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# International Journal of Advanced Multidisciplinary Research

ISSN: 2393-8870

www.ijarm.com

(A Peer Reviewed, Referred, Indexed and Open Access Journal)

DOI: 10.22192/ijamr

Volume 10, Issue 9 -2023

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Research Article

DOI: <http://dx.doi.org/10.22192/ijamr.2023.10.09.001>

## Efficacy of Rational Emotive Behavioural Therapy on Academic Stress Reduction of Teachers in English, Mathematics and Biology (EMB)

**Udom, Inwang Etim**

Department of Guidance and Counselling  
University of Uyo, Uyo

**Dr. Damian C. Ncheke**

Department of Educational Foundations  
University of Nigeria, Nsukka

**Prof. J.C. Omeje**

Department of Educational Foundations  
University of Nigeria, Nsukka

&

**Dr. Mkpoikanke Sunday Otu**

Department of Educational Foundations  
University of Nigeria, Nsukka

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### Abstract

This paper assessed the efficacy of REBT based programme in the reduction of secondary school teachers' stress behaviour. Pre-test post-test randomized control trial experimental design was adopted by the researchers for the study. Sixty two (62) secondary school teachers who were drawn through proportionate stratified random sampling technique constituted the sample for the study. The teachers were randomly assigned to experimental (32) and control (20) groups. Stress Assessment Scale for Teachers (SAST) and Academic Stress Behaviour Scale (ASBS) were used for data collection. SAST and ASBS were properly validated by experts in test development and the internal consistency reliability indexes of the items estimated at 0.77 and 0.81 respectively using cronbach alpha method. Before the commencement of the testing and treatment package, the researchers assured the participants of confidentiality of interactions and personal information as they work

#### Keywords

Rational emotive  
behavioural therapy,  
Stress.

together in self-disclosure. After that, pre-treatment assessment (pre-test) was conducted using the SAST and ASBS in order to collect baseline data (Time 1). Thereafter, the experimental group was exposed to 90 minutes of the REBT programme twice for a period of 6 weeks. The treatment took place between September and November, 2022. Post-test (Time 2) assessment was conducted, 1 week after the last treatment session. Besides, a follow-up assessment was conducted after two (2) months of the treatment (Time 3). Data collected were analyzed using repeated measures analysis of variance. The findings of the study revealed that the efficacy of rational emotive behavioural therapy on the reduction of stress behaviour among secondary school teachers was significant at post-test and follow-up measures. One of the implications of the findings is that if secondary school teachers are not properly counseled, their stress behaviour will continue to increase. Based on the findings, it was recommended among others that federal government should provide enough guidance counselors in the various secondary schools who will assist in the counseling of the teaches on dangers of stress using REBT.

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## **Introduction**

In Nigeria and many other developing countries, education has come to stay as one of the most essential activities of government and society. The level of development attained by many nations usually has bearing with the levels of their education system. The Federal Republic of Nigeria (FRN) (2014) adopted education as an instrument par excellence for promoting national development and social change. Education is the bedrock of every nation's development and it unlocks the door to modernization, optimal utilization of human and capital resources (Serek, Zaporov & Yoo, 2018). In Nigeria, there are three phases of educational system; thus: primary school phase, secondary school phase, and tertiary school phase (FRN, 2014). In the three phases, teachers are the major characters in charge with the function of implementing the curriculum for the achievement of educational objectives and national goals. In this research work, the focus of the researchers is on teachers in secondary schools. The school processes involve two major characters, the teachers and the learners (the students). The teacher ensures that the students are given relevant instruction for the student to learn (Eze, 2020). A good teacher is one who can make the maximum use of the minimal resources available to teach the students and provide a joyful learning experience (Waigh, 2020). This implies that a teacher has to be mostly importantly an expert in teaching skills which will

help them to present the context knowledge they had of their concerned subject.

However, teachers are also highly responsible for students' academic success or failure. It has been noted that in most secondary schools in Nigeria, majority of teachers are stressed up (Eze, 2020). It appears that stress among teachers in public secondary schools is on the increase. In every public secondary school in this area, there are cases of stress ranging from burnout, phobia, anxiety and depression (Udom, 2022). The author further noted that teachers encounter stress as a result of professional mandate like subjects they teach, number of classes they oversee, other academic assignments and personal responsibilities which conditioned them under pressure leading to maladaptive behaviours as well as physical and psychological damage. Many of these teachers are stressed up due to working circumstances that demand physically and emotionally beyond their capacity to handle (Udom, 2022). This implies that stressed teachers are vulnerable to anti-social behaviour which usually leads them astray. Stress is becoming a serious threat in Nigerian education system. Stress according to Wilson (2002) is a feeling of strain and pressure. Oboegbulam and Ogbonnaya (2008) describe stress as a process in which environment, events or process, called stressor threaten an organism's existence and well-being and how the individual responds to such threat.

Stress may have an effect on teachers' personality traits and their discharge of duty. Egonmwan (2015) found out that stress relates to mentally or emotionally disruptive condition occurring in response to adverse external influences and capable of affecting physical health. Chang (2009) disclosed that stress is the second teaching cause of unproductive among teachers. Different factors appear to contribute towards depression among secondary school teaches particularly lack of professional autonomy, limited amount of time for lunch and are unable to use the restroom throughout the day among others. Fullan (2002) posits that stress among teachers could be due to the fact that teachers may become frustrated, bored and tired as they privately struggle with their anxieties. They may feel drained intellectually and emotionally when they deal with student misbehaviors (Chang & Davis, 2009).

Research indicates that stress is very common, particularly among secondary school teachers (Oliver & Venter, 2003; Chang, 2009 & Nuthapa, 2021). According to Nuthapa (2021), the poor job performance of teachers at the different levels is as a result of stress. Stress affects academic performance negatively (Buttar, 2013). Also, stress relates to increased anxiety (Ncheke, 2018).

Stress can also lead to burnout, phobia, anxiety and depression (Udom, 2022). In addition, there is a correlation between academic stressors like loss of concentration, fatigue and level of productivity. Egonmwan (2015) stated that teachers who are stressed experience increase heart rate, a rise in the blood pressure, muscular tension and irritability and depression. The negative consequences of stress on academic and emotional and physical wellbeing reveal the need for intervention studies on this topic (Burns, 2020). Such intervention includes rational emotive behaviour therapy (Gayford, 2019; Dryden, 2020).

Rational emotive behavioural therapy (REBT) is a type of therapy introduced by Albert Ellis in the 1950s. Rational emotive behaviour therapy according to Ellis (1993) assumes that human

beings have both rational and irrational tendencies and learning. The rational tendencies are self-helping while the irrational tendencies are self-defeating and unhelpful. REBT posits that people are stress because of established ways of thinking and within this framework. REBT highlights the importance of replacing irrational beliefs with rational ones (Drydon, 2009). REBT is a therapy that is aimed to help individual to reason properly and shun irrational or illogical thoughts ((Leo, 2017). A lot of experimental studies have focused on the management of stress among teachers (Kutlesa, 2018; Binder, 2021 and Schubert, 2020, Robert, 2021). According to Rozantal and Carlberg (2022), lack of effective therapy has been emphasized in both national and international literature. Meanwhile, experimental studies on reducing or managing stress are quite limited (Kagan, 2010; Uzun, 2010 and Leo, 2017). Mostly, existing research focuses on organizing educational programmes on the management of these behaviours, providing counseling and highlighting the need to create and increase awareness through workshops and conferences (Leo, 2017, Gayford, 2019, Drydan, 2020). In the Nigerian context, there is a dearth of empirical evidence on the efficacy of REBT in the management of stress among secondary school teachers in Enugu State, Nigeria. Based on this, this research sought to investigate how to use REBT in the reduction of stress among teachers, which remains essential as long as it continues to have negative effect for these teachers. According to Gayford (2019), REBT had positive effect on unstable marriage stress.

In the other hand, Kanter (2021) posits that divorced couples who were exposed to REBT adjusted their stress behaviour more than those who were not exposed to treatment. Due to the facts that stress is connected to maladaptive beliefs such as low self-efficacy, negative thoughts among others, the use of rational emotive behavioural therapy has been suggested as a solution (Yuleh, 2020). Leziah, (2022) noted that in REBT, stress individuals are taught to dispute their irrational thoughts and beliefs, develop goals and develop a mindset that enables them to reduce stress and other maladaptive

behaviours. The researchers therefore tested the hypothesis that there is a significant effect of Rational Emotive Behavioura Therapy on the reduction of stress behaviour of teachers.

## **Methods**

A total of 62 teachers comprising male (n=32) and female (n=30) from sampled public secondary schools in Ikot Abasi Education Zone of Akwa Ibom State, Nigeria, who met the inclusion criteria constituted participants for the study. G.power, version 3.1 gave 0.86 which is an adequate sample size for this study (Faul, et al., 2007). Sixty two (62) English, Maths and Biology teachers who were drawn through proportionate stratified random sampling technique constituted the sample for the study. The teachers were stratified based on their area of disciplines (English, Maths and Biology) from where the teachers were proportionately sampled (18 English teachers, 16 Maths teacher and 28 Biology teachers). A total of 181 teachers showed interest and volunteered to participate in the intervention programme. All the 181 teachers who volunteered to participate in the study were screened for suitability based on the suitability criteria set by the researchers, including that: (1) the teachers must be in secondary schools in English, Maths or Biology; (2) teachers must have an element of stress behaviour. Volunteers who did not meet all the inclusion criteria were excluded. After that, the 62 secondary school teachers who met the inclusion criteria were randomly assigned to experimental and control group conditions using a simple randomization procedure (participants were asked to pick 1 envelope containing pressure – sensitive paper labeled with either E – experimental group or C – control group from a container).

### **Stress Assessment Scale for Teachers (SAST)**

Stress assessment scale for teachers (SAST) developed by the teachers was used for data collection. SAST is a 20 item scale with four response options of strongly agree (4), agree (3), disagree (2), strongly disagree (4) with lowest and

highest scores of 10 and 40 respectively. Example of item statement on SAST is difficult to concentrate when teaching the students. A minimum of 20 points and a maximum of 80 points can be earned on the scale, with higher scores indicating greater stress behaviour.

### **Academic Stress Behaviour Scale (ASBS)**

Academic stress behaviour scale (ASBS) developed by the researchers is a 10 item scale with four response option of strongly agree (4), agree (3), disagree (2), strongly disagree (1) with lowest and highest scores of 10 and 40 respectively. Example of item statement ASBS is “depend on other colleagues to teach the students”. However, the initial development of the ASBS involved 20 items but after construct validation, the number of the items was reduced to 10. In other words, 10 items of ASBS did not survive the construct validation.

### **Procedure**

Before the commencement of the testing and treatment package, the researchers assured the participants of confidentiality of interactions and personal information as they work together in self-disclosure. Therefore, pre-treatment assessment (pre-test) was conducted using the ASTS and ASBS in order to collect baseline data (Time 1). After that, the experimental group was exposed to 90 minutes of the REBT programme twice a week for a period of 6-weeks. The treatment took place between September and November 2022. Post-test (Time 2) assessment was conducted 1 week after the last treatment session. Besides, a follow-up assessment was conducted after 2 months of the treatment (Time 3). Data collected from the experimental group of each evaluation were compared to that from the no intervention control group.

### **Data Analysis**

The effect of rational Emotive Behavioural Therapy on the reduction of academic stress behaviours among public secondary school teachers in Ikot Abasi Education Zone of Akwa

Ibom State, Nigeria was established statistically using repeated measures analysis of variance (ANOVA). Partial Eta Squared and adjusted R<sup>2</sup> values were used to report the effect size of the intervention on the dependent measure. The assumption of the sphericity of the test statistic was tested using the Mauchly test of sphericity which was not significant (Mauchly W=0.718, P=6.47), implying that the assumption was not violated. Thus, the variances of the differences between all combinations of the related measures are equal. The analysis was done using statistical package for social sciences version 18.0.

**Results**

Table 1 reveals that there was no significant difference between the experimental and control groups in initial academic stress among English, Maths and Biology teachers as measured by

SAST, F(1, 61)=141.0, P=.762, n<sup>2</sup>=.005, R<sup>2</sup>=.009. At the post-treatment and follow-up measures, the efficacies of rational emotive behavioural therapy on the reduction of academic stress among English, Maths and Biology teachers were significant, F(1, 61)=.430, P=.123, n<sup>2</sup>=.000, R<sup>2</sup>=.069; and F(1, 61)=.722, P=.421, n<sup>2</sup>=.000, R<sup>2</sup>=.801.

Similarly, using ASBS as a measure, there was no significant difference in the initial academic stress of the participants, F(1, 61)=.451, P=.651, n<sup>2</sup>=.007, R<sup>2</sup>=.010. At the post-treatment and follow-up measures, the efficacies of rational emotive behavioural therapy on the reduction of academic stress among English, Maths and Biology teachers were significant, F(1, 61)=.106, P=.521, n<sup>2</sup>=.000, R<sup>2</sup>=.678 and F(1, 61)=120, P=.674, n<sup>2</sup>=.000, R<sup>2</sup>=.792.

**Table 1:** Repeated analysis of variance for the effect of REBT on the reduction of academic stress among teachers

Time	Measures	Group	Mean (SD)	F	P	n <sup>2</sup>	R <sup>2</sup>	95%	CI
1 Pre-treatment	SAST	Experimental	37.86(6.55)	141.0	.762	.005	.009	0.10	1.77
		Control	41.21(5.01)						
	ASBS	Experimental	58.47(10.31)	.451	.651	.007	.010	0.26	1.89
		Control	41.68(11.51)						
1 Post-treatment	SAST	Experimental	20.51(2.44)	.430	.123		.000	.069	.178
		Control	73.41(8.24)						
	ASBS	Experimental	16.84(8.52)	.106	.521		.000	.678	762.456
		Control	41.61(8.52)						
3 Follow-up	SAST	Experimental	21.10(3.01)	.712	.421		.000	.801	.815850.31
		Control	72.11(7.22)						
	ASBS	Experimental	14.02(1.51)	.120	.674		.000	.792	109.56, 12
		Control	41.81(6.01)						

SAST: Stress Assessment Scale for Teachers; ASBS: Academic Stress Behaviour Scale; Mean (SD): Mean (Standard Deviation); P: Probability Value, CI: Confidence interval, n<sup>2</sup>: effect size, R<sup>2</sup>: adjusted R<sup>2</sup>

Table 2 revealed that the mean stress behaviour scores of the intervention group were significantly differently different at pre-treatment, post-

treatment and follow-up measures,  $F(2, 31)=42.241, P<0.05, n^2=.762$ .

**Table 2:** Test of within-subjects effects for the intervention group

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta squares
Measure: ABB Time						
Sphericity assumed	91.224	2	42.241	10.421	.000	.762
Greenhouse	91.224	1.862	43.311	10.421	.000	.060
Geisser Huynh-Feldt	91.224	2.000	42.521	10.421	.000	.002
Lower-bound	91.224	1.00	82.412	10.421	.000	.710

Table 3 gives us the significance level for differences between the individual time points. It shows that there were significant differences in academic stress behaviours of the teachers

between post-treatment and pre-treatment ( $P=0.000$ ). This implies that the academic stress behaviours of the teachers drastically reduced after the intervention programme.

**Table 3:** Post hoc test for the significant of time

(I) Time	(J) Time	Mean difference (I-J)	Std. error	Sig.
Pre-treatment	Post-treatment	61.541	.007	.000
	Follow-up	61.125	.006	.000
Post-treatment	Post-treatment	-61.541	.007	.000
	Follow-up	-.424	.007	.000
Follow-up	Pre-treatment	-61.125	.006	.000
	Post-treatment	.424	.007	.000

## Discussion of the Results

The findings of the study revealed that at the post-treatment and follow-up measures, the efficacy of rational emotive behavioural therapy on the reduction of academic stress among English, Maths and Biology teachers was significant. This finding has shown the superiority nature of the REBT over the conventional counseling approach in the reduction of maladaptive behaviours among the teachers of secondary schools. The teachers who were counseled on the dangers of academic stress using REBT were optionally motivated during the intervention session and that led to the

drastic reduction in their academic stress after the intervention and even at the follow-up measure. The findings are similar to the findings of Gayford (2019), who found out that REBT had positive effect on unstable marriage stress. According to Kanter (2021) divorced couples who were exposed to REBT adjusted their stress behaviour more than those who were not exposed to treatment. Also, Yuleh (2020) noted that maladaptive behaviours such as self-efficacy and negative thought can be handled by REBT. Kuttessa (2018); Binder (2021); Schubert (2020) and Robert (2021) are of the view that REBT intervention can manage stress.

The above findings validated the efficacy of the REBT intervention for reducing academic stress among teachers of public secondary schools in Ikot Abasi Education Zone of Akwa Ibom State, Nigeria. The implication of these findings is that if teachers in public secondary schools are not properly counseled, their academic stress behaviours will continue to increase.

### Strength of the Study

This study investigated an area which addresses the contemporary problems among teachers in Nigerian secondary schools. The intervention is considered timely given the potential impacts of academic stress in teachers' working schools. The intervention successfully validated the effectiveness of REBT in reducing academic stress among secondary school teachers using a randomized control trial. The use of experimental and control groups enabled the researchers to compare both within-group factors and between-group factors.

### Limitations

This present study has some limiting factors just like other empirical studies. The study utilized data to investigate the efficacy of REBT on reduction of academic stress among secondary school teachers without considering the moderating effects of demographic variables like gender, age, marital status, among others. The experimental group in this study reported disliking teaching, wanting to resign and fear of those in authority as causes of academic stress behaviours. These may have affected the outcome of the study. With these limitations, generalizing the findings should be done with care. Besides, further studies should explore how these demographic variables could moderate the efficacy of REBT on the reduction of academic stress among secondary school teachers.

### Conclusion

Based on the findings of the study, the researchers concluded that REBT is effective in the reduction of academic stress behaviour of teachers in public secondary schools.

### Recommendations

It was recommended that:

- (1) Available guidance counsellors in public secondary schools should be properly trained on how to use REBT in reducing academic stress.
- (2) Guidance counselors should master REBT through workshops and seminars to ensure effective counseling to reduce academic stress of teachers.

### Compliance with Ethical Standards

**Conflict of Interests:** The authors declare that they have no conflict of interest.

**Ethical Standard:** The authors adhered to the ethical standard specification of the American Psychological Association (APA) (2017).

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**How to cite this article:**

Udom, Inwang Etim, Damian C. Ncheke, J.C. Omeje & Mkpoikanke Sunday Otu . (2023). Efficacy of Rational Emotive Behavioural Therapy on Academic Stress Reduction of Teachers in English, Mathematics and Biology (EMB). *Int. J. Adv. Multidiscip. Res.* 10(9): 1-9.  
DOI: <http://dx.doi.org/10.22192/ijamr.2023.10.09.001>