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RESEARCH ARTICLE
Management of Mental Health Problem among Primary School Teachers using Rational-emotive Behavior Therapy

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Abstract:
Background:
Teachers in the Nigerian education system, especially at the primary level, experience various mental health issues. This is likely to be so as primary school teachers carry out a lot of responsibilities ranging from teaching all the primary school subjects to taking care of their families. Studies have revealed that mental health issues limit the academic responsibilities of teachers. However, there is a dearth of literature on mental health issues management among primary school teachers.

Objective:
This study explored the effect of rational-emotive behavior therapy (REBT) on work stress management among primary school teachers.

Methods:
Using a randomised control trial group experimental design, this research used 45 primary school teachers as the study participants. Data for the study were collected using a work stress questionnaire which was properly validated and trial tested (α = .84). The participants were pretested before being exposed to a 12-week REBT intervention treatment. Participants were then retested and received follow-up care two months after the end of the intervention. Data collected were analysed using mixed-design repeated analysis of variance.

Results:
It was revealed that the work stress of the primary school teachers who were exposed to REBT intervention significantly (p < .05) reduced after the treatment.

Conclusion:
REBT intervention significantly affected work stress management among primary school teachers. Therefore, it was recommended that REBT intervention be used as a workplace stress management intervention among primary school teachers.

Keywords: Intervention, Management, Mental health, Primary school teachers, Randomized controlled trial group, Rational-emotive behavioral therapy.

1. INTRODUCTION

Teachers in Nigerian schools are prone to mental health problems due to the poor state of their working environment. Teachers are front-line workers who interact with kids regularly, making them the ones most likely to have a significant influence on their students [1]. The teaching profession is one of the largest in the world and is particularly prone to physical and mental health issues [2]. It has been discovered that university and other levels of education teachers experience moderate to high levels of stress [3]. Stress among teachers affected 72.2% of them, while depression affected 29.3% [2]. Although mental illness is claimed to affect 20% of the population in Nigeria, teachers there have poor mental health literacy [1]. In Poland, there were 18.1%, 22.4%, and 51.7% of teachers who reported having moderately to severely severe levels of depression, anxiety, and stress symptoms, respectively [4]. There is a cause for concern expressed about voice disorders, stress, and musculoskeletal ailments that have been documented among Malaysian educators [5]. Due to pressure from scientific research,
competition for promotions, lack of regular breaks, and lack of physical activity, university professors in China typically faced significant levels of stress [6]. Enriching programs and mental health interventions for the leadership of school administration and the higher education system should be encouraged owing to the teachers' poor physical activities and productivity due to extremely severe mental health problems. Based on this premise, this research was executed to determine the effect of rational-emotive behavior therapy (REBT) on work stress management among primary school teachers.

REBT is a form of cognitive behavior therapy that focuses on reducing irrational thoughts in clients in order to promote more rational thought. The most notable aspect of REBT is how heavily it emphasizes how both rational and irrational ideas influence emotions and behavior [7]. Irrational beliefs, on the other hand, are rigid, extreme, and illogical, whereas rational beliefs are those that are flexible, non-extreme, and congruent with reality (i.e., inconsistent with reality) [7]. In order to help you understand how unhealthy thoughts and ideas lead to emotional pain, which results in destructive actions and behaviors that conflict with your current life goals, REBT primarily focuses on the present moment [8]. Once recognized and acknowledged, negative ideas and behaviors may be changed and replaced with more constructive and successful conduct, enabling you to build more satisfying personal and professional relationships [8]. Therefore, REBT is a type of brief psychotherapy that identifies self-defeating attitudes and thoughts, challenges their irrationality, and replaces them with healthier and more productive logical beliefs [8]. According to REBT, any unhappiness should be swiftly and readily remedied, and reality should be desired [9]. Several studies have explored the effectiveness of REBT in managing mental health problems (stress, depression, burnout) among students and teachers.

Comparing the electronics work students in the treatment group to those in the control group, rational-emotive behavior therapy significantly reduced the stress syndrome [10]. It was revealed that REBT intervention significantly reduced occupational stress among science and social science education lecturers [11]. It was discovered that a population of science education teachers in Nigeria responded significantly better to rational-emotive occupational health counseling for the control of work stress [12]. Compared to a waiting control group, rational health education health intervention significantly decreased teacher stress among teaching staff who received the treatment intervention [13]. The REBT group had a significant mean reduction in stress levels and a change from irrational to rational beliefs both after treatment and during the follow-up period than the control group [14]. It was found that rational-emotive behavior therapy had a significant effect on the reduction of perceived stress, stress symptoms, and total teachers' stress scores [15].

The result of a 10-week REBT program revealed a significant decrease in mean burnout among artisans in the treatment group [16]. In comparison to adult learners who did not participate in the school-based REBT program, the study indicated that adult learners who participated showed a significant improvement in their burnout levels over time [17]. The blended rational-emotive occupational health coaching group's perceived mean stress, stress symptoms, and overall teachers' stress score dramatically decreased at post-test and follow-up evaluations [18]. In similar research, it was found that participants in the rational-emotive cognitive behavioral coaching intervention for adult learners significantly lowered their stress levels [19]. There was also a significant effect of rational-emotive occupation health coaching (REOHC) on work stress management among lecturers [20]. Following exposure to rational-emotive family health therapy, there was a significant improvement in parenting stress management among parents of children with autism spectrum disorders [21]. It was revealed that rational-emotive health education significantly reduced teachers' stress [22]. In a similar study, REOHC had a significant effect on lowering their subjective sentiments and physical signs of work stress [23].

The foregoing has shown that studies on the effect of REBT as well as REOHC are available in the literature. However, it can be seen that none of such studies was conducted using primary school teachers as participants and this created a gap in the literature that necessitated this research. Thus, the need for this research. The researcher hypothesized that REBT had a significant effect on the management of work stress among primary school teachers.

2. METHODS

2.1. Ethical Consideration Statement

Ethical approval for the conduct of this study was granted by the Research Ethics Committee of the researcher’s University with an approval number UN/FoE/2022/013. The researcher complied with the American Psychological Association's ethical guidelines (2017). Before the start of the treatment, participants were also given informed consent forms to sign.

2.2. Design of the Study

The experimental design of a randomized controlled trial was used. The goal of the design was to assess and contrast the results following the participant's receipt of the treatment.

2.3. Participants

From all the elementary schools in South East (SE), Nigeria, a total of 45 primary school teachers were chosen at random for the study. 45 participants formed an appropriate sample size for this investigation according to G-Power, version 3.1, at a medium effect size (f2) of 0.13, level of significance of 0.05, and power of 0.86. The statistical power analysis of 0.86 was deemed sufficient for calculating the appropriate sample size. The intervention program's participation was made optional. In order to gauge their interest in taking part in the REBT intervention program, the participants were questioned. The participants' eligibility was evaluated using the following eligibility criteria: (1) must work as a teacher in one of SE Nigeria's primary schools, (2) after the baseline assessment using the occupational stress index, there must be symptoms of stress (OSI) with a score greater than or equal to 116. Thus, the participants were
randomised into the REBT group (23) and control group (22), respectively.

2.4. Occupational Stress Index (OSI)

The study used the occupational stress index created by Srivastava and Singh (1984). The OSI is a 46-item scale that measures how much stress employees experience in their daily lives. For OSI, there are five possible responses: 5 for definitely true, 4 for nearly true, 3 for mostly true, 2 for nearly false, and 1 for positively false. Getting an idea of how stressed workers are at work was achieved by totalling the scores on all the statements. Low occupational stress was indicated by a score below 115, a score between 116 and 161 indicated moderate occupational stress, and high occupational stress was indicated by a score above 161. Using the Cronbach alpha method, the internal consistency reliability of the items was estimated as 0.87.

2.5. Procedure

An advertisement for the intervention program was published prior to the start of the program asking for participation declarations. Thus, 94 elementary school teachers expressed interest in joining the program through that route. The researcher thereafter gave the OSI to those who volunteered to participate in the experiment to determine whether they were eligible based on the predetermined criteria. Any person who scored 116 or higher on the OSI was admitted to the study. In other words, participants were chosen using OSI based on a 116-criterion score. 45 participants who satisfied the inclusion or eligibility requirements were identified during the selection process.

Then, the individuals were randomly assigned to the intervention and control groups. Both groups received a thorough explanation of the study's goals and the procedure for carrying them out. The 12-week intervention program and regular care counseling sessions were conducted. The purpose of the initial interaction was familiarization and to create a favorable environment for the program's implementation. Data bundles were made available to the participants as a form of motivation and to guarantee active engagement in the program. The meeting was scheduled for Tuesday and Thursday from 4-5 pm, twice a week, for 12 weeks. The participants in the experimental group underwent the REBT intervention program during this time, whereas the participants in the control group underwent counseling as per standard care. Clients had the option to personalize care through the practice of usual care. Unlike the REBT group, which received group therapy, the individuals in the control group underwent 12 weeks of individual counseling sessions. The effectiveness of engaging in clinical trials, such as the REBT intervention, can be determined, according to proponents of usual-care groups in randomized controlled trials, by timely comparisons to the results of clients who were randomly assigned to receive usual care.

The OSI was given to the participants as a posttest measure at the end of the REBT intervention program. Two months after the termination of the REBT intervention program, a follow-up measurement was done using the OSI to determine the degree of retention of the impact of the REBT on the participants.

It is worth noting that during the recruitment process, the therapist, data analysis, participants, research assistants, and data analysts were all blinded. Data from the pretest, posttest, and follow-up measurements were cleaned and analyzed accordingly.

2.6. REBT Intervention Program

Cognitive-behavioral therapy is predicated on the interplay of thoughts, actions, and feelings. Although this intervention program manual was originally developed to treat depression, it was modified for this study on stress because both stress and depression are mental health issues. As a result, the stress management techniques that were proven effective in this study for treating depression can also be used to alleviate stress. In order to deal with stress-related sentiments, this model emphasizes the significance of pinpointing the ideas and behaviors that affect job experience, allowing the adolescent to develop emotional self-control. The therapy sessions in this guidebook are broken up into three modules, each of which has four sessions.

2.7. Module I: How participants' thoughts impact their employment (Sessions 1-4)

This module provides details on how participants' thoughts affect how they perceive their work. The framework and goal of the remaining sessions are established in the first session of this module. Also adequately defined were the time, day, guidelines for the therapy, and degree of confidentiality. Since this can influence the nature and caliber of the therapeutic connection, the participants in this module are aware of the boundaries and scope of confidentiality.

A discussion about occupational stress—what it is and how people perceive it—took place at the beginning of the first session. The therapist explained the first module's goal at this session as well, which is to help participants understand how their thoughts affect how they experience their jobs. The focus of the following three sessions was on various forms of thinking mistakes and dysfunctional thoughts connected to work-related stress. The participants were also taught how to dispute and alter these dysfunctional beliefs and cognitive errors linked to work stress in order to manage it. Some exercises are used in between sessions to spot thinking mistakes. The participants were also exposed to techniques in the sessions for raising positive ideas and lowering unhealthy or dysfunctional negative thoughts, reducing occupational stress symptoms.

2.8. Module II: How participants' actions impact their employment (Sessions 5-8)

Participants were able to connect indicators of work stress with enjoying fun activities during sessions 5-8. It was highlighted how a person's employment can make it difficult for them to indulge in fun hobbies, making their stress symptoms worse. Enjoyable activities were discussed throughout these sessions, and obstacles to participation were observed. The participants also experienced situations that will
enable them to decide on specific objectives that can reduce workplace stress. During sessions, participants received coaching on how to develop realistic goals, and those skills were put into practice. The main objectives of sessions 5-8 were to empower participants with more life control and to educate them on how to identify choices that will provide them with more freedom and possibilities. The therapist gave the participants advice on how to set realistic goals and take part in activities that will improve their work experiences.

2.9. Module III: How a participant's relationships impact how they work (Sessions 9-12)

This session provided an introduction to the participants' relationships' impact on their work experiences by outlining social support and how it aids in overcoming challenges. The participants were able to learn how to recognize and develop their social support networks thanks to these workshops. Themes from the previous modules are integrated into the final sessions. Together with the participants, the therapist looked at how thoughts impact their actions, the people they interact with, and their relationships. Exercises were employed to educate the participants on assertive communication techniques that will aid in the development of satisfying, healthy relationships. The primary themes of each module were revisited and integrated at the end of the CBT intervention program. A review of the therapy experience was conducted with the participants during the last session in order to identify strengths and accomplishments.

2.10. Data Analysis

The statistical analysis was conducted using SPSS version 25. The data gathered were statistically analyzed using mixed-design repeated measures analysis of variance. Simple repeated measures analysis of variance (ANOVA), commonly known as a mixed-design analysis of variance model in statistics, allows researchers to compare two or more independent groups that have taken repeated measurements.

3. RESULTS

3.1. Demographic Profiles of the Participants

Fig. (1) shows that 80.4% (37) of the participants are female teachers while 17.4% (8) are male teachers.

Fig. (2) shows that 26.1% (12) of the participants are within the age range of 20-25 years, 47.8% (22) are within the age range of 26-30 years, and 23.9% (11) are within the age range of 35 years and above.

Fig. (3) shows that 93.5% (43) of the participants are Christians, while 4.3% (2) are Moslems.
Fig. (2). Bar chart representation of the participants' age.

Fig. (3). Bar chart representation of the participants' religion.
Table 1 showed that both teachers of the experimental and control groups had similar mean work stress at the pretest ($M = 174.60$, $SD = 9.43$) and ($M = 173.36$, $SD = 10.30$). However, at the post-test and follow-up measures, the teachers of the experimental group had more reduced mean work stress ($M = 51.91$, $SD = 4.99$); ($M = 49.86$, $SD = 8.19$) than those of the control group ($M = 144.54$, $SD = 14.42$); ($M = 141.54$, $SD = 12.56$).

As shown in Table 2, there is significant within-subjects effect, $F(2, 86) = 1010.301, p < .050$, and significant between-subjects effect, $F(1, 43) = 854.663, p < .050$. Besides, the result revealed a significant interaction between time and treatment, $F(2, 86) = 371.176, p < .050$. This implies that REBT significantly affected the management of work stress among primary school teachers in SE Nigeria.

Table 3 revealed that there is no significant interaction effect of treatment and age on the management of work stress among primary school teachers, $F(2, 80) = .605, p = .903$. Similarly, there is no significant interaction effect of treatment and gender on the management of work stress among primary school teachers, $F(2, 80) = .102, p = .903$. This implies that the age and gender of the participants do not interact with the REBT intervention in the management of their work stress.

4. DISCUSSION

This research sought the intervention effectiveness of REBT on the management of work stress among primary school teachers. Using a randomised controlled trial group experimental design, it was revealed that the work stress of primary school teachers significantly reduced after their exposure to REBT intervention. This finding confirmed the hypothesis of the researcher that REBT had a significant effect on work stress management among primary school teachers. It was also found that the age and gender of the participants do not interact with the REBT intervention on the management of their work stress. This finding was not surprising to the researcher as many similar findings have revealed the effectiveness of REBT on mental health problem management. In the real sense of it, REBT helps people by challenging their dysfunctional thoughts, being encouraged them to approach problems rationally, and having their old, unhelpful beliefs replaced with new, helpful, and life-enhancing ones.

### Table 1. Mean analysis of the work stress ratings of the intervention and non-intervention groups.

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Measure</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>OSI</td>
<td>23</td>
<td>174.60</td>
<td>9.43</td>
<td>51.91</td>
<td>4.99</td>
<td>49.86</td>
<td>8.19</td>
</tr>
<tr>
<td>Control</td>
<td>OSI</td>
<td>22</td>
<td>173.36</td>
<td>10.30</td>
<td>144.54</td>
<td>14.42</td>
<td>141.54</td>
<td>12.56</td>
</tr>
</tbody>
</table>

**abbreviations:** OSI = Occupational Stress Index, SD = Standard Deviation

### Table 2. A mixed design Analysis of variance for the evaluation of the intervention’s within- and between-subjects impacts.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSI</td>
<td>Time</td>
<td>178007.316</td>
<td>2</td>
<td>89003.658</td>
<td>1010.301</td>
<td>.000</td>
</tr>
<tr>
<td>OSI</td>
<td>Time * Treatment</td>
<td>65398.428</td>
<td>2</td>
<td>32699.214</td>
<td>371.176</td>
<td>.000</td>
</tr>
<tr>
<td>OSI</td>
<td>Error (Time)</td>
<td>7576.269</td>
<td>86</td>
<td>88.096</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Tests of Within-subjects effect**

| OSI     | Intercept | 2029506.459            | 1  | 2029506.459 | 13809.128 | .000 |
| OSI     | Treatment | 125608.504             | 1  | 125608.504 | 854.663   | .000 |
| OSI     | Error     | 6319.644               | 43 | 146.968    |      |      |

**Tests of Between-subjects effect**

**abbreviations:** OSI = Occupational Stress Index

### Table 3. Analysis of possible interaction effects of treatment and confounding variables (age and gender).

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment * Age</td>
<td>Sphericity Assumed</td>
<td>221.666</td>
<td>4</td>
<td>55.416</td>
<td>.605 .600</td>
</tr>
<tr>
<td>Greenhouse-Geisser</td>
<td>221.666</td>
<td>2.594</td>
<td>85.454</td>
<td>.605 .591</td>
<td></td>
</tr>
<tr>
<td>Huynh-Feldt</td>
<td>221.666</td>
<td>2.913</td>
<td>76.104</td>
<td>.605 .610</td>
<td></td>
</tr>
<tr>
<td>Lower-bound</td>
<td>221.666</td>
<td>2.000</td>
<td>110.833</td>
<td>.605 .551</td>
<td></td>
</tr>
</tbody>
</table>

| Treatment * Gender | Sphericity Assumed | 18.677 | 2  | 9.338 | .102 .903 |
| Greenhouse-Geisser | 18.677 | 1.297 | 14.400 | .102 .815 |
| Huynh-Feldt | 18.677 | 1.456 | 12.825 | .102 .841 |
| Lower-bound | 18.677 | 1.000 | 18.677 | .102 .751 |
Based on these findings, it was found that REBT intervention had a significant effect on occupational stress management among teachers [11]. Also, it was found that REBT significantly reduced stress levels among the participants [14]. It was discovered that a population of science education teachers in Nigeria responded markedly better to rational-emotive occupational health counseling for the control of work stress [12]. Compared to a waiting control group, rational health education health intervention significantly decreased teacher stress among teaching staff who received the treatment intervention [13]. It was found that Rational-emotive Behavior Therapy significantly reduced perceived stress, stress symptoms, and total teachers’ stress scores at post-test and follow-up assessments than the waitlisted group [15].

Results of a 10-week REBT program revealed a significant decrease in mean burnout among artisans in the treatment group [16]. In comparison to adult learners who did not participate in the school-based REBT program, the study indicated that adult learners who did show a significant improvement in their burnout levels over time [17]. The blended rational-emotive occupational health coaching group’s mean perceived stress, stress symptoms, and overall teachers’ stress score dramatically decreased at post-test and follow-up evaluations [18]. Results showed that participants in the rational-emotive cognitive behavioral coaching intervention for adult learners significantly lowered their stress levels [19]. Rational-emotive occupation health coaching (REOHC) had a significant effect on work stress management among academic staff [20]. After exposure to rational-emotive family health therapy, there was a significant improvement in parenting stress management among parents of children with autism spectrum disorders [21]. It was revealed that rational-emotive health education significantly reduced teachers’ stress [22]. Similarly, REOHC significantly lowered their subjective sentiments and physical signs of work stress [23].

5. STRENGTH OF THE RESEARCH

This research has significant contributions to the field of mental health of teachers. Practically, this research has demonstrated that teachers can effectively manage their work stress using REBT intervention. This goes a long way in boosting the productivity of the teachers when they manage their work stress effectively. Theoretically, this research has strengthened the tenets of rational-emotive behavior therapy theory, which believes in identifying self-defeating attitudes and thoughts by challenging their irrationality and replacing them with healthier and more productive logical beliefs. Finally, this research has policy implications in that there should be an adequate policy arrangement for managing primary school teachers’ work stress using REBT intervention.

6. LIMITATIONS OF THE RESEARCH

This finding may be limited by the small sample size used for the study. The inability of the researcher to use a large sample size was because of the rigorousness of the intervention. Besides, not determining the potential moderating influences of gender, age and religion may limit the generalizability of this research. Thus, the researcher suggests that future researchers can replicate this study considering the limiting above factors.

CONCLUSION AND RECOMMENDATION

Rational-emotive behavior therapy proved to be significantly effective in the management of work stress among primary school teachers. This empirical finding has been earlier confirmed by previous researchers who used different participants but similar mental health problems. Thus, it is now very obvious that primary school teachers can be assisted in the management of work stress through the use of REBT intervention. Based on this premise, the research recommends that Local Government Education Authority develop an appropriate policy arrangement for managing work stress among teachers using REBT.

LIST OF ABBREVIATIONS

REBT = Rational-Emotive Behavior Therapy
REOHC = Rational-Emotive Occupation Health Coaching
OSI = Occupational Stress Index

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Ethical approval for the conduct of this study was granted by the Research Ethics Committee of the University of the Free State with an approval number UN/FoE/2022/013.

HUMAN AND ANIMAL RIGHTS

No animals were used for studies that are the basis of this research. All the humans were used in accordance with the American Psychological Association’s ethical guidelines (2017).

CONSENT FOR PUBLICATION

Before the start of the treatment, participants were also given informed consent forms to sign.

STANDARDS OF REPORTING

STROBE guidelines were followed.

AVAILABILITY OF DATA AND MATERIALS

The data that support the findings of this study are available within the article.
ACKNOWLEDGEMENTS

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