

Effect of rational emotive behavioural therapy (REBT) on aggressive behaviours of secondary school students in Calabar Nigeria

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Abstract

The rate of secondary school students' aggression in Calabar Nigeria is alarming. Despite all the measures employed to curb it; much has not been achieved, probably because the right strategy has not been engaged. The purpose of the study therefore was to determine the effect of exposure to rational emotive behavioral therapy (REBT) in reducing aggressive behaviors of secondary school students. The study was anchored on Rational Emotive Theory, one research question and two hypotheses. Population of the study was 7298 senior secondary school students in Calabar Metropolis; Simple random sampling technique was used to select three intact classes with 167 students. A quasi- experimental research design was adopted. Behaviour Assessment Questionnaire for Secondary Schools (BAQSS) with a reliability coefficient of 0.952 was used for data collection. Descriptive statistics and Multivariate Analysis of Covariance were used for data analysis at 0.05 level of significance. The results showed that REBT significantly reduced different dimensions of students' aggression. It also revealed no significant interaction effect of treatment and sex. It was concluded that REBT was effective in reducing students' aggression. The implication of the findings is that REBT should be recommended among others for the control of students' aggression.

Keywords: Rational emotive; behaviour therapy; Aggressive behaviours; Secondary school; students.

Introduction

The alarming rate of aggressive behaviours among secondary school students in Calabar Cross River State Nigeria is an issue of great concern for stakeholders in educational system. Basically, schools should function to raise individuals to be sound in character, knowledgeable and highly skilled. However, students' nature and their interpersonal behaviour can be assumed to contribute to the dynamics of instructional technique and school environment and their impacts on the attainment of learning outcomes. When students' interpersonal relationships involve lots of aggression, they become counter- productive. Different types of aggressive behaviours are common among the students in most of the schools in the study area. Ajah, and Okon (2019) revealed that 41.9%, 64.1, 53.9% and 91.9% of subjects in their study respectively manifested physical, verbal, social and overall aggression. Presently, all the school gates of the schools in the study area are manned by members of Nigerian Peace Corps whose presence in the schools is evidence that teachers alone can no longer control the students.

The students' aggressive behaviours comprise bullying, fighting, use of abusive language, forceful collection of other students' items, cultism, physical assault, peer exclusion etc. All these have enormous psycho-social consequences. Students get intimidated, frightened, disorganized and the entire school system becomes unstable making quality learning difficult due to the discordant atmosphere resulting from students' aggression. It distorts the physical, cognitive, social and emotional development and behaviour of students. Basically, the victims, the perpetrators, the school environment, teachers, parents and the society suffer from the manifestation of students' unhealthy aggression. Parents are tensed up regarding the security of their children in schools (Thornberg, 2010; Aluede, 2006; Beran, 2005). The atmosphere of insecurity created by aggression in schools, could lead to serious maladaptive outcomes such as school dropout, adjustment problem and ineffective learning.

Much has been done to curb aggression among students. Such disciplinary measures as punishment of various forms which include in severe cases rustication have not yielded much positive results in containing aggression and its consequences probably because they may have

short term positive effects and negative long-term effects. Furthermore, extensive studies have been conducted on this subject matter in Nigeria as a means to come up with solutions to the problem of aggression. While, most of these studies attempted to establish cause and effect relationship (Liman, Bala & Waziri, 2016; Shireem & Sufiana, 2015; Ingyoroko, 2011; Dibia, 2013; Ikwuba, 2011; Okon, 2010; Aliyu, 2016; Iman, 2016). A few other studies though have attempted to curb students' aggression through direct behaviour change using behavioural therapy. Aggression is learned and according to behavioural scientists, any learned behaviour can be unlearned (Johnston, 2016). Currently, psychologists have advocated the importance of direct intervention in solving behavioural problems like aggression. In the current investigation, the researchers thus tested the effect of Rational Emotive Behavioural Therapy (REBT) on the aggressive behaviours of secondary school students. REBT is an intervention technique that targets the students' irrational believe that could cause aggression, and counters the irrational perceptions about events.

REBT is a form of CBT and many empirical studies have shown evidences that CBT can be used to modify behaviour. For example, Ikechukwu-Ilomuanya and Iwuagwu (2016) studied the effect of cognitive restructuring counselling techniques on emotional and academic adjustment of bereaved in-school adolescents in Nsukka Urban, Enugu State Nigeria in a quasi-experimental study involving one group pre-test and post-test design. The result revealed that cognitive restructuring was effective in improving the emotional adjustment of the in-school adolescents. Cognitive behavioural grief therapy was also found to be effective in transforming trauma, facilitating behavioural change and restructuring cognition of the clients, (Edgar-Baily & Kress, 2010). Consequently, Iman, (2016) investigated the effect of cognitive behavioural therapy on bullying among students of secondary school in Batagarawa L.G.A Katsina State Nigeria and found a significant effect of CBT in reducing bullying among students in secondary schools; while Fung, Gersteins, Chan and Hutchison (2013) found its effectiveness in reducing proactive aggressive behaviour or bullying among Hong Kong students. In a meta-analysis conducted by Beck and Fernandez in Fernandez, Malvaso, Day and Guharajan (2018) on the effectiveness of CBT in the treatment of anger, average CBT recipients were found to be better off than untreated subjects in anger reduction. According to the authors, CBT has proved to be the most common approach to manage anger in the last 20 years, and the finding was homogenous across studies.

In a related study, Rogo (2016) investigated the impact of REBT on adolescent students' conduct disorder in Kano Metropolis using a youth self-report scale by Achanbach System of empirically based Assessment (ASEBA) to collect data on baseline behaviour and later the post-test after intervention with REBT. The study revealed that the intervention with REBT impacted positively on the adolescents conduct disorder. In other words, it improved their behaviour. Ekechukwu, (2018) investigated efficacy of REBT and CBT in reducing aggressive behaviour of secondary school students in Abia State and found that REBT and CBT were effective and rewarding techniques in the treatment of aggressive behaviour. Earlier, Venkatesh (2009) studied the impact of REBT on adolescent students with conduct disorder and found that REBT has a positive impact on adolescents' conduct, emotional and behavioural disorders. In another study Eifediyi, (2015) investigated the effectiveness of Rational Emotive Behavioural and Cognitive Behavioural therapies in reduction of examination anxiety in senior secondary schools in Edo state Nigeria. It was found out that REBT and CBT were effective in treating anxiety problem.

In the case of gender, though there is strong evidence for the potency of CBT and REBT in effecting behavioural change, studies such as Daryoush, D'Souza and Ebrahim (2012), Eifediyi (2015), Ojewola (2014) and Smeet, Leeijen, Vandermolen, Scheeper, Buitelaar and

Rommelise (2015) found no significant interaction effect of gender on treatment outcome but Weisz, Weiss, Han, Granger and Morton (1995) study found otherwise. In view of the support which behavioural therapy such as REBT garnered in literature as an effective tool in behaviour modification of individuals (male and female); again the fact that most of the studies involving the use of therapy in mitigating aggression dealt with aggression holistically, this present study sought to diverse by finding out the effect of REBT on different dimensions of aggression as well as examine if there is an interaction effect of REBT and gender on the different forms of aggression. Looking at the different dimensions here will help one see how the therapy works with each dimension of aggression and holistically. The purpose of the study therefore is to determine the effect of rational emotive behavioural therapy on aggressive behaviours of secondary school students in their second year of the upper Basic level in Calabar, Metropolis, Nigeria. In view of the fact that male and female tend to differ in their expression of aggressive behaviours, the study also thus sought to establish the interaction effect of REBT and gender on students' aggressive behaviours to see how male and female responded differently to the treatment. The research question answered in the study read thus: "To what extent will exposure to rational emotive behavioural therapy (REBT) affect students' aggressive behaviours?" and the two hypotheses tested were: 1. "There is no significant main effect of REBT on students' aggressive behaviours"; 2. "There is no interaction effect of REBT and gender on students' aggressive behavior's".

Methodology

The non-equivalent pre-test, post-test control group quasi experimental research design was adopted for the study. Two intact classes made up of one hundred and twenty (120) senior secondary school students drawn from the population of SS11 students in the in Calabar, Nigeria were used for the study. This category of students (SS11) was the preferred population for the study because they have spent reasonable time in school (5 years) and is quite familiar with the school system and its operations; reasonably mature to understand and respond to treatment technique used in the study. The two intact classes were randomly assigned to the experimental and control groups. The control group had a total of 47 students (25 males and 22 females) constituting 39.1% of the total sample while the experimental group had a total of 73 students (35 males and 38 females). Their average age was about 16.6 years.

An instrument tagged Behaviour Assessment Questionnaire for Secondary School Students (BAQSSS) was used for data collection. The BAQSSS was adapted from two instruments – Orphinas and Frankowski, (2001) aggressive scale and Buss- Perry (1992) aggressive questionnaire. The amendments made in terms of content relied on information from literature, interaction with some teachers and students in some secondary school visited in the study area, inputs from the researchers' personal experience and from experts in educational psychology, research and statistics. The instrument had two sections: A and B. Section 'A' requested for demographic information of the subjects such as sex, age and school while 'B' elicited information on students' aggressive behaviours. Section B was a four-point Likert type scale with a total of 30 items spread across 3 sub- sections: B1, B2 and B3. B1 consisted of 11 items for measuring Physical aggression. B2 consisted of 10 items which measured verbal aggression B3 consisted of nine items which measured Social aggression.

The instrument was therefore duly validated and tested for reliability using Cronbach Alpha reliability procedure and this resulted in a reliability estimate of 0.952 for the entire scale while the sub-scales yielded 0.891, 0.896 and 0.910 coefficients for physical, verbal, and social aggression sub-scales respectively. REBT treatment package was equally developed by the researchers. The content, activities and procedures of the REBT treatment package went

through rigorous assessment and validation by test experts and educational psychologist in the department of educational foundations in University of Calabar.

Table 1: Distribution of sample according to school, treatment technique, group and gender

	Treatment	Group	Male	Female	Total	%
School A	REBT	Experimental group	35	38	73	60.8
School B	-	Control group	25	22	47	39.1
Total			60	60	120	100

Experimental procedure

The procedure commenced with the pre-test which involved the administration of BAQSSS to the experimental and control groups. The pre-test determined the base line aggressive behaviours of the subjects in the two groups. After administering, collecting and scoring the instrument for analysis, the treatment proper based on a well-planned out step by step approach following the ABC model was carried out on the experimental group. The control group did not receive treatment. The treatment involved 10 sessions spread through 7 weeks. Each treatment session lasted for a period of 1 hour 30 minutes. The procedure was a three-pronged plan aimed at helping the subjects in identify their irrational thought patterns and beliefs. ii. Challenging the subjects' irrational beliefs; iii. Helping subjects gain insight and recognise the irrational thought patterns they experience that makes them to be aggressive. Guided imagery and journaling meditation practices were used in helping to handle and change unwanted aggressive behaviours. At the end of the treatment sessions (targeting the different types of aggression), BAQSSS was re-administered to the subjects in the two groups as post-test. The researchers with the help of two research assistants trained in the use of BAQSSS administered the treatments to both the experimental and control groups. Data from post-test was collated after which the difference between pre-test scores and post- test scores was determined. Measures were also taken to control the extraneous variables that would have adversely affected the internal and external validity of the study. Multivariate Analysis of Covariate (MANCOVA) statistics was used for data analysis. These statistics use the pre-test as a covariate to partial out initial differences in abilities of students in different treatment and control groups. This covariate compensates for the absence of random selection of individual students (subjects in the different treatment group), since intact classes were used. Data derived from pre-test and post-test, carefully scored and graded were subjected to analysis using MANCOVA to test the hypotheses at 0.05 level of significance.

Results

The results of the data analyses are presented as follow:

Research question 1: To what extent will exposure to rational emotive behavioural therapy (REBT) affect students' aggressive behaviours?

In responding to this question, the pre-test and post-test mean differences of the subjects were used to estimate the extent to which exposure to behavioural therapy (REBT) may have exerted some effects on their level of aggression (physical, verbal, social and overall). As presented in Table 2, the mean differences between the students' pre-test and post-test scores in the various components of aggression differed between the control and the experimental groups. For the control group, the mean differences between the pre-test and post-test scores ranged from -0.37 for females in physical aggression, to 15.32 for males in the overall aggression. For the experimental group, the corresponding differences between the pre-test and post-test mean differences ranged from 6.37 in respect of the male subjects in social aggression to 24.09 in the overall aggression for males. A further study of Table 2, showed that the differences between the mean pre-test and post-test differences of the control and the

experimental groups ranged from -1.69 for males in social aggression, to -10.43 for females in the overall aggression. This showed a noticeable difference in the manifest aggression of students after exposure to treatment using REBT. This showed that the therapy reduced all dimensions of aggression considered in the study. To ascertain the extent to which exposure to REBT reduced aggression, the subjects were categorised into three levels (marginal, moderate and substantial). Subjects whose differences between pre-test and post-test manifest-aggression as presented in table 2, were below the group mean difference were classified as those who manifested marginal reduction in aggression following treatment with REBT. Those whose differences were within the group mean differences were categorised as those who had moderate aggression reduction following treatment. While those whose differences were above the group mean differences, were categorised as those who manifested substantial reduction in aggression after treatment.

Table 2: Extent of effect of exposure to REBT on students' aggression

Variable	Gender	Control group				Exp. Group				Diff. b/w cont and Exp <u>mean</u> diff.
		N	Pre-test	Post-test	<u>mean</u> diff.	N	Pre-test	Post-test	<u>mean</u> diff	
Physical aggression	Male	25	27.76	26.12	1.64	35	27.77	19.1	8.66	-7.02
	Female	22	25.22	25.59	-0.37	38	27.31	20.73	6.58	-6.95
	Total	47	26.57	25.87	0.7	73	27.53	19.95	7.58	-8.28
Verbal aggression	Male	25	28.96	23.20	5.76	35	28.34	18.68	9.66	-3.90
	Female	22	28.09	24.36	3.73	38	30.00	19.78	10.22	-6.49
	Total	47	28.55	23.74	4.81	73	29.20	19.26	9.94	-5.13
Social aggression	Male	25	31.16	26.48	4.68	35	28.82	22.45	6.37	-1.69
	Female	22	26.54	27.54	1.0	38	29.57	21.47	8.1	- 9.1
	Total	47	29.00	26.97	2.03	73	29.21	21.94	7.27	-5.24
Overall aggression	Male	25	91.84	76.52	15.32	35	96.11	72.02	24.09	-8.77
	Female	22	88.31	76.50	11.81	38	92.89	70.65	22.24	-10.43
	Total	47	90.19	76.51	13.68	73	94.43	71.31	23.12	-9.44

As presented in Table 3, out of the 73 subjects who received the experimental treatment with REBT, 38.4%, 13. 7% and 47.9% respectively had marginal, moderate and substantial reduction in manifest physical aggression. A greater proportion of the subjects (47.9%) were therefore substantially affected by the treatment in respect of physical aggression reduction. In the case of verbal aggression as also presented in Table 3, out of 73 subjects who received the REBT treatment, 27.4%, 15.1% and 57.5 % respectively had marginal, moderate and substantial reduction in manifest verbal aggression. A greater proportion of the subjects (57.5%) were therefore substantially affected by the treatment in respect of verbal aggression reduction. In the case of social aggression, out of 73 subjects who received the REBT treatment, 48.6%, 5.6% and 45.8 % respectively had marginal, moderate and substantial reduction in manifest social aggression. More subjects (48.6%) were marginally than substantially (45.8%) affected by the treatment in respect of social aggression reduction. Concerning the overall aggression, of all the 73 subjects who received the experimental treatment with REBT, 42.5%, 4.1% and 53.4% respectively had marginal, moderate and substantial reduction in manifest overall aggression. A greater proportion of the subjects were therefore substantially affected by the treatment in respect of overall aggression reduction. On the basis of this result, it was concluded, that exposure to rational emotive behavioural therapy (REBT) was able to substantially reduce manifest aggressive behaviours among students in Calabar metropolis Nigeria. A further analysis was carried out, by testing an hypothesis to establish whether the effect could be statistically significant

Table 3: Effect of exposure to rational emotive behavioural therapy (REBT) on students' aggressive behaviour

Variables	N	Level of aggression reduction		
		Marginally (%)	Moderately (%)	Substantially (%)
Physical aggression	73	38.4(28)	13.7(10)	47.9(35)
Verbal aggression	73	27.4(20)	15.1(11)	57.5(42)
Social aggression	73	48.6(36)	5.6(41)	45.8(33)
Overall aggression	73	42.5(31)	4.1(3)	53.4(39)

*Actual numbers of subjects are presented in parenthesis

Hypothesis one: There is no significant main effect of REBT on students' aggressive behaviours.

The results of the MANCOVA analysis as presented in Table 4 showed that the calculated F-values for physical aggression, $F(1, 114) = 32.364$, $p < 0.05$; verbal aggression, $F(1, 114) = 22.526$, $p < 0.05$; social aggression $F(1, 114) = 19.778$, $p < 0.05$; and overall aggression $F(1, 114) = 4.198$, $p < 0.05$ were each greater than the critical F-value of 3.00 at 1 and 114 degrees of freedom, at 0.05 level of significance. With these results, the null hypothesis that "there is no significant main effect of REBT on students' aggressive behaviours (physical, verbal, social and overall aggression)" was rejected. There was a statistically significant main effect of REBT on students' aggressive behaviours (physical, verbal, social and overall aggression). The results, thus gave the researchers the confident to state that, rational emotive behavioural therapy could effectively reduce physical, verbal, social and overall aggression among secondary school students in Calabar metropolis, Nigeria.

Table 4: Multivariate analysis of covariance of REBT on students' aggressive behaviour

Variable	Group	N	Mean	SD
Physical aggression	Control group	47	25.87	5.80
	Expt group	73	19.95	4.95
	Total	120	22.27	6.02
Verbal aggression	Control group	47	23.74	5.52
	Expt group	73	19.26	4.49
	Total	120	21.01	5.37
Social aggression	Control group	47	26.97	5.61
	Expt group	73	21.94	5.47
	Total	120	23.91	6.03
Overall aggression	Control group	47	76.51	13.97
	Expt group	73	71.31	13.93
	Total		73.35	14.11

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Physical aggression	1058.404 ^a	5	211.681	7.403	.000
	Verbal aggression	594.867 ^b	5	118.973	4.781	.001
	Social aggression	791.681 ^c	5	158.336	5.091	.000
	Overall aggression	1021.121 ^d	5	204.224	1.025	.406
Group	Physical aggression	925.374	1	925.374	32.364	.000
	Verbal aggression	560.607	1	560.607	22.526	.000
	Social aggression	615.114	1	615.114	19.778	.000
	Overall aggression	836.026	1	836.026	4.198	.043
Error	Physical aggression	3259.521	114	28.592		
	Verbal aggression	2837.100	114	24.887		
	Social aggression	3545.486	114	31.101		
	Overall aggression	22704.179	114	199.159		
Total	Physical aggression	63859.000	120			
	Verbal aggression	56436.000	120			

Corrected Total	Social aggression	72978.000	120
	Overall aggression	669352.000	120
	Physical aggression	4317.925	119
	Verbal aggression	3431.967	119
	Social aggression	4337.167	119
	Overall aggression	23725.300	119

a. R Squared = .245 (Adjusted R Squared = .212)

Hypothesis two

The second hypothesis tested the interaction effect of rational emotive behavioural therapy (REBT) and gender on students' aggression (physical, verbal, social and overall aggression). The result of the analysis using MANCOVA analysis presented in Table 5 showed that the calculated F-values for physical aggression, $F(1, 112) = 1.331$, $p > 0.05$; verbal aggression, $F(1, 112) = 0.007$, $p > 0.05$; social aggression $F(1, 112) = 0.952$, $p > 0.05$; and overall aggression $F(1, 112) = 0.014$, $p > 0.05$ were each less than the critical F-value of 3.00 at 1 and 112 degrees of freedom at 0.05 level of significance. These results confirmed the null hypothesis which stated that, there is no significant interaction effect of REBT and gender on students' aggression (physical, verbal, social and overall aggression). In view of this, REBT and gender could be said not to have had a significant interaction effect on students' aggressive behaviours (physical, verbal, social and overall aggression). The effect of the interaction between REBT and gender on students' aggressive behaviours was not statistically significant.

Table 5: Multivariate analysis of covariance of REBT and gender on students' aggressive behaviour

Variable	Group	Gender	N	Mean	SD	
Physical aggression	Control group	Male	25	26.12	5.06	
		Female	22	25.59	6.65	
		Total	47	25.87	5.80	
	Expt group	Male	35	19.11	5.42	
		Female	38	20.73	4.41	
		Total	73	19.95	4.95	
Verbal aggression	Control group	Male	25	23.20	5.85	
		Female	22	24.36	5.18	
		Total	47	23.74	5.52	
	Expt group	Male	35	18.68	4.25	
		Female	38	19.78	4.69	
		Total	73	19.26	4.49	
Social aggression	Control group	Male	25	26.48	5.22	
		Female	22	27.54	6.10	
		Total	47	26.97	5.61	
	Expt. Group	Male	35	22.45	6.01	
		Female	38	21.47	4.96	
		Total	73	21.94	5.47	
Overall aggression	Control group	Male	25	76.52	13.73	
		Female	22	76.50	14.56	
		Total	47	76.51	13.97	
	Expt. Group	Male	35	72.02	14.13	
		Female	38	70.65	13.89	
		Total	73	71.31	13.93	
Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Physical aggression	1104.852 ^a	7	157.836	5.502	.000
	Verbal aggression	630.107 ^b	7	90.015	3.598	.002
	Social aggression	828.366 ^c	7	118.338	3.777	.001
	Overall aggression	1050.810 ^d	7	150.116	.741	.637
Group* Sex	Physical aggression	38.192	1	38.192	1.331	.251
	Verbal aggression	.174	1	.174	.007	.934

	Social aggression	29.824	1	29.824	.952	.331
	Overall aggression	2.867	1	2.867	.014	.905
Error	Physical aggression	3213.073	112	28.688		
	Verbal aggression	2801.860	112	25.017		
	Social aggression	3508.801	112	31.329		
	Overall aggression	22674.490	112	202.451		
Total	Physical aggression	63859.000	120			
	Verbal aggression	56436.000	120			
	Social aggression	72978.000	120			
	Overall aggression	669352.000	120			
Corrected Total	Physical aggression	4317.925	119			
	Verbal aggression	3431.967	119			
	Social aggression	4337.167	119			
	Overall aggression	23725.300	119			

a. R Squared = .256 (Adjusted R Squared = .209)

Discussion of findings

The results of the study revealed high potency of rational emotive behavioural therapy (REBT) in reducing all forms of students' aggressive behaviours. This finding is consistent with the outcomes of such previous studies as those of Beck and Fernandez in Fernandez, Malvaso, Day and Guharajan (2018), Venkatesh (2009), Rogo (2016), and Ekechukwu (2018). In addition, the finding agrees with the findings of some related studies e.g. Kazdin, Bass, Ayers, and Rodgers in Kazdin (2015), Weize (1995), Ekechukwu and Onyekuru (2014), Ekechukwu-Ilomuanya and Iwuagwu (2016), on effectiveness of REBT and CBT for treatment of some other problem behaviours such as affective disturbances and conduct behaviours. No study has actually reported of a contrary finding to both the findings of previous studies and that of this current study on the effectiveness of REBT on treatment of aggressive behaviours and other problem behaviours.

The difference between this study and other previous studies is that the present study unlike earlier works cited, determined the effect of REBT on the different dimensions of aggression as well as on aggression in general. In terms of the finding of significant effect of REBT on treatment of different forms of aggression, few studies like Fung et al (2013) and Imam (2016), covered it and their findings regarding physical and verbal aggression are consistent with that of this study on the two forms of aggression but their studies did not cover social aggression.

The finding that REBT has a significant effect on aggressive behaviours of students in this study, could be attributed to the fact that since aggression is a psychological or problem behaviour, it has to respond to psychotherapy like REBT, whose efficacies have been proven with supportive evidences from previous works such as Ekechukwu (2018) who found the effectiveness of REBT in the treatment of aggressive behaviour. Furthermore, Ekechukwu and Onyekuru (2014) found its efficacy in the treatment of depression and other emotional and maladaptive problems. Still in support of the above assertion, Beck and Fernandez found effectiveness of CBT-use, in anger management of over the last 20 years and the findings have been consistent. They also asserted that a clinical implication of meta-analysis of CBT on anger control has been encouraging. These revelations go a long way to strengthen the findings of this study since REBT is a type of CBT. In addition, since the finding of this present study agreed with that of previous studies which were carried out outside the study area, it showed that REBT works in management of problem behaviours irrespective of cultural background.

The outcome of this study could also be attributed to how the study was conducted. This is in the sense that the researchers organized a pre-treatment session with a drama group who presented a play let on different forms of aggression and their consequences. This made the subjects aware of the negative implications of aggression; they became ready vessels who asked for solution to the problem by themselves before the treatment was administered. The treatment therefore had substantial effect in reducing their aggression because they desired it after coming in terms with reality regarding the undesirable consequences of aggressive behaviours.

The result of the analysis on the interaction effect of REBT and gender on students' aggressive behaviours, revealed no significant interaction effect of REBT and gender on physical, verbal, social and overall aggression of students. This meant that effectiveness of the treatment did not depend on the gender of the subjects; both genders responded to REBT treatment with lower mean scores than the control group, the interaction was not statistically significant.

This finding is consistent with the findings of previous studies such as Landenberger and Lipsey (2005), Daryoush et al (2012) Ojewola (2014) Cuijpers, Weisz, Twisk, & Hollon, (2014), Eifediyi (2015), Smeet et al (2015), and Brown, Fite, and Poquiz, (2016), who reported that therapy was not gender specific in their studies, as both males and females responded to REBT treatment. However, the finding of the work slightly differs from the findings of Weize et al (1995) who reported that adolescent girls showed better treatment outcomes than adolescent males. The studies of Daroush et al (2012), Ojewola (2014), Eifediyi (2015) and others were supported by the findings of the present study, to some extent. Yet the findings of this study differ somehow from those studies in that Ojewola (2014) worked on interaction effect of self-efficacy, skills training and sex in reducing aggressive behaviour among in-school adolescents; Eifediyi (2015) studied effectiveness of REBT and CBT in reducing examination anxiety, and Daryoush et al (2012) worked on the effectiveness of REBT on shyness and influence of sex. Why it is believed that these studies corroborated findings from the present study to some extent is that although the present work is on the interaction effect of Rational Emotive Behavioural Therapy (REBT) in reducing aggressive behaviours of secondary school students, REBT is a form of CBT, and anxiety, shyness as well as aggression are all problem behaviours which respond to psychotherapies almost in the same pattern. The finding of no interaction effect of treatments and gender on the aggressive behaviour of the subjects in this study could therefore be explained with the fact that since CBT has been proven by many studies to be highly effective in controlling aggressive behaviours, recipients of the treatments have responded favourably to its effects irrespective of their gender.

Conclusion and recommendations

Based on the findings of the study, it was concluded that Rational Emotive Behavioural Therapy (REBT) significantly reduced students' physical, verbal, social and overall aggression. It was also concluded that interaction effect of treatment and sex did not significantly affect the treatment outcomes. This means that treatment focused on the problem irrespective of sex. It was thus recommended as follows: The use of REBT and other behavioural therapies in targeting the students' irrational beliefs that make them aggressive and changing these irrational thoughts to rational thoughts that help students make better behavioural choices should be emphasized; while use of aversive measures like punishments to mitigate manifest aggressive behaviours among students should be discouraged. To this end, the Ministry of Education should organize seminars and workshops for teachers and school counselors on the importance of using CBT generally and how to use behavioural therapy such as REBT procedure in changing unacceptable/problem behaviours such as unhealthy aggression.

Students should be exposed to REBT procedures to acquaint them with the right skills they could adopt in resolving annoying frustrating challenges they face in life in place of aggression. REBT should be used to control students' aggressive behaviours irrespective of their sex. The implications of this study to the problem it tried to address in the school system are: i. If all the recommendations based on the findings are implemented by all the stakeholders, the problem of different dimensions of students' aggressive behaviours in schools would be controlled. Secondly, innovation like the use of play let as enshrined in the methodology to enlighten the students on the grave consequences of aggressive displays enhanced their response to the treatment. This and other innovative designs should be embraced by therapists in an attempt to control psychological or problem behaviours.

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