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The Effect of Rational Emotive Behaviour Therapy on Work-irrational Beliefs Among Electrical and Electronic Educators in Nigeria

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Abstract: This study delved into a critical concern in academic and professional settings: the impact of irrational work-related beliefs among individuals within the electrical/electronic technology education domain in Nigeria. The prevalence of detrimental work-related beliefs and their potential adverse effects on performance, mental health, and overall well-being necessitated an investigation into effective therapeutic interventions to mitigate these beliefs. The research adopted a quasi-experimental design spanning eight weeks and involving 16 sessions to examine the effects of Rational Emotive Behavioural Therapy (REBT) on these work-related irrational beliefs. The study encompassed a cohort of 330 participants, comprising electrical/electronic technology education technologists and instructors within Nigerian universities. To ensure a robust study design, the participants were randomly allocated to the REBT group (165 participants) or the control group (165 participants). The study uncovered notable findings using an intervention package and structured psycho-educational strategies for data collection. The analysis revealed a significant mean difference between the experimental (REBT) group and the control group, demonstrating the efficacy of REBT in significantly reducing work-related belief scores among electrical and electronic technologists compared to those not exposed to the therapy. Furthermore, the study explored potential variations based on gender in response to the treatment, finding that the interaction effect of therapies and gender was not statistically significant. This suggests that the benefits of REBT in alleviating work-related irrational beliefs were consistent across genders. These findings underscore the potential of REBT as an effective intervention to address work-related irrational beliefs. The study recommends the integration of REBT into the academic curriculum, emphasising its value in mitigating detrimental work-related beliefs among educational staff and students in the field of electrical/electronic technology education.

Keywords: Work-irrational beliefs, electrical/electronic, technologists and instructors, rational emotive behavior therapy, performance demand

1. Introduction

The educational environment significantly influences the performance of educators, particularly those tasked with instructing students in the practical aspects of electrical/electronic technology within universities. A conducive academic

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setting, with minimal levels of occupational stress, is fundamental in promoting optimal working performance among teachers.

In contemporary times, as highlighted by Jalil (2017) and Anitha (2014), universities uphold rigorous standards for service quality, accuracy, and overall organisational success—especially within the rapidly evolving domain of high technology. Consequently, educators are often pressured to meet these demands, fostering a culture of overwork and potential work-related stress, which can harm their health and well-being. Thus, the pursuit of organisational excellence has led to a notable rise in workaholic behaviours among professionals, including those in electrical/electronic technology. This increase is closely linked to individuals' irrational beliefs about work, as noted by Wijhe, Peeters, and Schaufeli (2013). Such beliefs can impact an individual's work-life balance and overall mental and physical health.

In this context, there is a pressing need to investigate the effects of Rational Emotive Behaviour Therapy (REBT) on mitigating irrational work beliefs among electrical/electronic technologists and instructors in Nigerian universities. This study aims to address the critical balance between meeting organisational demands and preserving the well-being of educators. By exploring the interplay between work-related beliefs, occupational stress, and the application of REBT, we seek to develop strategies that can enhance educators' mental health and professional performance within this crucial academic domain.

Electrical/electronic technologists and instructors within Nigerian Universities grapple with various work-related challenges such as negative workloads, isolation, non-flexible working hours, role conflicts, role ambiguities, lack of autonomy, strained relationships with colleagues, managerial bullying, harassment, and unfavourable organisational climate. Research by Jalil (2017) highlighted the persistence of irrational beliefs in the workplace among these professionals, contributing to distressing emotions and behaviours that hinder their well-being and job satisfaction.

Work-related irrational beliefs present a significant health risk to workers, including electrical/electronic technologists and instructors. Palmer and Gyllensten (2008) proposed that coaching, a therapy akin to Rational Emotive Behavioural Therapy (REBT), could potentially mitigate mental health problems. This study is predicated on the understanding that electrical/electronic technologists and university instructors often hold rigid, irrational beliefs that impair their effective functioning and productivity in their roles. Consequently, it is crucial to mitigate the stress levels of work-related irrational beliefs among these professionals by employing REBT.

The anticipated outcomes of this study hold promising implications for academia and the workforce. Understanding the potential positive impact of REBT in challenging and transforming irrational work beliefs can contribute to creating targeted interventions for educators, promoting a healthier work-life equilibrium, and ultimately enhancing their teaching efficacy. Additionally, insights gained from this study could inform organisational policies and practices, fostering environments that nurture productivity while safeguarding the holistic well-being of the workforce.

Therefore, this research aims to ascertain the effects of REBT on the work-irrational beliefs held by electrical/electronic technologists and instructors in Nigerian Universities. Specifically, the study addresses two principal questions. 1) What are the mean work-irrational beliefs scores of electrical/electronic technologists and instructors exposed to Rational Emotive Behaviour Therapy (REBT) and those not exposed to the therapy? 2) What is the influence of gender on the mean work-irrational beliefs scores of electrical/electronic technologists and instructors?

1.1 Irrational Beliefs

Irrational beliefs are forms of occupational stress (Popov, Popov & Damjanovic, 2015). The primary causes of work-related stress in workers are irrational beliefs and self-defeating thoughts (Ogbuanya et al., 2017b; Ogbuanya et al., 2018; Onuigbo et al., 2018). Froggatt (2005) affirmed that work irrational beliefs are thoughts that impede a person from achieving his goals, create extreme emotions and lead to behaviours that harm one and others. Li, Dong, Zhao, and Zhang (2021) recently explained irrational beliefs as irrational thoughts, illogical attitudes and ideas that do not correspond to empirical reality. Irrational beliefs are rigid, extreme, and confusing thoughts (Chrysidis, Turner &Wood, 2020; DiGiuseppe et al., 2013). This study explains work irrational beliefs to mean accumulated work irrational thoughts that are rigid and illogical, which leads to occupational stress for electrical and electronic Technologists and Instructors. Irrational beliefs include performance demand, co-worker approval, failure, and control (Wijhe, Peeters, and Schaufeli, 2013).

Performance demand (PD), in the view of Sharan et al. (2011), is the irrational belief that workers only like themselves if they perform well. Wijhe, Peeters, and Schaufeli (2013) assert that PD is an irrational belief where workers base their self-esteem on their performance. Performance demand, therefore, refers to a type of work irrational belief where electrical/electronic technologists and instructors value themselves just when they perform excellently on the job. For instance, “doing work perfectly is a must”. Irrational beliefs are said to have the premise of ‘musts’ and ‘shoulds’ and are absolute, rigid and dogmatic (DiGiuseppe, Doyle, Dryden, & Backx, 2012; Kendall et al., 1995). The quest to perform excellently on the job makes workers sometimes seek co-workers’ approval before starting their careers.

Co-workers’ approval is viewed as a core irrational belief anchored on the compulsive drive to gain approval from colleagues before embarking on any meaningful job. Andreassen, Hetland, and Pallesen (2010) had earlier stated that co-worker’s approval is best explained when workers make statements such as “it is important what other people at work think of me”; “the approval of colleagues is needed to make me feel worthy”. Therefore, co-workers’ approval from the

perspective of this study is regarded as the scenario where electrical/electronic technologists and instructors depend on other colleagues for perfect work done. Another form of irrational belief is 'failure'.

Failure as a component of irrational belief is expressed through a scenario where one concludes that it is awful if things turn out badly at work. Turner (2016) refers to failure as an employee's belief that an event is so terrible, that is, more than 100 per cent bad. According to Dryden (2011) and Dryden and Branch (2008), this belief is self-deprecating. Failure in the context of this study refers to work irrational belief where electrical/electronic technologists and instructors believe that situations around them are catastrophic. Ellis and Dryden (2003) asserted that such irrational beliefs are awfulizing. This belief may result in frustration in technologists and instructors at the workplace.

A form of low frustration in technologists and instructors tends to make them unable to cope. This type of low frustration is called control belief (Wijhe, Peeters, and Schaufeli, 2013). Mahfar, Noah, Jaafar, Shah, & Ahmad, (2012) affirmed that control beliefs are extreme ideas that stem from the demand that things must not be as frustrating or uncomfortable as they are. Macavei (2005) aver that control belief means the person believes that no happiness is possible if the unwanted event occurs. From the viewpoint of this study, control belief is explained to mean a work irrational belief that indicates a lack of coping ability. Ogbuanya (2019) affirmed that such beliefs affect the work performance of electronic instructors. The extant research in the view of Turner (2016) indicates that irrational work beliefs lead to unhealthy emotions, a range of pathological conditions, and a host of maladaptive behaviours that undermine mental health. Wijhe, Peeters, and Schaufeli (2013) professed that work-irrational beliefs constitute serious psychological stress among workers. Therapy is required to moderate the effect of the work's irrational beliefs among Technologists and Instructors.

1.2 Rational Emotive Behavior Therapy

To correct the work irrational beliefs into rational beliefs and reduce stress among electrical/electronic technologists and instructors, the researcher employs the Rational Emotive Behavioural Therapy (REBT) theory introduced by Albert Ellis in 1955 in this study. Ellis and Dryden (2007) affirmed that REBT is a form of humanistic psychology that helps individuals live happier, more productive, more self-actualizing and more creative. The goal of REBT is to help people to change irrational beliefs for rational beliefs, thus changing the way in which an event is cognitively appraised (Turner& Barker, 2015; Hyland & Boduszek, 2012), promoting functional emotions and adaptive behaviours that facilitate psychological well-being and goal achievement.

Based on the REBT approach, stress among employees is largely due to the irrational beliefs of a person. Ogbuanya (2019), Shumba (2016), and Balevre (2001) have also noted that irrational beliefs, a major concept in the REBT model, build maladaptive cognitive patterns, leading to burnout. Irrational beliefs are unlikely to find objective empirical support, are not pragmatic, and generally reflect demandingness, leading to dysfunctional consequences (Szasz, 2011). Dysfunctional beliefs implied incorrect or abnormal functioning of electrical/electronic technologists and instructors in their workplace. Such dysfunctional beliefs tend to affect workers' performance and need intervention for their treatment (Wijhe, Peeters, and Schaufeli, 2013). When adequately treated, REBT is hypothesised to treat the dysfunctional work-irrational beliefs among electrical/electronic technologists and instructors.

The most basic premise of REBT, which it shares with other cognitive-behavioural theories, is that almost all human emotions and behaviours result from what people think, assume, or believe about themselves and others (Froggatt, 2005). What people believe about situations they face and not the situations themselves determines how they feel and behave. Nucci (2002) asserted that REBT is a therapeutic approach to reducing undesirable behaviours by identifying and changing the behaviours' antecedents, namely work-related beliefs and feelings. Since literature from the Journal of Occupational Rehabilitation (Wijhe, Peeters. & Schaufeli, 2013) has proven that irrational work beliefs are detrimental to the health of workers, it is pertinent to modify those beliefs into productive, positive and rational beliefs among electrical/electronic technologists which is the thrust of this study.

1.3 Electrical/Electronic Technologists and Instructors

Electrical/electronic technologists and instructors are professionally trained in certain aspects of development and design in the implementation of the respective electrical/electronic technology area. Electronic technologists' role includes designing and producing electronic circuits and assembling components on a printed circuit board. Dounas-Frazer and Lewandowski (2017) explained that an electronic instructor's role includes but is not limited to teaching and guiding students, typically using power supplies, oscilloscopes, and multi-meters to perform measurements. Both male and female employees experience stress while coaching and teaching students. Mohammad (2014) asserted that gender may influence employees' occupational stress levels.

1.4 Gender and work-Irrational beliefs

Gender has empirical evidence indicating their possible influence on employees' stress experience due to irrational beliefs. Some researchers find no differences between women and men in terms of the influence of stress factors on perceived role conflicts (Wong, DeSanctis, and Staudenmayer 2007), personal accomplishment (Proost, De Witte, De Witte, & Evers 2004) or self-esteem. Other studies find differences between the genders only about the perceived level

of control in the workplace (Bowen, Edwards, Lingard, & Cattell, 2014; Rivera-Torres, Araque-Padilla, and Montero-Simo, 2013) but not about job demands, unlike other research (Rossler, 2012). Based on the arguments above, the researchers have a good reason to postulate that work-irrational beliefs among male and female electrical/electronic technologists and instructors may not vary.
With the foregoing, the following hypotheses are formulated and tested at a 0.05 significance level.

H_{01}: There is no significant difference between the mean work-irrational beliefs scores of electrical/electronic technologists and instructors exposed to Rational Emotive Behaviour Therapy (REBT) and those not exposed to the therapy.

H_{02}: There is no significant interaction effect of therapies and gender on the mean work-irrational beliefs scores of electrical/electronic technologists and instructors

2. Methodology

2.1 Research Design

This study adopted a quasi-experimental design that lasted 8 weeks and 16 sessions. Specifically, the non-equivalent control-group pre-test and post-test experimental design was employed in this study. The test was done variously at (times 1, 2, & 3). The time 1 (T1) measures represent the pre-test, while the measures at time 2 (T2) and time 3 (T3) represent the post-tests for both control and experimental groups.

2.2 Study Participants

The participants of this study were 330 Electrical/Electronic Technology Education Technologists and instructors in the Universities in Nigeria. 8 participants were females, including 6 technologists and 2 instructors, while 140 technologists and 182 were male instructors from the 7 Federal Universities in Nigeria. The population was obtained through the consent of the heads of departments of Industrial Technical/Technology education offering electrical/electronic technology education in the Federal Universities in Nigeria.

2.3 Measures

The instrument for data collection in this study is a structured questionnaire titled Work Irrational Beliefs (WIB) Questionnaire. The scales adapted for the study were sourced from previous studies to fit the purpose of this study. The questionnaire comprised two sections. Section ‘A’ measured the demographic variables of the electrical/electronic technologists and instructors’ gender. Section ‘B’ had 24 items and was divided into four subsections that measured the work irrational beliefs of electrical/electronic technologists and instructors, namely, performance demand, co-workers’ approval, control, and failure. Items of the questionnaire in section ‘B’ were rated on a five-point Likert scale of strongly disagree (1), disagree (2), Undecided (3), agree (4) and strongly agree (5). Three experts validated this research instrument, and their inputs improved the quality of the questionnaire both in content and language. The reliability of the study was performed in 2 Federal Universities in Southeast Nigeria, which yielded a reliability coefficient of 0.87 Cronbach alpha. Description of the scales are as follows:
Work irrational beliefs: Work irrational beliefs were measured with 24 items. Performance demand had 9 items, and Co-workers’ approval, failure, and control had 5 items each, which were also adapted to suit the purpose of this study from Ellis 1975 and Wijhe, Peeters, and Schaufeli, 2013. e.g., at work, I have to achieve to be satisfied with myself (performance demand). I need my colleagues' approval to do my work well (Co-workers’ approval). It is awful if I don’t do my work well (Failure). I can’t cope with unexpected demands in my workplace (Control).

2.4 Eligibility Criteria and Randomized Group Allocation

Participants were randomly allocated to one of two groups. 165 participants were allocated to the REBT group, and 165 participants were allocated to the control group using simple randomization. Those whose name are on government’s pay role and have served for five years and above were eligible. Those who did not meet this inclusion criteria were excluded. The simple randomization allowed the participants to pick an envelope from a container as in Ogbuanya et al. (2017a). Each of the envelopes contained a pressure-sensitive paper with either a ‘T’ or ‘WC’ caption on it. The ‘‘T’ means treatment group and ‘‘WC’ waitlist control group. The caption on each paper was created from a computer-generated random list obtained from random allocation software, version 1.0 by Saghaei (2004). The REBT program lasted for 8 weeks of 16 sessions and 45 minutes per session. Participants in both groups responded to the WIB Questionnaire for the pre-test and post-test data. Finally, follow-up evaluations were conducted at two and five months later for the treatment group participants.

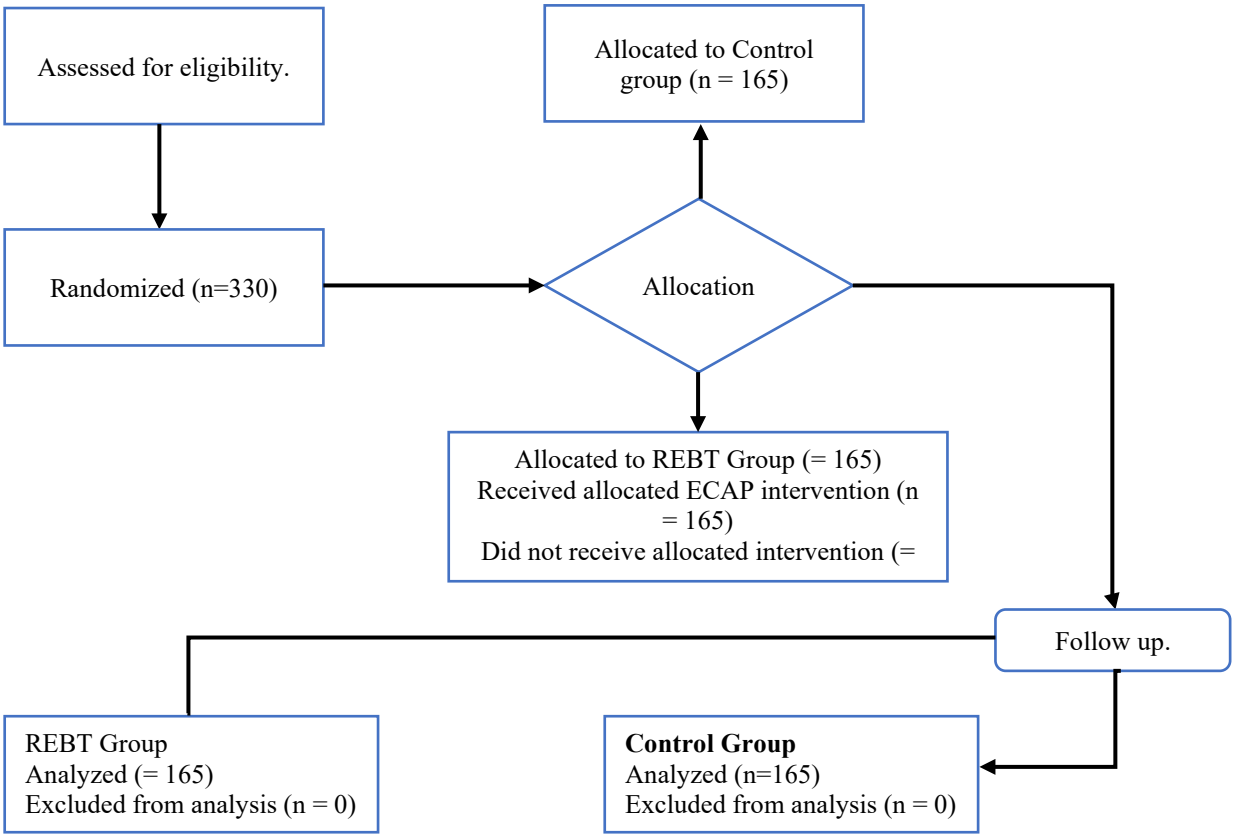

Fig. 1 - Participants' eligibility criteria

2.5 Control of Extraneous Variables (Experimental Conditions)

2.5.1. Experimental Bias

The regular Electronic Technology lecturers were involved in administering the instruments to reduce experimental bias. At the same time, the usual school counsellors were used as the therapists in facilitating the REBT program in each participating institution. Hence, the researcher was not directly involved in any research instrument administration and REBT intervention facilitation.

2.5.2 Facilitators Variability

To control the invalidity that this variable could cause and ensure uniform standards in the research, the researcher personally prepared the instruments as well as the intervention focus, presentation guide and intervention structure in the form of lesson plans. The therapists were given the REBT intervention plans to study and prepare for the expected activities before the intervention and use them for the treatment of the subject during the intervention.

2.5.3. Training of Facilitators for the Experimental Groups

A one-week intensive interaction and training exercise was organised for the therapists and Electronic Technology lecturers who were directly involved in the study by the researcher. The lecturers were given detailed explanations on the administration of the instrument for the pre-test and post-test for both groups. The therapists were introduced to the REBT intervention package and the structured psycho-educational strategies for administering the intervention.

2.6 REBT Intervention

The REBT treatment manual: This treatment manual was adapted from The REBT manual protocol for depression by Ellis (2002) and was used by the researchers to help participants to identify, challenge, and alters work irrational beliefs and occupational stress interfering with their rational beliefs, health, and performance in the place of work. According to Ellis (2002), the best way to manage and control negative thoughts is through changing the thinking system of the individual, and this can be achieved through effective disputation.

2.7 Experimental Procedure

The manual is divided into 16 sessions and lasts for 45 minutes each for a period of 8 weeks. Every session in the treatment manual is divided into therapy objectives, content, therapy activities and techniques to be used. The A-B-C-D-E-F form was adapted for the treatment. The procedure for applying the REBT treatment package for the experimental group is organized in stages as follows:

Table 1 - Experimental procedure adapted from Ellis (2002)

Time frame	Content	Researcher Activities
Session 1 Initial Phase	• Introduction of the REBT programme • Baseline assessment of work –related irrational beliefs of electrical/electronic technologists and instructors	• Therapists introduces the REBT programme to the electrical/electronic technologists and instructors • Performs baseline assessment of work–related irrational beliefs through a rational report assessment report technique.
Session 2/3	• Establishing rapport and group cohesiveness among the researcher and the participants • Work-related irrational beliefs s	➢ Researchers build a therapeutic rapport with the electrical/electronic technologists and instructors through trusting and accepting relationships. ➢ Researcher explains that stress among employees is largely due to work-related irrational beliefs of a person. ➢ Irrational belief is defined as thoughts that block a person from achieving his goals, create extreme emotions that persist and which distress and immobilize, and lead to behaviour that harm oneself, others. Work-related irrational beliefs are a major concept in REBT model that build maladaptive cognitive pattern leading to burn-out other emotional and psychological health complications in individuals. ➢ Examples of work-related irrational beliefs are. • Performance demand: It is a belief where workers base their sense of self-worth on their performance. For instance, 'I must do my work perfectly.' • Co-workers' demand is viewed as a core belief in which a worker ultimately will emphasize a situation as "must" or "must not". For instance, 'to be happy, I must be liked by colleagues. • Failure: is a component of irrational beliefs which refers to an employee's belief that an event is so awful, that is, more than 100 percent bad. This kind of irrational beliefs has been categorized as Awfulizing. E.g., it's awful if things turn out badly at work. • A form of low frustration in technologists and instructors tends to make them feel unable to cope. For instance, 'I can't stand this' or 'I can't cope with that'. Statements that indicate lack of control
4/5	Exposition of electrical/electronic technologists and instructors to A. B. C. of REBT	• Researcher exposes the participants to the general purpose. • Explaining the programme expectation • Explaining the A.B.C. of REBT work-related irrational beliefs **A= Activating even**t e.g., Head of section announce that any technologist or instructor who fails to meet up with the given activity for the week will be sacked **B= Belief** e.g. • The Head of section is a troublesome man. • I "must" do the activity perfectly to avoid being sacked or queried. **C= Consequences** e.g. • Feeling bad • Depressed and worried
Session 6/7	List of problems related to work-related irrational beliefs of electrical/electronic technologists and instructors	Creating problem list irrational beliefs of electrical/electronic technologists and instructors E.g. • I must do my work perfectly. • To be happy, I must be liked by colleagues. • It's awful if things turn out badly at work. • I can't stand this' or 'I can't cope with that.'
Session 8/9	Cognitive disputation of work-related irrational beliefs	**D=Disputing.** • The researcher explains how to dispute work-related irrational beliefs of electrical/electronic technologists.

Time frame	Content	Researcher Activities
		• Each work-related irrational beliefs of electrical/electronic technologists are approached based on the REBT model, its behavioral change and technique on the current intervention
Session 10	Same as in session 7/8	• Working towards improving participants' rational beliefs by weakening the work-related irrational beliefs • Encouraging technologists and instructors to see the link between rational and irrational beliefs
Session 11/12	Disputation Continues	➢ Disputing work-related irrational beliefs and constructing positive behaviour and maintaining awareness of self-acceptance. E.g. • I need to do my work perfectly' instead of I must do my work perfectly. • Instead of using absolute phrases such as 'must' and 'should', employees will be taught in therapy about how to express their rational beliefs in a more flexible context employing flexible phrases 'want to', 'want' or 'choose'. For example, 'I want my boss to respect me, but not necessarily I get it. • It's awful if things turn out badly at work' is disputed to "it is not good if things turn out badly at work, but the situation happened to me is not awful actually".
Final Phase Session 13/14	Revision and discussion on difficulties and success in the homework. REBT evaluation sheet containing assessment items	• Discussing difficulties and success in the homework and session activities • Fine-tuning the implementation and generalization of rational beliefs learnt • Evaluating the therapeutic process to obtain a post-test data
Follow-up phase	Rational self-report assessment form	One week follow-up meetings assessment to be conducted after two months and four months

2.8 Data Analysis

The collected data from the administration of both pre-test and post-test were analysed and interpreted using mean, standard deviation (SD) and analysis of covariance (ANCOVA). The statistical package used for running the analysis was Statistical Package for the Social Sciences, SPSS version23. Specifically, mean, and standard deviation were used for analysing and answering all the research questions while ANCOVA was used to test all the null hypotheses at 0.05 level of significance.

3. Results

The results from the analysis are presented in Tables in this section in line with the research questions and the null hypotheses formulated to guide the study.

Research Question One: What is the mean work-irrational beliefs scores of electrical/electronic technologists and instructors exposed to Rational Emotive Behaviour Therapy (REBT) and those not exposed to the therapy?

Table 1 - Pre-test and post-test mean work-irrational beliefs scores of electrical/electronic technologists and instructors exposed to Rational Emotive Behaviour Therapy (REBT) and those not exposed to the treatment

Therapies	Pre-test			Post-test		
	N	$\bar{x}$	SD	$\bar{x}$	SD	Mean Difference
With REBT (Experimental Group)	165	98.27	5.34	45.75	5.33	-52.52
Without REBT (Control Group)	165	94.29	5.13	94.62	5.49	0.33

The result in Table 1 shows that electrical/electronic technologists and instructors who were exposed to Rational Emotive Behaviour Therapy (REBT) had a mean work-irrational beliefs score of ($\bar{x}$ = 98.27, SD = 5.34) at pre-test and a mean of ($\bar{x}$ = 45.75, SD = 5.33) at post-test, while those who were not exposed to the therapy had a mean work-irrational beliefs score of ($\bar{x}$ = 94.29, SD = 5.13) at pre-test and a mean of ($\bar{x}$ = 94.62, SD = 5.49) at post-test. Mean difference of -52.52 and 0.33 obtained for respondents that were exposed to REBT (experimental group) and those not exposed to the therapy (control group) respectively imply that REBT effectively reduced the work-irrational beliefs scores of electrical/electronic technologists and instructors.

Hypothesis One

H_{01}: There is no significant difference between the mean work-irrational belief scores of electrical/electronic technologists and instructors exposed to REBT and those not exposed to the therapy.

Table 2 - Analysis of covariance (ANCOVA) of the difference between the mean work-irrational beliefs scores of electrical/electronic technologists and instructors exposed to Rational Emotive Behaviour Therapy (REBT) and those not exposed to the treatment

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Decision
Corrected Model	197202.622	4	49300.656	1702.533	.000	.954	
Intercept	5230.797	1	5230.797	180.639	.000	.357	
Pre-WIBS	16.763	1	16.763	.579	.447	.002	
Therapies	170918.505	1	170918.505	5902.445	.000	.948	S
Gender	41.348	1	41.348	1.428	.233	.004	NS
Therapies * Gender	151.168	1	151.168	5.220	.063	.006	NS
Error	9411.102	325	28.957				
Total	1832165.000	330					
Corrected Total	206613.724	329					

Note: S = significant; NS = Not significant

Result in Table 2 shows that the difference between the mean work-irrational beliefs scores of electrical/electronic technologists and instructors exposed to Rational Emotive Behaviour Therapy (REBT) and those not exposed to the therapy was significant [F (5902.445), $p < .05$, $\eta^2_p =$. 948]. This is because the associated probability value of 0.000 is less than 0.05 set as the level of significance for testing the null hypothesis. Hence, the null hypothesis is rejected, and inference drawn is that there is a significant difference between the mean work-irrational beliefs scores of electrical/electronic technologists and instructors exposed to REBT and those not exposed to the therapy. The effect size of (η^2_p = .948), indicates that 94.8 percent variance in the mean work-irrational beliefs scores of electrical/electronic technologists and instructors is accounted for by the exposure to REBT.

Research Question Two: What is the influence of gender on mean work-irrational beliefs scores of electrical/electronic technologists and instructors?

Table 3 - Pre-test and post-test mean work-irrational beliefs scores of males and female electrical/electronic technologists and instructors

Gender	Pre-test			Post-test		
	N	$\bar{x}$	SD	$\bar{x}$	SD	Mean Difference
Male	322	97.03	5.32	70.37	5.75	-26.66
Female	8	95.62	5.76	70.02	4.51	-25.60

Result in Table 3 shows that male electrical/electronic technologists and instructors had a mean work-irrational beliefs score of ($\bar{x}$ = 97.03, SD = 5.32) at pre-test and a mean of ($\bar{x}$ = 70.37, SD = 5.75) at post-test while their female counterparts had a mean of ($\bar{x}$ = 95.62, SD = 5.76) at pre-test and a mean of ($\bar{x}$ = 70.02, SD = 4.51) at post-test. Mean difference of -26.66 and -25.60 for male and female electrical/electronic technologists and instructors respectively implies that the males recorded a slightly higher reduction in the mean work-irrational beliefs scores than their female counterparts.

Hypothesis Two: There is no significant interaction effect of therapies and gender on the mean work-irrational beliefs scores of electrical/electronic technologists and instructors.

Result in Table 2 also indicate that the interaction effect of therapies and gender on the mean work-irrational beliefs scores of electrical/electronic technologists and instructors was not statistically significant [F(5.220, $p > .05$, $\eta^2_p = .006$]. This is because the associated probability value of 0.063 was greater than 0.05 set as level of significance for testing the

null hypothesis. Thus, the null hypothesis was upheld. Therefore, it is concluded that there is no significant interaction effect of therapies and gender on the mean work-irrational beliefs scores of electrical/electronic technologists and instructors. This is evident as the lines drawn against therapies and gender (male and female) do not intercept at any point as depicted by the graph below.

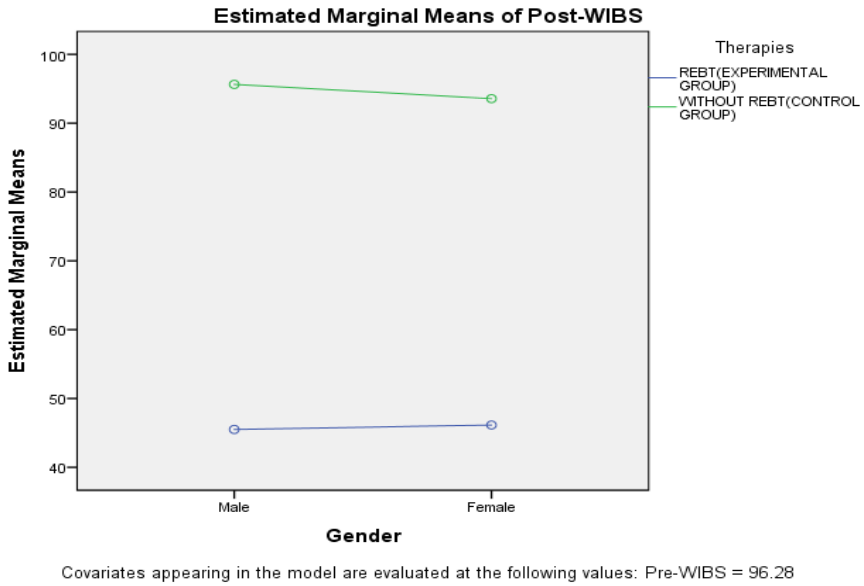

Fig. 2 - Graph showing the interaction effect of therapy and gender on work-irrational beliefs scores of educators

Figure 1 shows parallel lines on the graph, which illustrates that there is no interaction effect of the therapies and gender on the mean work irrational beliefs scores of electrical/electronic technologists and instructors. Also, the marginal means for those in the experimental group (REBT) was about 46. In contrast, that of their counterparts in the control group (without REBT) was about 95, irrespective of the respondents' gender. These are indications that there was no significant interaction effect of therapies and gender on the mean work-irrational beliefs scores of electrical/electronic technologists and instructors.

4. Discussion

The primary objective of this study was to investigate the influence of Rational Emotive Behavioural Therapy (REBT) on work-related irrational beliefs among electrical and electronic technologists and instructors within Nigerian universities. The mean difference presented in Table 1 between the experimental and control groups indicates a noteworthy reduction in work-irrational belief scores for the participants subjected to REBT compared to those in the control group. The substantial decline in work-irrational beliefs among the experimental group suggests the effectiveness of REBT as an intervention.

Prior research by Ogbuanya et al. (2017b), Ogbuanya et al. (2018), and Onuigbo et al. (2018) have also demonstrated the successful transformation of irrational beliefs and self-defeating thoughts into rational beliefs through similar therapeutic approaches. Since the fundamental objective of REBT is to facilitate the transition from irrational beliefs to rational beliefs, thereby altering the cognitive appraisal of events (Turner & Barker, 2015; Hyland & Boduszek, 2012), this study has substantiated the core tenets of REBT as per the researcher's objectives. As Ellis (2007) affirmed, REBT aligns with humanistic psychology principles, fostering individuals' greater happiness, productivity, self-actualisation, and creativity. The experimental group in this study is anticipated to experience enhanced well-being and productivity, aligning with these positive outcomes, having undergone 8 weeks of REBT treatment.

Table 3 results suggest a marginal gender-related disparity, with males showing a slightly higher reduction in mean work-irrational belief scores than their female counterparts. This finding underscores that male and female electrical/electronic technologists and instructors harbour similar irrational beliefs, given the negligible mean effect difference. This aligns with the conclusion that both genders hold comparable degrees of irrational beliefs, demonstrating the universality of this phenomenon in the studied population.

Analysing the hypotheses presented in Table 2, the first hypothesis is substantiated by the significant difference in mean work-irrational belief scores between electrical/electronic technologists and instructors exposed to REBT and those who were not. The considerable effect size ($\eta 2p$ = .948) indicates that 94.8% of the variance in mean work-irrational belief scores is attributed to exposure to REBT. This corroborates findings from a similar study by Ogbuanya et al. (2017b), where rational emotive behaviour coaching (REBC) significantly reduced occupational stress in the REBC

group compared to the control group. This study also aligns with Palmer and Gyllensten's (2008) assertion that REBC can effectively prevent mental health problems, enhance performance, and reduce work-related stress.

Table 2 further shows no statistically significant interaction effect of therapies and gender on the mean work-irrational belief scores of electrical/electronic technologists and instructors. The parallel lines on the graph in Figure 2 and the lack of interception between therapies and gender lines signify that both experimental and control groups did not differ significantly in their work-related irrational beliefs concerning performance demands, co-worker approval, control, and fear of failure. This finding contradicts the results of Rivera-Torres, Araque-Padilla, and Montero-Simo (2013), who observed significant gender-based differences in stress levels, suggesting higher stress among women. It also differs from other studies (Hausser et al., 2010; Chiang et al., 2010), indicating that workplace characteristics such as job demands and control may impact psychological well-being differently based on gender. Conversely, this study aligns with Choi (2011) and Gronlund (2007), indicating that job demands, and control affect both genders.

5. Conclusion

This study explored the effectiveness of an REBT on the work-irrational beliefs of electrical and electronic technologists and instructors in Nigerian universities. An REBT intervention package was prudent in reducing irrational work beliefs among the experimental group to rational work beliefs. This was evident when the work irrational beliefs of the experimental group momentously declined as against the control group. The mean difference obtained for the experimental and control groups, respectively, implied that REBT effectively reduced the work-irrational beliefs scores of electrical/electronic technologists and instructors compared to the control group. We have empirical evidence, therefore, to infer that a REBT is a perfect treatment package that helps correct workers' irrational work beliefs. The interaction effect of therapies and gender on the mean work-irrational beliefs scores of Electrical Electronic Technologists and Instructors was not statistically significant**.**

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