

# Effect Of Rational Emotive Behaviour Therapy On Academic Procrastination, Self-Esteem And Academic Anxiety Of Secondary School Students By Using T-Test Analysis

Dr. Mandeep Kaur

Assistant Professor, Khalsa College of Education, Ranjit Avenue, Amritsar.

## Abstract

In this paper Rational Emotive Behavior Therapy (REBT) is utilized as a significant tool to deal with the academic procrastination, self-esteem and academic anxiety. The sample of students whose academic procrastination tendency was moderate and high after measuring on the basis of an academic procrastination scale was selected. This study sample was delimited to secondary school students of private schools of Amritsar district, Punjab, India only. T-test was used to examine the effect of various issues on the selected students. From significance analysis it was found that there is a significant difference in the effect of REBT on academic procrastination of secondary school students as compare to the control group. Also, there is significant difference in the effect of REBT on self-esteem of secondary school students as compare to the control group. There is significant difference in the effect of REBT on academic anxiety of secondary school students as compare to control group. Finally, there is significant difference in the performance of experimental group at posttest level and delayed posttest level. Thus, overall analysis rejects the defined null hypothesis. Therefore, results indicated that REBT has significant effect on the academic procrastination, self-esteem, and academic anxiety of secondary school students.

**Keywords:** Academic procrastination, Self-esteem, Secondary school students, and Academic anxiety.

## 1. INTRODUCTION

Education serves as a foundation for personal growth, societal development, and economic advancement. It equips individuals with critical thinking, problem-solving, and interpersonal skills that are essential for success in life and work. Academic achievement is a key determinant of future opportunities, including higher education, employment prospects, and earning potential. When procrastination undermines education, it not only affects individual learners

but also has broader implications for society. Addressing academic procrastination is, therefore, essential to ensuring equitable access to education and fostering a more productive, skilled, and innovative workforce. Procrastination is described as a failure to self-regulate in order to accomplish certain goals, resulting in a time delay (Steel, 2007). Procrastination, especially in academic settings, is a common challenge faced by students worldwide. It involves delaying important academic tasks such as studying for exams, completing assignments, or engaging in research. Academic procrastination can significantly impact a student's academic success, mental health, and overall well-being.

Self-esteem is a fundamental aspect of human psychology that significantly influences our thoughts, feelings, and behaviors. It reflects how individuals perceive their own worth and value. High self-esteem empowers individuals to face life's challenges with confidence, while low self-esteem can hinder personal growth and well-being. In school context, self-esteem is a central concept that is related to academic achievement, social functioning and psychopathology of children and adolescents (Bos, Muris, Mulken, & Schaalma, 2006). ) Self-esteem is essential for academic performance since it provides the required motivation (Branden, 1994; Cigman, 2004; Ferkany, 2008; Lawrence, 2006; van Laar, 2000). Students must have good self-esteem as it affects nearly every aspect of their lives. Good self-esteem not only improves academic achievement, but it also improves social skills and the capacity to establish supportive and long-term relationships. Like the other aspects of the self, it is learnt and builds up by interacting with the others. Developing good self-esteem involves encouraging a positive attitude towards ourselves and the world around us and appreciating our worth.

Anxiety is an excited state of nervous system as a result of which sense of tension, nervousness and worry is being inflicted on individual. It is a sort of state anxiety which relates to the approaching threat from the academic institution's environment admitting teachers, certain subjects like Mathematics, English etc. Academic anxiety may become detrimental, obstacle in the academic performance over the period of time. As the academic performance of the student suffers, the levels of anxiety related to certain academic chore also increases. Though an acceptable level of academic anxiety is actually a good thing as it keeps the student motivated to accomplish the academic tasks given to them.

## **2. RELATED WORK**

### **A. STUDIES RELATED WITH ACADEMIC PROCRASTINATION**

Solomon et al. (1984) procrastination is a complex interaction of behavioral, cognitive and affective components. Therefore, procrastination cannot be solely attributed to a deficit in study

habits or time management. Milgram et al. (1999) conducted a study on the relationship between procrastination, academic anxiety and parental involvement on academic tasks. It has been found that the students were more anxious about academic assignments, rather than homework. Ferrari et al. (2000) examined that procrastination as a self-handicap. It was found that participants in the high effort-high stress condition would procrastinate more than subjects in the other conditions.

Onwuegbuzie et al. (2004) revealed that academic procrastination resulting from both fear of failure and task averseness was related significantly to worth of statistics, interpretation anxiety, test and class anxiety, computational self-concept, fear of asking for help, and fear of the statistics instructor. Steel et al. (2007) found that conscientiousness as demonstrated by achievement motivation, organization, and self-control were also strong predictors of procrastination behaviors. Klasen et al. (2009) found that when procrastinating, Turkish adolescent boys were more likely to spend time with electronic media, whereas girls were most likely to read books, magazines, and newspapers. Ozer et al. (2009) shown that more female students than male students reported greater academic procrastination because of fear of failure and laziness; male students reported more academic procrastination as a result of risk taking and rebellion against control than did female students. Hussain et al. (2010) conducted a study on analyzing the factors of procrastination and its effects on learning of university students. It is also concluded that the work load of assignments' and improper time management by the students caused procrastination.

Ozer et al. (2011) conducted a study on undergraduate students and claimed to procrastinate more than graduate and high school students. High school and undergraduate students claimed to be nearly always or always procrastinator on studying for exams, while graduate students procrastinate more on writing term papers. Vij et al. (2014) conducted a study on role of motivation in Academic Procrastination. They explored the motivational differences in high and low academic procrastinators. 400 college students were given PASS, out of which 100 high and 100 low procrastinators were selected and given the AMS. Khan et al. (2014) investigated the academic procrastination among male and female university and college students. Effect of some demographic variables like gender, age and education were also explored. Moreover, there was a significant difference found on academic procrastination between students of age below and above 20 years.

#### **B. SELF-ESTEEM**

Beswick et al. (1988) showed a negative correlation among self-reported procrastination and final course grade, indicating

that procrastination is detrimental to academic performance. Saleem and Rafique (2012) found that students with high self-esteem procrastinate less where as those who procrastinate more has comparatively lower self-esteem. Procrastination and self-esteem do not differ for male and female university students. Beheshtifar and Azadi (2013) shown that there is a reverse relationship between fear of failure, averseness of task, difficulty making decisions, dependency, and lack of assertion, risk-taking, and rebellion against control with organizational-based self-esteem. Duruand and Balkis (2014) indicated that, self-doubt level negatively affects the individual's performance and academic success in cases which individual's level of academic procrastination is high. Kandemir et al. (2014) indicated that the academic procrastination behavior of students is explained by academic self-efficacy, self-esteem and coping with stress strategies in scope of a model. Vijay and Kadiravan (2016) revealed that the academic procrastination of university students has significant negative relationship with their self-esteem. Hence, the negative influence of self-esteem on academic procrastination is understandable. Browne (2016) indicated a moderate negative relationship between self-esteem and procrastination. Duru and Balkis (2016) demonstrated that self-esteem of students with low academic achievement is affected more when they postpone their existing tasks and responsibilities. However, self-esteem of students with high academic achievement is not so much affected by the procrastination behavior.

### **C. ACADEMIC ANXIETY**

Onwegbuzie et al. (2004) show that the procrastination resulting from both fear of failure and task averseness was related significantly to worth of statistics, interpretation anxiety, test and class anxiety, computational self-concept, fear of asking for help, and fear of the statistics instructor. Chapell et al. (2005) found that differences in levels (low, moderate and high) of test-anxiety had produced significant differences in GPA scores among students. Sunitha and Musthafa (2013) shown that the procrastination increases, Mathematics Anxiety also increases or vice versa. Both the variables are detrimental to student's achievement and performance in mathematics. Chang (2014) shown that the majority of prelicensure nursing students report procrastinating most on keeping up with weekly reading assignments.

Rehman et al. (2016) [35] revealed that there are various potential threats such as personal, familial, institutional, social and political that provokes the anxiety among students and clinical and non-clinical measures are available to deal with the anxiety. Emmanuel et al. (2017) [36] proved that the independent variables jointly impacted significantly on

Mathematics anxiety of junior secondary school students expressed Mathematics anxiety. Suk-man, Grace and Leung (2017) [37] shown that the emotional support lowered children's' anxiety while protectiveness brought about the opposite outcome.

### **3. METHODOLOGY**

In the present study experimental method was used to see the effect of rational emotive behavior therapy on academic procrastination, self-esteem and academic anxiety of secondary school students. Rational Emotive Behavior Therapy was administered on the students identified with academic procrastination and its effect was observed.

#### **A. DESIGN**

In the present study, pretest- posttest experimental control group design was used. There was one experimental group and one control group. 30 subjects were included in each group. Both the groups were assessed before and after the treatment. The treatment based on rational emotive behavior therapy was given to the experimental group for three months in twelve sessions conducting one session per week. In the present study the investigator would study the effect of rational emotive behavior therapy (independent variable) on academic procrastination, self-esteem and academic anxiety (dependent variables).

**i. Size:** Subjects were from Private schools of Amritsar district of Punjab.

**ii.**

**ii. Techniques:** Random Sampling technique was used to select Private schools of Amritsar district of Punjab. Students with Academic procrastination were identified purposively by administering academic procrastination scale. Subjects were randomly assigned to two groups.

#### **B. PROCEDURE OF SAMPLE SELECTION**

The sample selection procedure is shown in Figure 1.

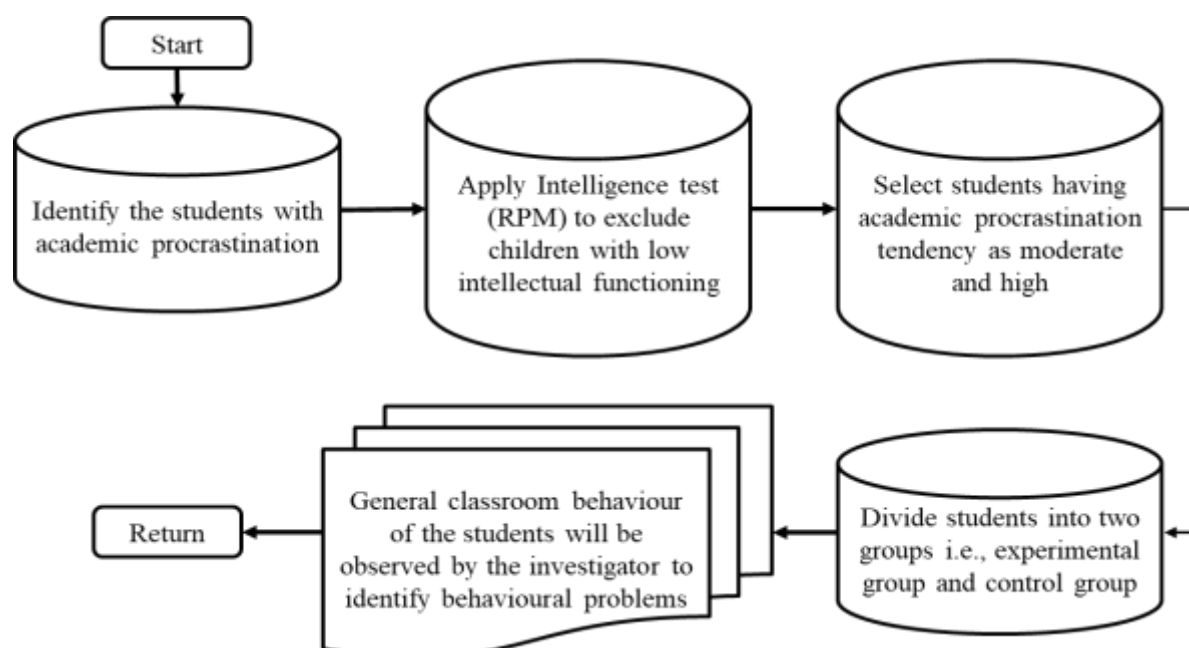


Figure 1: Diagrammatic flow of the sample selection procedure

### C. PROCEDURE OF DATA COLLECTION

Following Procedure will be followed by the investigator during research:

After the sample selection of 60 students on the basis of Teacher Referral Form, Standard Progressive Matrices and Academic Procrastination Scale, students were equally divided into two groups i.e experimental group and control group. 30 students were included in each group. Both the groups were assessed before and after the treatment .The scores obtained from Academic Procrastination Scale, Academic Anxiety Scale and Self-Esteem Scale were used as pretest scores .With the consent of the student's parents and the college authority the researcher scheduled the intervention program .The treatment based on rational emotive behavior therapy was given to the experimental group for three months in twelve sessions conducting one session per week. No intervention was given to control group, but was kept under observation. In the next phase, Academic Procrastination Scale, Self Esteem Scale and Academic Anxiety Scale were administered in both the groups i.e Experimental Group and Control Group for taking the posttest measures to see the relative effectiveness of Rational Emotive Behavioural Therapy. In the last phase Academic Procrastination Scale, Self Esteem Scale and Academic Anxiety Scale were re-administered in the experimental group as a measure of delayed posttest after one month.

### 4. PERFORMANCE ANALYSIS

**Ho1:** There will be no significant difference in the effect of Rational Emotive Behavior Therapy on Academic Procrastination of secondary school students as compare to control group.

Table 1 represents t-test analysis on pre and post academic procrastination. It is observed that the mean, standard deviation, standard error mean of pre-academic procrastination experimental are 58.70, 11.35, and 2.07, respectively. It is observed that the mean, standard deviation, standard error mean of pre-academic procrastination control is 60.10, 11.93, and 2.17, respectively. It is observed that the mean, standard deviation, standard error mean of Post Academic Procrastination experimental are 45.46, 10.22, and 1.86, respectively. It is observed that the mean, standard deviation, standard error mean of post academic procrastination control is 62.23, 12.13, and 2.21 respectively.

Table 1: t-Test analysis on pre and post academic procrastination.

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
Pre-academic Procrastination	Experimental	30	58.70	11.35	2.07
	Control	30	60.10	11.93	2.17
Post Academic Procrastination	Experimental	30	45.46	10.22	1.86
	Control	30	62.23	12.13	2.21

Table 2 depicts Independent samples test analysis on pre and post academic procrastination. It is observed that the F-value and t- value of pre-academic procrastination experimental are 0.003 and -0.465, respectively. It is observed that the F-value and t-value of post academic procrastination control are 1.323 and -5.786, respectively.

From significance analysis (depicted in Tables 1 and 2) it is found that there is a significant difference in the effect of REBT on academic procrastination of secondary school students as compare to the control group. Thus, overall analysis has rejected the defined null hypothesis for academic procrastination. Therefore, REBT has significant impact on the academic procrastination of secondary school students as compare to the control group.

Table 2: Independent samples test analysis on pre and post academic procrastination

Independent Samples Test									
	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper

Pre-academic Procrastination	.003	.003	-.465	58	.643	-1.40	3.00	-7.42	4.62
Post Academic Procrastination	1.323	.255	-5.786	58	.000	-16.76	2.89	-22.56	-10.96

**Ho2:** There will be no significant difference in the effect of Rational Emotive Behavior Therapy on Self Esteem of secondary school students as compare to control group.

Table 3 characterizes t-Test analysis on Pre and post self-esteem. It is found that the mean, standard deviation, standard error mean of pre self-esteem experimental are 18.43, 3.31, and 0.60, respectively. It is found that the mean, standard deviation, standard error mean of pre self-esteem control are 19.03, 3.17, and 0.58, respectively. It is found that the mean, standard deviation, standard error mean of post self-esteem experimental are 23.80, 2.60, and 0.47, respectively. It is found that the mean, standard deviation, standard error mean of Post Self-esteem control is 18.26, 3.60, and 0.65, respectively.

Table 3: t-Test analysis on pre and post self-esteem

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
Pre Self-esteem	Experimental	30	18.43	3.31	.605
	Control	30	19.03	3.17	.580
Post Self-esteem	Experimental	30	23.80	2.60	.475
	Control	30	18.26	3.60	.659

Table 4 describes Independent samples test analysis on pre and post self-esteem. It is evaluated that the F-value and T value of pre self-esteem experimental are 0.084, and -0.715, respectively. It is evaluated that the F-value and t-value of post self-esteem control are 3.52, and 6.80, respectively.

From significance analysis (depicted in Tables 3 and 4) it is found that there is a significant difference in the effect of REBT on self-esteem of secondary school students as compare to the control group. Thus, overall analysis has rejected the defined null hypothesis for self-esteem. Therefore, REBT has significant impact on the self-esteem of secondary school students as compare to the control group.

**Ho3:** There will be no significant difference in the effect of Rational Emotive Behaviour Therapy on Academic Anxiety of secondary school students as compare to control group.

Table 4: Independent samples test analysis on pre and post self-esteem

Independent Samples Test		
	Levene's Test for Equality of Variances	t-test for Equality of Means

	F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Pre Self-esteem	.084	.773	-.715	58	.477	-.600	.838	-2.27	1.07
Post Self-esteem	3.521	.066	6.80	58	.000	5.53	.812	3.90	7.16

Table 5 signifies t-Test analysis on pre and post academic anxiety. It is examined that the mean, standard deviation, and standard error mean of Pre-Academic Anxiety experimental are 12.73, 2.14, and 0.39, respectively. It is examined that the mean, standard deviation, and standard error mean of Pre-Academic Anxiety control are 11.56, 2.64, and 0.48, respectively. It is examined that the mean, standard deviation, and standard error mean of Post Academic Anxiety experimental are 7.67, 1.58, and 0.28, respectively. It is examined that the mean, standard deviation, standard error mean of Post Academic Anxiety control is 12.23, 2.35, and 0.43, respectively.

Table 5: t-Test analysis on pre and post academic anxiety

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
Pre-academic Anxiety	Experimental	30	12.73	2.14	.392
	Control	30	11.56	2.64	.483
Post Academic Anxiety	Experimental	30	7.67	1.58	.289
	Control	30	12.23	2.35	.431

Table 6 defines Independent Samples Test analysis on pre and post academic anxiety. It is evaluated that the F-value and T-value of Pre-academic Anxiety experimental are .988, and 1.87, respectively. It is evaluated that the F-value and T value of Post Academic Anxiety control are 3.56, and -8.80, respectively. From significance analysis (depicted in Tables 3 and 4) it is found that there is a significant difference in the effect of REBT on academic anxiety of secondary school students as compare to the control group. Thus, overall analysis has rejected the defined null hypothesis for academic anxiety. Therefore, REBT has significant impact on the academic anxiety of secondary school students as compare to the control group.

Table 6: Independent Samples Test analysis on pre and post academic anxiety

Independent Samples Test		
	Levene's Test for Equality of Variances	t-test for Equality of Means

	F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Pre-academic Anxiety	.988	.324	1.874	58	.066	1.166	.622	-.079	2.41
Post Academic Anxiety	3.563	.064	-8.805	58	.000	-4.56	.519	-5.60	-3.52

**Ho3:** There will be no significant difference in the performance of Experimental group at posttest level and delayed posttest level

Table 7 suggests t-test Gain analysis on academic procrastination, academic anxiety, and self-esteem. It is examined that the mean, standard deviation, standard error mean of gain academic procrastination experimental are -13.23, 6.11, and 1.11, respectively. It is examined that the mean, standard deviation, standard error mean of gain academic procrastination control are 2.13, 9.16, and 1.67 respectively. It is examined that the mean, standard deviation, standard error mean of gain academic anxiety experimental are -5.06, 2.16, and 0.39, respectively. It is examined that the mean, standard deviation, standard error mean of gain academic anxiety control are 0.66, 2.38, and 0.43, respectively. It is examined that the mean, standard deviation, standard error mean of gain self-esteem experimental are 5.36, 2.28, and 0.41 respectively. It is examined that the mean, standard deviation, standard error mean of gain self-esteem control are -.76, 2.92, and 0.53 respectively.

Table 7: t-test Gain analysis on academic procrastination, academic anxiety, and self-esteem

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
Gain_Academic_Procrastination	Experimental	30	-13.23	6.11	1.11
	Control	30	2.13	9.16	1.67
Gain_Academic_Anxiety	Experimental	30	-5.06	2.16	.395
	Control	30	.666	2.38	.435
Gain_Self_Esteem	Experimental	30	5.36	2.28	.416
	Control	30	-.766	2.92	.533

Table 8 elucidates Independent Samples Test analysis on academic procrastination, academic anxiety, and self-esteem. It is evaluated that the F-value and T value of gain academic procrastination experimental are 0.649 and -7.63, respectively. It is evaluated that the F-value and T value of gain academic anxiety control are 0.030, and -9.75, respectively. It is

evaluated that the F-value and T value of gain self-esteem experimental are 0.446 and 9.06, respectively.

From significance analysis (depicted in Tables 1 to 8), it has been observed that there is a significant difference in the effect of REBT on academic procrastination of secondary school students as compare to the control group. Also, significant difference has been reported in the effect of REBT on self-esteem of secondary school students as compare to the control group. It has been found that the significant difference in the effect of REBT on academic anxiety of secondary school students as compare to control group. Finally, it has been observed that there is significant difference in the performance of experimental group at posttest level and delayed posttest level. Therefore, REBT has significant impact on the academic procrastination, self-esteem, and academic anxiety, respectively of secondary school students as compare to the control group.'

Table 8: Independent Samples Test analysis on academic procrastination, academic anxiety, and self-esteem

Independent Samples Test									
	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Gain_Academic_Procrastination	.649	.424	-7.639	58	.000	-15.36	2.011	-19.39	-11.33
Gain_Academic_Anxiety	.030	.863	-9.755	58	.000	-5.73	.587	-6.90	-4.55
Gain_Self_Esteem	.446	.507	9.064	58	.000	6.13	.676	4.77	7.48

## 5. CONCLUSION

In this paper, Rational Emotive Behavior Therapy (REBT) was utilized to deal with the academic procrastination, stress, and self-esteem. The sample of students was selected whose academic procrastination tendency ranked as moderate and high after measuring on the basis of an academic procrastination scale. This study sample was delimited for secondary school students of private schools of Amritsar, India only. T-test was utilized to evaluate the effect of various issues on the selected students. From significance analysis it has been observed that there is a significant difference in the effect of REBT on academic procrastination of secondary school

students as compare to the control group. Also, significant difference has been reported in the effect of REBT on self-esteem of secondary school students as compare to the control group. It has been found that the significant difference in the effect of REBT on academic anxiety of secondary school students as compare to control group. Finally, it has been observed that there is significant difference in the performance of experimental group at posttest level and delayed posttest level. Thus, overall analysis has rejected the defined null hypothesis. Therefore, REBT has significant impact on the academic procrastination, self-esteem, and academic anxiety, respectively of secondary school students as compare to the control group.

## REFERENCES

1. Steel, P., (2007), The nature of procrastination: A meta-analytic and theoretical review of quintessential self-Regulatory Failure. *Psychological Bulletin*, 133(1), 65-94.
2. Lay, C. H. (1986). At last, my research article on procrastination. *Journal of Research in Personality*, 20(4), 474–495.
3. Tuckman, B. W. (1991). The development and concurrent validity of the procrastination scale. *Educational and Psychological Measurement*, 51(2), 473-480.
4. Bashir, S., Bashir, Z., & Nazir, M. (2015). Time management and its application in academic life: a study of omani students at Dhofar university, sultanate of oman. *Linguistics*, 4(2), 154-159.
5. Moksnes, U. K., & Espnes, G. A. (2012). Self-esteem and emotional health in adolescents gender and age as potential moderators. *Scandinavian Journal of Psychology*, 53(1), 483-489.
6. Robins, Richard, W., & Trzesniewski, K. H. (2005). Self-esteem development across the lifespan. *Current direction in psychological science*, 14(3), 158-162.
7. Orth, U., Robins, R. W., & Widaman, K. F. (2012). Life-span development of self-esteem and its effects on important life outcomes. *Journal of Personality and Social Psychology*, 102(6), 1271-1288.
8. Schouwenberg, H.C., & Lay, C.H. (1995). Trait procrastination and the big five factors of personality. *Personality and Individual Differences*. 18(4), 481-490.
9. Maddux, J. E., Norton, L. W., & Stolenberg, C. D. (1986). Self-efficacy expectancy, outcome expectancy, and outcome value: Relative effects on behavioural intentions. *Journal of Personality and Social Psychology*, 51(4), 783-789.
10. Khan, M.J., Arif, H., Noor, S.S., & Muneer, S. (2014). Academic procrastination among male and female university and college. *FWU Journal of Social Sciences*, 8(2), 65-70.
11. Misra, R., & McKean, M. (2000). College students academic stress and its relation to their anxiety, time

management, and leisure satisfaction. *American Journal of Health Studies*, 16(1), 41-52.

12. Solomon, L. J., & Rothblum, E. D., (1984), Academic Procrastination: Frequency and Cognitive- Behavioral Correlates. *Journal of Counseling Psychology*, 30(4), 503–509

13. Shannon, H. D., & Allen, T. H. (1998). The effectiveness of a REBT training program in increasing the performance of high school students in mathematics. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, 16(3), 197–209.

14. Milgram, N., & Toubiana, Y. (1999). Academic anxiety, academic procrastination, and parental involvement in students and their parents. *British Journal of Educational Psychology*, 69(3), 345-361

15. Ferrari, J. R., & Tice, D. M. (2000). Procrastination as a self-Handicap for men and women: A task- avoidance strategy in a laboratory setting. *Journal of Research in Personality*, 34(1), 73-83.

16. Tuckman, Bruce, W. (2002). Academic Procrastinators: Their Rationalizations and Web Course Performance. Retrieved from <https://eric.ed.gov/?id=ED470567>

17. Onwuegbuzie, A. J. (2004). Academic procrastination and statistics anxiety. *Assessment and Evaluation in High Education*, 29(1), 3-19.

18. Klassen, R., & Kuzucu, E. (2009). Academic procrastination and motivation of adolescents in Turkey. *Educational Psychology*, 29(1), 69-81.

19. Owens, A. M., & Newbegin, I. (1997). Procrastination in high school achievement: A causal structural model. *Journal of Social Behavior & Personality*, 12(4), 869-887.

20. Hussain, I., & Sultan, S. (2010). Analysis of procrastination among university students. *Procedia Social and Behavioral Sciences*, 5(1), 1897-1904.

21. Ozer, B.U. (2011). A cross-sectional study on procrastination: Who procrastinates more? *International Conference on Education, Research and Innovation, IPEDR*, 18, 34-37.

22. Vij, J., & Lomesh. H. (2014). Role of motivation in academic procrastination. *International journal of Scientific & Engineering Research*, 5(8), 1065-1068.

23. Beswick, G., Rothblum, E. D., & Mann, L. (1988). Psychological antecedents to student procrastination. *Australian Psychologist*, 23, 207.

24. Rozental, A., & Carlbring, P. (2013). Internet-based cognitive behavior therapy for procrastination: Study protocol for a randomized controlled trial. *JMIR Research Protocols*, 2(2), 123-126.

25. Beheshtifar, M., & Azad, R. (2013). Survey of relationship between procrastination behavior and organizational based self-esteem of academic members in

Islamic Azad University 7th zone. Journal of basic and applied research, 3(4), 544-552.

26. Duru, E., & Balkis, M. (2014). The roles of academic procrastination tendency on the relationships among self-doubt, self-esteem and academic achievement. *Education and Science*, 39(173), 274-287.

27. Kandemir, M., İlhan, T., Özpolat, A., & Palanc, M. (2014). Analysis of academic self-efficacy, self-esteem and coping with stress skills predictive power on academic procrastination. *Educational Research and Review*, 9(5) 146-152

28. Vijay, M., & Kadiravan, S. (2016). Influence of personality and self-esteem on the Academic procrastination among university student. *The international Journal of Indian Psychology*, 4(1), 19-23.

29. Browne, J. (2016). Self-Esteem and Procrastination in university students in barbados. *Caribbean Journal of Psychology*, 8(1), 14-24.

30. Duşmez, I., & Barut, Y. (2016). Rational Emotive Behavior Based on Academic Procrastination. *Participatory Educational Research*, 3(1), 1-13

31. Chapell, M.S., Blanding, Z., Silverstein, M. E., Takahashi, M., & Mekan, N. (2005). Test Anxiety and Academic Performance in Undergraduate and Graduate Students. *Journal Educational Psychology*, 97(2), 268-274.

32. Saleem, M., & Rafique, R. (2012). Procrastination and self-esteem among university students. *Pakistan Journal of Social and Clinical Psychology*, 10(2), 50-53.

33. Sunitha, T.P., & Musthafa, M. N. (2013). Relationship between academic procrastination and mathematics anxiety among secondary school students. *International Journal of Education and Psychological Research (IJEPR)*, 2 (2), 101-105.

34. Chang, H. K. (2014). Perfectionism, Anxiety and Academic Procrastination: The Role of intrinsic and extrinsic motivation in college students. (Unpublished doctoral dissertation), California State University, California.

35. Rehman, A. (2016). Academic Anxiety among Higher Education Students of India, Cause and Preventive Measures: An Exploratory Study. *International Journal of Modern Social Sciences*, 5(2), 102-116.

36. Emmanuel, O. O., Nkiruka, E., & Chimezie, N.M. (2017). Impact of academic procrastination and study habit on expressed mathematics anxiety of junior secondary school students in esan south east edo state Nigeria. *British Journal of Psychology Research*, 5(1), 32-40.

37. Suk-man, Grace & Leung (2017). A Study of the effects of parental support and children's resourcefulness on the academic stress of senior primary school students in Hong Kong. (Doctoral dissertation), Hong Kong University, Hong Kong.