

# A group-focused rational emotive behavior coaching for management of academic burnout among undergraduate students

## Implications for school administrators

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### Abstract

**Background:** High-stress level affects students' health and many of them experiencing high levels of stress are at risk of burnout. School administrators are often concerned about the experiences and negative effects of burnout among students and staff. Burnout is described as a psychological reaction to chronic stress. The aim of the current study was to investigate the effect of a group-focused intervention (rational emotive behavior coaching, REBC) on academic burnout among undergraduate students attending public universities in Southeast Nigeria.

**Methods:** A group randomized controlled trial design was adopted for this study. A total of 52 convenient samples of undergraduate students (with a high degree of burnout symptoms) took part in the research. We used a group REBT program manual for the management of burnout which was complemented with REBC techniques. Data were gathered with the aid of the perceived stress scale (PSS-10) and Oldenburg Burnout inventory-student (OLBI-S). Data were analyzed using ANOVA and paired *t* test at .05 probability level.

**Results:** Results showed that the group-focused REBC program significantly alleviated burnout symptoms among students in the treatment group compared to students in the control group as measured by OLBI-S subscales: exhaustion ( $F(1,51)=41.789$ ,  $P=.000$ ,  $\eta_p^2=0.493$ ,  $\Delta R^2=0.634$ ,  $SE=1.00$ ), and disengagement ( $F(1,51)=196.036$ ,  $P=.000$ ,  $\eta_p^2=0.820$ ,  $\Delta R^2=0.869$ ,  $SE=0.69$ ). The students who benefitted from the group-focused REBC program maintained reduced symptoms of burnout after three months when the researchers conducted a follow-up as measured by OLBI-S subscales: exhaustion ( $F(1,51)=34.012$ ,  $P=.000$ ,  $\eta_p^2=0.442$ ,  $\Delta R^2=0.467$ ,  $SE=1.21$ ), and disengagement ( $F(1,51)=108.941$ ,  $P=.000$ ,  $\eta_p^2=0.717$ ,  $\Delta R^2=0.765$ ,  $SE=0.85$ ).

**Conclusion:** This research indicates that group-focused REBC can be applied to reduce burnout symptoms among undergraduate students. The group-focused REBC intervention may be adapted to overcome employee burnout and school administrators' burnout. Researchers may need to investigate the possibility of storing and harnessing data from studies on REBC and burnout and delivering computer-based/internet REBC program following evidence-based computing strategies and principles.

**Abbreviations:** % = percent, EMA = English Minus Absolutisms technique, F = ANOVA, OLBI-S = Oldenburg Burnout inventory-student, PSS-10 = perceived stress scale, REBC = rational emotive behavior coaching, REBT = rational-emotive behavior therapy, SDQ = students' demographic questionnaire, *t* = *t* test.

**Keywords:** burnout symptoms, perceived stress, psychological coaching, rational emotive behavior coaching, undergraduate students

Editor: Wanqing Wu.

The authors report no conflicts of interest.

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Medicine (2019) 98:30(e16352)

Received: 16 February 2019 / Received in final form: 11 June 2019 / Accepted: 14 June 2019

<http://dx.doi.org/10.1097/MD.00000000000016352>

## 1. Introduction

### 1.1. Burnout in undergraduate students

Chronic stress affects students' health<sup>[1,2]</sup> and individuals experiencing high levels of stress are vulnerable to burnout.<sup>[3,4]</sup> Burnout is described as a psychological reaction to chronic stress.<sup>[5-7]</sup> Burnout can negatively affect students' academic achievement.<sup>[5,7]</sup> Burnout has been linked to substance abuse and increased possibility of suicidal thoughts in students.<sup>[8,9]</sup> Burnout is also a considerable issue related to poor school performance, loss of interest in completing schoolwork, alexithymia, and poor health.<sup>[10-14]</sup> One major concern is that burnout in undergraduate students is common but only a few of these students often seek help in developing countries like Nigeria. Researchers have noted that many undergraduate students exhibit stress and burnout symptoms.<sup>[15-23]</sup> Undergraduate students having stress and burnout symptoms might have difficulty controlling their emotional reactions.<sup>[6]</sup>

According to results of a cross-sectional study, the prevalence of burnout among undergraduate students (data from 265 undergraduates) were as follows: emotional exhaustion (70.6%), cynicism (52.8%), and academic efficacy (48.7%).<sup>[24]</sup> A similar study carried out among 662 undergraduate students revealed that the prevalence of burnout was 7.4%, and burnout symptoms significantly predicted depression in this student sample.<sup>[25]</sup> In a previous cross-sectional survey among 542 students, researchers found that 33.6% of students in the sixth year had a high burnout level while 27.5% of the fourth and fifth year students had a high burnout level; high burnout level was significantly related to stress experienced by these students.<sup>[26]</sup> Despite the high prevalence of burnout among undergraduate students, how to manage burnout symptoms among undergraduate students remains scarce and unclear. In the current study, we propose and validate the efficacy of a group-focused rational emotive behavior coaching for the management of academic burnout in a sample of undergraduate students in Nigeria.

### 1.2. Rational emotive behavior coaching adapted to group setting

The development and application of evidence-based interventions to alleviate burnout can be helpful to clinicians who aim to advance public health policy decisions and bring about improvement in undergraduate students' health and wellbeing. Such interventions are needed for burned-out students, given that burnout may result in dysfunctional emotions and reduced performance. Psychological coaching interventions with rational-emotive and cognitive-behavioral components can be useful for managing burnout symptoms.<sup>[6,27]</sup> Psychological coaches can work with clients by targeting any unhelpful beliefs and assumptions held by those clients.<sup>[28]</sup> The rational-emotive behavioral approach to psychological coaching can be applied to help clients overcome self-limiting beliefs and assumptions which are holding them back from developing personally and professionally.

To assist a sample of undergraduate students towards managing burnout symptoms, the current study adapted to a group setting, the rational emotive behavior coaching (REBC) approach created by Kodish in 2002. Kodish shared elaboration of the assumptions, as well as coaching techniques of REBC for individual coaching intervention.<sup>[29]</sup> Rational emotive behavior coaching is a psychological coaching model derived from rational-emotive behavior therapy (REBT), which is one of the earliest types of cognitive-behavioral therapy. The REBC is delivered following the assumption that the coachees (clients) are willing to shift to a deeper level of functioning, discover and master new cognitive, behavioral and emotive skills, pursue an improved and balanced life, search for self-awareness, and seek focus and motivation.<sup>[29]</sup> It is also assumed that the coachees are interested in learning how to adjust their behavior.<sup>[29]</sup>

The REBC experts see the coachees as individuals having the capacity to change their behavior. Conversely, the rational emotive behavioral coach would focus on coachees' actions and their future, orient coachees toward action and problem-solving through action, concentrate on what is within coachees' awareness, assist coachees in the recognition, assessment and implementation of choices, assist coachees toward learning new skills and techniques for personal development and mastery, pay attention to coachees' feelings as clues for assisting them toward taking appropriate actions, assist coachees toward clarifying and

acting on values, promote assertive behavior in coachees, offer advice to coachees intermittently and plainly tag it as such.<sup>[29]</sup> Therefore, the REBC process includes but is not limited to focusing on learning and developing coachees' potential, searching for solutions to internal blocks to change in coachees' behavior, applying techniques of inquiry and goal-setting alongside follow-up on results, holding coachees' answerable for their actions and reactions, meeting with coachees face-to-face and/or by phone, and tailoring task structure in a way that would be suitable to each coachee.<sup>[29]</sup>

## 2. Study objective and hypotheses

The main objective of this investigation was to examine the effectiveness of a group-focused rational emotive behavior coaching (REBC) program on burnout symptoms among undergraduate students in the Southeastern part of Nigeria. The researchers hypothesized that the group-focused REBC program could lead to a significant reduction in burnout symptoms among undergraduate students in the treatment group weighed against those in the no-intervention control group. The gains from exposure to the group-focused REBC program were hypothesized to be maintained at follow-up for the treatment group.

## 3. Methods

### 3.1. Statement of ethical consideration

The research was approved by the Research Ethics Committee of the Department of Educational Foundations, University of Nigeria, Nsukka. The study was conducted in line with the tenets of the Declaration of Helsinki. Informed consent was obtained from all the undergraduate students included in this research.

### 3.2. Participants and procedures

The researchers and four assistants recruited participants by convenience sampling during classroom and hostel visitations between January and February 2018. The study participants included 52 undergraduate students recruited from four public Universities in Southeast Nigeria. Participants' age range was 18–30 years. These participants were obtained from 456 anticipated target sample size assessed and screened for eligibility by four of the researchers (Fig. 1). These targeted samples were all undergraduate students of participating universities.

The sample size was calculated using G\*power 3.1 computer software program.<sup>[30]</sup> An effect size of 0.25 with a priori percentage power of 80% was chosen for conducting ANOVA with repeated-measures, within-between interactions using G\*power. The study inclusion criteria stipulated that participants must be undergraduate students in a public university in Southeast Nigeria and must exhibit burnout symptoms at the baseline assessment. Other criteria included that the potential participants must complete informed consent forms and be willing to focus on the coaching program from start to finish without attending any other intervention on student burnout during the study period.

The intervention type employed in the study consisted of an experimental group (REBC group) and a control group (no-intervention control group). The study participants were randomly assigned to either no-intervention or experimental

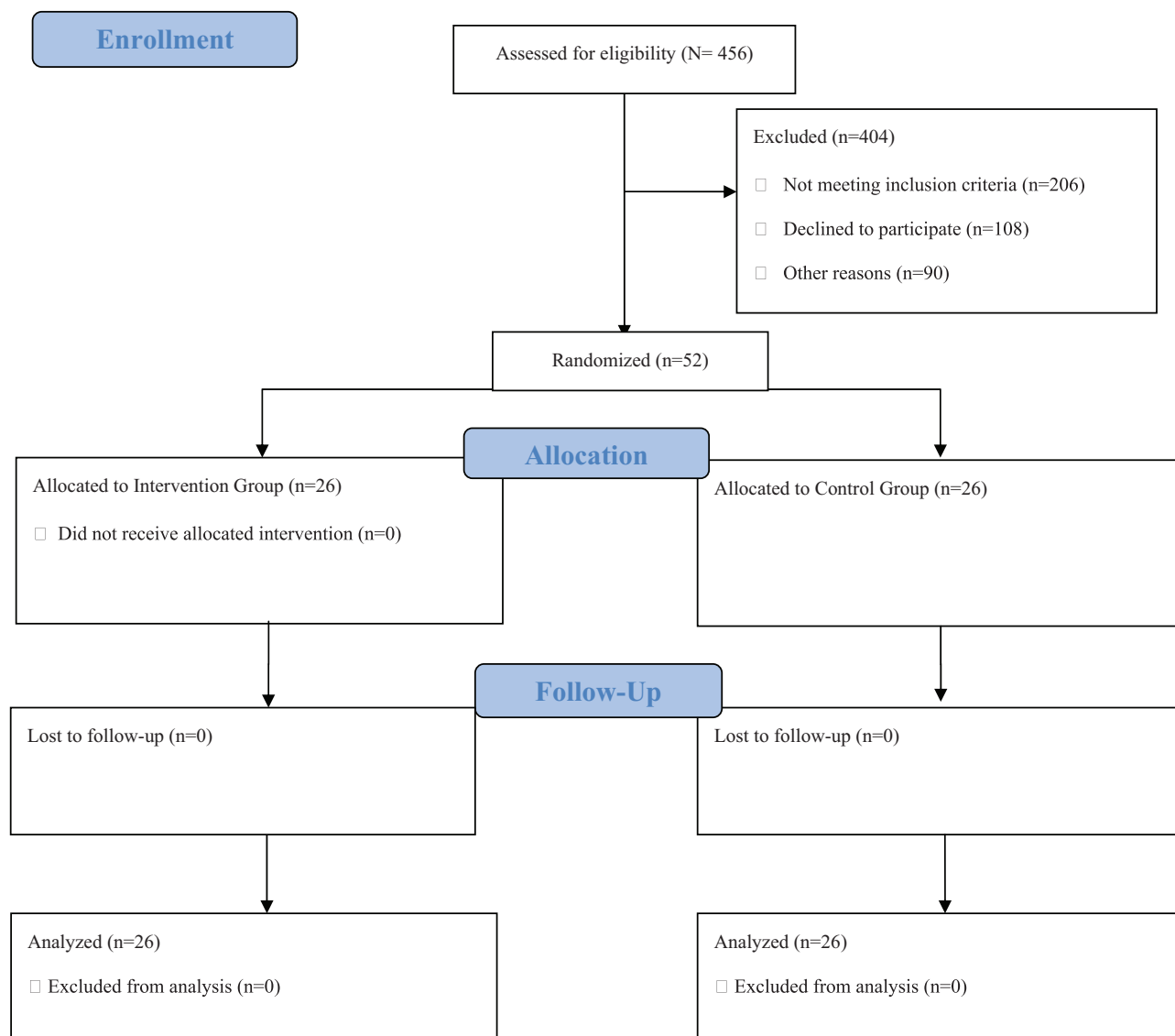


Figure 1. CONSORT flowchart showing participant eligibility criteria.

groups by four of the researchers. Thus, this study adopted a group randomized controlled trial design. Per group size, 26 participants were exposed to each intervention type for 12 weeks. The experimental group participants (three small groups consisting of 8–9 students) were exposed twice a week to the group-focused REBC program, with an evidence-based group REBT program manual for the management of stress and burnout symptoms.<sup>[6]</sup> This method was employed in addition to the use of REBC techniques—designing the alliance, homework, future self, big “A” agenda, identifying values, wheel of life, goal setting, dating, and English Minus Absolutisms (EMA) techniques—which were adapted from Kodish.<sup>[29]</sup> The group-focused REBC intervention was delivered by three of the authors with expertise in psychological coaching and REBT theory. The REBC sessions consisted of small groups with mandatory psychological exercises. The control group participants used for comparison were not exposed to any treatment. A financial incentive for participation was provided to all participants. Group sessions stayed three hours long; these sessions occurred in high school

classrooms in the study area, and due to the class schedule, group sessions were held over the weekends since all participants indicated such period would be convenient for them.

Given that a significant reduction in burnout symptoms might result in considerable alleviation of stress levels and vice versa, in the current study, we adopted a strategy in which we measured perceived stress level at just one time point and moved on to assess the presence of burnout among undergraduate students experiencing severe level of stress at three time points (preintervention, postintervention and follow-up phases). In this study, the allocation sequence was generated using simple randomization based on a randomization table made possible from a computer software program (Random Allocation Software program).<sup>[31]</sup> The statistical data analysts were blinded to the allocation sequence as in a previous study.<sup>[32]</sup> By using sealed, opaque envelopes, the allocation sequence was also concealed from those who assigned the study participants to each intervention type. The participants completed and returned the outcome measures at various time points: Time 1 (pretreatment);

Time 2 (posttreatment); and Time 3 (follow-up which was conducted three months from the end of the group coaching). The REBC intervention was given in English.

## 4. Outcome measures

### 4.1. Perceived stress scale (PSS-10)<sup>[33]</sup>

The PSS-10 was used at Time 1 for data collection. The PSS-10 is a 10-item self-report instrument for assessing a person's stress levels based on a five-point rating scale of never (0) to very often (4). Scores are reversed for items 4, 5, 7, and 8 of the PSS-10. Higher scores signify a higher perceived stress level. The internal consistency (Cronbach alpha) of the PSS-10 based on this study sample was 0.83.

### 4.2. Oldenburg Burnout inventory-student version (OLBI-S)<sup>[34]</sup>

The OLBI-S was used at Times 1, 2, and 3 for data collection. We used the 16-item OLBI-S with two subscales, exhaustion and disengagement, consisting of 8 items each and rated on a four-point scale of strongly agree (1) to strongly disagree (4). Higher scores signify higher burnout symptoms (Mean score  $\geq 17$ ). The internal consistency (Cronbach alpha) of the OLBI-S based on this study sample was 0.86 for the exhaustion and 0.83 for the disengagement subscales. The OLBI has been shown to be a valid measure of burnout in students sample.<sup>[34,35]</sup>

### 4.3. Students' demographic questionnaire (DQ)

The SDQ was used at Time 1 for data collection regarding participants' characteristics such as gender, age, and, residence (within/off-campus).

## 5. Data analyses approach

The ANOVA statistic was used to analyze the data from this study. In order to link the data at each time point, a paired *t* test

analyses were conducted. Tests for violations of assumptions and data normality were carried out. Statistical assumptions were met, and data were normally distributed. Screening for missing data was also done. There was no missing data and all students completed the pretest, posttest, and 2-week follow-up test. All statistical analyses were carried out using SPSS, version 22. Results were considered significant at  $P \leq .05$ .

## 6. Results

Among the 52 study participants, there were 12 (46%) males and 14 (54%) females in the treatment group and 11 (42%) males and 15 (58%) female participants in the no-intervention control group, with no statistically significant difference,  $\chi^2(1) = 0.078$ ,  $P = .782$ . The mean age of participants in the treatment group was  $19.81 \pm 1.72$  years, while those in the no-intervention control group had a mean age of  $20.15 \pm 1.83$  years, with no statistically significant difference,  $t(50) = -0.703$ ,  $P = .485$ , 95% CI =  $-1.33462, 0.64231$ . Attendance to the sessions was 100% and there was no record of drop-out. Also, there was no report of adverse effects (Table 1).

The ANOVA results in Table 2 revealed that there was no significant difference between the treatment ( $34.98 \pm 2.85$ ) and no-intervention control groups ( $35.18 \pm 2.93$ ) in perceived stress in the pretreatment measure as assessed using PSS-10,  $F(1,51) = 0.035$ ,  $P = .853$ ,  $\eta_p^2 = 0.001$ ,  $\Delta R^2 = -0.018$ ,  $SE = 0.68$ . Table 2 further indicates that there was no significant difference between the undergraduate students in the treatment ( $24.09 \pm 6.22$ ) and no-intervention control groups ( $20.68 \pm 5.81$ ) on OLBI-S-exhaustion scores,  $F(1,51) = 2.371$ ,  $P = .131$ ,  $\eta_p^2 = 0.052$ ,  $\Delta R^2 = -0.053$ ,  $SE = 1.39$ . There was no significant difference between the undergraduate students in the treatment ( $27.28 \pm 3.73$ ) and no-intervention control groups ( $27.18 \pm 4.03$ ) on OLBI-S-disengagement scores,  $F(1,51) = 0.004$ ,  $P = .949$ ,  $\eta_p^2 = 0.000$ ,  $\Delta R^2 = -0.124$ ,  $SE = 0.93$  (Table 2).

The posttreatment measure revealed a significant decrease in OLBI-S-exhaustion scores among undergraduate students in the treatment group ( $10.86 \pm 2.34$ ) compared to students in the

**Table 1**  
Demographic characteristics of study participants.

Characteristic	Treatment group, N (%)	Control group, N (%)	Statistic	Significance
Gender			0.078 ( $\chi^2$ )	0.782
Male	12 (46%)	11 (42%)		
Female	14 (54%)	15 (58%)		
Age	$19.81 \pm 1.72$	$20.15 \pm 1.83$	$-0.703$ (t)	0.485
Level of study			$\chi^2$	0.301
Year 1	8 (30.8%)	7 (26.9%)	2.40	
Year 2	10 (38.4%)	15 (57.7%)		
Year 3	8 (30.8%)	4 (15.4%)		
Residence			1.261	0.400
Within campus	11 (42.3)	14 (53.8%)		
Off-campus	15 (57.6%)	12 (46.2%)		
Study hours			9.238	0.100
1 h	5 (19.2%)	2 (7.7%)		
2 h	11 (42.3%)	7 (26.9%)		
3 h	8 (30.8%)	6 (23.1%)		
4 h	2 (7.7%)	7 (26.9%)		
5 h	–	3 (11.5%)		
6 h	–	1 (3.8%)		

$\chi^2$  = chi-square, t = *t* test results statistics.

**Table 2**  
**Results of repeated measure ANOVA indicating the effect of rational emotive behavior coaching.**

Measures	Time	Group	M ± SD	SE	95% CI	F	Sig.	$\eta_p^2$	$\Delta R^2$
PSS-10	1 (Pretest)	Treatment	34.98 ± 2.85	0.68	33.611–36.342	0.035	0.853	0.001	–0.081
		Control	35.18 ± 2.93	0.68	33.812–36.543				
OLBI-S exhaustion		Treatment	24.09 ± 6.22	1.39	21.272–26.911	2.371	0.131	0.052	–0.053
		Control	20.68 ± 5.81	1.39	17.858–23.497				
OLBI-S disengagement		Treatment	27.28 ± 3.73	0.93	25.408–29.148	0.004	0.949	0.000	–0.124
		Control	27.18 ± 4.03	0.93	25.314–29.054				
OLBI-S exhaustion	2 (Posttest)	Treatment	10.86 ± 2.34	1.00	8.831–2.880	41.789	0.000	0.493	0.634
		Control	21.15 ± 5.81	1.00	19.120–23.169				
OLBI-S disengagement		Treatment	11.49 ± 2.02	0.69	10.091–12.878	196.036	0.000	0.820	0.869
		Control	26.82 ± 3.54	0.69	25.430–28.216				
OLBI-S exhaustion	3 (Follow-up test)	Treatment	11.03 ± 2.79	1.21	8.583–13.473	34.012	0.000	0.442	0.467
		Control	22.24 ± 6.89	1.21	19.796–24.687				
OLBI-S disengagement		Treatment	12.70 ± 2.74	0.85	10.983–14.418	108.941	0.000	0.717	0.765
		Control	26.79 ± 4.42	0.85	25.082–28.517				

$\Delta R^2$  = adjusted  $R^2$ ,  $\eta_p^2$  = partial eta squared, CI = confidence interval, mean ± SD = mean and standard deviation, OLBI-S = Oldenburg Burnout inventory-student version, PSS-10 = perceived stress scale, SE = standard error.

no-intervention control group (21.15 ± 5.81),  $F(1,51) = 41.789$ ,  $P = .000$ ,  $\eta_p^2 = 0.493$ ,  $\Delta R^2 = 0.634$ ,  $SE = 1.00$ . The posttreatment measure revealed a significant decrease in OLBI-S-disengagement scores among undergraduate students in the treatment group (11.49 ± 2.02) compared to students in the no-intervention control group (26.82 ± 3.54),  $F(1,51) = 196.036$ ,  $P = .000$ ,  $\eta_p^2 = 0.820$ ,  $\Delta R^2 = 0.869$ ,  $SE = 0.69$  (Table 2).

The follow-up assessment (Time 3) indicated that there was a significant decline in OLBI-S-exhaustion scores among students in the treatment group (11.03 ± 2.79) in contrast to those in the no-intervention control group (22.24 ± 6.89),  $F(1,51) = 34.012$ ,  $P = .000$ ,  $\eta_p^2 = 0.442$ ,  $\Delta R^2 = 0.467$ ,  $SE = 1.21$ . The follow-up assessment (Time 3) also indicated that there was a significant decline in OLBI-S-disengagement scores among students in the treatment group (12.70 ± 2.74) in contrast to those in the no-intervention control group (26.79 ± 4.42),  $F(1,51) = 108.941$ ,  $P = .000$ ,  $\eta_p^2 = 0.717$ ,  $\Delta R^2 = 0.765$ ,  $SE = 0.85$ . This meant that REBC intervention was effectual in reducing burnout symptoms among a select group of undergraduate students in public universities in Southeast Nigeria (Table 2).

Because of the significant differences observed between the treatment group and no-intervention control group at Time 2 and Time 3, the authors conducted a Posthoc analyses with the aid of Bonferroni corrections for  $P$ -values in which analyses of data is based on estimated marginal means. The Posthoc analyses results indicated that there was no significant difference in the mean of both groups at Time 1 as assessed using PSS-10 ( $P = .853$ , 95% CI = –1.965, 2.366,  $SE = 1.074$ ), OLBI-S-exhaustion ( $P = .131$ , 95% CI = –7.885, 1.058,  $SE = 2.217$ ), and OLBI-S-disengagement ( $P = .949$ , 95% CI = –3.060, 2.871,  $SE = 1.470$ ) respectively. At Time 2, significant mean differences in OLBI-S-exhaustion ( $P = .000$ , 95% CI = 7.079, 13.499,  $SE = 1.592$ ), and OLBI-S-disengagement ( $P = .000$ , 95% CI = 13.129, 17.548,  $SE = 1.096$ ) were observed between the treatment and control group participants in favor of those in the treatment group. At Time 3, significant mean differences in OLBI-S exhaustion ( $P = .000$ , 95% CI = 7.336, 15.091,  $SE = 1.923$ ), and OLBI-S-disengagement ( $P = .000$ , 95% CI = 11.375, 16.823,  $SE = 1.351$ ) were also observed between the treatment and control group participants in favor of those in the treatment group (Table 3).

**Table 3**  
**Posthoc analyses with Bonferroni corrections for P-values based on estimated marginal means.**

Measures	(I) Group	(J) Group	Mean difference (I-J)	SE	Sig. <sup>†</sup>	95% CI
PSS-10 (Time 1)	Control	Treatment	0.201	1.074	0.853	–1.965, 2.366
	Treatment	Control	–0.201	1.074	0.853	–2.366, 1.965
OLBI-S exhaustion (Time 1)	Control	Treatment	–3.414	2.217	0.131	–7.885, 1.058
	Treatment	Control	3.414	2.217	0.131	–1.058, 7.885
OLBI-S disengagement (Time 1)	Control	Treatment	–0.094	1.470	0.949	–3.060, 2.871
	Treatment	Control	0.094	1.470	0.949	–2.871, 3.060
OLBI-S exhaustion (Time 2)	Control	Treatment	10.289*	1.592	0.000	7.079, 13.499
	Treatment	Control	–10.289*	1.592	0.000	–13.499, –7.079
OLBI-S disengagement (Time 2)	Control	Treatment	15.339*	1.096	0.000	13.129, 17.548
	Treatment	Control	–15.339*	1.096	0.000	–17.548, –13.129
OLBI-S exhaustion (Time 3)	Control	Treatment	11.214*	1.923	0.000	7.336, 15.091
	Treatment	Control	–11.214*	1.923	0.000	–15.091, –7.336
OLBI-S disengagement (Time 3)	Control	Treatment	14.099*	1.351	0.000	11.375, 16.823
	Treatment	Control	–14.099*	1.351	0.000	–16.823, –11.375

OLBI-S = Oldenburg Burnout inventory-student version, PSS-10 = perceived stress scale, SE = standard error, Time 1 = pretest, Time 2 = posttest, Time 3 = follow-up test.

\* The mean difference is significant at the 0.05 level.

† Adjustment for multiple comparisons: Bonferroni.

**Table 4**  
Paired *t* test showing analysis of link between each time point.

		Paired differences			<i>t</i>	Sig.
		M ± SD	SE mean	95% CI		
Pair 1	OLBI-S exhaustion (Time 1) – OLBI-S exhaustion (Time 2)	6.38 ± 7.83	1.086	4.20349, 8.56574	5.877	0.000
Pair 2	OLBI-S exhaustion (Time 1) – OLBI-S exhaustion (Time 3)	5.75 ± 9.11	1.263	3.21401, 8.28599	4.552	0.000
Pair 3	OLBI-S exhaustion (Time 2) – OLBI-S exhaustion (Time 3)	-0.63 ± 5.49	0.762	-2.16349, 0.89426	-0.833	0.409
Pair 4	OLBI-S disengagement (Time 1) – OLBI-S disengagement (Time 2)	8.08 ± 8.58	1.189	5.68847, 10.46537	6.789	0.000
Pair 5	OLBI-S disengagement (Time 1) – OLBI-S disengagement (Time 3)	7.48 ± 8.12	1.126	5.21936, 9.74217	6.641	0.000
Pair 6	OLBI-S disengagement (Time 2) – OLBI-S disengagement (Time 3)	-0.59 ± 2.72	0.377	-1.35260, 0.16030	-1.582	0.120

M ± SD = mean and standard deviation, SE = standard error.

In order to further link the data at each time point, a paired *t* test analyses was conducted. The results of the paired *t* test analyses indicated a significant difference between OLBI-S-exhaustion scores at Time 1 and OLBI-S exhaustion scores at Time 2,  $t(51) = 5.877$ ,  $P = .000$ ,  $95\%CI = 4.20349, 8.56574$ , SE Mean = 1.086. There was also a significant difference between OLBI-S-exhaustion scores at Time 1 and OLBI-S-exhaustion scores at Time 3,  $t(51) = 4.552$ ,  $P = .000$ ,  $95\%CI = 3.21401, 8.28599$ , SE Mean = 1.263. This implies that there was a significant mean change in OLBI-S-exhaustion scores of participants in treatment group from Time 1 to Time 2. No significant difference was found between OLBI-S-exhaustion at Time 2 and OLBI-S-exhaustion scores at Time 3,  $t(51) = -0.833$ ,  $P = .409$ ,  $95\%CI = -2.16349, .89426$ , SE Mean = 0.762. This implies that the reduction in OLBI-S-exhaustion scores at Time 2 was sustained at Time 3 for the treatment group participants (Table 4).

A similar trend was also observed for the OLBI-S-disengagement scores across the three-time points for the treatment group participants. The results of the paired *t* test analyses indicated a significant difference between OLBI-S-disengagement scores at Time 1 and OLBI-S-disengagement scores at Time 2,  $t(51) = 6.789$ ,  $P = .000$ ,  $95\%CI = 5.68847, 10.46537$ , SE Mean = 1.189. There was also a significant difference between OLBI-S-disengagement scores at Time 1 and OLBI-S-disengagement scores at Time 3,  $t(51) = 6.641$ ,  $P = .000$ ,  $95\%CI = 5.21936, 9.74217$ , SE Mean = 1.126. This implies that there was a significant mean change in OLBI-S-disengagement scores of participants in treatment group from Time 1 to Time 2. No significant difference was found between OLBI-S-disengagement scores at Time 2 and OLBI-S-disengagement scores at Time 3,  $t(51) = -1.582$ ,  $P = .120$ ,  $95\%CI = -1.35260, 0.16030$ , SE Mean = 0.377. This implies that the reduction in OLBI-S-disengagement scores at Time 2 was sustained at Time 3 for the treatment

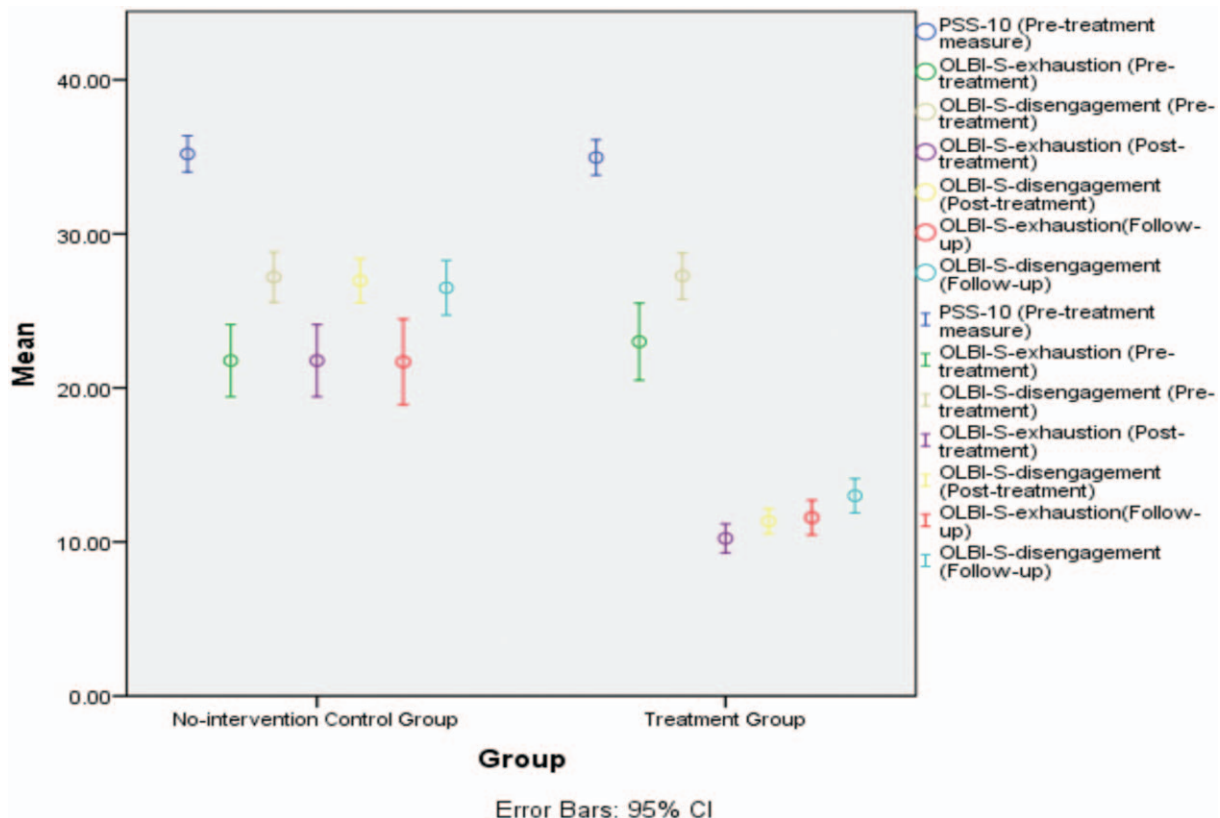


Figure 2. Effect of REBC on burnout symptoms among undergraduate students.

group participants (Table 4). The (Fig. 2) indicate the changes in each group across the three times of measurement.

## 7. Discussion

The main focus of the current investigation was to examine the effect of a group-focused rational emotive behavior coaching (REBC) intervention on burnout symptoms among undergraduate students in Southeast Nigeria. It was found that group-focused rational emotive behavior coaching was efficacious in reducing the level of burnout symptoms among the undergraduate students who were exposed to the coaching program compared to those who were not exposed to it. The group-focused REBC was an effective intervention in managing undergraduate students' emotional exhaustion and disengagement. In addition, the gains from exposure to the group-focused REBC program were maintained at follow-up. This finding supported Nucci who observed that a rational emotive behavioral approach could be of help to beneficiaries in addressing their individual and professional growth.<sup>[36]</sup> Sherin and Caiger noted that therapeutic components of rational emotive behavioral treatment were useful in a coaching context.<sup>[37]</sup> Also, Kodish stated that REBT could be integrated with coaching.<sup>[29]</sup> Thus, REBC practitioners may continue to facilitate undergraduate students' ability to overcome burnout symptoms using the REBT approach to psychological coaching.

Cognitive-behavioral interventions such as REBT can have a beneficial impact on burnout symptoms. Previous studies have confirmed that implementing rational emotive behavioral intervention can be helpful in reducing stress and burnout symptoms.<sup>[27,32]</sup> Romeo remarked that an REBT-based interventional approach is efficacious in reducing stress-related symptoms.<sup>[38]</sup> Similarly, Ogbuanya et al found that an REBT-based intervention significantly alleviated symptoms of burnout syndrome among students and that the positive outcomes were significantly sustained at follow-ups after the initial study.<sup>[6]</sup>

The findings of the present study show the importance of group REBC in reduction of burnout symptoms among undergraduate students. Although Kodish<sup>[29]</sup> described individual coaching interventions based on REBT theory, the current study has creatively adapted Kodish's approach to group setting. Offering REBC in small groups showed a significant impact of this approach on burnout reduction. Given the finding that group-focused REBC intervention significantly reduced burnout among undergraduate students, school management has the responsibility of ensuring that those students at risk of burnout benefit from prospective group-focused REBC interventions. Nigerian school managers should consider adopting the REBC program for managing burnout among university undergraduate students. School management in other countries should also adopt the REBC program into their school system for managing school-related stress and burnout among university undergraduate students.

Since the results suggest that group-focused REBC can be used in University settings to help students with burnout symptoms, it may be helpful for clinicians, school administrators, and counselors who work with different category of students to understand the methods to help the highly stressed students with whom they work. The findings from this study can help school administrators at different levels of education to initiate and/or support a therapeutic mechanism for effectively managing students with stress-related concerns. Further application of

REBC to improve the psychological health and wellbeing of undergraduate students is important and requires funding. In addition, as more studies becomes readily available on REBC and burnout management across populations, researchers may need to investigate the possibility of storing and harnessing data from such studies and delivering of computer-based/internet REBC program following the computing strategies, virtual reality environment principles and logical foundations in previous studies.<sup>[39-45]</sup>

One limitation of this research was that the sample consisted of only undergraduate students who were enrolled at public universities in Southeast Nigeria. Thus, the results of the study were specific to this category of students. The mean age of study participants was ~20 and they were in the first three years of study, making them more similar to US undergraduate students. Further studies will be necessary for comparing undergraduate and postgraduate students' burnout symptoms reduction in a group-focused REBC program. Also, inclusion of students from other disciplines/faculties and private universities is suggested for further research. The short period of follow-up is also one of the limitations of the study. The control group received no intervention instead of some kind of contact. Further research should investigate the impact of group-focused REBC by comparing the mean gains of the treatment group with a control group such as those waitlisted, receiving treatment as usual, or another type of psychological coaching or therapy. Further researchers should endeavor to give the control group some number of group meetings but without the REBC structure. Also, longer follow-up period is suggested for future research.

## 8. Conclusion

The findings of this study showed that group-focused REBC intervention reduced self-reported burnout in a select group of undergraduate students in public universities in the southeastern part of Nigeria. None of the participants dropped out. The group-focused REBC was an effective intervention in managing undergraduate students' emotional exhaustion and disengagement. It is, therefore, recommended that further studies be done on REBC programs for reducing perceived stress and burnout in undergraduate students. Also, psychological coaches with sufficient understanding of REBC should make use of this coaching strategy for helping undergraduate students to reduce their burnout symptoms. This group-focused intervention could be adapted to overcome employee burnout and school administrators' burnout.

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