


Occupational health coaching for job stress management among technical college teachers

Implications for educational administrators

Nneka Vera Ogakwu, PhD^{a,b}, Moses Onyemaechi Ede, PhD^b, Ifeyinwa Manafa, PhD^c, Kelechi Ruth Ede, BEd^d, Faith Omeke, PhD^b, Patricia U. Agu, PhD^b, Nneka Nwosu, PhD^b, Sebastian Okechukwu Onah, PhD^e, Joy Obiageli Oneli, BEd^{f,*} , Godwin Keres Okoro Okereke, PhD^g

Abstract

Background: The need for stress management strategies has been empirically investigated and supported considering demands in workplaces. However, some people in public offices do not seem to have been exposed to occupational health strategies that could reduce the adverse impacts of stress on job productivity and quality of life. Consequently, they become susceptible to mental health disturbances requiring the attention of occupational therapists. Given this, we studied the impact of occupational health coaching for job stress management among technical college teachers.

Methods: Using a randomized control design study, 90 technical college teachers were screened and ready to participate. The eligible teachers were included and assigned to intervention and control groups. An occupational stress index was given to the participants before, immediately after, and 2 months after the delivery of occupational coaching program by career counselors while the comparison group received no intervention. Data collected were analyzed using multivariate analysis of variance analysis.

Results: The results showed a significant improvement in the management of job stress after receiving rational emotive occupational health coaching. According to the multivariate analysis of variance analysis, there were between-group differences immediately after the intervention and 3 months later. As a result, the study suggested that career counselors and school management systems should incorporate rational-emotive behavioral therapy into workforce and workplace programs.

Abbreviations: CI = confidence interval, OSI = occupational stress index, REBT = rational-emotive behavioral therapy, REOHI = rational emotive occupational health intervention, SD = standard deviation.

Keywords: job stress management, rational emotive occupational health coaching, REBT, technical college teachers

1. Introduction

In developing nations like Nigeria, the state of the work environment and working conditions have given serious concern to researchers.^[1] It is serious among academic researchers who demonstrated unfair conditions in Nigerian organizations.^[2] In most organizations in Nigeria today, workers experience serious hardship every day while on the job looking for conveniences, which causes work abandonment and unneeded stress.^[3] This has reduced the level of work engagement as it is against their predicted job outputs.^[4] When the workloads

become uncontrollable and demands are excessive, the teachers feel exhausted and frustrated which could lead to work-related stress. Without a doubt, an employee's working environment affects both their general wellbeing and how successfully they do their job obligations. An analysis of earlier studies reveals that better working circumstances have a beneficial effect on workers' performance.^[3]

Stress is a public health problem that constantly affects how people feel at work. According to the report, teachers in Nigeria experience a lot of stress at work.^[5] It has been that teachers with work role ambiguity are vulnerable to job-related risks.

Written informed consent was granted by the participants.

The authors have no funding and conflicts of interest to disclose.

The datasets generated during and/or analyzed during the current study are not publicly available, but are available from the corresponding author on reasonable request.

The Faculty of Education, University of Nigeria, approved this study.

^a Institute for Development Studies, University of Nigeria, Enugu Campus, Nigeria,

^b Department of Educational Foundations, Faculty of Education, University of Nigeria, Nsukka, Nigeria, ^c Department of Educational Foundations, Faculty of Education, Chukwuemeka Odimegwu Ojukwu University, Igbariam, Anambra State, Nigeria, ^d Department of Agricultural Education, Faculty of Vocational and Teacher Education, University of Nigeria, Nsukka, Nigeria, ^e Department of Sociology and Anthropology, Faculty of Social Sciences, University of Nigeria, Nsukka, Nigeria,

^f Teleo Network International School of Theology, Pastoral Ministry Grace Training International Bible Institute, Gambia, ^g Department of Industrial Technical Education, Faculty of Vocational and Teacher Education, University of Nigeria, Nsukka, Nigeria.

* Correspondence: Joy Obiageli Oneli, Teleo Network International School of Theology, Pastoral Ministry Grace Training International Bible Institute, Duluth 20284, Gambia (e-mail: joy.oneliede@gmail.com).

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Some of them are posed with dual roles. For example, some teachers may function as school psychologists, social workers, nurses, school counselors, etc – or a combination of some of these – in an academic setting.^[6] The competing responsibilities and diverse roles that teachers must perform cause job stress.^[7] In response to such demands, they engage in psychological combat to meet the academic requirements, social expectations, and emotional needs of students and members of their immediate families.^[8] As a result, the level of stress in the workplace has been increasingly reported among teachers.^[9]

According to reports from earlier research, 72% of school employees in Nigeria report having a bad quality of work-life due to work-related stress.^[10] It was reported that civil servants in Nigeria are experiencing psychological and health problems attributed to job stress.^[11,12] Further evidence reported that Nigeria has the worst working conditions among the developing countries in the world.^[13] This situation is not interesting and is unhealthy for workers in Nigeria, especially teachers who receive stipends. It is a stipend because they collect salaries that are <200 US dollars. The current state of working conditions is intolerable,^[12] making work-life dangerous to the extent that many teachers are frustrated.^[13,14] Beyond Nigeria's statistic, reports showed that countries like the US, Sweden,^[15] Japan,^[16] and Togo are affected.^[17] Upon the negative impacts of stress on productivity and commitment, coaching strategies for cushioning the adverse effects are not enough.^[18]

Given the health and psychological states of the teachers, career-based professionals suggested for occupational health coaches in improving the quality of life of teachers.^[19,20] One of the occupational interventions is rational emotive occupational health intervention^[21] is crafted from Ellis's philosophies of rational and irrational beliefs. The philosophies are sounded around demandingness, awfulizing, frustration intolerance, and depreciation beliefs.^[22] Rational beliefs are characterized by being flexible, reasonable, non-extreme, objective, constructive in conclusion, and consistent with reality. While irrational beliefs are defined as being rigid, illogical, and drawing a poor conclusion. Based on these philosophies, rational emotive occupational health intervention was developed to help workers to deal with negative feelings and dysfunctional beliefs. It is a coaching approach that aimed to modify negative beliefs, improve rational ones, and adaptive coping in the face of a stressful working environment. Using rational emotive occupational intervention helps teachers to understand that harsh working conditions (A = activating event) do not account for stress but unrealistic and illogical perceptions (B = beliefs). For if employees rely more on exaggerating the truth or misrepresenting the nature of their jobs, it could result in psychosocial problems, work deviant behavior, and maladjustment. The outcome of the disbelief system may be poor adaptation and inconsistent with workplace rules and regulations (NC = negative consequences). As the teacher's behavior becomes inconsistent leading to withdrawal, sanction, and termination of appointment. The teacher requires the attention of career counselors for treatments (D = disputation). There is also evidential support showing that rational-emotive techniques are curative and preventive.^[23] Due to the negative impacts of irrational thinking on workers' behaviors, we contend that teachers experiencing significant levels of unhappiness, fatigue, and physical and mental tiredness could benefit from rational-emotive techniques. Based on this, we evaluated the effectiveness of a rational-emotive occupational health intervention in enhancing technical college teachers' stress management. In light of this, we hypothesized that, at time 2 and time 3, technical college teachers exposed to the occupational health intervention would significantly manage their job stress compared to technical college teachers in the control group. The technical college teachers' scores on the

job stress scale will be influenced significantly by group and gender interaction effect.

2. Methods

2.1. Research design

A group-randomized trial design was adopted to assign subjects to respective groups. In group randomized trials, complete groups are randomly assigned to treatment conditions, and everyone in the same group receives the same care.^[24]

2.2. Participants

The study participants were registered technical college teachers with moderate and severe stress levels employed to teach students. In total, we selected 95 participants using the convenience sampling technique. Participants were randomly allocated to groups of intervention (n = 47) and waitlisted control (n = 48) using random allocation software. The sample size was considered to be appropriate using Gpower.^[25] For each teacher to be included in the study, criteria such as willingness to participate, being in service for at least 1 year and above, history of stress (confirmed by occupational stress index [OSI]), and absence of psychosis and schizophrenia). Unwillingness to continue the study, unanticipated events, and changes in the treatment plan for whatever reason were among the exclusion criteria.

2.3. Dependent measures

Participants' demographic information: Prior to the intervention, the information of participants were collected, including age, gender, education, occupation, and marital status.

OSI (Srivastava and Singh)^[26] is a self-report screen with 46 items. It is subdivided into 12 dimensions and these include role overload (6 items) role ambiguity (4 items), role conflict (5 items), unreasonable group and political pressures (4 items), responsibility for persons (3 items), underparticipation (4 items), powerlessness (3 items), poor peer relations (4 items), intrinsic impoverishment (4 items), low status (3 items), strenuous working conditions (4 items), and unprofitability (2 items). On a 5-point scale, the OSI was graded: 1 = strongly disagree (SDA), 2 = disagree (DA), 3 = uncertain (U), 4 = agree (A), and 5 = completely agree (SA). The ones that were negatively worded, on the other hand, were rated differently. Some past studies have utilized OSI and confirmed internal consistency, for instance, 0.94^[26] and 0.90.^[27] Using the Cronbach α coefficient approach, a reliability coefficient of 0.86 was calculated for this investigation.

2.4. Compliance with ethical standards

The principles of the Helsinki Declaration were adhered to in this investigation. Ethical approval was obtained from the Department of Educational Foundations Ethics Committee of University of Nigeria and the principals of the technical colleges. Consent to participate was given by the recruited teachers. It was also made known that anyone who wanted to leave the treatment session can do so without penalty. The participants received assurances from the researchers regarding their rights and privacy protection.

2.5. Therapist and integrity checks

Two therapists with a fundamental orientation in career counseling carried out the intervention. They have practiced rational-emotive therapy for more than a decade as university lecturers. To guarantee that coaching integrity is maintained, the researchers gave 2 members of the research team extra

responsibilities. They were viewed as independent assessors who kept an eye on the proper application of the intervention manual. This was done because several crucial elements of the manual could be disregarded by coaches. The team was tasked with keeping an eye on how the treatment was being administered as well as to how the participants responded during sessions, carried out the prescribed home exercises, and asked questions.

2.6. Procedure

The research team visited the 2 technical colleges where flyers were distributed to teachers in their respective offices. Prior to that, oral permission to engage the teachers was given by school head teachers. In the flyers, there were phone numbers

of the research team. A few days later, 57 teachers contacted us via phone calls, expressing interest to participate. Those that indicated interest were scrutinized by the dependent measure, inclusion, and exclusion criteria. The 50 qualified teachers were recruited for the study. A simple random sampling technique without replacement was adopted to assign the recruited participants to groups, that is, intervention (n = 25) and waitlisted (n = 25). Kindly see Figure 1 for participants' allocation.

The participants in the intervention group were coached using rational emotive occupational health coaching programme and those in the comparison group were waitlisted, in that, they only participated during assessment 1, assessment 2, and assessment 3. The coaching program was designed to last for 12 sessions, 90 minutes per session. It was brief coaching sessions for teachers in technical colleges.

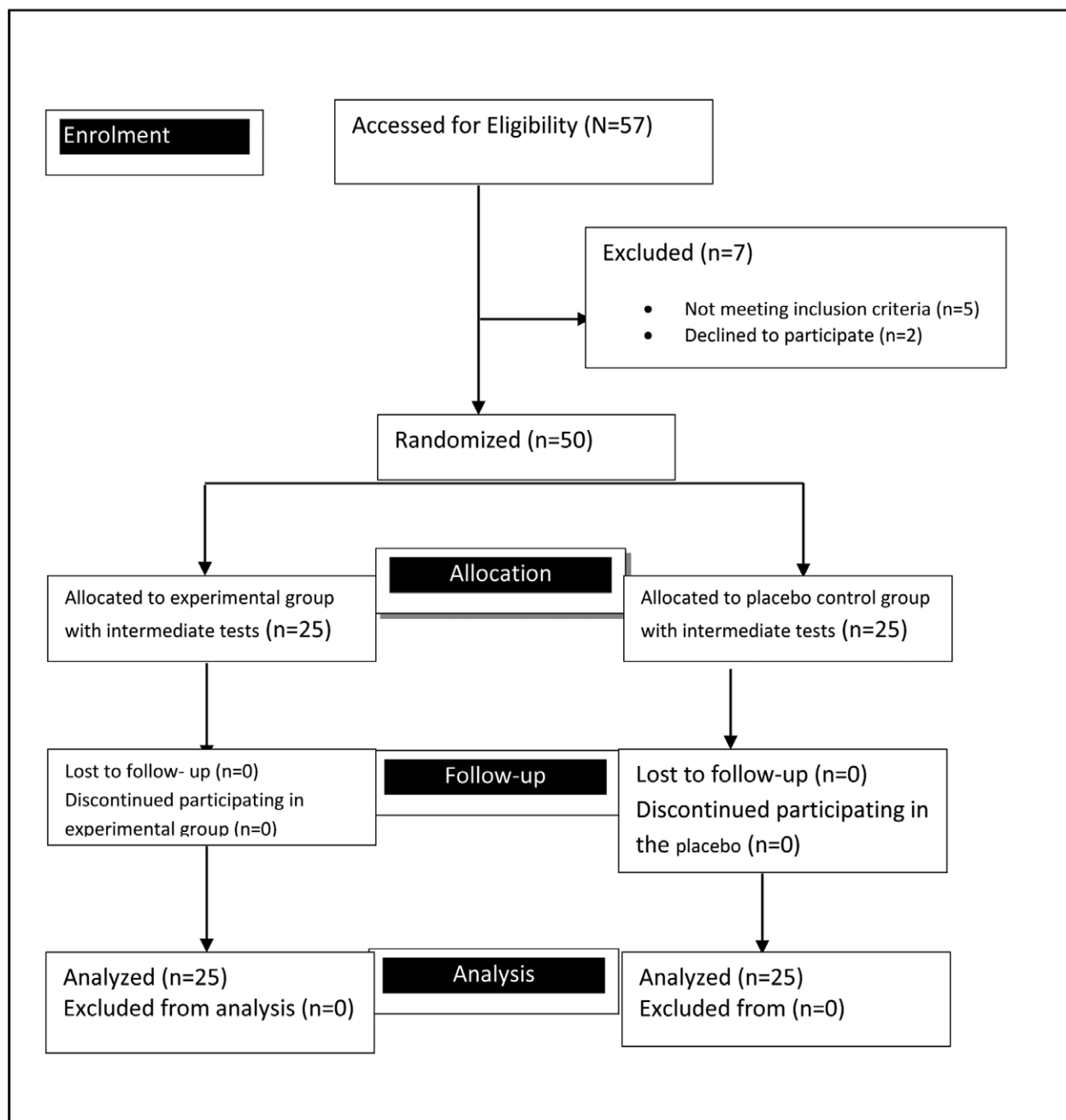


Figure 1. Participants allocation diagram.

2.7. Coaching sessions

Session 1 = introduction and establishment of rules that guided the sessions.

Session 2 = Addressing the aim and objectives of the sessions. The study's goals and currently available treatments were explained to the participants, highlighting the need to participate from the onset of the program to the end.

Session 3 = conceptualization of the basic terms such as quality of work and work stress rational emotive behavior therapy.

Session 4 = assignment and statement of actions by the group members, their expectations, roles, and obligations were highlighted in line with rational emotive principles.

Session 5 = explaining irrational and rational beliefs, examples, and application.

Session 6 = how irrational beliefs detrimentally affect work behaviors.

Session 7 = relating irrational beliefs with unhealthy reactions and feelings. Stress in the workplace and relationship with negative perceptions.

Session 8 = how negative perception and behavior lead to poor quality of work-life and poor stress management practice as well as practice exercises.

Session 9 = identification of irrational beliefs and redefining participants' perceptions of poor quality of work-life and poor stress management practices.

Session 10 = how to apply rational-behavior techniques in changing and altering irrational beliefs and behavior related to poor quality of work-life and poor stress management practices.

Session 11 = how to apply rational beliefs in work settings and the importance of integrating poor quality of work-life and stress management to overcome work stress.

Session 12 = revision and termination of the sessions.

This summary was adapted from past studies that have utilized rational-emotive occupational health coaching.^[28,29] The individuals in both groups were reevaluated (assessment 2) immediately following the intervention to determine whether there had been a beneficial change in the treatment. A third evaluation was given to the participants 2 months later (assessment 3).

2.8. Data analysis

A statistician who was unaware of the participants' distribution used SPSS version 28 (IBM Corp., Armonk, NY) to evaluate the data. Statistical analysis was done on the data gathered prior to the intervention, following the intervention, and during the follow-up phase. For data analysis, a multivariate analysis of variance statistic with a 0.05 level of significance was applied. The dependent measure's effect size of the intervention was reported using η_p^2 . Post hoc analysis was also carried out using Sidak. After screening the data, an assumption violation test was run on the data using Mauchly test. Field^[30] states that when the sphericity assumption fails, the data should be interpreted using either the Huynh–Feldt correction or the Greenhouse–Geisser

correction (if the ϵ value is ≥ 0.75). However, the sphericity assumption did not fail. The effectiveness of the intervention on the outcome measures at follow-up was further determined using the univariate test.

3. Results

Of all the teachers in intervention group, 10 (45.5%) had <10 years of experience and 15 (53.6%) had ≥ 11 years of experience; 9 (42.9%) were males and 16 (55.2%) were females. While teachers in waitlisted group, 12 (54.5%) had 10 years of experience and 13 (46.4%) had ≥ 11 years of experience; 12 (57.1%) were males and 13 (44.8%) were females. Sociodemographic information of the participants shows that there is a significant difference in terms of participants' gender ($\chi^2 = .739, P = .39$), and years of experience ($\chi^2 = 0.325, P = .569$).

Table 1 shows the participants' mean OSI scores in the pretest stage for the control group (M = 161.84, standard deviation [SD] = 6.10) and the intervention group (M = 167.03, SD = 5.27) in each group. This suggests that there was a high level of job stress among the participants in both groups. The mean job stress scores of the participants in the intervention group (M = 123.94, SD = 7.62) and (M = 120.90, SD = 8.07) reduced significantly at the posttest and follow-up measures than did those of the control group (M = 160.96, SD = 5.48) and (M = 161.96, SD = 5.99).

Table 2 shows that there was a significant effect of group on job stress scores, $F(1, 46) = 227.218, P < .01, \eta_p^2 = .83$. The results also indicate that teachers in technical colleges' scores on job stress scale were influenced significantly by group and gender interaction effect, $F(1, 46) = .405, P = .52, \eta_p^2 = .01$. The results also show a statistically significant effect of time on the job stress of technical college teachers, $F(1, 92) = 438.430, P < .01, \eta_p^2 = .91$. The results also indicate that the technical college teachers' scores on job stress scores were significantly influenced by group and time interaction effect, $F(1, 92) = 425.882, P < .01, \eta_p^2 = .90$. The follow-up result revealed that the significant effect of the intervention on job stress among technical college teachers' was sustained over time, $F(1, 49) = 417.276, P < .01, \eta_p^2 = .90$.

Table 1
Descriptive statistics for participants as measured by OSI.

Time	Group	OSI	
		Mean	SD
Time 1	REOHI	167.03	5.27
	Control	161.84	6.10
Time 2	REOHI	123.94	7.62
	Control	160.96	5.48
Time 3	REOHI	120.90	8.07
	Control	161.96	5.99

OSI = occupational stress index, REOHI = rational emotive occupational health intervention, SD = standard deviation.

Table 2
MANOVA results for primary school teachers as measured by OSI (group, time, and interaction effects).

Source	Type III sum of squares	df	Mean square	F	P	η_p^2
Group	21225.066	1, 46	21225.066	227.218	<.001	.832
Group × gender	37.870	1, 46	37.870	.405	.527	.009
Time	15997.095	2, 92	7998.547	438.430	<.001	.905
Time × group	15539.282	2, 92	7769.641	425.882	<.001	.903
Time × group × gender	7.219	2, 92	3.610	.198	.821	.004

df = degrees of freedom, MANOVA = multivariate analysis of variance, OSI = Occupational Stress Index.

Sidak post hoc analysis in Table 3 for group × time interaction effects shows that at pretest, there is no significant difference between technical college teachers on the OSI scores in the intervention group and those in the comparison group (mean difference = 5.017, standard error = 1.664, $P = .004$, 95% confidence interval [CI]: -1.668, 8.366). On the contrary, technical college teachers in the intervention group significantly reduced the OSI scores at posttest when compared to the control group (mean difference = -36.994, standard error = 1.935, $P < .01$, 95% CI: -40.889, -33.098). Additionally, at the follow-up test the technical college teachers in the intervention group still showed significantly lower OSI scores than those in the control group (mean difference = -40.926, standard error = 2.081, $P < .01$, 95% CI: -45.114, -36.737). Figure 2 also demonstrated the interaction effect of group on time as measured by OSI.

Sidak post hoc analysis in Table 4 for group × gender × time interaction effects shows that at pretest, male and female technical college teachers in the intervention group had significantly similar OSI scores to the control group (mean difference = 3.501, standard error = 2.539, $P = .175$, 95% CI: -1.611, 8.612; mean difference = 6.533, standard error = 2.150, $P = .01$, 95% CI: 2.205, 10.861). On the contrary, primary school male and female technical college teachers in the intervention group had significantly reduced the OSI scores at time 2 when compared to the control group (mean difference = -38.124, standard error = 2.954, $P < .001$, 95% CI: -44.070, -32.178; mean difference = -35.864, standard error = 2.501, $P = .01$, 95% CI: -40.898, -30.829). Additionally, at the follow-up test the male and female technical college teachers in the intervention group still show significantly lower OSI scores than those in the control group (mean difference = -12.481, standard error = 2.983, $P < .01$, 95% CI: -18.400, -6.561; mean difference = -40.492, standard error = 2.689, $P = .01$, 95% CI: -45.905, -35.079). Figure 3 also demonstrated the interaction effect of group on gender as measured by OSI.

4. Discussion

This study investigated the impact of occupational health coaching on job stress among teachers in technical colleges in Enugu State, Nigeria. After delivering a coaching program and assessments, the result showed that the job stress coping strategies of the teachers were improved due to the rational emotive occupational health coaching. The findings also showed that group and gender interaction effects had a substantial impact on the occupational stress levels of technical college teachers. The findings also show that the group and time interaction effect had a substantial impact on the job stress levels of technical college teachers. The follow-up findings showed that the intervention's strong impact on teachers at technical colleges' levels of job stress persisted over time. These results are consistent with earlier research that showed how group

rational-emotive behavioral therapy (REBT) training effectively reduced stress and changed irrational beliefs in a range of participant types.^[21,31,32] This is the major goal of REBT approaches, that is, to change erroneous beliefs responsible for severe stress. Previous research by REBT experts noted that it is very important to assess both participants' disrupted emotions and their irrational beliefs in a REBT intervention.^[33] This is so because therapists can better understand how the REBT treatment alters irrational beliefs, which are thought to be the primary cause of emotional disturbance accruing stress. It can also show whether the treatment had the desired effect on these irrational beliefs and the emotional disturbance it was intended to treat.^[11]

The REB coaching program offers organizational personnel, beneficial strategies to reduce occupational stress, which was previously studied and proven.^[34,35] It also supported successfully implemented REBT studies,^[36] that demonstrated how stress in the workplace may be controlled utilizing REBT's fundamental concepts. The earlier empirical evidence, that occupation-focused rational emotive training is beneficial and therapeutic has been further supported by this study.^[37]

Another study that used the identical rational-emotive intervention demonstrated success in modifying unfavorable opinions of public servants. Agu et al^[28] took the same stance when they advised using a rational emotive occupational health intervention (REOHI) in a workplace setting where employees spend a few weeks away from their family at home. The intervention, according to the author, may be able to assist Nigerian workers in overcoming the negative impacts that stress has on their professional outcomes. This implies that perceptions of stress management strategies and work delivery methods may alter if REOHI is implemented in technical colleges in Nigeria.

As the present study showed that group and gender interaction effects had a substantial impact on the occupational stress levels of technical college teachers, this is not in line with past study that found that there is no interaction effect of rational emotive occupational health coaching and gender.^[29] The variation could be due to the work engagement by the teachers. Unlike the present study,^[29] the reviewed study sampled primary school teachers. Possibly, the exposure and risks involved in the 2 work environments may not be the same, in that, the role expectation of male and female teachers in the 2 levels (primary schools and technical college) of education differs.

5. Practice implications

As this study has reported positive impacts of rational emotive occupational health coaching, it becomes important to consider how the finding could be replicated during practice. It should be used by professionals in the field of organizational psychology to assist those just starting their careers. For example, newly

Table 3
Post hoc analyses for the OSI scores based on group × time interaction effects.

Time	(I) Groups	(J) Groups	Mean difference (I-J)	SE	Sig.†	95% CI
Pretest	REOHC	WCG	5.017*	1.664	.004	1.668, 8.366
	WCG	REOHC	-5.017*	1.664	.004	-8.366, -1.668
Posttest	REOHC	WCG	-36.994*	1.935	.000	-40.889, -33.098
	WCG	REOHC	36.994*	1.935	.000	33.098, 40.889
Follow-up	REOHC	WCG	-40.926*	2.081	.000	-45.114, -36.737
	WCG	REOHC	40.926*	2.081	.000	36.737, 45.114

Based on estimated marginal means.

CI = confidence interval, OSI = Occupational Stress Index, SE = standard error, Sig. = significance, WCG = waitlist control group.

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

† Adjustment for multiple comparisons: Sidak.

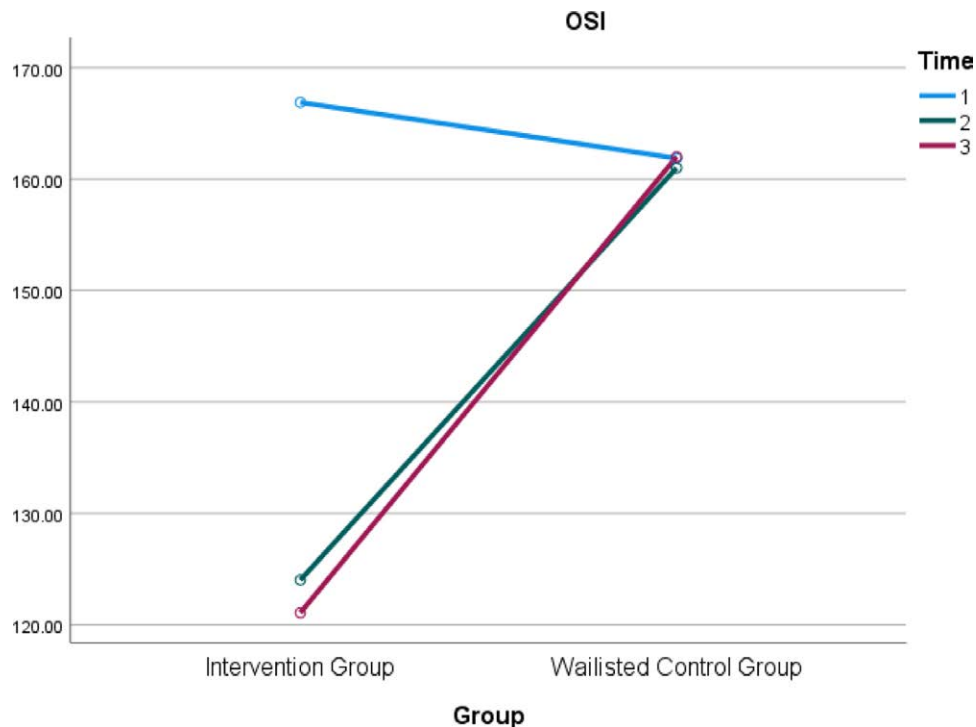


Figure 2. The interaction effect of group on gender as measured by OSI. OSI = Occupational Stress Index.

Table 4

Post hoc analyses for the OSI scores based on group × gender × time interaction effects.

Gender	Time	(I) Groups	(J) Groups	Mean difference (I–J)	SE	Sig.†	95% CI
Male	1	REOHC	WCG	3.501	2.539	0.175	–1.611, 8.612
		WCG	REOHC	–3.501	2.539	0.175	–8.612, 1.611
	2	REOHC	WCG	–38.124*	2.954	<.001	–44.070, –32.178
		WCG	REOHC	38.124*	2.954	<.001	32.178, 44.070
	3	REOHC	WCG	–41.359*	3.176	.000	–47.751, –34.966
		WCG	REOHC	41.359*	3.176	.000	34.966, 47.751
Female	1	REOHC	WCG	6.533*	2.15	0.004	2.205, 10.861
		WCG	REOHC	–6.533*	2.15	0.004	–10.861, –2.205
	2	REOHC	WCG	–35.864*	2.501	.000	–40.898, –30.829
		WCG	REOHC	35.864*	2.501	.000	30.829, 40.898
	3	REOHC	WCG	–40.492*	2.689	.000	–45.905, –35.079
		WCG	REOHC	40.492*	2.689	.000	35.079, 45.905

Based on estimated marginal means.

CI = confidence interval, OSI = Occupational Stress Index, SE = standard error, Sig. = significance, WCG = waitlist control group.

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

† Adjustment for multiple comparisons: Sidak.

employed teachers should receive rational emotive occupational coaching as part of their professional orientation. The coaching will help them to cope easily with organizational hazards. Possibly, the managerial team could benefit from the rational coping techniques acquired from the coaching. In the course of practice in organizational or educational settings school counselors can employ REOHI to change teachers’ unfavorable beliefs about how work environments and host communities interact.

6. Conclusion

Investigating the perception of workers about the work environment and conditions is important as it X-rays possible negative impacts and possible interventions. This forms the crux of the present study to test the impact of occupational health

coaching on job stress among technical college teachers. It was imperative as the health and psychosocial well-being of Nigerian workers are deteriorating from time to time. From the outcome of this study, it was found that rational emotive occupational health is a significant strategy in reducing job stress among technical college teachers. The results also indicate that teachers in technical colleges’ scores on job stress scale were influenced significantly by group and gender interaction effect. Additionally, the findings suggest that the group and time interaction effect had a substantial impact on the job stress scores of technical college teachers. The results of the follow-up study showed that the intervention’s lasting impact on teachers at technical colleges’ levels of job stress was significant. The positive outcome suggests the need for further examination of mediators and moderators of the condition and intervention.

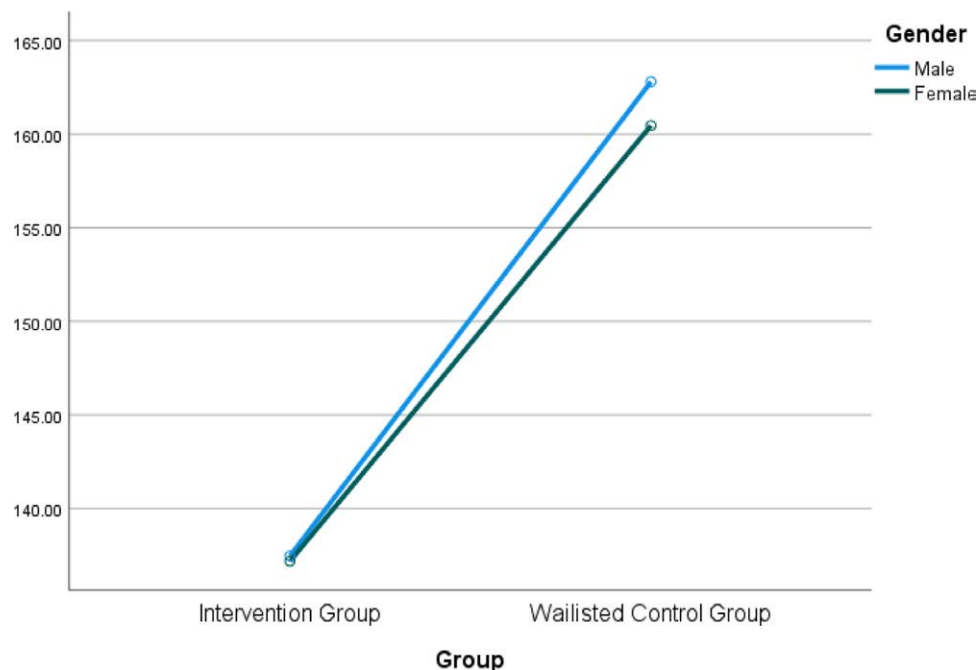


Figure 3. The interaction effect of group on time as measured by OSI. OSI = Occupational Stress Index.

7. Limitations

Despite the positive impacts of the intervention, we appeal to readers to interpret the result of this study with caution as there are noted flaws that affected the external validity and generalizability of the finding to the general audience. One of the major flaws is the small sample size. The 50 participants are small size compared to the number of teachers in Nigeria. Secondly, a significant flaw in this study is the absence of measurement of participants' illogical ideas. The stress measure was not analyzed based on the dimensions. Additionally, there was no way to gauge participant satisfaction with the treatment to determine whether or not they were happy with it. We recommend that future studies fill in these gaps in light of these flaws.

Author contributions

Conceptualization: Nneka Vera Ogakwu, Moses Onyemaechi Ede, Ifeyinwa Manafa, Kelechi Ruth Ede, Faith Omeke, Joy Obiageli Oneli.

Data curation: Nneka Vera Ogakwu, Moses Onyemaechi Ede, Ifeyinwa Manafa, Kelechi Ruth Ede.

Formal analysis: Moses Onyemaechi Ede, Ifeyinwa Manafa.

Funding acquisition: Nneka Vera Ogakwu, Moses Onyemaechi Ede, Ifeyinwa Manafa, Kelechi Ruth Ede, Faith Omeke, Patricia U. Agu, Nneka Nwosu, Sebastine Okechukwu Onah, Joy Obiageli Oneli, Godwin Keres Okoro Okereke.

Investigation: Nneka Vera Ogakwu, Moses Onyemaechi Ede, Ifeyinwa Manafa, Kelechi Ruth Ede, Faith Omeke, Patricia U. Agu, Nneka Nwosu, Sebastine Okechukwu Onah, Joy Obiageli Oneli, Godwin Keres Okoro Okereke.

Methodology: Nneka Vera Ogakwu, Moses Onyemaechi Ede, Ifeyinwa Manafa, Kelechi Ruth Ede, Faith Omeke, Patricia U. Agu, Nneka Nwosu, Sebastine Okechukwu Onah, Joy Obiageli Oneli, Godwin Keres Okoro Okereke.

Project administration: Nneka Vera Ogakwu, Moses Onyemaechi Ede, Ifeyinwa Manafa, Kelechi Ruth Ede, Faith Omeke, Patricia U. Agu, Nneka Nwosu, Sebastine Okechukwu Onah, Joy Obiageli Oneli, Godwin Keres Okoro Okereke.

Resources: Nneka Vera Ogakwu, Moses Onyemaechi Ede, Ifeyinwa Manafa, Kelechi Ruth Ede, Faith Omeke, Patricia

U. Agu, Nneka Nwosu, Sebastine Okechukwu Onah, Joy Obiageli Oneli, Godwin Keres Okoro Okereke.

Software: Nneka Vera Ogakwu, Moses Onyemaechi Ede, Ifeyinwa Manafa, Kelechi Ruth Ede, Faith Omeke, Patricia U. Agu, Nneka Nwosu, Sebastine Okechukwu Onah, Joy Obiageli Oneli, Godwin Keres Okoro Okereke.

Supervision: Nneka Vera Ogakwu, Moses Onyemaechi Ede, Ifeyinwa Manafa, Kelechi Ruth Ede, Faith Omeke, Patricia U. Agu, Nneka Nwosu, Sebastine Okechukwu Onah, Joy Obiageli Oneli, Godwin Keres Okoro Okereke.

Validation: Nneka Vera Ogakwu, Moses Onyemaechi Ede, Ifeyinwa Manafa, Kelechi Ruth Ede, Faith Omeke, Patricia U. Agu, Nneka Nwosu, Sebastine Okechukwu Onah, Joy Obiageli Oneli, Godwin Keres Okoro Okereke.

Visualization: Nneka Vera Ogakwu, Moses Onyemaechi Ede, Ifeyinwa Manafa, Kelechi Ruth Ede, Faith Omeke, Patricia U. Agu, Nneka Nwosu, Sebastine Okechukwu Onah, Joy Obiageli Oneli.

Writing – original draft: Nneka Vera Ogakwu, Moses Onyemaechi Ede, Ifeyinwa Manafa, Kelechi Ruth Ede, Faith Omeke, Nneka Nwosu, Godwin Keres Okoro Okereke.

Writing – review & editing: Nneka Vera Ogakwu, Moses Onyemaechi Ede, Ifeyinwa Manafa, Kelechi Ruth Ede, Faith Omeke, Patricia U. Agu, Nneka Nwosu, Sebastine Okechukwu Onah, Godwin Keres Okoro Okereke.

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