


# Academic burnout among undergraduate history students

## Effect of an intervention

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### Abstract

**Background:** This study aimed to examine the effect of an online psychological intervention on academic burnout of undergraduate history students in Nigeria.

**Method:** The sample for the study consists of burned-out undergraduate history students selected randomly from public universities. A total of 18 undergraduate history students with moderate to high burnout symptoms were randomly allocated to the online intervention group, while 17 were randomly assigned to the waitlist control group.

**Results:** The use of online rational emotive behavior therapy (online REBT) effectively reduced academic burnout and sustained this significant reduction among Nigerian undergraduate history students compared with a waitlist control condition.

**Conclusion:** Online rational emotive behavior therapy intervention delivered to undergraduate history students brought about a significant decrease in academic burnout. Further studies should expand the benefits of online psychological intervention for burnout treatment among Nigerian undergraduate history students.

**Abbreviations:** OLBI-S = Oldenburg burnout inventory for students, REBT = rational emotive behavior therapy.

**Keywords:** academic burnout, online rational emotive behavior therapy, undergraduate history students

## 1. Introduction

Academic burnout negatively affects students.<sup>[1,2]</sup> Academic burnout refers to students' feeling of debilitation, pessimism, and low self-efficacy.<sup>[1–3]</sup> Academic burnout also refers to exhaustion and disengagement symptoms experienced by students due to long-term exposure to specific school demands.<sup>[4–6]</sup> Past research showed that academic burnout is negatively linked to academic

engagement<sup>[7]</sup> and is associated with increased odds of suicidal ideation amongst students.<sup>[8]</sup> Hence, this study aimed to decrease academic burnout among undergraduate history students in Nigeria. In Nigeria, undergraduate history students are students at the university seeking to receive their first degree in history and study about social, cultural, economic, political, and religious dimensions of African history specifically, and the wider world generally.<sup>[9,10]</sup> The students are taught to compare and contrast African historical experiences with those of the world beyond and recognize the dynamics of the continuously changing relations between Africa and other nations.<sup>[9,10]</sup>

The use of rational emotive behavior therapy (REBT) for reducing students' academic burnout symptoms has been demonstrated in previous randomized controlled studies.<sup>[2–5,11–14]</sup> Researchers have also affirmed the rationale for employing REBT in burnout management by indicating that burnout is associated with dysfunctional thinking patterns.<sup>[15,16]</sup> Also, Ogbuanya et al<sup>[2]</sup> observed that a positive decrease in students' burnout could be achieved through altering their burnout-related thoughts. It has also been observed that individuals can develop tolerance to frustration and recover from burnout through participation in an REBT program.<sup>[17]</sup> Furthermore, evidence shows that online intervention can be effective just as other treatment formats in assisting students.<sup>[18,19]</sup> Research also shows that intervention delivered through telegram is as effective as an in-person intervention and could improve participants' quality of life.<sup>[20]</sup> The telegram can serve as a tool for the effective delivery of online programs to students.<sup>[21]</sup> Against this background, the main objective of this research was to examine the effect of an online rational emotive behavior therapy on academic burnout of undergraduate history students in Nigeria.

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The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

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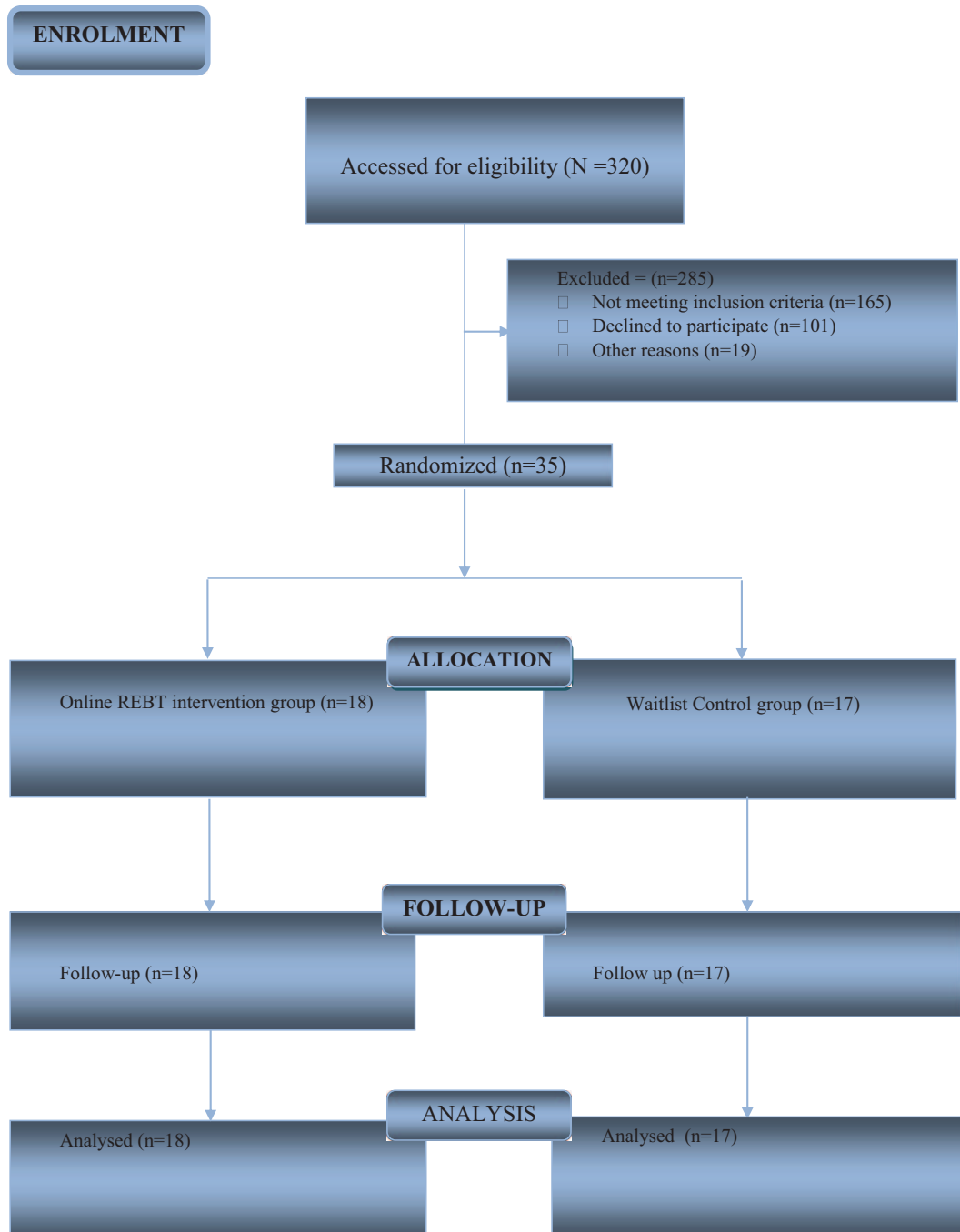
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**2. Method**

The Committee on Research Ethics at the University of Nigeria approved this research. An informed consent form was signed electronically by the students before taking part in this online intervention. Participating undergraduate history students were randomly allocated to the intervention and waitlist control groups. The sample for the study consisted of 35 burned-out undergraduate history students selected randomly from public universities situated in the southeastern region of Nigeria. An eligibility assessment was conducted through an electronic mail survey among 320 undergraduate history students. A sample size

of 35 was considered after sample calculation using the Gpower statistical program.<sup>[22]</sup> Consequently, a total of 18 undergraduate history students with moderate to high burnout symptoms were randomly allotted to the online intervention group. At the same time, 17 were randomly assigned to the waitlist control group (see Fig. 1).

The instruments used for this research included demographic profiles and the 16-item Oldenburg burnout inventory for students (OLBI-S).<sup>[6]</sup> The online demographic information completed by participants consisted of basic demographic information: age, gender, ethnicity, and year of study. The



**Figure 1.** Participant flowchart.

OLBI-S has 2 subscales (exhaustion and disengagement) on a 4-point rating, from strongly agree to strongly disagree. A high mean score suggests high academic burnout in a student. In Nigerian studies of the university student population, internal consistency reliability tests show that Cronbach  $\alpha$  score for the OLBI-S ranges from 0.77 to 0.90.<sup>[3–5,11,12,14,23]</sup>

This online intervention was guided with an adapted electronic version of the manual of rational emotive behavioral therapy for the management of burnout<sup>[2]</sup> and was delivered using the telegram app. This online REBT intervention comprised cognitive restructuring strategies and re-education to alter students' burnout beliefs. The online intervention provided an avenue for homework after every online meeting. The online REBT program was held twice a week for 6 weeks, and a weekly follow-up session was conducted after 1 month for 2 weeks. Sixty minutes was the duration for each online session. The repeated measures analysis of variance statistics were applied at .05 probability level to test the main effect of group, time, and effect of time and group interactions. The univariate analysis was applied to test for differences in pretest and follow-up scores between the groups. The Sidak method was applied for post hoc analyses. Data were scanned for missing variables and were subjected to test of assumptions violations. In the case where the sphericity assumption is violated, and the epsilon value ( $\epsilon$ ) is  $<0.75$ , the Greenhouse–Geisser estimates of sphericity are recommended for interpretation of data, but if the epsilon value is  $>0.75$ , the Huynh–Feldt correction is recommended for data interpretation.<sup>[24,25]</sup> All the analytical processes for the research data were carried out through the IBM statistical software (SPSS 22).

### 3. Results

Table 1 revealed that there were no significant variations in the socio-demographic profiles of the undergraduate history students by group (age, gender, ethnicity, year of study). The mean age of the students in the online intervention group was  $23.22 \pm 2.53$  years old, while the mean age for students in the waitlist control group was  $22.76 \pm 2.63$  years old (Table 1).

A statistically significant similarity in pretest burnout scores of the online intervention group ( $M=45.28$ ,  $SD=7.81$ ) and waitlisted group ( $M=44.15$ ,  $SD=7.39$ ) was established [ $F(1, 33)=0.193$ ,  $P=.66$ ].

Mauchly test revealed that the sphericity assumption was violated [ $\chi^2(2)=121.882$ ,  $P=.000$ ]. As a result, we corrected the degrees of freedom using Greenhouse–Geisser estimates of sphericity ( $\epsilon=0.51$ ). As anticipated, after the online REBT intervention, the study result revealed that group significantly affected the undergraduate history students' academic burnout,  $F(1, 33)=32.09$ ,  $P=.000$ ,  $\eta_p^2=0.49$ . The result further demonstrated a significant effect of time on undergraduate history students' academic burnout,  $F(1.01, 33.37)=52.69$ ,  $P=.000$ ,  $\eta_p^2=0.62$  (see Table 2). Also, the result shows that undergraduate history students' burnout scores were affected significantly by the interaction of time and group,  $F(1.01, 33.37)=55.54$ ,  $P=.000$ ,  $\eta_p^2=0.63$  (see Table 2). The undergraduate history students' burnout scores as were affected by group and time interaction is depicted in Fig. 2. The follow-up result indicated a significant difference in academic burnout scores [ $F(1, 33)=62.830$ ,  $P=.000$ ] between the undergraduate history students who received the online intervention and the waitlist group.

Undergraduate history students in the online intervention group had a lower burnout score at the posttest ( $M=26.36$ ,  $SD=6.58$ ), which was maintained at follow-up [mean difference =  $0.065$ ,  $P=.924$ , 95% CI:  $-0.226, 0.357$ ], according to our Sidak post hoc analysis by Time (see Table 3). The results of the between-group Sidak post hoc analysis also confirmed the statistically significant differences in the burnout scores of undergraduate history students in the online intervention group when equated to the burnout scores of the waitlist participants (mean difference =  $-11.744$ ,  $P=.000$ , 95% CI:  $-15.961, -7.527$ ).

### 4. Discussion

This research aimed to ascertain the effect of an online psychological intervention on academic burnout among undergraduate history students in Nigeria. This research revealed that the online rational emotive behavioral therapy reduced academic burnout of undergraduate history students compared with participants in the waitlist control group. In terms of REBT's effectiveness in assisting students in managing burnout, our present finding supports several studies which found similar results in student population.<sup>[3–5,11,12,14,23]</sup> Heber et al<sup>[26]</sup> show that internet-based intervention effectively reduced symptoms of stress. The finding of Harrer et al<sup>[27]</sup> supports online intervention

**Table 1**  
Undergraduate history students' demographic profile.

Characteristics	Category	Intervention group <i>M</i> ( <i>SD</i> )	Waitlist group <i>M</i> ( <i>SD</i> )	Test value <i>t</i>	<i>P</i>
Age	Mean age	23.22 (2.53)	22.76 (2.63)	0.524	.60
Gender	Male	<i>n</i> (%) 9 (50)	<i>n</i> (%) 7 (41.2)	$\chi^2$ 0.274	.74
	Female	9 (50)	10 (58.8)		
Ethnicity	Hausa	4 (22.2)	1 (5.9)	3.191	.36
	Igbo	7 (38.9)	9 (52.9)		
	Hausa	5 (27.8)	3 (17.6)		
	Other groups	2 (11.1)	4 (23.5)		
Year of study	1st year	5 (27.8)	5 (29.4)	1.102	.78
	2nd year	7 (38.9)	4 (23.5)		
	3rd year	4 (22.2)	5 (29.4)		
	4th year	2 (11.1)	3 (17.6)		

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

**Table 2**  
**Repeated measures ANOVA results for undergraduate history students' academic burnout scores (effect of group, time, and interaction effects).**

Variables	Intervention group		Waitlist group		Effect	rmAnova		$\eta_p^2$	95% CI
	M	SD	M	SD		F-ratio	df		
OLBI-S									
Pre-test	45.28	7.81	44.15	7.39	G	32.09*	1, 33	0.49	[42.10, 47.34]
Post-test	26.36	6.58	44.33	7.12	T	52.69*	1.01, 33.37	0.62	[32.99, 37.70]
Follow-up	26.08	6.82	44.48	6.91	G × T	55.54*	1.01, 33.37	0.63	[32.92, 37.64]

ANOVA = Analysis of variance, OLBI-S = Oldenburg burnout inventory for students.  
 \*  $P < .05$ .

delivery for reducing patient symptoms. The result also supports the evidence that revealed moderate to high online treatment effects on stress-related outcomes.<sup>[28–30]</sup> The positive impact of online REBT on undergraduate history students' academic burnout also validates the evidence regarding the effectiveness of online interventions comparable to other treatment formats.<sup>[18]</sup> The study finding also agrees with the research by Nwabuko et al<sup>[31]</sup> that found that the REBT program effectively decreases burnout symptoms amongst participants. Ezenwaji et al<sup>[13]</sup> also found that REBT intervention can help participants to manage academic burnout. Onuigbo et al<sup>[32]</sup> also observed that REBT is a clinically relevant methodology for burnout management. However, limitations can be found in this research despite the result. Only quantitative data was used to assess the

impact of the online REBT treatment program. Future studies should integrate the use of qualitative data to study how this intervention affects students' burnout. Although the participants were assessed after 1 month at follow-up, the effectiveness of online REBT on academic burnout after a longer duration should also be considered in future research. The research implication is that given the psychological and economic effects of the coronavirus pandemic,<sup>[33,34]</sup> the use of online interventions like online REBT program to decrease student burnout can be considered a suitable strategy at this period.

**5. Conclusion**

This was an investigation into the effect of an online psychological intervention on the academic burnout of under-

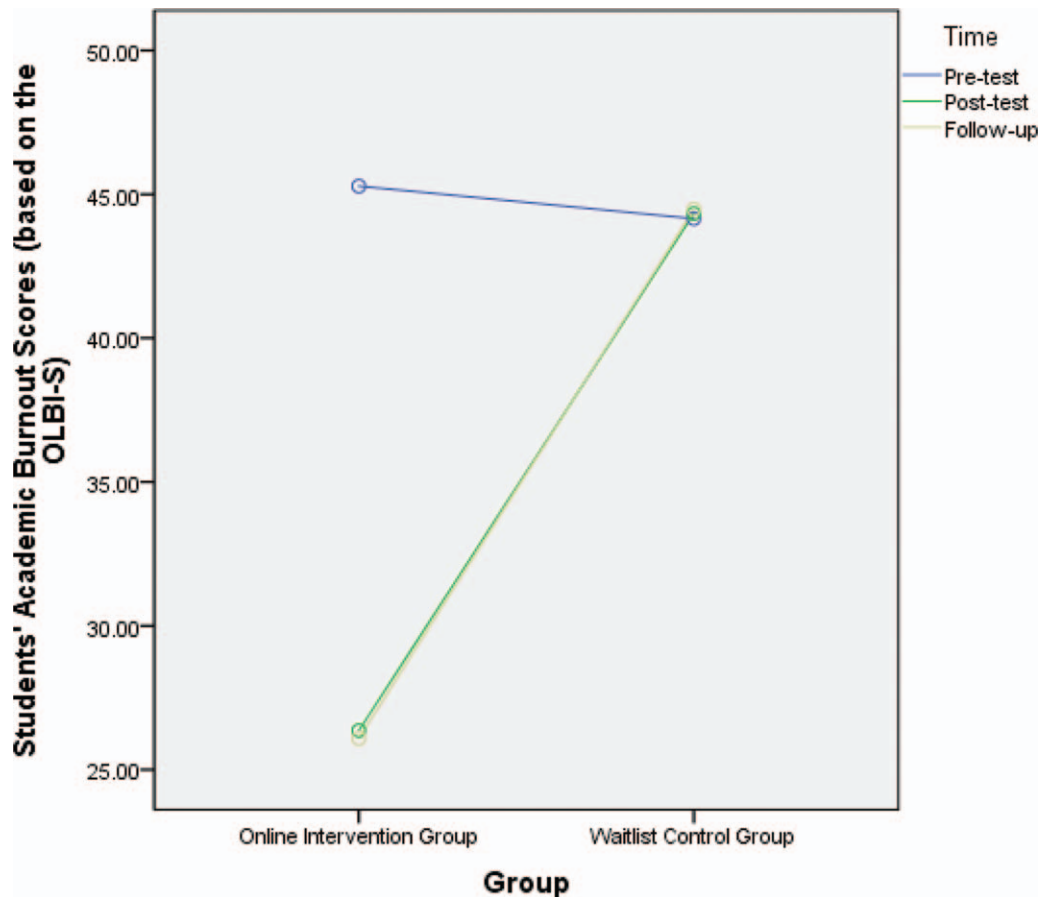


Figure 2. Group and time interaction effect on undergraduate history students' academic burnout.

**Table 3****Post hoc analyses for the OLBI-S scores by time.**

(I) Time	(J) Time	Mean difference (I-J)	Std. error	Sig. <sup>†</sup>	95% CI <sup>†</sup>
Pretest	Posttest	9.373 <sup>*</sup>	1.278	0.000	6.159, 12.587
	Follow-up	9.438 <sup>*</sup>	1.308	0.000	6.147, 12.729
Posttest	Pretest	-9.373 <sup>*</sup>	1.278	0.000	-12.587, -6.159
	Follow-up	0.065	0.116	0.924	-0.226, 0.357
Follow-up	Pretest	-9.438 <sup>*</sup>	1.308	0.000	-12.729, -6.147
	Posttest	-0.065	0.116	0.924	-0.357, 0.226

Based on estimated marginal means.

\*The mean difference is significant at the .05 level.

<sup>†</sup>Adjustment for multiple comparisons: Sidak.

graduate history students in Nigeria. From the finding in this study, online REBT intervention delivered to undergraduate history students brought about a significant decrease in academic burnout. It is recommended that further studies expand the benefits of online psychological intervention for academic burnout treatment among Nigerian undergraduate history students.

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