed significant higher stress than males. a significant correlation was found between 'failing a course' and perceived stress. Non-significant results were found between GPA and stress. Non significant relationship was found between the academic year and stress.

Essel and Owusu (2017) studied causes of stress of students, its effects on their academic success and stress management by students. General objective of study was to identify factors causing stress among students in Seinajoki University of applied science Finland. Specific objectives are to identify causes of stress among students, to identify specific areas of stress in students life, to identify techniques to deal with the stress. A quantitative method was used in gathering and analyzing data. For this purpose, questionnaires were distributed to two students' groups. The results revealed the different factors that cause stress among students. The factors were grouped into four, namely relationship factors, environmental factors, academic factors and personal factors. With respect to relationship factors working with new people was the main

cause of stress for students in groups. In the case of environmental factors, worries about future were the main factor causing stress among students. Whereas class workload was the main element of stress regarding the academic factors. in the category of personal factors financial problems caused stress to students.

Research methodology

Research method - Survey research method used in this study.

Population of the study – Population of present study comprised class ninth and tenth students of government and private schools of Pauri block, district Pauri Garhwal.

Sample – Sample consists of 450 secondary students. Students are selected by random sampling from schools of Pauri block, district Pauri Garhwal, Uttarakhand. Sample consist of 203 female students and 247 male students.

Tool used in study–The time management competency of secondary students was assessed via their scores on time management competency scale developed by D.N. Sansanwal and Meenakshi Parashar. The stress level was assessed via their score on a stress scale by Dr.vijay Lakshmi and Dr.Shruti Narain. Scores for academic achievement were taken from school records.

Data collection- Data was collected from the students of class ninth and tenth of government and private schools of pauri.

Administration of tool-The students were asked to read each statement carefully and complete the scale by giving a response to every item of scale. The time management competency scale consists of 36 statements. Corresponding to each statement there are five alternatives. Stress scale consists of 40 items. Out of two given alternatives, one alternative was to be selected by putting a tick mark. There was no time limit,

but students took about 30 minute. The time management competency scale and stress scale were distributed to 450 students.

Analysis of data

To study the status of time management competency between male and female students, percentage of obtained scores was calculated. Table 1 shows that the percent of male students was found higher (87.04%) than female students (82.27%) in the good time management category but in poor time management competency category, very low number of students were reported (6 male, 7 female). In excellent time management competency category, female students were found higher (14.29%) than male students (10.53%).   No data was seen in very poor time management competency column.

Data of table 1 and figure 1 shows that the maximum number of students with reference to their gender having good time management competency. Tanriogen and Iscan (2009) found the majority of students possess moderate time management skills.

Table 2 shows that the mean (65.63) scores of academic achievements of girls are greater than the mean (62.45) scores of academic achievement of boys. Therefore, on face value, academic achievement of girls is better than that of boys.

Table 3 shows that the correlation coefficient between time management competency and academic achievement is +0.28, correlation coefficient between stress level and academic achievement is -0.38, correlation coefficient between stress level and time management competency is -0.82. The value of multiple correlation coefficient is +0.28.

Table 1: Status of time management competency of female and male students

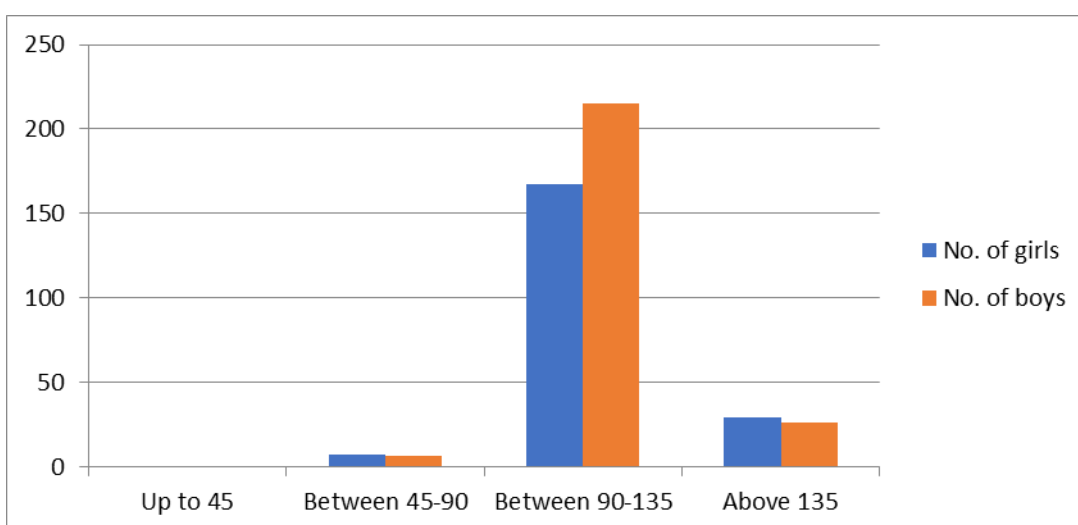| Scores	Interpretation	Girls	Boys
Up to 45	Very poor time management competency	_	_
Between 45-90	Poor time management competency	7 (3.45%)	6 (2.43%)
Between 90-135	Good time management competency	167 (82.27%)	215 (87.04%)
Above 135	Excellent time management competency	29 (14.29%)	26 (10.53%)
Total		203	247

Figure 1. Graphical representation of comparison between time management competency of female and male students

Table 2. Academic achievement of female and male students

Students	No. of students	Mean of scores
Girls	203	65.63
Boys	247	62.45

Table 3. Interrelationship of time management, stress and academic achievement of students

No. of Students	Correlation coefficient between time management competency and academic achievement	Correlation coefficient between stress level and academic achievement	Correlation coefficient between stress level and time management competency	Multiple correlation coefficient
450	+0.28	-0.38	-0.082	+0.28

Hypothesis-1

In order to test the hypothesis 1 that 'there is no significant difference in time management competency of female and male students',

Mean, S.D. and t-ratio was calculated for analysis.

Table 4. Time management competency between female and male students

Gender	No. of Students	Mean	S.D	Df	t-value	Level of sign.	Result
Girls	203	66.32	8.59				Not significant
Boys	247	65.23	8.17	448	1.36	0.05	

In table 4 mean score of female a male students was calculated at 66.32 and 65.23 respectively. The value of S.D. was found 8.59 and 8.17 for groups of students.

t-value at 0.05 level of significance was found greater than calculated t-value, so there was no significant difference was found between time management competency of female and male students included in this study. It can be interpreted that time management competency is gender free construct. Yilmaz et.al. (2010) found time management behavior had no effect on gender, age and class variable. In contradiction

Trumen and Hartley (1996) concluded that women students in general significantly greater time management skills than men students. Alkhatib (2014) concluded that females reported higher time management than males. Mishra and Kean (2000) found females had more effective time management behavior than males.

Hypothesis-2

In order to test hypothesis 2 that 'there is no significant difference between academic achievement of girls' and boys', mean, S.D. and t-ratio were calculated and obtained results are given Table:

Table 5. Academic achievement of female and male students

Students	No. Of students	Mean	S.D.	Df	t-value	Level of sign.	Result
Female	203	65.63	11.18				
Male	247	62.45	11.08	448	3.01	0.05	Significant

Results of statistical calculations of obtained data related to academic achievement of female and male students presented in table 5. Obtained results show that calculated t-value is greater than t-value at 0.05-level of significance. So, there is a significant difference in academic achievement between girls and boys. Mean value shows that female students have better status of academic achievement than male students. This finding is in agreement with the findings of Sharmila and Latha (2015). In contradiction RajniKumari and Gartta (2012) found no significant difference in academic achievement of male and female students.

Hypotesis-3

In order to test the hypothesis 3 that 'there is no significant Interrelationship of time management, stress and academic achievement of students' mean, S.D., multiple correlation coefficient, f-test were calculated and obtained results are given in table.

Table 6 shows that calculated f-ratio is greater than f-ratio at 0.05 level of significance, so there is a significant interrelationship of time management, stress and academic achievement of students

Table 6. Significance test of interrelationship of time management, stress and academic achievement of students

No. of students	Multiple Correlation coefficient	Df	F- ratio	Result
450	+0.28	447	19.81	Significant

Findings

- Out of 247 boys, 2.43% boys have poor time management competency, 87.04% boys have good time management competency, and 10.53% boys have excellent time management competency. It can be interpreted as maximum boys have good time management competency.

- Out of 203 girls, 3.45% girls have poor time management competency, 82.27% girls have good time management competency, and 14.28% girls have excellent time management competency. It can be interpreted that maximum girls have good time management competency.

- Mean (65.63) of scores of academic achievements of girls is greater than the mean (62.45) of scores of academic achievement of boys, so academic achievement of girls is better than boys.

- There was no significant difference in time management competency of male and female students. However, there was significant difference in academic achievement of male and female students.

- The F-ratio is calculated to determine the interrelationship of time management, academic achievement, and stress of students. The interrelationship of time management, stress and academic achievement is significant at 0.05 level of significance.

Conclusion

- No significant difference was found between the time management competency of girls and boys. Null hypothesis is therefore stands accepted.

- A significant difference was found between academic achievement of girls and boys. Null hypothesis is therefore stands rejected.

- A significant interrelationship was found among time management competency, stress, and academic achievement of students. Null hypothesis is therefore stands rejected.

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